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OF THE

COMMONWEALTH OF AUSTRALIA

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OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA.

CHAPTER I. DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA.

§ 1. Early Knowledge and Discovery of Australia.

1. *Introduction.*—The following paragraphs contain only a bare outline of the more important facts relating to the early history of Australian discovery. Previous issues of the Year Book contain a summary of these facts in greater detail, but for a more complete account of this subject, together with bibliographical references thereto, the reader should consult Official Year Book No. 1 (pp. 44–51), bearing in mind the knowledge that the account must be modified somewhat in view of later investigations.

2. *Terra Australis.*—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India, and rumours to that effect found their way in the course of time to Europe. References to this *Terra Australis* are found in the works of Ælianus (A.D. 205–234), Manilius (probably a contemporary of Augustus or Tiberius Caesar), and Ptolemy (A.D. 107–161). Evidence which might warrant the supposition of knowledge of such a land appeared in maps and manuscripts of the Middle Ages and the fourteenth and fifteenth centuries, but there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

Reference by Marco Polo (1254–1324) to a land called Locac, and several indications on maps and globes in the fifteenth and sixteenth centuries have been supposed to relate to Australia, but little weight can now be attached to these suppositions. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria, although the oft-quoted passage in his *Descriptionis Ptolemaicæ Augmentum* describing the *Australis Terra* has been considered to have had its origin in the voyages through the Straits of Magellan and the discovery of Tierra del Fuego rather than that of Australia.

3. *Discovery of Australia.*—(i) *The Spaniards.* Disregarding the statement that the Arabs had come to Australia long before the Portuguese, Spaniards or the Dutch, for which there is no evidence, and apart from the possibility that the Portuguese may have discovered part of the Australian coast before 1542, the coastal exploration of Australia began with the Spaniards and the Dutch.

In 1606 the Spaniard Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south, and therefore named the group *La Australia del Espiritu Santo*. After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course, and passed through the strait that now bears his name. In all probability he sighted the Australian continent, but no mention of it is made in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(ii) *The Dutch.* The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam to explore the islands of New Guinea. During March, 1606 the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again).

During the following thirty years there were nine visits of Dutch navigators to Australian waters; by 1636, through their efforts, the coast of Australia from Cape York westward around to the Great Australian Bight had been discovered.

In 1642 Abel Janszoon Tasman set out from Batavia to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644 Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far south as the tropic of Capricorn. This voyage of Tasman's may be said to have ended the period of Dutch discoveries, although there were subsequent visits by the Dutch to Australia (de Vlamingh in 1696 and Van Delft in 1705).

4. **Discoveries by the English.**—In the meantime the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnēt*, a trading vessel whose crew had turned buccaneers. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds and reptiles observed, and of encounters with natives.

At the end of the seventeenth century it was a question whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Tahiti, had also for its objective to ascertain whether the unexplored part of the southern hemisphere was only an immense mass of water or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burden, carrying about 85 persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7th October, 1769 in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown. On 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the same day. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Strait and anchoring in the Downs on 13th July, 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure*, with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Flinders and Bass in 1798.

§ 2. The Annexation of Australia.

1. **Annexation of Eastern Part of Australia, 1770.**—Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 23rd August, 1770 that the history of Australia was brought into definite political connexion with Western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from latitude 38° to this place, latitude 10½° S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty over only what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on 12th October, 1786, and amplified on 2nd April, 1787, was read to the people whom he had brought with him in the "First Fleet."

A full historical account of the period referred to may be found in the *Historical Records of New South Wales* Vol. 1., parts 1 and 2.

2. **Original Extent of New South Wales.**—The commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769 Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770 also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean." The facts that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, and that in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. On 5th February the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed.

3. **Extension of New South Wales Westward, 1825.**—On 17th February, 1824 Earl Bathurst advised Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20th September, 1824 of the coast from the 135th to the 129th degree of east longitude. On 16th July, 1825 the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.

4. **Annexation of Western Australia, 1827.**—An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George III. Sound, sailed from Sydney on 9th November, 1826, landed at the Sound on 26th December following, and on 21st January, 1827 hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George's Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country," urging its occupation for the purpose of settlement. He left for England in July, 1827, continuing his advocacy—notwithstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being mainly due to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June, 1829. On the 2nd of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of "all that part of New Holland, which is not included within the territory of New South Wales." Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

§ 3. The Exploration of Australia.

A fairly complete, though brief, account of the exploration of Australia was given in Official Year Book No. 2 (pp. 20-39), and a summary of the more important facts relating to the subject was embodied in this Chapter in succeeding issues up to and including No. 22.

§ 4. The Creation of the Several Colonies.

1. **New South Wales.**—In Governor Phillip's commission of 1786 the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Strait, Flinders and Bass proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825, when the western boundary was extended to the 129th meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles.

Lord Howe Island, which is a dependency of New South Wales and is included in King, one of the electorates of Sydney, is situated in latitude $31^{\circ} 30'$ south, longitude $159^{\circ} 5'$ east, about 436 miles north-east of Sydney, and has an area of 3,220 acres. The climate is mild and the rainfall abundant, but on account of the rocky formations of its surface only about 300 acres are suitable for cultivation, most of which are devoted to the production of Kentia palm seed. The land belongs to the Crown and is occupied rent-free on sufferance.

Discovered in 1788, the Island was first settled by a small party of Maoris in 1853; afterwards a colony was settled from Sydney. A Board of Control at Sydney manages the affairs of the Island and supervises the palm seed industry. The population was 179 at the Census of 30th June, 1947.

2. **Tasmania.**—In 1825 Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on 14th June of that year. The area of the colony was 26,215 square miles.

Macquarie Island, about 1,000 miles south-east of Hobart, together with a few rocky islets nearby, has been a dependency of Tasmania since the nineteenth century. In December, 1911, five members of the Australian National Antarctic Expedition landed on the island and remained there until 1915. On 3rd March, 1948, another party was landed to man a new base and this has since been maintained as a scientific base. The island is about 21 miles long and 2 miles wide.

3. **Western Australia.**—The territory westward of the 129th meridian comprising 975,920 square miles was constituted a colony under the name of Western Australia in June, 1829. It was always distinct and independent of New South Wales, though until 1831 the settlement on King George's Sound remained under the latter jurisdiction.

4. **South Australia.**—On 15th August, 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude. On 10th December, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th

meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6th July, 1863, the Northern Territory comprising 523,620 square miles was, by letters patent, brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles.

5. **New Zealand.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of 7th August, 1840. Proclamation of the separation was made on 3rd May, 1841. The area of the colony was 103,862 square miles.

6. **Victoria.**—In 1851 what was known as the "Port Phillip District" of New South Wales was constituted the colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council.

7. **Queensland.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6th June, 1859, although separation from New South Wales was not consummated until 10th December of the same year, upon the assumption of office of the first Governor. The territory comprised in the new colony was "so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean". The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." With this addition the area of Queensland became 670,500 square miles.

§ 5. The Establishment of the Commonwealth of Australia.

1. **General.**—On 1st January, 1901 the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—except in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States".

2. **Transfer of the Northern Territory to the Commonwealth.**—On 7th December, 1907 the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under The Northern Territory Surrender Act 1907 (assented to on 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on 16th November, 1910). The Territory was formally transferred to the Commonwealth on 1st January, 1911, and became the Northern Territory of Australia.

3. **Transfer of the Australian Capital Territory to the Commonwealth.**—On 18th October, 1909 the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the seat of Government of the Commonwealth. In December, 1909 Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5th December, 1910 a proclamation was issued vesting the Territory in the Commonwealth on and from 1st January, 1911. By the Jervis Bay Territory Acceptance Act 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4th September, 1915.

4. **Present Composition of the Commonwealth.**—The total area of the Commonwealth of Australia is 2,974,581 square miles. The dates of creation and the areas of its component States and Territories, as determined on the final adjustment of their boundaries, are shown below :—

THE COMMONWEALTH OF AUSTRALIA : AREA, ETC., OF COMPONENT STATES AND TERRITORIES.

State or Territory.	Year of Formation into Separate Colony or Territory.	Present Area in Square Miles.	State or Territory.	Year of Formation into Separate Colony or Territory.	Present Area in Square Miles.
New South Wales	1786	309,433	Northern Territory	1863	523,620
Victoria ..	1851	87,884	Australian Capital Territory ..	1911	939
Queensland ..	1859	670,500			
South Australia ..	1834	380,070			
Western Australia	1829	975,920	Commonwealth of Australia ..	..	2,974,581
Tasmania ..	1825	26,215			

§ 6. The Constitutions of the States and of the Commonwealth.

1. **General.**—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, was embodied in this Chapter in issues of the Official Year Book up to No. 22 inclusive.

2. **Commonwealth Constitution Act.**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely : "An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) 1906, the Constitution Alteration (State Debts) 1909, the Constitution Alteration (State Debts) 1928, and the Constitution Alteration (Social Services) 1946 was included *in extenso* in issues prior to No. 40.

There have been no changes in the Constitution since the previous publication thereof in the Year Book.

§ 7. The External Territories of Australia.

1. **Transfer of Norfolk Island.**—In 1856 Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony and finally by the passage of the Norfolk Island Act 1913 it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 3' 30" S. longitude 167° 57' 5" E., and comprises an area of 8,528 acres.

2. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

3. **Territory of New Guinea.**—In 1919 it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and 159° 25' E. The mandate was issued by the League of Nations on 17th December, 1920. The Governor-General of the Commonwealth was authorized to accept the mandate by the New Guinea Act 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The Territory comprises about 93,000 square miles, and the administration under the mandate dated from 9th May, 1921. New Guinea is now administered under a Trusteeship Agreement with the United Nations, approved 13th December, 1946.

4. **Nauru.**—In 1919 the Governments of the United Kingdom, Australia and New Zealand entered into an agreement to make provision for the exercise of the mandate conferred on the British Empire for the administration of the island of Nauru, and for the mining of the phosphate deposits thereon. The island is situated in latitude 0° 32' south of the Equator and longitude 166° 55' east of Greenwich, and comprises about 5,263 acres. The agreement provided that the administration of the island should be vested in an administrator, the first appointment to be made by the Commonwealth Government, and thereafter in such manner as the three Governments decided. The agreement was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and a supplementary agreement of 30th May, 1923, which gave the Government immediately responsible for the administration greater powers of control over the Administrator, was approved in 1932. The administration under the mandate operated from 17th December, 1920 until 1st November, 1947 and so far the administrators have been appointed by the Commonwealth Government. As with the Territory of New Guinea, Nauru is now administered under a Trusteeship Agreement with the United Nations.

5. **Territory of Ashmore and Cartier Islands.**—By Imperial Order in Council, dated 23rd July, 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth in the Ashmore and Cartier Islands Acceptance Act 1933 under the name of the Territory of Ashmore and Cartier Islands on 10th May, 1934. The Act authorized the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July, 1938 annexed the islands to the Northern Territory, whose laws, ordinances and regulations, wherever applicable, thereupon applied.

6. **Australian Antarctic Territory.**—An Imperial Order in Council of 7th February, 1933 placed under Australian authority "all the islands and territories other than Adélie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude."

The Order came into force with a proclamation issued by the Governor-General on 24th August, 1936, after the Commonwealth Parliament had passed the Australian Antarctic Territory Acceptance Act on 13th June, 1933. The boundaries of Adélie Land were definitely fixed by a decree of 1st April, 1938 as latitude 60° S., longitude 136° E. and longitude 142° E.

7. **Territory of Heard and McDonald Islands.**—Heard and McDonald Islands, about 2,500 miles south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26th December, 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act 1953.

CHAPTER II.

PHYSIOGRAPHY.

§ 1. General Description of Australia.

1. *Geographical Position.*—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes $113^{\circ} 9' E.$ and $153^{\circ} 39' E.$, while its northern and southern limits are the parallels of latitude $10^{\circ} 41' S.$ and $39^{\circ} 8' S.$, or, including Tasmania, $43^{\circ} 39' S.$ On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are Steep Point on the west, Cape Byron on the east, Cape York on the north, Wilson's Promontory on the south, or, if Tasmania be included, South-East Cape.

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is $23^{\circ} 30' S.$, the areas within the tropical and temperate zones are approximately as follows:—

AUSTRALIA : AREAS OF TROPICAL AND TEMPERATE REGIONS.
(Square miles.)

Area.	N.S.W. (a)	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Within Tropical Zone ..	..	..	359,000	..	364,000	..	426,320	1,149,320
„ Temperate Zone	310,372	87,884	311,500	380,070	611,920	26,215	97,300	1,825,261
Total Area ..	310,372	87,884	670,500	380,070	975,920	26,215	523,620	2,974,581

(a) Includes Australian Capital Territory.

Fifty-four per cent. of Queensland lies within the tropical zone and 46 per cent. in the temperate zone; of Western Australia, 37 per cent. is tropical and 63 per cent. temperate; of Northern Territory 81 per cent. is tropical and 19 per cent. temperate. All of the remaining States lie within the temperate zone. The tropical part of Australia thus comprises about 39 per cent. of the whole of the continent, and about 53 per cent. of the three territories which have areas within the tropical zone.

2. *Area of Australia compared with Areas of other Countries.*—The area of Australia is almost as great as that of the United States of America, four-fifths of that of Canada, nearly three-quarters of the whole area of Europe, and about 25 times as large as Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the next page.

AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *circa* 1953.

('000 square miles.)

Country.	Area.	Country.	Area.
Continental Divisions—		Africa—continued.	
Europe (a)	1,900	Angola	481
Asia (a)	10,460	Union of South Africa	473
U.S.S.R. (Europe and Asia)	8,599	Ethiopia	409
Africa	11,704	Egypt	386
North and Central America		Tanganyika Territory	363
and West Indies	9,360	Nigeria and Protectorate	339
South America	6,896	South-West Africa	318
Oceania	3,304	Mozambique	298
Total, excluding Arctic and Antarctic Conts.	52,223	Northern Rhodesia	290
Europe(a)—		Bechuanaland Protectorate	275
France	213	Madagascar	228
Spain (incl. possessions)	194	Kenya Colony and Protectorate	225
Sweden	170	Other	1,422
Germany	136	Total	11,704
Finland	130		
Norway	125	North and Central America—	
Poland	120	Canada	3,846
Italy	116	United States of America	3,022
Yugoslavia	99	Greenland	840
United Kingdom	94	Mexico	760
Romania	92	Alaska	586
Other	411	Cuba	44
Total	1,900	Nicaragua	57
Asia(a)—		Honduras	43
China and Dependencies	3,759	Other	162
India	1,270	Total	9,360
Iran	629		
Mongolian People's Republic	626	South America—	
Saudi Arabia	618	Brazil	3,288
Indonesia	576	Argentina	1,084
Pakistan	364	Peru	506
Turkey	296	Colombia (excl. of Panama)	440
Indo-China	272	Bolivia	424
Burma	262	Venezuela	352
Afghanistan	251	Chile	286
Thailand	198	Paraguay	157
Other	1,339	Ecuador	106
Total	10,460	Other	253
U.S.S.R.	8,599	Total	6,896
Africa—		Oceania—	
French West Africa	1,831	Commonwealth of Australia	2,975
French Equatorial Africa	969	New Zealand	103
Anglo-Egyptian Sudan	967	New Guinea	93
Belgian Congo	905	Papua	91
Algeria	846	Other	42
Libya	679	Total	3,304

(a) Excludes U.S.S.R., shown below.

The areas shown in the table are obtained from the *Demographic Yearbook*, 1953, published by the Statistical Office of the United Nations and the countries have been arranged in accordance with the continental groups used therein.

3. Areas of States and Territories, Coastal Configurations and Standard Times.—As already stated, Australia consists of six States and the Northern, and Australian Capital, Territories. Particulars of areas, coastline and standard times are shown in the following table :—

AUSTRALIA : AREAS OF STATES AND TERRITORIES, COASTLINE AND STANDARD TIMES.

State or Territory.	Area.	Proportion of Total Area.	Coastline.	Area per Mile of Coastline.	Standard Times.	
					Meridian Selected.	Ahead of G.M.T.
	Sq. miles.	%	Miles.	Sq. miles.		Hours.
New South Wales ..	399,433	10.40	(a) 700	(a) 443	150° E.	10
Victoria ..	87,884	2.96	680	129	150° E.	10
Queensland ..	670,500	22.54	3,000	223	150° E.	10
South Australia ..	380,070	12.78	1,540	247	142°30' E.	9½
Western Australia ..	975,920	32.81	4,350	224	120° E.	8
Northern Territory ..	523,620	17.60	1,040	503	142°30' E.	9½
Australian Capital Territory ..	939	0.03	..	..	150° E.	10
Continent ..	2,948,366	99.12	11,310	261	..	..
Tasmania ..	26,215	0.88	900	29	150° E.	10
Australia ..	2,974,581	100.00	12,210	244	..	..

(a) Includes Australian Capital Territory.

There are no striking features in the configuration of the coast ; the most remarkable indentations are the Gulf of Carpentaria on the north and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Official Year Book No. 1 an enumeration is given of the features of the coastline of Australia (*see* pp. 60-68).

Prior to 1895 the official time adopted in the several colonies was for most purposes the mean solar time of the capital city of each. In 1894 and 1895, after several conferences had been held, legislation was enacted by each of the colonies whereby the mean solar times of the meridians of east longitude 120° (Western Australia), 135° (South Australia and Northern Territory) and 150° (Queensland, New South Wales, Victoria and Tasmania) were adopted. In 1898, however, the South Australian legislature amended its earlier provision and adopted the mean solar time of the meridian 142° 30' E. longitude as the standard time for that colony. For further information on this subject *see* Official Year Book No. 39, page 65.

4. Geographical Features of Australia.—(i) *General.* The following description is only a broad summarization of the main physical characteristics of the Australian continent. For greater detail of particular geographical elements earlier issues of the Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.

(ii) *Orography of Australia.* (a) *General Description of the Surface.* Owing to the absence of any very high mountain chains, and to the great depression in the centre of Australia, the average elevation of the Australian continent over the level of the surrounding oceans is less than that of any of the other continents. Three-quarters of the land-mass lies between the 600 and 1,500 feet contours in the form of a huge plateau.

A section through the continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole eastern coast, is well watered by rivers. Of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, its average may, nevertheless, be taken as about forty to fifty miles. From this, the Great Dividing Range, extending from the north of Queensland to the south of New South Wales, and thence sweeping westward through Victoria, rises often abruptly, and frequently presents bold escarpments on its eastern face. The descent on its western slopes is gradual, until, in the country to the north of Spencer's Gulf, the plain is not above sea-level, and occasionally is even below it. Then there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these another coastal plain.

The great central plain or plateau is the most distinctive feature of the Australian continent and its climatic peculiarities are doubtless to be largely ascribed thereto.

(b) *Mountain Systems.* The main mountain feature of Australia is the Great Dividing Range, which runs along the whole eastern coast of the continent and can be traced over the islands of Torres Strait to New Guinea, while in the south one branch sweeps westwards towards the boundary of Victoria and South Australia, and the other—the main branch—finds its termination in Tasmania.

This mountain system is at no place more than 250 miles from the eastern coastline and it approaches to less than 30 miles. On the whole, it is much closer to the coast in both New South Wales and Victoria than it is in Queensland, the corresponding average distances being about 70, 65 and 130 miles respectively.

The mountains of Australia are relatively low. Thus in Queensland the Great Dividing Range reaches a height above sea-level of less than 5,500 feet, the highest peak being Mount Bartle Frere. In New South Wales Mount Kosciuszko is only about 7,300 feet, and Mount Bogong in Victoria about 6,500 feet high. This fact, viz., that there are no high mountains in Australia, is also an important element in considering the climate of Australia.

There is no connexion between the mountains of the eastern and other States of Australia. In South Australia and Western Australia heights of three and four thousand feet are attained. In Tasmania the greatest height is only a little more than 5,000 feet.

It may be of interest to observe that at one time Tasmania was doubtless connected with the mainland. As the Great Dividing Range can in the north be traced from Cape York across Torres Strait to New Guinea, so can its main axis be similarly followed across the shallow waters of Bass Strait and its islands from Wilson's Promontory to Tasmania, which may be said to be completely occupied by ramifications of the chain. The central part of the island is occupied by an elevated plateau, somewhat triangular in shape, and presenting bold fronts to the east, west and north. This does not extend in any direction more than about 60 miles. The plateau rests upon a more extensive tableland, the contour of which closely follows the coastline, and occasionally broadens out into low-lying tracts not much above sea-level. The extreme south of the island is rugged in character.

(iii) *Hydrology of Australia.* (a) *Rainfall.* On the whole, Australia is a country with a limited rainfall. This is immediately evident on studying its river systems, its lakes, and its artesian areas. Its one large river system is that of the Murray and Darling Rivers, of which the former stream is the larger and more important. Many of the rivers of the interior run only after heavy rains. Depending almost entirely on rainfall, a consequence of the absence of high mountains, they drain large areas with

widely varying relation as between rainfall and flow. Thus it has been estimated that not more than 10 per cent. of the rainfall on the "catchment-area" of the Darling River above Bourke (New South Wales) discharges itself past that town. The rate of fall is often very slight.

(b) *Rivers.* The rivers of Australia may be divided into two great classes, those of the coastal plains with moderate rates of fall; and those of the central plains with very slight fall. Of the former not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The two longest rivers of the northern part of the eastern coast are the Burdekin, discharging into Upstart Bay, with a catchment area of 53,500 square miles, and the Fitzroy, which reaches the sea at Keppel Bay and drains about 55,600 square miles,

The Hunter is the largest coastal river of New South Wales, draining about 11,000 square miles before it empties itself at Newcastle. The Murray River, with its great tributary the Darling, drains a considerable part of Queensland, the major part of New South Wales and a large part of Victoria. It debouches into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Darling-Murray from the source of the Darling to the mouth of the Murray is about 2,300 miles. In good seasons the river is navigable for a considerable proportion of its length.

The rivers of the north-west coast of Australia (Western Australia) are of considerable size, e.g., the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale and Ord. So also are those in the Northern Territory, e.g., Victoria and Daly. The former of these, estimated to drain 90,000 square miles, is said to be navigable for 50 miles.

The rivers on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert and Mitchell, are also of considerable size.

Owing to the small amount of fall of many of the interior rivers, they may flood hundreds of miles of country in wet seasons, while in dry seasons they form a mere succession of waterholes or are entirely dry. It is this fact that explains the apparently conflicting reports of the early explorers, one regarding the interior as an inland sea, and another as a desert.

The rivers of Tasmania have short and rapid courses, as the configuration of the territory would indicate.

(c) *Lakes.* The "lakes" of Australia may be divided into three classes, true permanent lakes; lakes which, being very shallow, become mere morasses in dry seasons or even dry up and finally present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening out into a lake-like expanse.

The second class is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lake Torrens, Gairdner, Eyre and Frome, are of considerable extent.

(d) *Artesian Areas.* A considerable tract of the plain country of New South Wales and Queensland carries a water-bearing stratum, usually at a great depth. A large number of artesian bores have been put down, from which there is a considerable flow. These are of great value and render large areas available which otherwise would be difficult to occupy even for pastoral purposes.

For further information on this subject, see Chapter XXVI.—Water Conservation and Irrigation.

5. *Fauna, Flora, Geology and Seismology of Australia.*—Special articles dealing with these features have appeared in previous issues of the Official Year Book, but limits of space naturally preclude their repetition in each volume. The nature and location of these articles can be readily ascertained from the special index preceding the index of maps and graphs at the end of this issue.

§ 2. Climate and Meteorology of Australia.

NOTE.—This Section has been prepared by the Director, Commonwealth Meteorological Bureau, and the various States and Territories have been arranged in the standard order adopted by that Bureau.

1. *Introductory*.—Previous issues of the Official Year Book, notably No. 3, pp. 79 to 83, and No. 4, pp. 84 and 87, contained outlines of the history of Australian meteorology and the creation and organization of the Commonwealth Bureau of Meteorology. Official Year Book No. 38, pp. 30–32, contained paragraphs devoted to (i) Organization of the Meteorological Service; (ii) Meteorological Publications; (iii) Equipment; and (iv) Meteorological Divisions.

By reason of its insular geographical position and the absence of striking physical features, whether in marine gulfs or in important mountains, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

The average elevation of the surface of the land is low, probably close to 900 feet above the sea. The altitudes range up to a little more than 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the Great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and here the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

2. *Temperature*.—(i) *Effective Temperature*. When a meteorologist speaks of temperature he means the temperature of the air indicated by a thermometer sheltered from precipitation, from direct rays of the sun and from radiation of heat from the ground and neighbouring objects, yet freely exposed to the circulation of the air. In other words, he means temperature measured under conditions standardized as near as possible in a Stevenson Screen, which is the standard housing for meteorological thermometers.

This shade temperature as measured by a “dry bulb” thermometer shows only the actual temperature experienced by dry inorganic substances, not the *sensible* temperatures felt by organic bodies. In the case of human beings, sensible temperature is affected by the rate of conduction of heat to or from the body by moving air and also by the rate of cooling due to evaporation from the skin and respiratory passages. The wind and humidity therefore determine the sensible temperature.

The humidity (relative humidity) is determined from the readings of the dry and wet bulb thermometers. Of late years, however, with increasing interest in human comfort in tropical climates, another term, *effective* temperature, has come into use. It may be defined as “the temperature of a still, saturated atmosphere which would on the average produce the same feeling of warmth or cold as the atmosphere in question”.*

Isotherms of effective temperature (not corrected for altitude) have been determined for Australia.† A map showing effective temperature for Australia for January (9 a.m.) will be found on page 33.

It will be seen that the 80° F. isotherm is confined to a very narrow tract of country on the north-west coast of Western Australia. The 75° F. isotherm extends broadly from Onslow on the north-west coast of Western Australia to Daly Waters to Camooweal to Moreton in Cape York Peninsula following in a general way the coastline of Northern Australia but from 100 to 300 miles inland.

* Houghton, F. C., Teague, W. W. and Miller, W. E. (1926) Amer. Soc. Heat. Vent. Engngs.

† Hounam, C. E. Effective Temp. Data, C.W.B. unpublished.

Later investigations have established "comfort zones" bounded by limits of effective temperature within which people will feel comfortable. American research workers have determined the following figures † :—

COMFORT ZONES : EFFECTIVE TEMPERATURES.

Season.	No subjects feel comfortable below—	Fifty per cent. of subjects feel comfortable between—	No subjects feel comfortable above—
Winter	60° F.	63° and 71° F.	74° F.
Summer	64° F.	66° and 75° F.	79° F.

Queensland investigators‡ in recent years have divided some towns of Queensland into three classes on the basis of deviation from comfort :—

Class 1 (Sub-tropics).—Quite suitable for Caucasian habitation—Rockhampton, Bundaberg, Brisbane, Longreach, Charleville.

Class 2 (Marginal tropics).—Suitable for Caucasian habitation, but requires adaptation in summer—Mackay, Townsville.

Class 3 (Tropics).—(a) Permissible for Caucasian habitation but requires selection and marked adaptation—Cardwell, Cairns, Cloncurry. (b) Not suitable for continuous Caucasian habitation—Cape York, Burketown.

These results of recent years bear out investigations made previously in Australia§ in which the atmospheric vapour pressure was used as a measure of comfort, its value for this purpose being that it has equal effect in both indoor and outdoor climates. The limits of comfort range from .2 to .5 inch of vapour pressure. After drawing isopleths for effective temperature (not corrected for altitude), mean vapour pressure reduced to a logarithmic scale, and mean wet bulb temperature, it is found that there is close agreement in defining zones of relative discomfort.

(ii) *Seasons*. The Australian seasons are :—Summer, December to February ; autumn, March to May ; winter, June to August ; spring, September to November. In most parts of Australia, January is the hottest month, but in Tasmania and southern Victoria, February is the hottest ; in the tropical north, probably because the cooling "monsoon" rains occur in late summer, December is the hottest month, and at Darwin, November.

On a rainfall basis, in the tropical north the year is divisible into "wet" and "dry" seasons, but on the basis of temperatures and physical comfort the "dry" season can be further sub-divided into two parts—"cool dry" and "warm dusty".||

(a) "*Cool dry*" Season. From May to August. The average maximum temperature ranges from 80° to 85° F., the relative humidity is low and in inland areas cold nights are experienced when the temperature drops to 40° F. The skies generally are cloudless, but in about one year in three during June or July one to two inches of rain fall.

(b) "*Warm dusty*" Season. From the end of August temperatures rise and reach a maximum in October or the beginning of November. Temperatures of over 120° F. have been recorded.

(c) "*Wet*" Season. After the first of the heavy storms, the maximum temperatures fall but still remain high with high relative humidity. At Wyndham during January, 1944 the minimum temperature did not drop below 75° F. for fourteen consecutive days. A maximum of over 100° F. was recorded on each rainless day.

In Central as in Northern Australia during the hottest months, the average temperatures range from 80° to 85° F., whereas in Southern Australia they vary from 65° to 70°.

* Yaglou, C. P. (1926) J. Industr. Hyg. Trans. Roy. Soc. Trop. Med. and Hyg. (1940) Vol. XXXII. † Yaglou, C. P. (1927) Ibid. ‡ Lee, D. H. K. Physical Comfort in Australia, Met. Bull. 20, 1934. § Barkley, H. Zones of Relative Settlement in E. Kimberleys. || Maze, W. H. Austn. Geog. June, 1945.

Throughout Australia the coldest month is July, when only a very narrow strip of the northern sea-board has an average temperature as high as 75° . Over the southern half of the continent, July temperatures range from 55° to 45° at elevations below 1,500 feet and fall as low as 35° on the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons. Hotham Heights (6,100 feet above Mean Sea Level) recorded the highest maximum of 82.0° on 20th January, 1935. In winter, readings slightly below zero are occasionally recorded on the extreme heights.

Tasmania as a whole enjoys a moderate and equable range of temperature throughout the year, although occasionally hot winds may cause the temperature to rise to 100° in the eastern part of the State.

(iii) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the mean annual isotherm for 70° F. extends in South America and South Africa as far south as latitude 33° , while in Australia it reaches only as far south as latitude 30° , thus showing that, on the whole, Australia has, latitude for latitude, a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States of America the 70° isotherm extends in several of the western States as far north as latitude 41° . In Europe, the same isotherm reaches almost to the southern shores of Spain, passing afterwards, however, along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher mean annual temperature than 70° .

The extreme range of temperature is less than 100° over practically the whole of Australia, that figure being only slightly exceeded at a very few places; it is mostly 70° to 90° over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° in some localities.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest month is only 8.4° , and the extreme readings for the year, or the highest maximum on record and the lowest minimum, show a difference of under 50° .

The highest temperature recorded in Australia was 127.5° F. at Cloncurry on 16th January, 1889. The world's highest (136° F.) was recorded at Azizia (Tripoli) on 13th August, 1922. The lowest temperature ever recorded in Australia was -8° F. at Charlotte Pass on 14th June, 1945, and again on 22nd July, 1947, as contrasted with the world's lowest recorded temperature of -90° F. at Verkhoyansk (Siberia) on 5th and 7th February, 1892.

A comparison of the mean temperatures and the range from the extreme maximum to the extreme minimum temperatures (in whole degrees) of the capital cities of Australia with those of the main cities of some other countries is shown in tabular form in Official Year Book No. 38, p. 42.

(iv) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases, within certain limits, with increasing distance from the coast. This is clearly illustrated by the map of extreme temperature range (page 33).

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade. The hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The longest recorded period was 160 days from 31st October, 1923 to 7th April, 1924.

The area affected and the period of duration of the longest heat waves in Australia are shown in the map and diagram on page 34.

(v) *Tabulated Data for Selected Climatological Stations in Australia.* Tables showing normal mean temperature, extreme temperatures and normal rainfall for each month for selected climatological stations in each State and the Northern Territory appeared in Official Year Book No. 40, pp. 16–23, and similar data for other selected stations in the Commonwealth in Official Year Book No. 39, pp. 41–48. Pages 26–32 and page 41 of this issue contain this information in respect of Canberra, Darwin and the six State capitals.

(vi) *Frosts.** The Observer's Handbook of the Meteorological Office, London, gives the following definition :—"Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water (32° F.) and a 'ground frost' is regarded as having occurred when the thermometer on the grass has fallen to 30.4° F. or below".

In Australia this definition is adopted for stations equipped with terrestrial minimum thermometers. However, these are few in number, so although many rainfall observers record "hoar frost" when seen, for statistical purposes a screen temperature of 36° F. is taken as indicating light frosts at ground level. For heavy frosts a screen temperature of 32° F. is taken.

In America a "killing" frost is defined as a frost "that is generally destructive of vegetation". A "black frost" is the phenomenon arising out of a combination of low temperature and low humidity causing rupturing of plant cells by expansion, when freezing takes place, of the water which they contain, though frost crystals are not formed on the ground.

The parts of Australia most subject to low temperature are the eastern highlands from about Omeo in Victoria northward to Cambooya and Bybera in Queensland. Most stations in this region experience more than ten nights per month with readings of 32° F. or under for three to five months of the year. In Tasmania, districts on the Central Plateau are subject to such conditions for three to six months of the year. Minimum temperatures of 32° F. are comparatively infrequent in Western Australia except in parts of the south and south-west. In South Australia the Yongala district is much more subject to such temperatures than other parts of the State. Much of the south-east of Queensland has a higher frequency of such readings than South Australia. Generally speaking, the frequency is controlled mainly by altitude, latitude and, to a lesser degree, by proximity to the sea.

Frosts may occur within a few miles of the coastline over the whole continent, except in the Northern Territory and a considerable area of Northern Queensland. Regions subject to frost in all months of the year comprise portions of the tablelands of New South Wales, the Eastern Highlands and parts of the Central Divide and Western district in Victoria, practically the whole of Tasmania and a small area in the south-west of Western Australia.

A map showing the average annual number of frost-free days (i.e., days on which the temperature does not fall below 36° F.) appears on page 35.

Over most of the interior of the continent and on the Highlands in Queensland as far north as the Atherton Plateau frosts appear in April and end in September, but they are infrequent in these months. Minimum temperatures of 32° F. are experienced in most of the sub-tropical interior in June and July.

3. *Humidity.*—After temperature, humidity is the most important element of climate, particularly as regards its effects on human comfort, rainfall supply and conservation and related problems.

"Vapour pressure" is the pressure exerted by the water vapour in the atmosphere. At any given temperature there is a definite upper limit to the amount of water that can exist as vapour in the atmosphere. When this limit is reached the air is said to be saturated and the pressure of the water vapour is equal to the "saturation vapour pressure".

* Foley, J. C. Frost in the Australian Region (Bull. 32, 1945).

In this publication the humidity of the air has been expressed by the relative humidity, which is the quotient of the vapour pressure divided by the saturation vapour pressure and multiplied by one hundred. The mean 9 a.m. relative humidity, as well as its highest and lowest recorded mean values at 9 a.m., are shown in the tables of climatological data for the capital cities (pages 26-32 and page 41). The mean monthly vapour pressure has also been added to these tables.

The annual curve of vapour pressure derived from the normal monthly values for this element is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of 9 a.m. vapour pressure is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity at 9 a.m. diminishes in the order, Melbourne, Sydney, Darwin, Brisbane, Canberra, Hobart, Perth, Adelaide and Alice Springs.

Further reference to humidity will be found in the section on effective temperature (page 13).

4. *Evaporation.*—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia the question is, perhaps, of more than ordinary importance, since in its drier regions water has often to be conserved in tanks and dams. The magnitude of the economic loss by evaporation will be appreciated from the map reproduced herein (see page 36) which shows that the yearly amount varies from about 20 inches over Western Tasmania to more than 100 inches over the central and north-western parts of Australia. Over an area of 70 per cent. of the continent, comprising most inland districts and extending to the coast in the North-West and Eucla divisions of Western Australia, during no month of the year does the rainfall exceed the evaporation. The central and north-western portions of the continent, comprising 46 per cent. of the total land mass, experience evaporation more than twice as great as their rainfall; it is noteworthy that the vegetation over most of this region is characterized by acacia, semi-desert, shrub steppe and porcupine grass. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more they are protected from the direct rays of the sun and from winds by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

(ii) *Comments on Map of Average Annual Evaporation.* The map of average annual evaporation in Australia (see page 36) has been compiled on the basis of records obtained from a number of evaporimeters supplemented by estimates derived from records of saturation deficit by applying the Waite Institute factor of 263.* Some modification of the latter values was found to be necessary in comparison with recordings of evaporimeters.

The standard evaporation tank used in Australia is cylindrical in form and is 36 inches in diameter and 36 inches deep. It is surrounded by a 6-inch water jacket and the whole is sunk into the ground so that the water surface is approximately at ground level.

Saturation deficit is obtained from readings of dry and wet bulb thermometers exposed in a standard Stevenson thermometer shelter. Saturation deficit is the difference between the vapour pressure indicated by the dry and wet bulb readings, and the saturation vapour pressure corresponding to the dry bulb temperature.

The Waite formula, $e = 263 \text{ s.d.}$, is not an exact relationship, but it takes account of one of the major factors in evaporation, i.e., the difference between saturation vapour pressures at the mean dew point and at the mean air temperature. Errors in the formula are found to be fairly consistent in considerable areas of Australia and corrections have

* Prescott, J. A. "Atmospheric Saturation Deficit in Australia" (Trans. Royal Society, S.A. Vol. LV., 1931).

been applied accordingly. No evaporation records are available north of latitude 20°, and corrections have been extrapolated for these areas. The evaporation stations on which estimates for the tropics have been based are Alice Springs (Northern Territory) and Winton (Queensland), and to a lesser degree Blackall (Queensland) and Marble Bar (Western Australia).

The map thus presents an estimate of evaporation for which allowance should be made for a certain margin of error (perhaps 10 per cent. or so) on the conservative side. In the absence of definite information, such a map should serve a useful purpose as a basis for many climatic studies.

For graphs and tables of mean monthly evaporation and rainfall at certain selected stations *see* Official Year Book No. 37, pp. 34-35.

5. **Rainfall.**—(i) *General.* The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by its physiographical features.

Australia lies within the zones of the south-east trades and "prevailing" westerly winds. The southern limit of the south-east trades strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains from the New South Wales northern border to Thursday Island, upon which the rain-laden winds blow. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the reliable, generally light to moderate rains enjoyed by the south-western portion of Western Australia, the agricultural areas of South Australia, a great part of Victoria, and the whole of Tasmania.

(ii) *Distribution of Rainfall.* The average annual rainfall map of Australia (page 37) shows that the heaviest yearly falls occur on the north coast of Queensland (up to more than 160 inches) and in western Tasmania (up to 140 inches), while from 50 to over 60 inches are received on parts of the eastern seaboard from Jervis Bay (New South Wales) to the northern part of Cape York Peninsula, also around Darwin (Northern Territory), on the West Kimberley coast, near Cape Leeuwin (Western Australia), about the Australian Alps in eastern Victoria and New South Wales, and on the north-eastern highlands in Tasmania. A great part of the interior of the continent, stretching from the far west of New South Wales and the south-west of Queensland to the vicinity of Shark Bay in Western Australia, has a very low average rainfall of less than 10 inches a year. Between these two regions of heavy and very low rainfall are the extensive areas which experience useful to good rains, and in the southern and eastern parts of which are found the best country and most of the population and primary production.

(iii) *Factors Determining Occurrence, Intensity and Seasonal Distribution of Rainfall.* Reference has already been made to the frequent rains occurring in the north-eastern coastal districts of Queensland with the prevailing south-east trade winds and to similar rains in the west of Tasmania with the prevailing westerly winds. Other rains in Australia are associated mainly with tropical and southern depressions.

The former chiefly affect the northern, eastern, and to some extent the central parts of the continent and operate in an irregular manner during the warmer half of the year, but principally from December to March. They vary considerably in activity and scope from year to year, occasionally developing into severe storms off the east and north-west coasts. Tropical rainstorms sometimes cover an extensive area, half of the continent on occasions receiving moderate to very heavy falls during a period of a few days. Rain is also experienced, with some regularity, with thunderstorms in tropical areas, especially

near the coast. All these tropical rains, however, favour mostly the northern and eastern parts of the area referred to; the other parts further inland receive lighter, less frequent and less reliable rainfall. With the exception of districts near the east coast, where some rain falls in all seasons, the tropical parts of the continent receive useful rains only on rare occasions from May to September.

The southern depressions are most active in the winter—June to August—and early spring months. The rains associated with them are fairly reliable and frequent over southern Australia and Tasmania, and provide during that period the principal factor in the successful growing of wheat. These depressions also operate with varying activity during the remainder of the year, but the accompanying rains are usually lighter. The southern rains favour chiefly the south-west of Western Australia, the agricultural districts of South Australia, Victoria, Tasmania, and the southern parts of New South Wales. They sometimes extend into the drier regions of the interior, but only infrequently and irregularly.

The map showing mean monthly distribution of rainfall over Australia (page 38) gives in graphic form information on the amount and occurrence of rain.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Deeral on the north coast-line has an average annual rainfall of 172.26 inches and Tully on the Tully River 179.26 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 169 inches. The maximum and minimum annual amounts there are:—Deeral, 287.18 in 1945 and 94.65 inches in 1951, or a range of 192.53 inches; Tully, 310.92 in 1950 and 104.98 inches in 1943, or a range of 205.94 inches; Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches; Innisfail, 232.06 in 1950 and 69.87 inches in 1902, or a range of 162.19 inches; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On five occasions more than 200 inches have been recorded at Goondi, the last of these being in 1950, when 204.97 inches were registered. The records at this station cover a period of 67 years.

In twenty-seven years of record Tully has exceeded 200 inches on ten occasions, whilst in a record of 28 complete years Harvey Creek has four times exceeded this figure.

In Tasmania the wettest part is in the West Coast region, the average annual rainfall at Lake Margaret being 146.51 inches, with a maximum of 177.30 inches in 1948.

The driest known part of the continent is in an area of approximately 180,000 square miles surrounding Lake Eyre in South Australia, where the annual average is between 4 and 6 inches and where the fall rarely exceeds 10 inches for twelve months.

Records at stations have at times been interrupted, but of the 23 stations in this region which have an annual average of less than 5 inches, six have complete records extending from 30 to 55 years. Of these Mulka has the lowest average of 4.05 inches (34 years), followed by Troudaninna with an average of 4.15 inches in 42 years. Troudaninna in the period 1893 to 1936 had only one year in which the total exceeded 9 inches (11.07 inches in 1894). There have been protracted periods when the average has even been less than 3 inches. From 1895 to 1903 Troudaninna received the following annual totals:—2.78, 0.99, 5.71, 3.04, 3.18, 2.83, 1.80, 1.11, 4.87, an average of 2.91 inches. From 1918 to 1929 the average was only 2.65 inches, and in this period from December, 1924 to November, 1929 the average was only 1.70 inches.

Mulka since 1918 has only once exceeded 10 inches for the annual total (11.72 inches in 1920), and in 34 years on 16 occasions the annual total has been less than 3 inches. In one particular period from October, 1926 to September, 1930, the average was only 1.26 inches (505 points in 48 months). However, at Kanowana, an even lower four-year average of 1.12 inches was recorded between 1896 and 1899 with yearly totals of 43, 225, 87 and 94 points. An even smaller total than 43 points was recorded at Mungeranie in 1889 when only 39 points were recorded on five days.

The average number of rain days per month in this region is only 1 to 2 and the annual number ranges between 10 and 20. Oodnadatta (standard 30 years' average rainfall equal to 4.44 inches) has an average of 20 days of rain per year, while Cordillo Downs in the extreme north-east corner of the State of South Australia receives 5.16 inches on twelve days per year, averaging about one day of rain each month in the thirty years' period 1911-1940.

No part of the earth, so far as is known, is absolutely rainless, and although at Arica, in northern Chile, the rainfall over a period of 15 years was nil, a further two years in which there were three measurable showers made the "average" for 17 years 0.02 inches.

(v) *Quantities and Distribution of Rainfall.* The general distribution is best seen from the rainfall map (page 37) which shows the areas subject to average annual rainfalls lying between certain limits. The proportions of the total area of each State and of Australia as a whole enjoying varying quantities of rainfall determined from the latest available information are shown in the following table:—

AVERAGE ANNUAL RAINFALL DISTRIBUTION.
(Per Cent.)

Average Annual Rainfall.	W. Aust.	N. Terr.	S. Aust.	Q'land.	N.S.W. (a)	Vic.	Tas. (b)	Total.
Under 10 inches ..	58.0	24.7	82.8	13.0	19.7	Nil	Nil	37.6
10 and under 15 ins.	22.4	32.4	9.4	14.4	23.5	22.4	Nil	19.9
15 and under 20 ..	6.8	9.7	4.5	19.7	17.5	15.2	0.7	10.9
20 and under 25 ..	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.1
25 and under 30 ..	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.3
30 and under 40 ..	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.6
40 inches and over	2.1	12.6	Nil	11.4	6.1	10.4	56.5	8.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Australian Capital Territory.
available.

(b) Over an area of 2,777 square miles no records are

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with an average rainfall of 44.80 inches, occupies the chief place; Brisbane, Perth, Melbourne, Hobart, Canberra and Adelaide follow in that order, Adelaide with 21.09 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.46 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, average figures for the various climatological districts have been selected. (See map on page 38). The figures for Northern Rivers (District 14), show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for the Central Coast, south-west of Western Australia (District 9), are the reverse, for while the summer months are dry, the winter months are very wet. In the districts containing Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for both districts. In Queensland, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons in eastern parts.

On the coast of New South Wales, the first half of the year is the wettest, with heaviest falls in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 inches or more, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *Tables of Rainfall.* The following table of rainfall for a fairly long period of years for each of the Australian capitals affords information as to the variability of the fall in successive years, and the list which follows in the next paragraph of the more remarkable falls furnishes information as to what may be expected on particular occasions.

RAINFALL : AUSTRALIAN CAPITAL CITIES.

Year.	PERTH.		ADELAIDE.		BRISBANE.		SYDNEY.		CANBERRA(a)		MELBOURNE.		HOBART(b)	
	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.
	in.		in.		in.		in.		in.		in.		in.	
1920 ..	40.35	124	26.70	119	39.72	122	43.42	159	..	..	28.27	162	18.00	182
1921 ..	41.09	135	22.64	100	54.31	167	43.34	140	..	..	29.76	151	18.04	159
1922 ..	31.86	135	23.20	117	35.82	109	39.35	136	..	..	25.02	151	28.27	189
1923 ..	44.47	134	29.79	139	23.27	93	37.01	132	..	..	22.64	158	32.93	198
1924 ..	33.79	119	23.44	143	41.08	114	37.01	136	..	..	36.48	171	28.76	197
1925 ..	31.41	126	21.91	118	53.10	139	50.35	145	..	..	17.57	144	22.67	170
1926 ..	49.22	167	22.20	116	30.82	111	37.07	127	..	..	20.51	149	25.79	187
1927 ..	36.59	133	16.92	101	62.08	130	48.56	138	..	..	17.98	135	20.13	185
1928 ..	44.88	140	19.43	107	52.64	145	40.07	130	18.59	90	24.09	151	30.23	205
1929 ..	36.77	132	17.51	119	39.78	118	57.90	129	23.12	70	28.81	168	26.55	194
1930 ..	39.80	129	18.65	116	41.22	144	44.47	141	17.33	82	25.41	145	19.38	152
1931 ..	39.18	118	22.26	145	66.72	136	49.22	153	24.02	103	28.63	164	27.17	179
1932 ..	39.40	121	25.04	141	24.79	97	37.47	146	20.18	118	31.08	179	30.29	155
1933 ..	32.47	116	22.12	130	49.71	118	42.71	153	20.78	96	22.28	136	23.18	162
1934 ..	40.61	120	20.24	125	54.26	117	64.91	183	35.58	131	33.53	157	23.17	194
1935 ..	32.28	129	23.45	140	34.64	111	30.97	131	23.78	95	29.98	183	32.22	196
1936 ..	30.64	118	19.34	121	21.77	101	30.22	130	26.24	108	24.30	187	19.60	178
1937 ..	35.28	120	23.01	128	34.79	113	52.00	157	20.46	82	21.45	141	20.65	160
1938 ..	29.64	111	19.26	119	43.49	110	39.17	132	19.26	79	17.63	131	31.32	169
1939 ..	45.70	123	23.29	139	44.43	122	33.67	127	27.63	116	33.11	166	27.23	188
1940 ..	20.00	98	16.16	116	42.37	93	39.34	125	17.38	64	19.83	126	17.17	135
1941 ..	34.74	122	22.56	126	31.50	105	26.74	129	19.55	91	31.78	157	23.49	145
1942 ..	39.24	140	25.44	133	44.01	125	48.29	121	25.76	104	29.79	148	19.42	163
1943 ..	31.46	117	17.84	135	50.68	126	50.74	136	24.59	123	18.80	150	20.84	149
1944 ..	27.39	123	17.13	114	27.85	100	31.04	115	12.05	75	21.32	143	26.23	151
1945 ..	52.67	137	17.85	105	48.16	130	46.47	136	22.35	100	19.22	152	16.92	157
1946 ..	41.47	122	22.59	135	38.66	83	36.05	111	22.31	94	29.80	177	39.45	193
1947 ..	43.42	137	21.89	146	60.30	146	41.45	137	27.95	131	30.47	163	38.61	181
1948 ..	34.75	126	21.40	122	41.54	106	38.83	131	32.11	101	20.98	155	23.42	178
1949 ..	27.15	126	18.23	119	47.18	121	66.26	149	27.71	100	31.41	163	22.85	157
1950 ..	32.27	122	16.06	91	63.93	152	86.33	183	43.35	132	26.18	147	19.25	131
1951 ..	34.14	127	25.44	135	33.89	87	53.15	143	22.00	103	29.85	155	24.57	163
1952 ..	39.26	123	19.99	128	33.49	122	59.10	130	37.87	141	34.39	177	30.35	165
1953 ..	37.14	119	20.00	121	43.60	101	40.86	110	19.40	102	28.38	148	28.06	162
Average No. of Years Standard 30 years' Normal	34.98	122	21.04	121	44.70	125	46.99	151	24.28	101	25.78	142	24.70	168
	78	78	115	115	102	94	95	95	26	26	98	98	71	71
	35.90	128	21.09	122	40.09	117	44.80	143	..	..	25.89	156	25.03	180

(a) Commonwealth Forestry Bureau ; records in issues prior to No. 36 were for the station at Acton which closed down in 1939. (b) Records taken from present site commenced 1883.

6. Remarkable Falls of Rain.—The following are the most notable falls of rain which have occurred within a period of twenty-four hours unless otherwise indicated in the various States and Territories. For other very heavy falls at various localities reference may be made to Official Year Books No. 14, pp. 60–64, No. 22, pp. 46–48 and No. 29, pp. 43, 44 and 51.

HEAVY RAINFALLS : WESTERN AUSTRALIA, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
		in.			in.
Whim Creek ..	3 Apr., 1898	29.41	Balla Balla ..	21 Mar., 1899	14.40
Thangoo ..	17–19 Feb., '96	24.18a	Winderrrie ..	17 Jan., 1923	14.23
Fortesque ..	3 May, 1890	23.36	Pilbara ..	2 Apr., 1898	14.04
Roebuck Plains..	6 Jan., 1917	22.36	Broome ..	6 Jan., 1917	14.00
	5 Jan., 1917	14.01	Carlton Hill ..	7 Feb., 1942	12.75
Widjip..	1 Apr., 1934	19.54	Towrana ..	1 Mar., 1943	12.16
Derby ..	7 Jan., 1917	16.47	Marble Bar ..	2 Mar., 1941	12.00
Boodarie ..	21 Mar., 1899	14.53	Jimba Jimba ..	1 Mar., 1943	11.54

(a) Recorded over period of 72 hours.

HEAVY RAINFALLS : NORTHERN TERRITORY, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Brock's Creek ..	24 Dec., 1915	14.33	Cape Don ..	13 Jan., 1935	13.58
Groote Eylandt..	9 Apr., 1931	14.29	Bathurst Island		
Borrooloola ..	14 Mar., 1899	14.00	Mission ..	7 Apr., 1925	11.85
Timber Creek ..	5 Feb., 1942	13.65	Darwin ..	7 Jan., 1897	11.67

HEAVY RAINFALLS : SOUTH AUSTRALIA, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Ardrossan ..	18 Feb., 1946	8.10	Wilmington ..	1 Mar., 1921	7.12
Carpa ..	18 Feb., 1946	7.83	Port Victoria ..	18 Feb., 1946	7.08
Wynbring ..	28 Feb., 1921	7.70	Mannum ..	25 Jan., 1941	6.84
Edithburg ..	18 Feb., 1946	7.46	Cape Willoughby	18 Feb., 1946	6.80
Hesso ..	18 Feb., 1946	7.36	Wirrabarra ..	7 Mar., 1910	6.80
Maitland ..	18 Feb., 1946	7.21	Torrens Vale ..	25 Jan., 1941	6.77

HEAVY RAINFALLS : QUEENSLAND, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Crohamhurst	2 Feb., 1893	35.71	Flat Top Island ..	21 Jan., 1918	25.18
Port Douglas ..	1 Apr., 1911	31.53	Landsborough ..	2 Feb., 1893	25.15
Yarrabah ..	2 Apr., 1911	30.65	Babinda (Cairns)	2 Mar., 1935	24.14
Kuranda ..	2 Apr., 1911	28.80	Goondi ..	30 Jan., 1913	24.10
Sarina ..	26 Feb., 1913	27.75	Banyan (Cardwell)	12 Feb., 1927	24.00
Harvey Creek ..	3 Jan., 1911	27.75	Carruchan ..	24 Jan., 1934	24.00
Plane Ck. (Mackay)	26 Feb., 1913	27.73	Tully Mill ..	12 Feb., 1927	23.86
Deeral ..	2 Mar., 1935	27.60	Macnade Mill ..	6 Feb., 1901	23.33
Springbrook ..	24 Jan., 1947	27.07	Woodlands (Yepp'n)	3 Jan., 1893	23.07
Buderim Mountain	11 Jan., 1898	26.20			

HEAVY RAINFALLS : NEW SOUTH WALES, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Dorrigo ..	24 June, 1950	25.04	Viaduct Creek ..	15 Mar., 1936	20.00
Cordeaux River..	14 Feb., 1898	22.58	Buladelah ..	16 Apr., 1927	19.80
Morpeth ..	9 Mar., 1893	21.52	Madden's Creek ..	13 Jan., 1911	18.68
Broger's Creek ..	13 Jan., 1911	20.83	Condong ..	27 Mar., 1887	18.66
South Head (Sydney Harbour)..	16 Oct., 1844	20.41	Candelo ..	27 Feb., 1919	18.58
" "	29 Apr., 1841	20.12	Mt. Kembla ..	13 Jan., 1911	18.25
Mount Pleasant..	5 May, 1925	20.10	Bega ..	27 Feb., 1919	17.88
Broger's Creek ..	14 Feb., 1898	20.05	Kembla Heights..	13 Jan., 1911	17.46
Towamba ..	5 Mar., 1893	20.00	Foxground ..	11 Sep., 1950	17.04
			Nimbin ..	6 Feb., 1939	16.26

HEAVY RAINFALLS : AUSTRALIAN CAPITAL TERRITORY, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Cotter Junction..	27 May, 1925	7.13	Uriarra (Woodside)	27 May, 1925	6.57
Canberra (Acton)	27 May, 1925	6.84	Land's End ..	27 May, 1925	6.35

HEAVY RAINFALLS : VICTORIA, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Balook ..	18 Feb., 1951	10.81	Blackwood (Green-hill) ..	26 Jan., 1941	8.98
Hazel Park ..	1 Dec., 1934	10.50	Tambo Crossing ..	13 July, 1925	8.89
Kalorama ..	1 Dec., 1934	10.05	Corinella ..	28 June, 1948	8.75
Cann River ..	16 Mar., 1938	9.94	Erica ..	1 Dec., 1934	8.66
Tonghi Creek ..	27 Feb., 1919	9.90	Mt. Buffalo ..	6 June, 1917	8.53
Cann River ..	27 Feb., 1919	9.56	Korumburra ..	1 Dec., 1934	8.51
Olinda ..	1 Dec., 1934	9.10			

HEAVY RAINFALLS : TASMANIA, UP TO 1953, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Lottah ..	8-10 Mar., '11	18.10a	Riana ..	5 Apr., 1929	11.08
Gould's Country	8-10 Mar., '11	15.33a	The Springs ..	30-31 Jan., '16	10.75a
Mathinna ..	5 Apr., 1929	13.25	Triabunna ..	5 June, 1923	10.20
Cullenswood ..	5 Apr., 1929	11.12			

(a) Recorded over period of 48 hours.

7. **Snowfall.**—Light snow has been known to fall occasionally as far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria as far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Mt. Kosciusko and similar localities the snow never entirely disappears after a severe winter.

8. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstones occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. Tornadoes or tornadic tendencies are almost invariably accompanied by hail, and on the east coast the clouds from which the stones fall are frequently of a remarkable sepia-coloured tint.

9. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions, ranged as high as 30.935 inches (at Hobart on 13th July, 1846) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on 10th March, 1918. For graphs of Mean Barometric Pressure at Capital Cities see Official Year Book No. 37, p. 35.

10. **Wind.**—(i) *Trade Winds.* The two distinctive wind currents in Australia are, as previously stated, the south-east trade and the "prevailing" westerly winds. As the belt of the earth's atmosphere in which they blow apparently follows the sun's ecliptic path north and south of the equator, so the area of the continent affected by these winds varies at different seasons of the year. During the summer months the anticyclonic belt travels in high latitudes, thereby bringing the south-east trade winds as far south

as 30° south latitude. The "prevailing" westerly winds retreat a considerable distance to the south of Australia, and are less in evidence in the hot months. When the sun passes to the north of the equator, the south-east trade winds follow it, and only operate to the north of the tropics for the greater part of the winter. The westerly winds come into lower latitudes during the same period of the year. They sweep across the southern areas of the continent from Cape Leeuwin to Cape Howe, and during some seasons are remarkably persistent and strong, and occasionally penetrate to almost tropical latitudes.

(ii) *North-west Monsoon.* As the belt of south-east trade winds retreats southward during the summer, it is replaced in the north and north-west of Australia first by a sequence of light variable winds and then by the north-west monsoon. In Australia, the north-west monsoon has not the persistence nor regularity of the Indian south-west monsoon but is sufficiently characteristic for the summer in the north of Australia to be called the "North-west Season". In central and eastern Queensland, the north-west monsoon in the summer has comparatively little effect and the trade winds, albeit weakened, are still dominant winds. With the migration of the sun northward in the autumn, the north-west monsoon is itself replaced first by light variable winds and then by the trade winds.

Further particulars of Australian wind conditions and meteorology will be found in Official Year Book No. 38, pp. 58-61.

(iii) *Cyclones and Storms.* The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to deep depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coastline of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these disturbances are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the south-west and finally towards the south-east.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April, inclusive. They usually originate over the ocean to the north or north-west of Australia, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coast-line, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly busters", a characteristic feature of the eastern part of Australia, appear in previous issues of the Official Year Book (see No. 6, pp. 84-86), and a special article dealing with "Australian Hurricanes and Related Storms" appears in Official Year Book No. 16, pp. 80-84.

Depressions vary considerably in their isobaric forms, intensity and other characteristics. Some bring rain in variable quantities, some heat and others mainly wind. A common type in southern Australia is the "A" shaped trough with an abrupt "backing" of the wind or "line squall" as it passes. The cold front is most frequently found through the centre of the "trough" because it is along this line, and extending into the upper levels of the atmosphere, that the demarcation of different air masses is so well defined. The best rains occur in inland Australia when extensive masses of warm moist tropical air move into the interior and are forced to rise by convergence of flow or by impact with a cold air stream.

The speed of low pressure systems is very variable, but in general in southern latitudes the movement is of the order of 500 to 700 miles per day.

11. *Influences affecting Australian Climate.*—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the highlands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forests on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States of America, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

12. *Rainfall and Temperatures, Various Cities.*—Official Year Book No. 34, p. 28, shows rainfall and temperature and No. 38, p. 42, temperature, for various important cities throughout the world and for the Australian capitals.

13. *Climatological Tables.*—The averages and extremes for a number of climatological elements, which have been determined from long series of observations at the Australian capitals up to and including the year 1953, are given on the following seven pages.

NOTE.—The following points apply throughout:—

- (i) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (ii) Extreme values have been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

CLIMATOLOGICAL DATA : PERTH, WESTERN AUSTRALIA.
(LAT. 31° 57' S., LONG. 115° 51' E. HEIGHT ABOVE M.S.L. 210 FT.)
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. M. Sea Level and Stan- dard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 71 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. 3 p.m., 9 p.m.(a)	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	High- est Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.					3 p.m.
No. of years of observations.	30(b)	30(b)	55	41	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.897	13.8	33.2 27/98	49	E	SSW	10.37	2	2.9	14
February ..	29.922	13.5	27.1 6/08	54	ENE	SSW	8.63	2	3.1	13
March ..	29.976	12.8	27.1 6/13	66	E	SSW	7.52	2	3.5	12
April ..	30.071	10.7	39.8 25/00	61	ENE	SSW	4.62	2	4.2	9
May ..	30.062	10.6	34.4 29/32	73	NE	WSW	2.80	3	5.4	6
June ..	30.068	10.6	38.1 17/27	80	N	NW	1.82	2	5.9	5
July ..	30.082	11.2	42.3 20/26	73	NNE	W	1.76	2	5.6	5
August ..	30.084	11.8	40.3 15/03	77	N	WNW	2.37	2	5.6	6
September ..	30.073	11.8	36.0 11/05	75	ENE	SSW	3.44	1	4.9	8
October ..	30.033	12.6	33.7 6/16	65	SE	SW	5.38	1	4.8	8
November ..	29.989	13.4	32.4 18/97	63	E	SW	7.65	2	3.9	9
December ..	29.923	13.9	32.3 6/22	64	E	SSW	9.69	2	3.2	13
Year { Totals ..	—	—	—	—	—	—	66.05	23	—	108
Averages	30.015	12.2	—	—	E	SSW	—	—	4.4	—
Extremes	—	—	42.3 20/7/26	80	—	—	—	—	—	—

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	57	57	57	55	55	30(a)
January	84.6	63.3	73.9	110.2 12/34	48.6 20/25	61.6	177.3 22/14	39.5 20/25	10.4
February	85.1	63.5	74.3	112.2 8/33	47.7 1/02	64.5	173.7 4/34	39.8 1/13	9.8
March	81.3	61.5	71.4	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	8.8
April	76.3	57.4	66.8	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	7.5
May	69.0	52.8	60.9	90.4 2/07	34.3 11/14	56.1	146.0 4/25	25.3 11/14	5.7
June	64.4	49.8	57.1	81.7 2/14	35.0 30/20	46.7	135.5 9/14	26.3 11/37	4.8
July	62.8	48.0	55.4	76.4 21/21	34.2 7/16	42.2	133.2 13/15	25.1 30/20	5.4
August	63.8	48.4	56.1	82.0 21/40	35.3 31/08	46.7	145.1 29/21	26.7 24/35	6.0
September	66.8	50.4	58.6	90.9 30/18	38.5 15/47	52.4	153.6 29/16	29.2 21/16	7.2
October	69.7	52.6	61.1	95.3 30/22	40.0 16/31	55.3	157.5 31/36	29.8 16/31	8.1
November	76.7	57.3	67.0	104.6 24/13	42.0 1/04	62.6	167.0 30/25	35.5 (b)	9.6
December	81.2	60.9	71.0	107.9 20/04	48.0 2/10	59.9	168.8 11/27	39.0 12/20	10.4
Year { Averages	73.5	55.5	64.5	—	—	—	—	—	7.8
Extremes	—	—	—	112.2 8/2/33	34.2 7/7/16	78.0	177.3 22/1/14	25.1 30/7/20	—

(a) Standard 30 years' normal (1911-1940).

(b) 6/10 and 14/12.

Humidity, Rainfall and Fog.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.
No. of years over which observation extends.	30(a)	30(a)	57	57	30(a)	30(a)	78	78	78	30(a)
January ..	0.438	51	61	41	0.33	3	2.17 1879	Nil	(b) 1.74 27/79	0
February ..	0.434	51	65	43	0.50	3	2.98 1915	Nil	(b) 1.63 26/15	0
March ..	0.432	57	66	46	0.90	5	5.71 1934	Nil	(b) 3.03 9/34	0
April ..	0.397	61	73	51	1.75	8	5.85 1926	Nil	1920 2.62 30/04	1
May ..	0.365	70	81	61	5.14	15	12.13 1879	0.98 1903	3.00 17/42	2
June ..	0.337	75	83	68	7.55	17	18.75 1945	2.16 1877	3.90 10/20	2
July ..	0.322	76	84	69	7.08	19	12.28 1926	2.42 1876	3.00 4/91	2
August ..	0.316	71	81	62	5.78	19	12.53 1945	0.46 1902	2.91 14/45	1
September ..	0.341	66	75	58	3.37	15	7.84 1923	0.34 1916	1.82 4/31	0
October ..	0.345	60	75	52	2.30	12	7.87 1890	0.15 1946	1.73 3/33	0
November ..	0.374	52	63	41	0.75	7	2.78 1916	Nil 1891	1.40 15/48	0
December ..	0.409	51	63	44	0.54	5	3.05 1888	Nil	(c) 1.72 1/88	0
Year { Totals	—	—	—	—	35.99	128	—	—	—	8
{ Averages	0.370	62	—	—	—	—	18.75 6/1945	Nil	Various months	—
{ Extremes	—	—	84	41	—	—	—	—	3.90 10/6/20	—

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) 1886 and 1924.

CLIMATOLOGICAL DATA : DARWIN, NORTHERN TERRITORY.

(LAT. 12° 28' S., LONG. 130° 51' E. HEIGHT ABOVE M.S.L. 97 FT.)

Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. M.S. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.				Prevailing Direction.		Mean Amount of Evaporation (inches).	Number of days of lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m. (d)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).							
					9 a.m.	3 p.m.					
No. of years of observations.	30	13	—	—	—	—	—	30	34	30	
January	29.706	6.1	—	—	NW & S	W & NW	—	16	7.1	1	
February	29.728	6.7	—	—	W & S	W & NW	—	16	7.0	1	
March	29.751	5.3	—	—	SE	W & NW	—	14	6.2	3	
April ..	29.809	6.1	—	—	SE	E	—	6	3.5	11	
May ..	29.859	6.5	—	—	SE	E	—	1	2.1	19	
June ..	29.892	6.5	—	—	SE	E & SE	—	0	1.6	22	
July ..	29.911	6.2	—	—	SE	E & SE	—	0	1.4	23	
August	29.914	5.9	—	—	SE	NW & N	—	0	1.3	23	
September	29.886	6.2	—	—	SE & S	NW & N	—	1	2.0	18	
October	29.850	6.2	—	—	S	NW & N	—	8	3.2	10	
November	29.797	5.5	—	—	W & S	NW & N	—	17	4.8	4	
December	29.738	6.2	—	—	NW & S	NW & N	—	17	6.0	2	
Year { Totals ..	—	—	—	—	—	—	—	96	—	137	
Year { Averages	29.820	6.1	—	—	SE	NW	—	—	3.9	—	
Year { Extremes	—	—	—	—	—	—	—	—	—	—	

(a) Scale 0-10.

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30	30	30	36(a)			24	—	
January	89.9	77.3	83.6	99.1	8/28	69.2	21/44	168.0	26/42
February	89.8	77.1	83.4	97.0	13/37	63.0	25/49	163.6	23/38
March	90.2	77.1	83.6	100.0	8/31	66.6	31/45	165.6	23/38
April	91.9	75.9	83.9	98.0	19/24	60.8	11/43	163.0	13/38
May	90.9	72.6	81.4	96.8	(b)	59.2	8/49	160.0	5/20
June	87.5	69.5	78.5	98.6	17/37	55.3	18/49	155.2	2/16
July	86.6	67.8	77.2	94.0	16/21	50.7	29/42	156.0	28/17
August	88.5	69.7	79.1	96.0	30/36	58.0	(c)	156.2	28/16
September	91.0	73.9	82.5	99.0	25/28	63.8	1/46	157.0	(d)
October	92.6	77.2	84.9	99.0	14/33	68.5	26/45	160.5	30/38
November	93.2	78.2	85.7	101.0	27/24	67.4	12/45	170.4	14/37
December	92.0	78.1	85.0	100.4	13/31	68.5	24/41	169.0	26/23
Year { Averages	90.3	74.5	82.4	101.0		50.7		—	—
Year { Extremes	—	—	—	27/11/24	29/7/42	—	—	—	—

(a) Years 1918-41 at Post Office, 1942-53 at aerodrome; sites not strictly comparable.

(b) 2/37 and 2/42.

(c) 9/42 and 12/42.

(d) 28/16 and 3/21.

Humidity, Rainfall and Fog.

Month.	Vapour- Pres- sure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).						Fog.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly	Mean No of Days of Rain.	Greatest Monthly	Least Monthly	Greatest in One Day.	Mean No of Days of Fog.	
No. of years over which observation extends	57	57	57	57	30	20	85	85	85	30	
January	0.925	78	80	69	16.18	20	27.86 1906	2.25 1930	11.67 7/97	0	
February	0.920	79	88	71	12.37	18	24.46 1949	0.44 1931	5.25 15/49	0	
March	0.912	78	84	69	11.18	17	21.88 1898	0.81 1911	7.18 6/19	0	
April	0.800	69	80	60	3.08	6	23.74 1891	Nil (a)	5.51 1/29	0	
May	0.652	63	76	49	0.33	1	14.00 1953	Nil (a)	2.19 6/22	0	
June	0.545	61	75	52	0.09	1	1.53 1902	Nil (a)	1.32 10/02	0.4	
July	0.522	59	71	47	0.01	0	2.56 1900	Nil (a)	1.71 2/00	1.1	
August	0.613	63	73	53	0.02	0	3.00 1870	Nil (a)	1.06 14/09	0.7	
September	0.732	65	73	54	0.60	2	2.72 1950	Nil (a)	2.00 26/50	0.2	
October	0.832	65	72	60	1.93	5	6.28 1916	Nil (a)	3.60 15/16	0	
November	0.868	68	75	62	4.32	10	15.72 1938	0.40 1870	4.73 9/51	0	
December	0.890	73	83	65	8.57	15	22.38 1910	0.98 1934	7.87 28/10	0	
Year { Totals	—	—	—	—	58.68	95	—	—	—	2.4	
Year { Averages	0.764	68	—	—	—	—	27.86 1/06	Nil (b)	11.67	—	
Year { Extremes	—	—	—	—	—	—	—	—	7/1/97	—	

(a) Various years.

(b) Various months in various years.

CLIMATOLOGICAL DATA : ADELAIDE, SOUTH AUSTRALIA.
(LAT. 34° 56' S., LONG. 138° 35' E. HEIGHT ABOVE M.S.L. 140 FT.)
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 75 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(c)	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.					3 p.m.
No. of years of observations.	30(b)	30(b)	76	37	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.917	9.9	31.6 19/99	72	SW	SW	9.27	2.3	3.6	12.9
February ..	29.953	8.8	28.8 22/96	64	NE	SW	7.56	2.0	3.7	11.2
March ..	30.037	8.3	26.2 9/12	63	S	SW	6.39	1.8	4.0	70.6
April ..	30.119	8.0	32.2 10/96	81	NE	SW	3.78	1.5	5.2	7.2
May ..	30.131	8.1	31.7 9/80	67	NE	NW	2.27	1.3	5.8	4.9
June ..	30.119	8.3	31.3 12/78	67	NE	N	1.37	1.3	6.1	4.1
July ..	30.111	8.5	28.1 25/82	60	NE	NW	1.34	1.5	6.0	4.3
August ..	30.084	9.2	32.2 31/97	57	NE	SW	1.99	2.0	5.5	5.6
September ..	30.050	9.2	30.0 2/87	69	NNE	SW	3.05	2.0	5.3	5.8
October ..	30.007	9.8	32.0 28/98	73	NNE	SW	5.03	2.8	5.3	5.7
November ..	29.990	9.9	32.2 7/48	79	SW	SW	6.89	3.3	4.9	7.2
December ..	29.922	9.9	28.1 12/91	75	SW	SW	8.74	2.2	4.2	9.5
Year { Totals ..	—	—	—	—	—	—	57.68	24.0	—	89.0
Year { Averages ..	30.037	9.0	—	—	NE	SW	—	—	5.0	—
Year { Extremes ..	—	—	32.2 (c)	81	—	—	—	—	—	—
(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 10/4/1896, 31/8/1897 and 7/11/1948.										

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

(c) 10/4/1896, 31/8/1897 and 7/11/1948.

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	97	97	97	54(b)	93	30(a)
January	84.8	61.0	72.9	117.7 12/39	45.1 21/84	72.6	180.0 18/82	36.5 14/79	10.0
February	85.7	61.8	73.7	113.6 12/99	45.5 23/18	68.1	170.5 10/00	35.8 23/26	9.3
March	81.3	59.1	70.2	110.5 9/34	43.9 21/33	66.6	174.0 17/83	32.1 21/33	7.9
April	73.0	54.4	63.7	98.6 5/38	39.6 15/59	59.0	155.0 1/83	30.2 16/17	6.0
May	66.8	50.8	58.8	89.5 4/21	36.9 26/95	52.6	148.2 12/79	25.6 19/28	4.8
June	61.0	46.6	53.8	76.0 23/65	32.5 (c)	43.5	138.8 18/79	21.0 24/44	4.2
July	59.9	45.4	52.7	74.0 11/06	32.0 24/08	42.0	134.5 26/90	22.1 30/29	4.3
August	62.3	46.2	54.3	85.0 31/11	32.3 17/59	52.7	140.0 31/92	22.8 11/29	5.4
September	66.8	48.3	57.5	91.3 29/44	32.7 4/58	58.6	160.5 23/82	25.0 25/27	6.3
October	72.5	51.7	62.1	102.9 21/22	36.0 —/57	66.9	162.0 30/21	27.3 (d)	7.3
November	78.1	55.4	66.2	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	8.6
December	82.6	58.9	70.7	114.6 29/31	43.0 (e)	71.6	175.7 7/99	32.5 4/84	9.5
Year { Averages	72.9	53.3	63.1	—	—	—	—	—	7.0
Year { Extremes	—	—	—	117.7 12/1/39	32.0 24/7/08	85.7	180.0 18/1/82	21.0 24/6/44	—

(a) Standard 30 years' normal (1911-1940).

(b) Records incomplete, 1931-34.

Discontinued, 1934.

(c) 27/1876 and 24/1944.

(d) 4/1931 and 2/1918.

(e) 16/1861 and 4/1906.

Humidity, Rainfall and Fog.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).						Fog.
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.	
No. of years over which observation extends.	30(a)	30(a)	86	86	30(a)	30(a)	115	115	115	30(a)	
January	0.327	39	59	29	0.76	5	4.00 1850	Nil (b)	2.30 2/89	0.0	
February	0.352	41	56	30	1.10	5	6.09 1925	Nil (b)	5.57 7/25	0.0	
March	0.332	44	58	29	0.87	5	4.60 1878	Nil (b)	3.50 5/78	0.0	
April	0.329	55	72	37	1.45	10	6.78 1853	Nil 1945	3.15 5/60	0.0	
May	0.313	64	76	49	2.49	13	7.75 1875	0.10 1934	2.75 1/53	0.6	
June	0.294	75	84	67	2.93	15	8.58 1916	0.42 1886	2.11 1/20	1.1	
July	0.282	75	87	66	2.49	16	5.38 1865	0.37 1899	1.75 10/65	1.4	
August	0.282	68	78	54	2.58	16	6.24 1852	0.33 1944	2.23 19/51	0.4	
September	0.289	59	72	44	2.39	13	5.83 1923	0.27 1951	1.59 20/23	0.2	
October	0.287	48	67	29	1.54	10	4.38 1948	0.17 1914	2.24 16/08	0.0	
November	0.292	41	57	31	1.22	8	4.10 1934	0.04 1885	2.08 7/34	0.0	
December	0.322	40	50	31	1.27	6	3.98 1861	Nil 1904	2.42 23/13	0.0	
Year { Totals	—	—	—	—	21.09	122	—	—	—	—	3.7
Year { Averages	0.304	52	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	87	29	—	—	8.58 6/1916	Nil (c)	5.57 7/2/25	—	

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) December to April, various years.

CLIMATOLOGICAL DATA : BRISBANE, QUEENSLAND.
(LAT. 27° 28' S., LONG. 153° 2' E. HEIGHT ABOVE M.S.L. 134 FT.)
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	No. of years of observations.	Bar. corrected to 32° F. M.S. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 105 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. to 3 p.m., 9 p.m. to 6 a.m.	No. of Clear Days.	
			Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Prevailing Direction.					
						9 a.m.					3 p.m.
		30(b)	30(b)	39	39	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)
January	..	29.865	6.8	19.7 23/47	58	SE	NE	6.74	9.8	5.7	3.5
February	..	29.912	7.0	21.0 5/31	67	SE	NE	5.49	6.5	5.6	2.4
March	..	29.975	6.5	20.3 1/29	50	S	E	5.05	5.9	5.1	5.4
April	..	30.035	5.9	16.7 3/25	57	S	E	4.05	5.0	4.3	7.8
May	..	30.083	5.8	17.9 17/26	49	SW	SE	3.09	4.1	4.3	8.3
June	..	30.091	5.7	19.0 14/28	58	SW	W & SW	2.45	2.9	4.4	9.2
July	..	30.090	5.6	15.0 2/23	52	SW	W & SW	2.69	2.8	3.8	12.4
August	..	30.105	5.8	14.8 4/35	56	SW	NE	3.51	3.8	3.1	13.1
September	..	30.067	5.9	16.1 1/48	57	SW	NE	4.51	5.8	3.3	13.0
October	..	30.019	6.3	15.7 1/41	62	S	NE	5.81	7.1	4.2	8.5
November	..	29.958	6.7	15.5 10/28	62	SE & N	NE	6.32	9.5	4.9	5.9
December	..	29.890	7.0	19.5 15/26	79	SE	NE	7.02	10.6	5.3	3.8
Year {	Totals ..	—	—	—	—	—	—	56.73	73.8	—	93.3
	Averages ..	30.007	6.3	—	—	SW	NE	—	—	4.5	—
	Extremes ..	—	—	21.0 5/2/31	79	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.				
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.					
No. of years over which observation extends.	30(a)	30(a)	30(a)	67	67	67	50(b)	67	30(a)				
January	85.5	69.1	77.3	109.8	26/40	58.8	4/93	51.0	169.0	2/37	49.9	4/93	7.6
February	84.6	68.7	76.6	105.7	21/25	58.5	23/13	47.2	165.2	6/10	49.1	22/31	7.4
March	82.3	66.2	74.3	99.4	5/19	52.4	29/13	47.0	162.5	6/39	45.4	29/13	7.0
April	79.1	61.5	70.3	93.2	(c)	44.4	25/25	50.8	153.8	11/16	36.7	24/25	7.1
May	73.7	55.6	64.7	90.3	21/23	40.6	30/51	49.7	147.0	1/10	29.8	8/97	6.6
June	69.4	51.5	60.5	88.9	19/18	36.3	29/08	52.6	136.0	3/18	25.4	23/88	6.3
July	68.6	49.4	59.0	84.3	23/46	36.1	(d)	58.2	146.1	20/15	23.9	11/90	6.8
August	71.1	50.0	60.6	91.0	14/46	37.4	6/87	53.6	141.9	20/17	27.1	9/99	7.9
September	75.5	54.8	65.1	100.9	22/43	40.7	1/96	60.2	155.5	26/03	30.4	1/89	8.2
October	79.2	60.3	69.8	101.4	18/93	43.3	3/99	58.1	157.4	31/18	34.9	8/89	8.4
November	82.3	64.6	73.4	106.1	18/13	48.5	2/05	57.6	162.3	7/89	38.8	1/05	8.2
December	84.5	67.5	76.0	105.9	26/93	56.4	13/12	59.5	165.9	28/42	49.1	3/94	8.2
Year { Averages	78.0	59.9	69.0	—	—	—	—	—	—	—	—	—	7.5
Year { Extremes	—	—	—	109.8	26/1/40	36.1	(d)	73.7	169.0	2/1/37	23.9	11/7/90	—

(a) Standard 30 years' normal (1911-1940).

(b) From 1887 to March, 1947, excluding 1927 to 1936.

(c) 9/1896 and 5/1903.

(d) 12/7/1894 and 2/7/1896.

Humidity, Rainfall and Fog.

Month.	Vapour Pressure (inches).	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog.			
		Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.		Greatest in One Day.	Mean No. of Days of Fog.	
No. of years over which observation extends.	30(a)	30(a)	67	67	30(a)	30(a)	102	102(b)	102	30(a)			
January	0.636	66	79	53	5.72	12	27.72	1895	0.32	1919	18.31	21/87	0.6
February	0.644	69	82	55	5.47	12	40.39	1893	0.58	1849	10.61	6/31	0.9
March	0.606	72	85	56	4.97	14	34.04	1870	Nil	1849	11.18	14/08	1.6
April	0.512	71	80	56	3.68	11	15.28	1867	0.04	1944	5.46	5/33	4.0
May	0.420	71	85	59	2.35	9	13.85	1876	Nil	1846	5.62	9/79	5.4
June	0.357	73	84	54	2.75	8	14.03	1873	Nil	1847	6.41	15/48	4.5
July	0.331	71	88	53	1.88	8	8.60	1950	Nil	1841	3.54	(e)	4.9
August	0.338	67	80	53	1.07	7	14.67	1879	Nil	(d)	4.89	12/87	5.9
September	0.396	62	76	47	1.69	7	5.43	1886	0.10	1907	2.46	2/94	2.8
October	0.459	59	72	48	2.27	8	11.41	1949	0.03	1948	5.34	25/49	1.6
November	0.533	61	72	45	4.00	10	12.40	1917	Nil	1842	4.46	16/86	0.7
December	0.589	62	70	51	4.24	11	17.36	1942	0.35	1865	6.60	28/71	0.4
Year { Totals			—	—	40.09	117	—	—	—	—	—	—	33.3
Year { Averages	0.485	67	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	85	45	—	—	40.39	2/1893	Nil	(e)	18.31	21/1/87	—

(a) Standard 30 years' normal (1911-1940).

(b) Records incomplete for various years between 1846 and 1859.

(c) 15/1876 and 16/1889.

(d) 1862, 1869, 1880.

(e) Various months in various years.

CLIMATOLOGICAL DATA : SYDNEY, NEW SOUTH WALES.
(LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L. 138 Ft.)
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Stan- dard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 58 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 a.m.(a)	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest- Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No. of years of observations.	30(b)	26(c)	39(d)	34(e)	26(c)	26(c)	26(c)	30(f)	30(b)	30(b)
January ..	29.875	8.9	24.9 2/22	74	S	ENE	5.71	4.8	5.7	4.8
February ..	29.942	8.1	20.1 14/18	61	NE	ENE	4.68	3.3	5.5	5.4
March ..	30.009	7.5	20.7 10/44	58	W	ENE	4.05	2.8	5.3	5.8
April ..	30.063	7.0	23.4 19/27	72	W	NE	2.91	2.4	5.0	7.0
May ..	30.098	6.8	19.6 2/26	63	W	S	2.17	1.6	4.9	7.4
June ..	30.078	7.1	24.5 17/14	70	W	W	1.61	1.5	4.8	8.3
July ..	30.070	7.2	26.6 6/31	68	W	W	1.69	1.1	4.5	10.1
August ..	30.060	7.4	24.6 9/51	68	W	NE	2.30	2.1	3.9	11.1
September ..	30.018	8.0	22.3 19/17	70	W	NE	3.00	3.0	4.2	10.0
October ..	29.976	8.2	21.1 18/44	95	W	ENE	4.17	3.9	4.9	7.4
November ..	29.935	8.5	22.6 14/30	71	W & E	ENE	4.97	4.5	5.5	5.7
December ..	29.881	8.9	24.9 10/20	75	S	ENE	5.64	5.4	5.8	4.8
Year { Totals ..	—	—	—	—	—	—	42.90	36.4	—	87.8
Year { Averages ..	30.000	7.8	—	—	W	NE	—	—	5.0	—
Year { Extremes ..	—	—	26.6 6/7/31	95	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 1915-1940. (d) 1914-1952
(e) 1917-1953. (f) 1921-1950.

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.				
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.					
	30(a)	30(a)	30(a)	95	95		95	84		95	30(b)		
No. of years over which observation extends.	30(a)	30(a)	30(a)	95	95	95	84	95	30(b)				
January ..	78.6	65.1	71.3	113.6	14/39	57.1	18/49	62.5	164.3	26/15	43.7	6/25	7.5
February ..	78.7	65.5	72.1	107.8	8/26	49.3	28/63	58.5	168.3	14/39	42.8	22/33	7.0
March ..	76.6	62.9	69.8	102.6	3/69	48.8	14/86	53.8	158.3	10/26	39.9	17/13	6.4
April ..	72.0	57.7	64.9	91.4	1/36	44.6	27/64	46.8	144.1	10/77	33.3	24/09	6.1
May ..	67.0	52.4	59.7	86.0	1/19	40.2	22/59	45.8	129.7	1/96	29.3	25/17	5.7
June ..	62.8	48.1	55.5	80.4	11/31	35.7	22/32	44.7	125.5	2/23	28.0	22/32	5.3
July ..	61.8	46.4	54.1	78.3	22/26	35.9	12/90	42.4	124.7	19/77	24.0	4/93	6.1
August ..	64.3	47.6	56.0	82.8	12/46	36.8	3/72	46.0	149.0	30/78	26.1	4/09	7.0
September ..	68.3	51.4	59.9	92.3	27/19	40.8	2/45	51.5	142.2	12/78	30.1	17/05	7.3
October ..	71.7	55.9	63.8	99.4	4/42	42.2	6/27	57.2	152.2	20/33	32.7	9/05	7.5
November ..	74.5	59.8	67.1	104.5	6/46	45.8	1/05	61.3	158.5	28/99	36.0	6/06	7.5
December ..	76.9	63.2	70.1	107.5	(c)	48.4	3/24	59.1	164.5	27/89	41.4	3/24	7.5
Year { Averages ..	71.1	56.3	63.7	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	—	113.6	14/1/39	35.7	22/6/32	77.9	168.3	14/2/39	24.0	4/7/93	6.8

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950 (different exposure prior to 1921). (c) 31/04 and 21/53.

Humidity, Rainfall and Fog.

Month.	Vapour Pres- sure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).						Fog.	
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.			
No. of years over which observation extends.	30(a)	30(a)	78	78	30(a)	30(a)	95	95	95	30(b)			
January	0.537	65	78	58	3.86	13	15.26	1911	0.25	1932	7.08	13/11	0.4
February	0.560	68	81	60	3.15	12	18.56	1873	0.12	1939	8.90	25/73	0.8
March	0.527	71	85	62	4.44	13	20.52	1862	0.42	1876	11.05	28/42	1.8
April	0.441	73	87	63	5.65	14	24.49	1861	0.06	1868	7.52	29/60	2.8
May	0.362	75	90	63	4.98	12	23.03	1919	0.18	1860	8.36	28/89	3.7
June	0.303	76	89	63	3.68	11	25.30	1950	0.19	1904	5.17	16/84	3.3
July	0.282	74	88	63	4.89	12	13.23	1950	0.10	1946	7.80	7/31	2.9
August	0.288	68	84	54	2.41	10	14.89	1899	0.04	1885	5.33	2/60	2.3
September	0.325	62	79	49	2.77	11	14.05	1879	0.08	1882	5.69	10/79	1.0
October	0.378	60	77	46	2.80	11	11.13	1916	0.21	1867	6.37	13/02	0.6
November	0.433	60	79	42	2.54	11	9.88	1865	0.07	1915	4.23	19/00	0.6
December	0.501	63	77	51	3.63	13	15.82	1920	0.23	1913	4.75	13/10	0.4
Year { Totals	—	—	—	—	44.80	143	—	—	—	—	—	—	20.6
Year { Averages	0.393	68	—	—	—	—	25.30	6/1950	0.04	8/1885	11.05	—	—
Year { Extremes	—	—	90	42	—	—	—	—	—	—	28/3/42	—	—

(a) Standard 30 years' normal (1911-1940).

(b) 1921-1950.

CLIMATOLOGICAL DATA : CANBERRA, AUSTRALIAN CAPITAL TERRITORY.

(LAT. 35° 18' S., LONG. 149° 6' E. HEIGHT ABOVE M.S.L. 1,906 Ft.)

Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 20 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. and 3 p.m., (a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No. of years of observations.	23	24	25	(b)	26	26	25	17	23	24
January ..	29.848	4.9	14.9 23/33	—	NW	NW	8.51	1.2	4.7	7.5
February ..	29.901	4.4	15.3 24/33	—	E	NW	6.68	2.4	4.9	6.6
March ..	30.012	3.9	18.2 28/42	—	E	NW	5.37	0.2	5.0	6.8
April ..	30.062	3.7	18.6 8/45	—	NW	NW	3.35	0.4	5.4	5.0
May ..	30.139	3.1	12.6 3/30	—	NW	NW	2.00	0.1	6.1	5.8
June ..	30.124	3.7	16.1 2/30	—	NW	NW	1.32	0.1	5.7	4.1
July ..	30.132	3.6	23.4 7/31	—	NW	NW	1.31	0.0	5.7	5.4
August ..	30.048	4.1	15.7 25/36	—	NW	NW	1.84	0.1	5.5	5.6
September ..	30.049	4.5	17.4 28/34	—	NW	NW	2.95	0.5	5.1	6.2
October ..	29.959	4.4	12.4 27/40	—	NW	NW	4.54	0.9	5.3	5.3
November ..	29.887	4.8	17.2 28/42	—	NW	NW	5.98	1.2	5.5	4.5
December ..	29.837	4.8	16.1 11/38	—	NW	NW	7.78	0.8	5.1	5.9
Year { Totals ..	—	—	—	—	—	—	51.60	7.9	—	68.7
Year { Averages	30.002	4.2	—	—	NW	NW	—	—	5.3	—
Year { Extremes	—	—	23.4 7/7/31	—	—	—	—	—	—	—

(a) Scale 0-10.

(b) No record.

Temperature and Sunshine.

Month.	Mean Temperature ("Fahr.).			Extreme Shade Temperature ("Fahr.).		Extreme Range.	Extreme Temperature ("Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	26	26	26	26	26	26	(a)	26	24
January	82.5	56.0	69.2	107.4 11/39	39.4 18/49	68.0	—	30.1 10/50	8.3
February	81.0	55.9	68.5	99.8 13/33	35.0 (b)	64.8	—	26.5 23/43	7.7
March	76.3	52.5	64.4	99.1 6/38	34.8 31/49	64.3	—	26.4 26/35	7.2
April	66.5	45.2	55.9	89.7 6/38	29.0 29/34	60.7	—	19.0 18/44	6.7
May	59.4	38.9	49.2	72.6 1/36	22.5 9/29	50.1	—	15.6 (c)	5.2
June	52.6	35.7	44.1	62.0 9/51	18.1 20/35	43.9	—	8.9 25/44	4.2
July	51.8	33.8	42.8	63.5 16/34	20.0 (d)	43.5	—	10.8 9/37	4.8
August	55.1	35.4	45.2	70.5 28/34	21.0 3/29	49.5	—	10.1 6/44	5.8
September	61.3	39.0	50.2	81.5 16/34	25.2 6/46	56.3	—	13.0 6/45	7.2
October	67.2	44.2	55.7	90.0 13/46	29.0 24/28	61.0	—	18.2 2/45	7.8
November	73.1	49.0	61.1	101.4 19/44	32.2 11/36	69.2	—	25.9 6/40	8.1
December	79.7	53.4	66.5	103.5 27/38	36.0 24/28	67.5	—	30.2 (e)	8.3
Year { Averages	67.2	44.9	56.1	107.4	18.1	89.3	—	8.9	—
Year { Extremes	—	—	—	11/1/39	20/6/35	—	—	25/6/44	6.8

(a) No record.

(b) 22/31 and 23/31.

(c) 13/37 and 15/46.

(d) 19/29, 9/37 and 27/43.

(e) 2/39 and 20/48.

Humidity, Rainfall and Fog.

Month.	Vapour Pres- sure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).				Fog.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.
No. of years over which observation extends.	25	25	25	25	26	26	26	26	26	22
January	0.370	53	69	39	2.09	7	6.69 1941	0.02 1932	2.47 19/50	0.0
February	0.388	58	71	40	2.09	7	6.03 1948	0.01 1933	3.24 17/28	0.2
March	0.378	65	79	48	2.36	7	12.69 1950	0.01 1940	2.53 20/52	0.6
April	0.315	71	81	54	2.18	7	5.19 1952	0.07 1942	2.52 9/45	1.3
May	0.254	79	87	67	1.95	7	6.13 1948	0.06 1935	3.88 3/48	4.6
June	0.212	81	90	72	1.75	9	6.09 1931	0.18 1944	1.65 24/31	6.1
July	0.196	81	87	73	1.61	10	4.09 1933	0.27 1940	2.02 13/33	5.2
August	0.213	75	88	60	1.93	11	4.71 1939	0.36 (a)	2.07 12/29	2.3
September	0.239	66	74	51	1.67	9	3.03 1937	0.13 1946	1.75 3/47	1.5
October	0.273	60	72	46	2.62	11	6.59 1934	0.34 1940	2.51 25/34	0.2
November	0.301	54	67	38	2.12	8	4.45 1950	0.28 1936	2.45 9/50	0.0
December	0.338	51	70	37	1.91	8	8.80 1947	0.16 1938	2.29 28/29	0.0
Year { Totals	—	—	—	—	24.28	101	—	—	—	22.0
Year { Averages	0.286	66	—	—	—	—	—	—	—	—
Year { Extremes	—	—	90	37	—	—	12.69 3/50	0.01 2/33/3/40	3.88 3/5/48	—

(a) 1944 and 1949.

CLIMATOLOGICAL DATA : MELBOURNE, VICTORIA.
(LAT. 37° 49' S. LONG. 144° 58' E. HEIGHT ABOVE M.S.L. 114 Ft.)
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Stan- dard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 93 feet.)				Prevailing Direction.		Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(e)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).							
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	14(c)	41	44	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.897	8.8	21.1 27/41	66	S & SW	S	6.55	1.8	4.9	6.8	
February ..	29.950	8.4	19.0 13/47	74	N & S	S	5.10	2.3	4.8	6.4	
March ..	30.025	7.8	17.2 19/50	66	N	S	4.26	1.8	5.3	5.5	
April ..	30.092	7.1	19.9 16/43	67	N	S	2.53	1.2	5.9	4.6	
May ..	30.113	7.4	20.0 4/44	72	N	N	1.57	0.5	6.1	3.4	
June ..	30.097	7.2	22.8 16/47	60	N	N	1.18	0.4	6.5	2.7	
July ..	30.079	8.7	20.9 9/44	68	N	N	1.16	0.3	6.3	2.9	
August ..	30.048	8.2	21.3 20/42	64	N	N	1.54	0.9	6.0	3.1	
September ..	30.001	8.5	19.4 6/53	69	N & W	N & S	2.41	1.3	5.9	3.3	
October ..	29.968	8.4	18.6 12/52	69	N	S	3.54	1.8	6.1	3.8	
November ..	29.951	8.6	19.4 4/50	65	S & SW	S	4.62	2.3	6.0	3.6	
December ..	29.896	8.7	21.0 11/52	61	S & SW	S	5.85	1.9	5.6	4.5	
Year { Totals ..	—	—	—	—	—	—	40.31	16.5	—	50.6	
Year { Averages	30.010	8.1	—	—	N	S	—	—	5.8	—	
Year { Extremes	—	—	22.8 16/6/47	74	—	—	—	—	—	—	

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

(c) Early records not comparable.

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.				
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.					
	30(a)	30(a)	30(a)	98	98		98	86(b)		94			
No. of years over which observation extends.	30(a)	30(a)	30(a)	98	98	98	86(b)	94	35(c)				
January	77.7	56.9	67.3	114.1	13/39	42.0	28/85	72.1	178.5	14/62	30.2	28/85	7.8
February	78.6	58.0	68.3	109.5	7/01	40.2	24/24	69.3	167.5	15/70	30.9	6/91	7.4
March	74.9	55.2	65.1	107.0	11/40	37.1	17/84	69.9	164.5	1/68	28.9	(d)	6.5
April	67.9	50.8	59.3	94.8	5/38	34.8	24/88	60.0	152.0	8/61	25.0	23/97	5.0
May	62.0	46.9	54.5	83.7	7/05	29.9	29/16	53.8	142.6	2/59	21.1	26/16	4.1
June	56.8	43.8	50.3	72.2	1/07	28.0	11/66	44.2	129.0	11/61	19.9	30/29	3.4
July	56.2	42.6	49.4	69.3	22/26	27.0	21/69	42.3	125.8	27/80	20.5	12/03	3.7
August	58.7	43.7	51.2	77.0	20/85	28.3	11/63	48.7	137.4	29/69	22.3	14/02	4.6
September ..	63.3	46.0	54.7	88.6	28/38	31.0	3/40	57.6	142.1	20/67	21.8	8/18	5.5
October	67.9	48.7	58.3	98.4	24/14	32.1	3/71	66.3	154.3	28/68	24.8	22/18	5.8
November ..	71.3	51.8	61.5	105.7	27/94	36.5	2/96	69.2	159.6	29/65	24.6	2/96	6.2
December ..	75.4	55.3	65.3	110.7	15/76	40.0	4/70	70.7	170.3	20/69	33.2	1/04	7.0
Year { Averages	67.6	50.0	58.8	—	—	—	—	—	—	—	—	—	5.6
Year { Extremes	—	—	—	114.1	13/1/39	27.0	21/7/60	87.1	178.5	14/1/62	19.9	30/6/29	—

(a) Standard 30 years' normal (1911-1940).

(b) Records discontinued, 1946.

(c) 1916-1950.

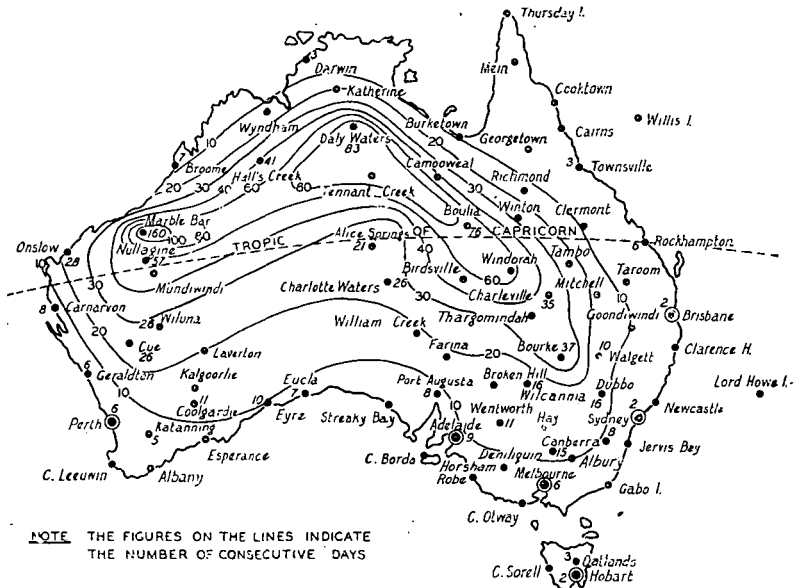
(d) 17/1884 and 20/1897.

Humidity, Rainfall and Fog.

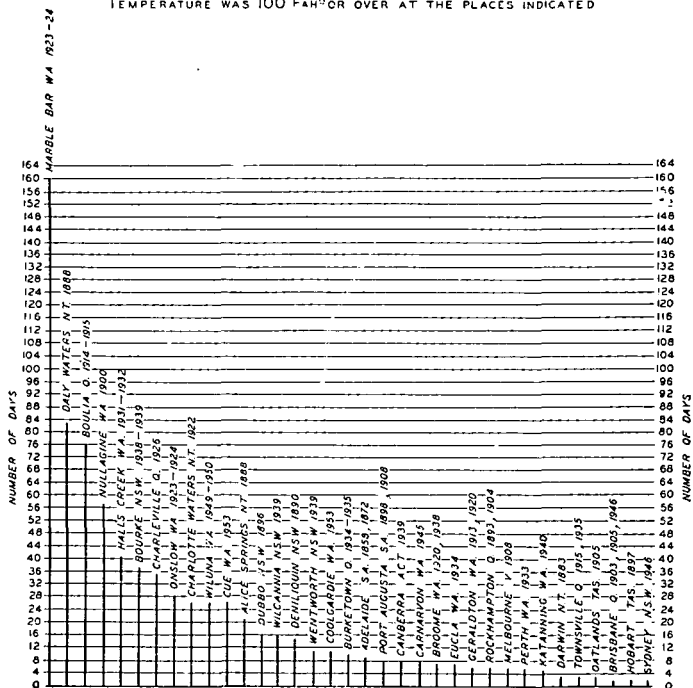
Month.	Vapour Pres- sure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).					Fog.
		Mean. Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	30(a)	46	46	30(a)	30(a)	98	98	98	30(a)
January	0.382	58	65	50	1.88	9	6.66 1941	0.01 1932	2.97 9/97	0.1
February .. .	0.417	62	70	48	2.00	8	7.72 1939	0.03 1870	3.44 26/46	0.3
March	0.385	64	76	50	2.22	9	7.50 1911	0.14 1934	3.55 5/19	1.1
April	0.351	72	82	66	2.30	13	6.71 1901	Nil 1923	2.28 22/01	2.3
May	0.311	79	86	70	1.94	14	5.60 1942	0.14 1934	1.85 7/91	6.8
June	0.276	83	92	75	2.06	16	4.51 1859	0.73 1877	1.74 21/04	6.5
July	0.264	82	86	75	1.93	17	7.02 1891	0.57 1902	2.71 12/91	6.5
August	0.271	76	82	65	2.02	17	4.35 1939	0.48 1903	1.94 26/24	3.7
September ..	0.288	68	76	60	2.20	15	7.93 1916	0.52 1907	2.62 12/80	1.3
October	0.307	62	67	52	2.63	14	7.61 1869	0.29 1914	3.00 17/69	0.3
November ..	0.336	60	69	52	2.33	13	6.71 1916	0.25 1895	2.57 16/76	0.3
December ..	0.373	59	69	48	2.38	11	7.18 1863	0.11 1904	3.20 1/34	0.2
Year { Totals	—	—	—	—	25.89	156	—	—	—	29.4
Year { Averages .. .	0.323	.69	—	—	—	—	—	—	—	—
Year { Extremes .. .	—	—	92	48	—	—	7.93 9/1916	Nil 4/1923	3.55 5/3/19	—

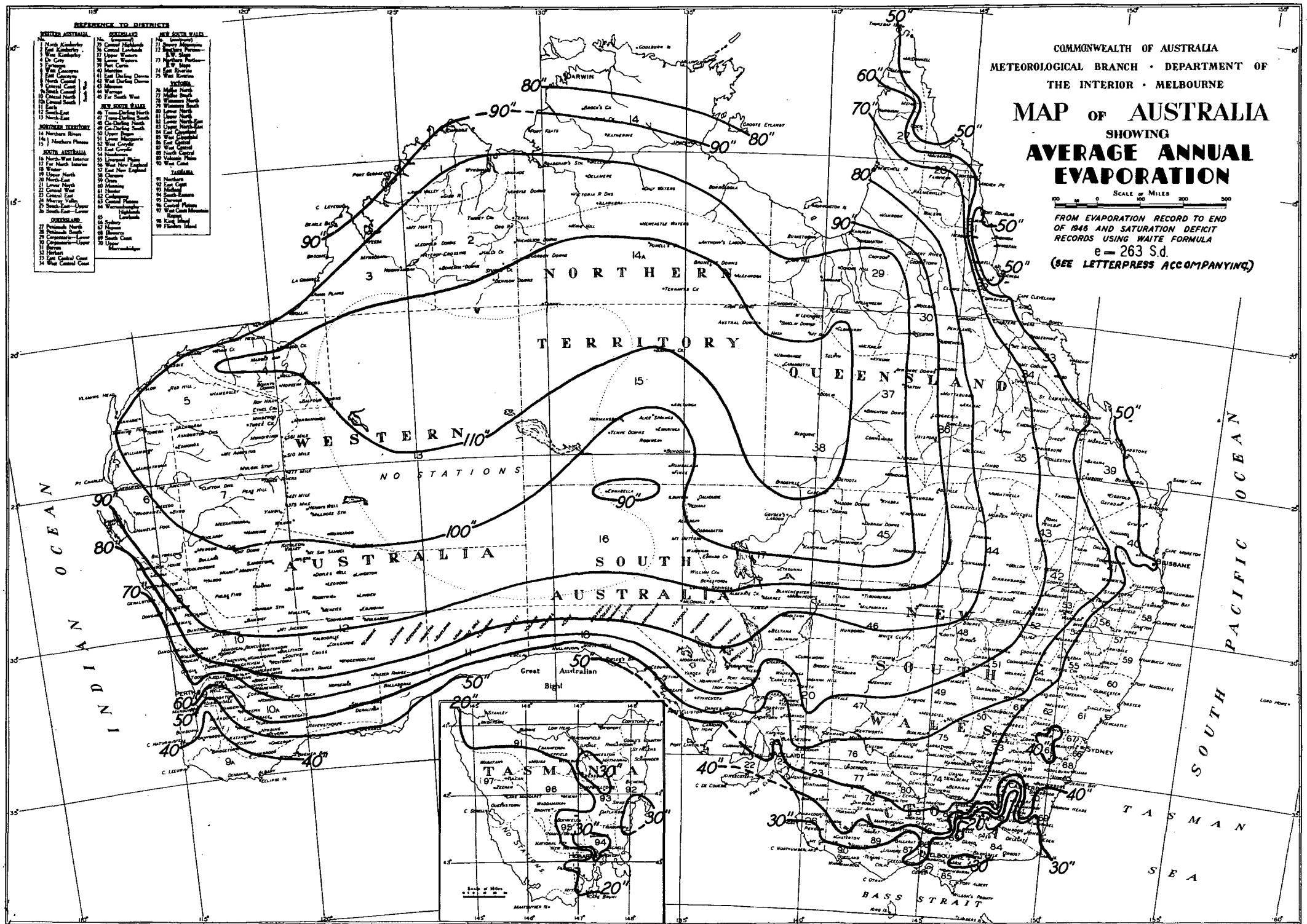
(a) Standard 30 years' normal (1911-1940).

AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F.



GREATEST NUMBER OF CONSECUTIVE DAYS ON WHICH THE SHADE TEMPERATURE WAS 100°F AND OVER AT THE PLACES INDICATED





COMMONWEALTH OF AUSTRALIA.
BUREAU OF METEOROLOGY MELBOURNE.
**MONTHLY DISTRIBUTION OF RAINFALL
OVER AUSTRALIA.**
REVISED TO END OF 1939.

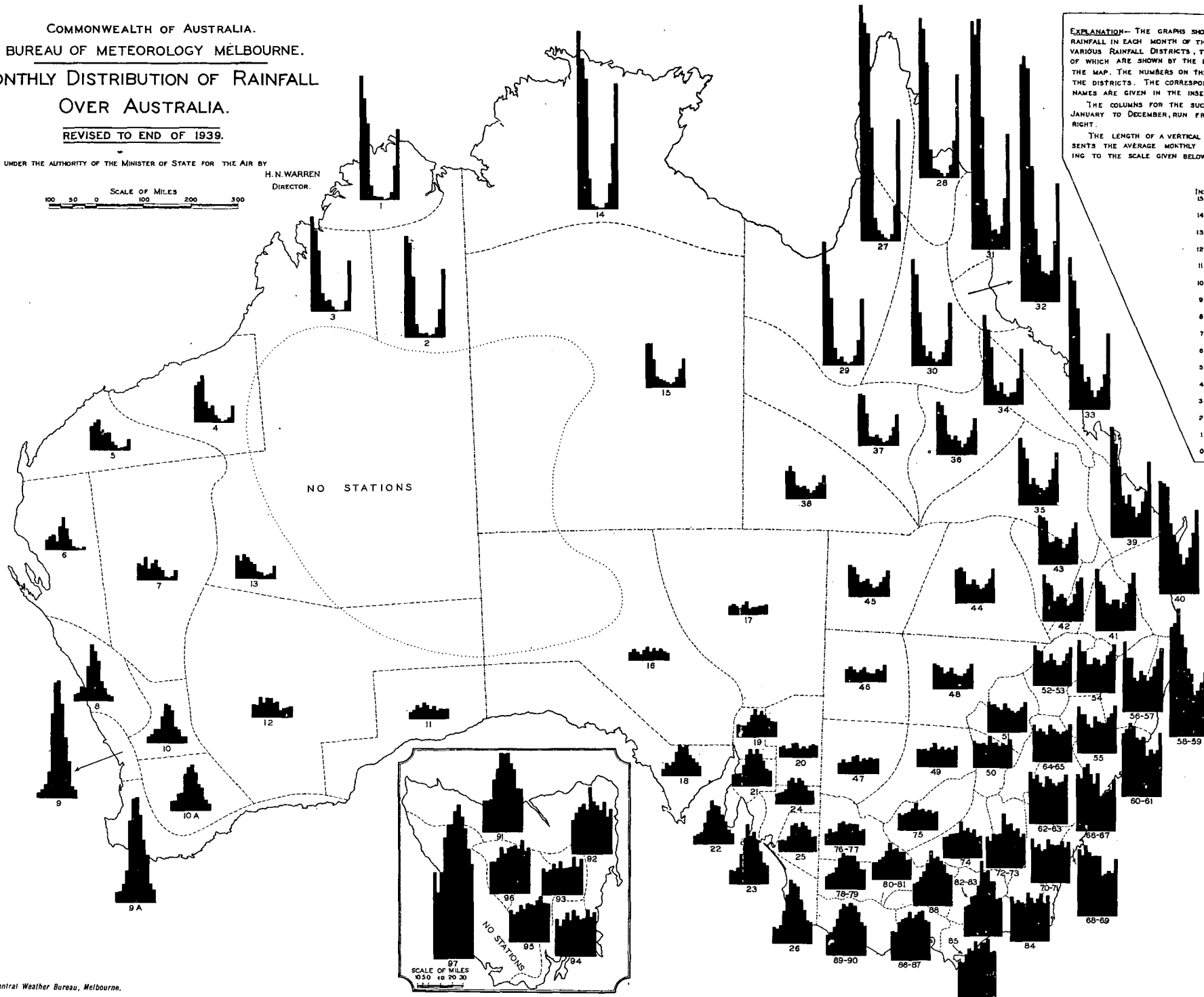
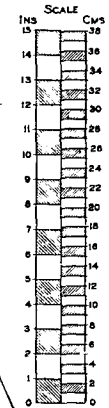
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE AIR BY

H. N. WARREN
DIRECTOR.

SCALE OF MILES
100 50 0 100 200 300

EXPLANATION—The graphs show the average rainfall in each month of the year in the various rainfall districts, the boundaries of which are shown by the broken lines on the map. The numbers on the map refer to the districts. The corresponding district names are given in the insert on page 37. The columns for the successive months, January to December, run from left to right.

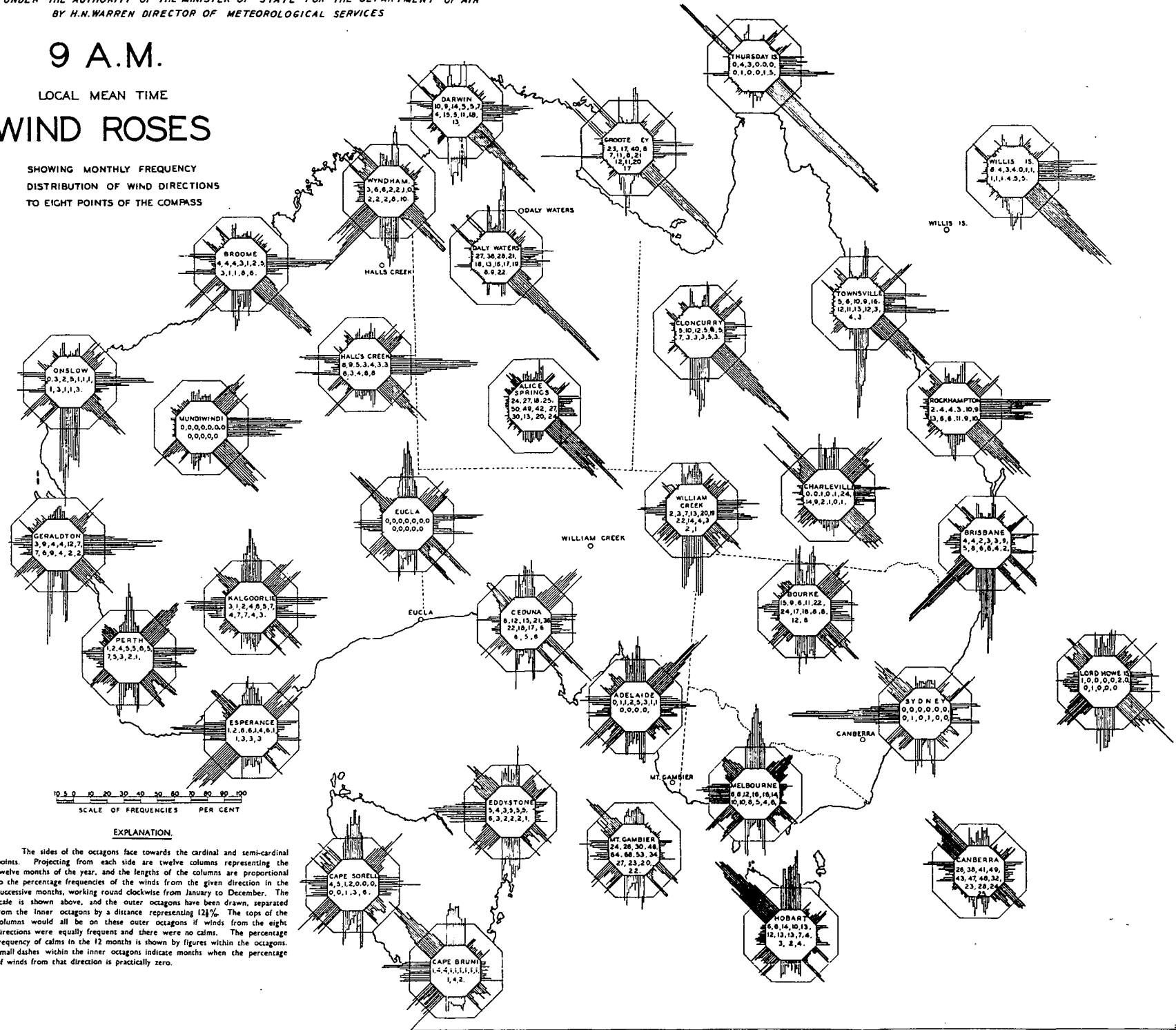
The length of a vertical column represents the average monthly rainfall according to the scale given below.



ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE DEPARTMENT OF AIR
BY H.N. WARREN DIRECTOR OF METEOROLOGICAL SERVICES

9 A.M. LOCAL MEAN TIME WIND ROSES

SHOWING MONTHLY FREQUENCY
DISTRIBUTION OF WIND DIRECTIONS
TO EIGHT POINTS OF THE COMPASS



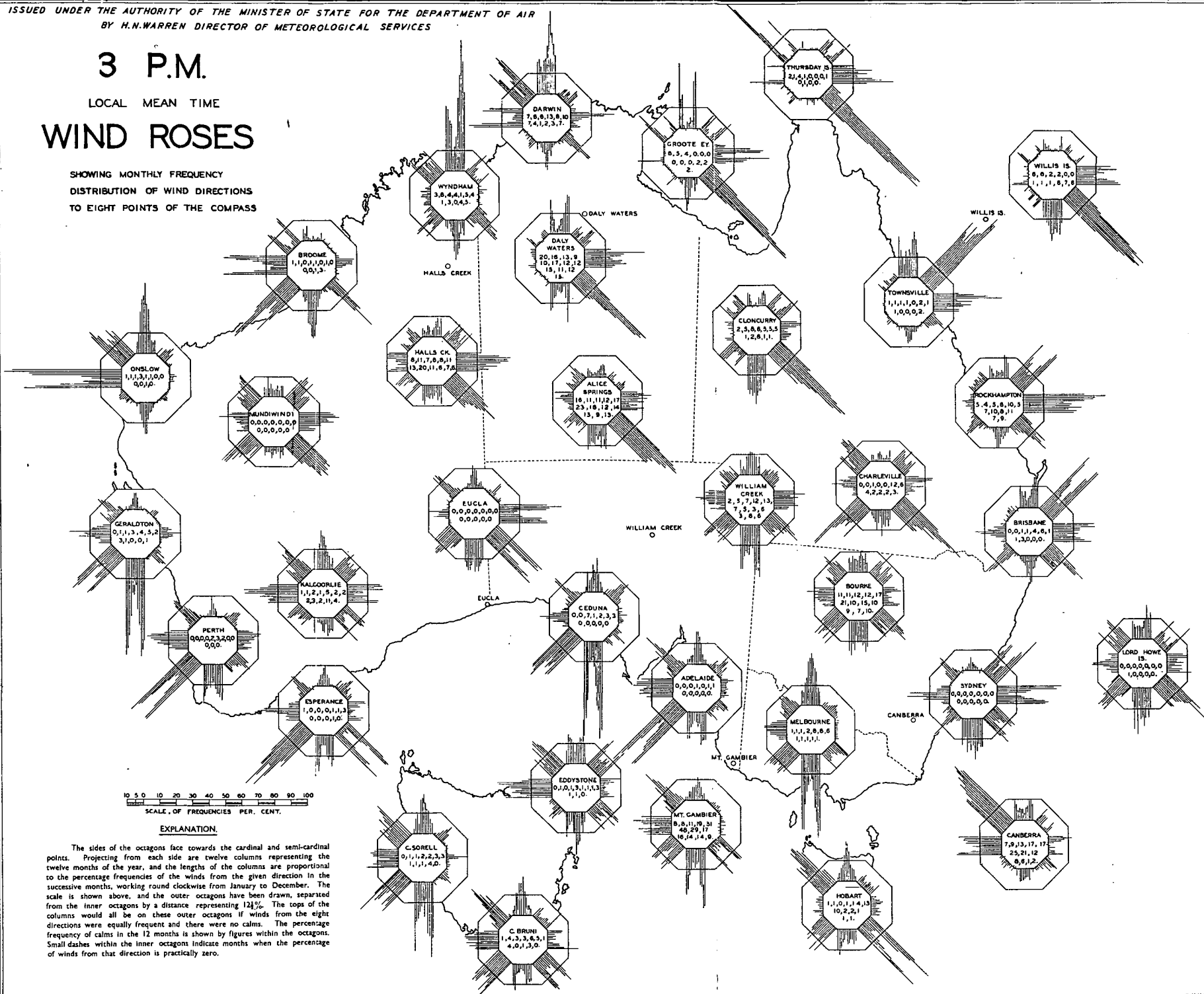
ISSUED UNDER THE AUTHORITY OF THE MINISTER OF STATE FOR THE DEPARTMENT OF AIR
BY H.N. WARREN DIRECTOR OF METEOROLOGICAL SERVICES

3 P.M.

LOCAL MEAN TIME

WIND ROSES

SHOWING MONTHLY FREQUENCY
DISTRIBUTION OF WIND DIRECTIONS
TO EIGHT POINTS OF THE COMPASS



CLIMATOLOGICAL DATA : HOBART, TASMANIA.
(LAT. 42° 53' S., LONG. 147° 20' E. HEIGHT ABOVE M.S.L. 177 FT.)
Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

Month.	Bar. corrected to 32° F. M. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 40 feet.)				Prevailing Direction.		Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(g)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day (miles per hour).	Highest Gust Speed (miles per hour).	Direction.						
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	30(b)	63	63	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.819	8.0	20.8 30/16	76	NNW	SSE	4.84	0.9	6.4	1.9	
February ..	29.913	7.2	25.2 4/27	65	NNW	SSE	3.71	1.0	6.2	2.3	
March ..	29.961	6.8	21.4 13/38	75	NW	SSE	3.10	1.2	6.1	2.4	
April ..	29.997	6.7	24.1 9/52	74	NW	W	1.98	0.7	6.5	1.7	
May ..	30.009	6.3	20.2 20/36	79	NNW	NW	1.37	0.4	6.1	2.4	
June ..	29.986	6.2	23.7 27/20	71	NW	NW	0.91	0.4	6.2	2.4	
July ..	29.958	6.5	22.9 22/53	78	NNW	NNW	0.94	0.3	6.1	2.0	
August ..	29.906	6.8	25.5 19/26	87	NNW	NW	1.28	0.4	6.1	2.1	
September ..	29.860	7.9	21.5 26/15	84	NNW	NW	1.97	0.7	6.3	1.5	
October ..	29.833	8.2	19.2 8/12	74	NNW	SW	3.05	0.6	6.6	1.0	
November ..	29.831	7.9	21.2 18/15	73	NNW	S	3.77	0.7	6.4	1.3	
December ..	29.816	7.6	23.4 1/34	70	NNW	SSE	4.37	0.5	6.8	1.1	
Year { Totals ..	—	—	—	—	—	—	31.29	7.8	—	22.1	
Year { Averages	29.907	7.2	—	—	NNW	W	—	—	6.3	—	
Year { Extremes	—	—	25.5 19/8/26	87	—	—	—	—	—	—	

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

Temperature and Sunshine.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	70(b)	70(b)	70(b)	57(c)	70(b)	30
January ..	69.8	52.4	61.0	105.0 1/00	40.1 (d)	64.9	160.0 (e)	30.6 19/97	7.7
February ..	70.6	53.7	62.2	104.4 12/99	39.0 20/87	65.4	165.0 24/98	28.3 —/87	7.1
March ..	67.5	51.3	59.4	99.1 13/40	35.2 31/26	63.9	150.9 26/44	27.5 30/02	6.4
April ..	62.2	48.0	55.1	87.1 1/41	33.3 24/88	53.8	142.0 18/93	25.0 —/86	5.0
May ..	57.8	44.6	51.2	77.8 5/21	29.2 20/02	48.6	128.0 (f)	20.0 19/02	4.4
June ..	52.8	41.2	47.0	69.2 1/07	29.2 28/44	40.0	122.0 12/94	21.0 6/87	4.0
July ..	52.7	40.6	46.6	66.1 14/34	27.7 11/95	38.4	121.0 12/93	18.7 16/86	4.4
August ..	55.4	41.7	48.7	71.6 28/14	28.9 9/51	42.7	129.0 —/87	20.1 7/09	5.1
September ..	59.0	43.7	51.4	81.7 23/26	31.0 16/97	50.7	138.0 23/93	18.3 16/26	5.9
October ..	62.5	46.1	54.3	92.0 24/14	32.0 12/89	60.0	156.0 9/93	23.8 (g)	6.1
November ..	65.0	48.2	56.6	98.3 26/37	35.0 16/41	63.3	154.0 19/92	26.0 1/08	7.2
December ..	67.9	51.3	59.6	105.2 30/97	38.0 3/06	67.2	161.5 10/39	27.2 —/86	7.3
Year { Averages	61.9	46.9	54.4	—	—	—	—	—	5.9
Year { Extremes	—	—	—	105.2 30/12/97	27.7 11/7/95	77.5 165.0 24/2/98	18.3 16/9/26	—	—

(a) Standard 30 years' normal (1911-1940). (b) Records 1855-1882 not comparable. (c) Period 1934-1938 not comparable; records discontinued, 1946. (d) 9/37 and 11/37. (e) 5/86 and 13/05. (f) —/89 and —/93. (g) 1/86 and —/99.

Humidity, Rainfall and Fog.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).					Fog.
		Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.		
No. of years over which observation extends.	30(a)	33	67	67	30(a)	30(a)	71(b)	71(b)	71(b)	30(c)	
January	0.309	57	72	46	1.82	13	5.91 1893	0.17 1915	2.96 30/16	0.0	
February	0.342	61	77	48	1.68	10	4.96 1935	0.11 1914	2.18 5/38	0.0	
March	0.323	65	77	52	2.13	13	10.05 1946	0.29 1943	3.47 17/46	0.3	
April	0.290	69	84	58	2.31	14	8.50 1935	0.07 1904	5.02 20/09	0.2	
May	0.263	78	89	65	1.71	14	6.37 1905	0.14 1913	1.75 2/93	0.9	
June	0.233	78	91	68	2.25	16	8.15 1889	0.28 1886	4.11 13/89	0.8	
July	0.227	78	94	72	2.14	17	6.02 1922	0.17 1950	2.51 18/22	1.0	
August	0.232	72	92	60	1.82	18	6.32 1946	0.30 1892	2.28 14/90	0.4	
September	0.240	64	85	58	1.90	17	5.02 1953	0.38 1951	2.34 21/53	0.1	
October	0.258	60	73	51	2.52	18	7.60 1947	0.39 1914	2.58 4/06	0.0	
November	0.274	57	72	50	2.23	16	7.39 1885	0.33 1921	3.70 30/85	0.1	
December	0.306	58	67	45	2.52	14	7.72 1916	0.17 1921	3.33 5/41	0.0	
Year { Totals	—	—	—	—	25.03	130	—	—	—	3.5	
Year { Averages	0.271	66	—	—	—	—	—	—	—	—	
Year { Extremes	—	—	94	45	—	—	10.05 3/1946	0.07 4/1904	5.02 20/4/09	—	

(a) Standard 30 years' normal (1911-1940).

(b) Records prior to 1883 not comparable.

(c) 1922-1951.

CHAPTER III.

GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

1. **General.**—The legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor, who is the representative of the Sovereign for the State, and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office, and by the instructions which inform him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral till 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States it consists of (a) a Legislative Council and (b) a Legislative Assembly, or House of Assembly. In Queensland the Legislative Assembly constitutes the legislature. In the Commonwealth Parliament the Upper House is known as the Senate, and in the State Parliaments as the Legislative Council. The Lower House in the bi-cameral Parliaments is known as follows:—in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly (Queensland as pointed out is uni-cameral) which is the larger House, is always elective, the franchise extending to adult British subjects with certain residential qualifications. The Council in each of the States other than New South Wales is elected by the people of that State, the constituencies being differently arranged and in general, some property or special qualification for the electorate being required. In Victoria, however, under the Legislative Council Reform Act passed in October, 1950, adult suffrage was adopted for Legislative Council elections. In the case of New South Wales, the Council is elected by the members of each House of Parliament at a simultaneous sitting. In the Federal Parliament the qualifications for the franchise are identical for both Houses.

2. **The Sovereign.**—(i) *Accession of Queen Elizabeth II.* On 7th February, 1952 the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty in Westminster Abbey took place on 2nd June, 1953.

(ii) *Royal Style and Titles Act 1953.* The Statute of Westminster, 1931 stated that it would be in accord with the established constitutional position of members of the British Commonwealth of Nations that any alteration in the law regarding the Royal Style and Titles should thereafter require the assent of the Parliaments of the Dominions in addition to that of the Parliament of the United Kingdom.

At the conference of Prime Ministers and other representatives of the British Commonwealth in London in December, 1952 it was agreed that the Royal Style and Titles then in use were not in accord with current relationships within the British Commonwealth and that there was need of a new form which would, in particular, "reflect the special position of the Sovereign as Head of the Commonwealth".

It was therefore decided that each member of the British Commonwealth should use a form of the Royal Style and Titles suited for its own circumstances, while retaining as a common element the description "Queen of Her other Realms and

Territories and Head of the Commonwealth"; and that consultation between all countries of the Commonwealth should take place on any future proposal to change the form of the Royal Style and Titles used in any country.

To give effect to these decisions in Australia the Royal Style and Titles Bill was introduced in the House of Representatives on 28th February, 1953, and enacted on 3rd April, 1953. The Act gives Parliament's assent to the adoption by the Queen, for use in relation to the Commonwealth of Australia and its Territories, of the following Royal Style and Titles:—"Elizabeth the Second, by the Grace of God of the United Kingdom, Australia and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith." The Act also approves the adoption by the Queen of a Royal Style and Titles for use in relation to other countries of the British Commonwealth, in accordance with the principles formulated at the London conference.

(iii) *Royal Visit to Australia.* On 3rd February, 1954, Her Majesty Queen Elizabeth the Second, accompanied by His Royal Highness the Duke of Edinburgh, arrived in Australia on a visit to all States and the Australian Capital Territory, the first occasion on which the reigning Sovereign has visited Australia. Foremost amongst the official acts performed by Her Majesty was the opening of the Commonwealth Parliament in Canberra on 15th February, 1954.

3. Powers and Functions of the Governor-General and of the State Governors.—

(i) *Governor-General of the Commonwealth.* Section 2 of the Commonwealth Constitution provides as follows:—

"A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him."

As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen—either by Letters Patent (*see* Letters Patent dated 29th October, 1900 and 15th December, 1920), by Instructions under the Royal Sign Manual and Signet, by Commission issued to him under the Royal Sign Manual and Signet, or by any instrument of delegation under section 2 of the Constitution. Powers which have been so assigned include, amongst others, the power to appoint a Deputy or Deputies of the Governor-General, to administer or authorize any other person to administer the Oath of Allegiance, to grant pardons and to remit fines for offences against the laws of the Commonwealth and to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth.

Other powers and functions are conferred on the Governor-General by the Constitution. For example, under section 5 of the Constitution he may appoint times for holding the sessions of the Parliament, prorogue Parliament and dissolve the House of Representatives. Under section 32 the Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives. Under section 58 he assents in the Queen's name to a proposed law passed by both Houses of the Parliament or withholds assent, or reserves the law for the Queen's pleasure; or he may return the proposed law to the House in which it originated and may transmit therewith any amendments which he may recommend. Under section 61 he exercises the executive power of the Commonwealth, under section 62 he chooses and summons Executive Councillors, who hold office during his pleasure, and under section 64 he may appoint Ministers of State for the Commonwealth. By section 68 the command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General, as the Queen's representative. Under the conventions of responsible government obtaining in Commonwealth countries, the Governor-General's executive functions generally are exercised on the advice of Ministers of State. In this regard the Governor-General's position has become assimilated to that of the Queen in relation to her Ministers of State for the United Kingdom.

In addition, many powers and functions are exercised by the Governor-General under Acts of the Commonwealth Parliament. Most Acts, for example, provide that the Governor-General may make regulations, not inconsistent with the Act, either

generally to give effect to the Act or to cover certain matters specified in the power. The Governor-General may be authorized by statute to issue proclamations—for example, to declare an Act in force or a state of things to exist, e.g. the existence of an epidemic. The Governor-General has been given power by statute to legislate for certain Territories of the Commonwealth. Other statutory powers include the power to appoint and dismiss statutory officers or bodies. A reference to the Governor-General, in Acts of the Commonwealth Parliament, means, unless the contrary intention appears, the Governor-General acting with the advice of the Executive Council (Acts Interpretation Act 1901-1950, section 17 (f)).

(ii) *Governors of the States.* The Queen is represented in each of the States by a Governor, the office having been constituted by Letters Patent under the Great Seal of the United Kingdom of various dates.

The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their Commissions of appointment, and the "Governor's Instructions" given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition they have been invested with various statutory functions, either under the State Constitutions, conferred by Imperial Act, or by Act of the Parliament of the State.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those reserved for the Royal assent. The latter include certain classes of Bills, which are regulated by the Constitution Acts and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown.

In the performance of his functions generally, particularly those conferred by Statute, the Governor of a State acts on the advice of Ministers of State for the State.

(iii) *Holders of Office.* For the names of the Governors-General since the inception of the Commonwealth and of the present State Governors, see § 3. following.

4. **The Cabinet and Executive Government.**—(i) *General.* Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as "Cabinet" or "responsible" government. Its essence is that the head of the State (Her Majesty the Queen, and her representative, the Governor-General or Governor) should perform Governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates by means, chiefly, of constitutional conventions, customs or understandings, and of institutions that do not form part of the legal structure of the government at all. The constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

The executive power of the Commonwealth is exercisable by the Governor-General, and that of the States by the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by the Ministers of State, meeting, without the Governor-General or Governor, under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

(ii) *The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia, all Ministers are members of the Cabinet. As Ministers are the leaders of the party or parties commanding a

majority in the popular House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

(iii) *The Executive Council.* This body is usually presided over by the Governor-General or Governor, the members thereof holding office during his pleasure. All Ministers of State are *ex officio* members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings; for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings, the decisions of the Cabinet are (where necessary) given legal form; appointments made; resignations accepted; proclamations issued, and regulations and the like approved.

(iv) *The Appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. Australian practice follows, broadly, that of the United Kingdom. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House, and to commission him, as Prime Minister or Premier, to "form a Ministry"—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Official Year Book (*see* No. 6, p. 942). It may be added, however, that legislation now exists in all States, the effect of which is to obviate the necessity of responsible Ministers vacating their seats in Parliament on appointment to office.

(v) *Ministers in Upper and Lower Houses.* The following table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in December, 1953 :—

AUSTRALIAN PARLIAMENTS : MINISTERS IN UPPER OR LOWER HOUSES, DECEMBER, 1953.

Ministers with Seats in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	5	2	4	(a)	3	2	..	16
The Lower House ..	15	14	10	11	5	8	9	72
Total ..	20	16	14	11	8	10	9	88

(a) Abolished in 1922.

For the names of the occupants of ministerial office in each of the Parliaments of Australia in December, 1953, *see* § 3. of this chapter. Subsequent changes of importance in Ministries will be found in the Appendix to this volume.

(vi) *Numbers and Salaries of Commonwealth Ministers.* Under sections 65 and 66, respectively, of the Constitution of the Commonwealth, the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000, each provision to operate, however, "until the Parliament otherwise provides."

Subsequently, number and salaries were increased to 8—£13,650 (1915) and to 9—£15,300 (1917). During the period of financial emergency in the early thirties the ministerial salary appropriation was reduced to as low as £10,710 a year, and was not restored to its former level until 1938. During the period of restoration of salary the number of Ministers was increased to 10 (1935). Later increases were as follows:—to 11—£18,600 (1938); 19—£21,250 (1941)—these increases were war-time provisions, extended into peacetime in 1946; £27,650 (1947—number unaltered); 20—£29,000 (1951); £41,000 (1952—number unaltered). In 1938 an additional ministerial allowance of £1,500 a year was granted to the Prime Minister; this was increased to £3,500 a year (exempt from income tax) in 1952 and at the same time an additional ministerial allowance of £1,000 a year (exempt from income tax) was granted to each other Minister.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (*see* paras. 5 and 6 below).

5. **Number and Salary of Members of the Legislatures, Australian Parliaments, December, 1953.**—The following table shows the number and annual salary of members in each of the legislative chambers in December, 1953:—

**AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES,
DECEMBER, 1953.**

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
NUMBER OF MEMBERS.								
Upper House ..	60	60	34	(a)	20	30	19	223
Lower House ..	123	94	65	75	39	50	30	476
Total ..	183	154	99	75	59	80	49	699
ANNUAL SALARY. (£.)								
Upper House ..	(b) 1,750	(c) 500	(d) 1,050	(a)	(e) 1,425— 1,500	(f) 1,340	(g) 800— 1,050	..
Lower House ..	(b) 1,750	(c) 1,875	(d) 1,050	(h) 1,575	(e) 1,425— 1,500	(f) 1,340	(g) 850— 1,050	..

(a) Abolished in 1922. (b) Plus expense allowances exempt from income tax—Senators, £550; Members of House of Representatives, £400—£900, varying with electoral divisions. *See also* para. 6 following. (c) Increased from £300 (Upper House) and £1,375 (Lower House) as from January, 1952. (d) Subject to automatic adjustment in accordance with variations in the cost of living. Plus £100 for urban and country electorates (i.e., excluding Metropolitan Electoral Districts and Provinces). (e) According to distance of electorate from Adelaide. Increased from £1,150—£1,225 from 1st July, 1953. (f) Subject to adjustment in accordance with variations of the State basic wage. Plus £50 where any part of electorate is more than 50 miles from Perth. Increased from £1,000 from 1st April, 1953. (g) According to area of electorate and distance from the capital. Plus a cost of living adjustment. (h) Increased from £1,375 from 1st July, 1953. Subject to adjustment in accordance with any variation of the equivalent Public Service Award classification. Plus marginal allowances of £100 for metropolitan electorates and ranging from £165 to £270 for non-metropolitan electorates.

Parliamentary salaries affected by cost of living adjustments (i.e., in the States of Victoria, Western Australia and Tasmania) have thereby been brought roughly into line with those of Queensland and South Australia.

6. **Commonwealth Parliamentary Allowances.**—(i) *General Allowance.* Section 48 of the Commonwealth Constitution granted to each Senator and member of the House of Representatives an allowance of £400 a year until Parliament should decide to alter it. The first alteration was made in 1907, when the allowance was increased to £600 for all except the holders of Parliamentary office (i.e., Ministers, and the Presiding Officer and Chairman of Committees of each House), whose allowances in addition to the emoluments of office remained at £400 a year. In 1920 the general allowance was increased to £1,000 a year and the allowance to holders of office to £800 a year. Under financial emergency legislation Parliamentary salaries and allowances were reduced generally, the lowest

level reached for the general allowance being £750 in 1932. Subsequently there was a gradual restoration to former levels, the allowance reaching £1,000 a year again in 1938, when the provision for the reduced allowance for holders of Parliamentary office was removed. In 1947 the general allowance was increased to £1,500 and in 1952 to £1,750 a year.

(ii) *Additional Allowances.* (a) *Holders of Parliamentary Office.* Amounts received by the holders of Parliamentary office in respect of the duties they perform are additional to the allowances to each Senator and Member of the House of Representatives as described above. Appropriations for ministerial salaries are referred to in par. 4 (vi) above, but the amounts received because of their duties of office by the President of the Senate, the Speaker of the House of Representatives and the Chairman of Committees in each House are not included in these appropriations.

In 1901-2 the Presiding Officer of each House received £1,100 a year and the Chairmen of Committees each £500 a year. Before the depression years these amounts had been increased to £1,300 and £700 respectively, but, in common with other Parliamentary salaries and allowances, they were reduced during this period, and in 1933-34 were as low as £900 and £500 a year. Following the gradual restoration to previous levels, they remained unchanged until 1947-48, when they were increased to £1,600 and £900 respectively. In 1952 the allowance to the President of the Senate and to the Speaker of the House of Representatives was increased to £1,750 a year each.

(b) *Other Additional Allowances.* In 1920 the Leaders of the Opposition in the Senate and in the House of Representatives were granted additional allowances of £200 a year and £400 a year respectively. These were increased to £300 and £600 in 1947 and to £750 and £1,750 in 1952. In 1947, also, the Leader in the House of Representatives (other than the Leader—and in 1952 the Deputy Leader—of the Opposition) of a recognized political party with not less than ten members in that House and of which none is a Minister received an additional allowance of £400 a year. This was increased to £500 in 1952.

Further additional annual allowances, all of which were granted in 1952, are as follows:—

Deputy Leader of the Opposition in the House of Representatives, £750;
Government Whip in the House of Representatives, £325; Other Whips. £275.

Additional allowances (exempt from income tax) for expenses of discharging duties.—Payable to each Senator—£550; payable to each Member of the House of Representatives—£400-£900, varying with electoral divisions.

Additional allowances (exempt from income tax) for expenses of discharging duties of Office.—President of the Senate, Speaker of the House of Representatives, Leader of the Opposition in the Senate, and Deputy Leader of the Opposition in the House of Representatives—£250; Leader of the Opposition in the House of Representatives—£1,000.

7. *Enactments of the Parliament.*—In the Commonwealth all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts on behalf of, and in the name of, the Sovereign, in assenting to Bills passed by the Legislatures, but he may reserve them for the special consideration of the Sovereign. The Parliaments of the States are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

§ 2. Parliaments and Elections.

1. *Commonwealth.*—(i) *Qualifications for Membership and for Franchise—Commonwealth Parliament.* Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, twenty-one years of age or over, who has resided in the Commonwealth for at least three years and who is, or is qualified to become, an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any British subject, not under twenty-one years of age and not disqualified on racial or other ground, who has lived in Australia for six months continuously. Residence in a sub-division for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory. A member of the Defence Force on service outside Australia who is a British subject not less than 21 years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections whether enrolled or not.

Disqualification of persons otherwise eligible as members of either Commonwealth House is mainly on the grounds of membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown with certain exceptions, or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than 25 persons. Excluded from the franchise are persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or of certain non-European races. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise.

(ii) *Commonwealth Parliaments and Elections.* From the establishment of the Commonwealth until 1949 the Senate consisted of 36 members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament and, as the population of the Commonwealth had more than doubled since its inception, the Parliament enacted legislation in 1948 enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. Thus the Representation Act 1948 provides that there shall be ten Senators from each State instead of six, increasing the total to 60 Senators. To effect this transition in the Senate, seven Senators were elected from each State at the elections of 1949, four taking office immediately the Senate sat after the election, the remaining three commencing their term on the usual date—1st July, 1950. Members of this Chamber are normally elected for the term of six years, but half the members retire at the end of every third year, although they are eligible for re-election. Accordingly, at each future periodical election of Senators, five Senators will normally be elected in each State, making 30 to be elected at each such election.

In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate. Correspondingly, in terms of the Constitution and the Representation Act 1905-38, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows:—New South Wales—from 28 to 47; Victoria—20 to 33; Queensland—10 to 18; South Australia—6 to 10; Western Australia—5 to 8; Tasmania—5, no increase; total—74 to 121. The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. This was carried out by the Distribution Commissioners in each State on a quota basis, but taking into account community or diversity of interest, means of communication, physical features, existing boundaries of divisions and sub-divisions, and State electoral boundaries.

Since the general elections of 1922 the Northern Territory has been represented by one member in the House of Representatives. The Australian Capital Territory Representation Act 1948 gave similar representation to the Australian Capital Territory

as from the elections of 1949. The members for the Territories may join in the debates but are not entitled to vote, except on a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion. The Commonwealth Parliament, however, when providing for a Legislative Council for the Northern Territory in 1947, relinquished the power to disallow ordinances for that Territory.

The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, the whole State constitutes the electorate. For the purposes of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Official Year Book.

There have been twenty complete Parliaments since the inauguration of Federation. Until 1927 the Parliament met at Melbourne; it now meets at Canberra, the first meeting at Parliament House, Canberra, being opened by the late King George VI., then Duke of York, on 9th May, 1927.

The fifth Parliament, which was opened on 9th July, 1913, was dissolved on 30th July, 1914 in somewhat unusual circumstances, when, for the first time in the history of the Commonwealth, a deadlock occurred between the Senate and the House of Representatives, and, in accordance with Section 57 of the Constitution which provides for such an eventuality, both Houses were dissolved by the Governor-General. The nineteenth Parliament was similarly dissolved. It opened on 22nd February, 1950, but on 19th March, 1951, in its first session, a double dissolution was proclaimed for the second time since the inception of the Commonwealth.

Particulars of the ensuing elections for Australia as a whole may be found in Official Year Book No. 39, page 71.

The system of voting for the House of Representatives is preferential and for the Senate, until 1948, voting was also preferential. The Commonwealth Electoral Act 1948, however, introduced with the Representation Act 1948 to enlarge the Commonwealth Parliament (*see* page 48), changed the system of scrutiny and counting of votes in Senate elections from preferential to that of proportional representation. For a description of the system, *see* Official Year Book No. 38, pp. 82-3.

For particulars of electors enrolled and of electors who voted at the various Commonwealth elections, *see* earlier Year Books. Elections for the Senate have usually been held at the same time as those for the House of Representatives. The double dissolution of the nineteenth Parliament, however, referred to above, led to the holding of separate elections for the Senate in 1953 as elections for this House are unaffected by such special dissolutions. The election was held on 9th May, 1953, and particulars of electors and voting in the several States are as follows:—

SENATE ELECTION, 9th MAY, 1953.

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	966,830	1,012,764	1,979,594	921,432	952,089	1,873,521	95.30	94.01	94.64
Victoria ..	683,483	728,028	1,411,511	653,787	686,324	1,340,111	95.66	94.27	94.94
Queensland ..	367,872	357,592	725,464	340,932	340,297	687,229	94.31	95.16	94.73
South Australia	220,518	232,978	453,496	213,446	224,137	437,583	96.79	96.21	96.49
West. Australia	164,652	164,540	329,192	155,872	154,587	310,459	94.67	93.95	94.31
Tasmania ..	83,634	84,862	168,496	80,729	81,332	162,061	96.53	95.84	96.18
Total ..	2,486,989	2,580,764	5,067,753	2,372,198	2,438,766	4,810,964	95.38	94.50	94.93

Following the Senate Election of 9th May, 1953, an election for the House of Representatives was held on 29th May, 1954. Particulars of electors and voting in the several States are as follows :—

ELECTION FOR HOUSE OF REPRESENTATIVES, 29th MAY, 1954.(a)

State.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	910,532	951,467	1,861,999	879,289	909,808	1,789,097	96.57	95.62	96.08
Victoria	646,517	689,508	1,336,025	621,909	659,223	1,281,132	96.19	95.61	95.89
Queensland	368,795	364,259	733,054	353,200	350,421	703,621	95.77	96.20	95.98
South Australia	179,188	190,608	369,796	173,392	184,462	357,854	96.77	96.78	96.77
West. Australia	166,946	167,407	334,353	160,603	161,085	321,688	96.20	96.22	96.21
Tasmania	85,715	86,815	172,530	82,826	83,353	166,179	96.63	96.01	96.32
Nor. Territory	4,280	2,589	6,869	3,163	2,130	5,299	73.90	82.50	77.14
Aust. Cap. Terr.	7,626	7,294	14,920	7,223	6,851	14,074	94.72	93.93	94.33
Australia	2,369,599	2,459,947	4,829,546	2,281,605	2,357,339	4,638,944	96.29	95.83	96.05

(a) Contested Electorates only.

The twenty-first Parliament opened on 4th August, 1954.

(iii) *Commonwealth Referenda*. According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted, before it can be presented for Royal Assent. So far 24 proposals have been submitted to referenda and the consent of the electors has been received in four cases only, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928—and the fourth in respect of Social Services in 1946. Details of the various referenda and the voting thereon were given in previous issues of the Official Year Book (*see* No. 18, p. 87, No. 31, p. 67, No. 35, p. 60, No. 36, p. 61, No. 37, pp. 64-5, No. 38, p. 84 and No. 40, p. 56).

A brief résumé of the various referenda held in Australia is to be found in § 7, below (*see* page 67.)

2. *State Elections*.—(i) *Latest in each State*. (a) *Upper Houses*. The following table shows particulars of the voting at the most recent elections for the Upper Houses or Legislative Councils in the States of Victoria, South Australia and Western Australia. In New South Wales the electorate for the Legislative Council comprises the members of both Houses, in Queensland there has been no Legislative Council since 1922, and in Tasmania three members of the Council are elected annually (but four in each sixth year) and the Council cannot be dissolved as a whole.

STATE UPPER HOUSE ELECTIONS.

State.	Year of Latest Election.	Electors Enrolled—Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Victoria (a)	1952	676,195	719,455	1,395,650	485,417	508,773	994,190	92.91	91.42	92.14
South Australia	1953	(b)	(b)	168,758	(b)	(b)	79,373	(b)	(b)	81.02
Western Australia	1952	56,854	22,650	79,504	11,677	4,005	15,682	36.16	31.38	34.80

(a) First election on the basis of adult suffrage.

(b) Not available.

Particulars of voting at the latest contested election for the Legislative Council in Tasmania in 1953 are as follows :—Number of electors on the roll, 15,117 ; number of votes recorded, 12,461 ; percentage of enrolled voters who voted, 82.43.

(b) *Lower Houses.* The following table shows particulars of the voting at the most recent election for the Lower House in each State.

STATE LOWER HOUSE ELECTIONS.

State.	Year of Latest Election.	Electors Enrolled—Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
N.S. Wales	1953	954,966	997,987	1,952,953	779,186	809,107	1,588,293	94.05	93.42	93.73
Victoria	1952	678,955	723,750	1,402,705	506,736	540,935	1,047,671	93.75	93.43	93.59
Q'land	1953	372,121	365,458	737,579	310,425	306,186	616,611	93.88	93.72	93.80
S. Australia	1953	(a)	(a)	449,630	(a)	(a)	336,592	(a)	(a)	95.01
W. Aust.	1953	160,151	159,790	319,941	93,307	98,918	192,225	93.68	93.27	93.47
Tasmania	1950	80,228	81,422	161,650	76,517	76,268	152,785	95.37	93.67	94.51

(a) Not available.

(ii) *Elections in Earlier Years.* Official Year Book No. 38 and earlier issues contain particulars of the voting at elections for both Upper and Lower State Houses in years prior to those shown above, and some general information is given in the following paragraphs.

3. The Parliament of New South Wales.—The Parliament of New South Wales consists of two Chambers, the Legislative Assembly and the Legislative Council. By legislation assented to in July, 1949, the Assembly was enlarged from 90 to 94 members, elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years and by legislation enacted in 1950 cannot be extended beyond that period except with the approval of electors by referendum. Until 1934 the Council was a nominee Chamber, consisting of a variable number of members appointed for life without remuneration, but as from 23rd April, 1934 it was reconstituted and became a House of 60 members to serve without remuneration for a term of twelve years, with one-quarter of the members retiring every third year. As from 1st September, 1948, however, members of the Council have been paid an allowance, now £500 a year. The electorate comprises members of both Chambers, who vote as a single electoral body at simultaneous sittings of both Chambers.

Any person who is an elector entitled to vote at a Legislative Assembly election, or a person entitled to become such elector, and who has been for at least three years resident in Australia, and who is a natural-born or naturalized subject of the Queen, is capable of being elected to the Legislative Council. For the Council franchise an elector must be, for the time being, a Member of the Legislative Council or a Member of the Legislative Assembly. Every person qualified to vote at a Legislative Assembly election for any electoral district in New South Wales is qualified to be elected as a Member for that or any other district. Every person not under twenty-one years of age, who is a natural-born or naturalized subject of the Queen, and who has lived in Australia for at least six months continuously, and in New South Wales for at least three months, and in any subdivision for at least one month immediately preceding the date of claim for enrolment, is entitled to enrolment as an elector for the Legislative Assembly. Persons are disqualified either as members or voters for reasons generally the same as those outlined on page 48.

Since the introduction of responsible government in New South Wales there have been 36 complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-sixth was dissolved on 14th January, 1953. The thirty-seventh Parliament opened on 11th March, 1953.

The elections of 1920, 1922 and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at the later appeals to the people. The principle of one elector one vote was

adopted in 1894, and that of compulsory enrolment in 1921. Compulsory voting was introduced at the 1930 election. The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised by them for the first time in 1904.

4. **The Parliament of Victoria.**—Both of the Victorian legislative Chambers are elective bodies, but there is a considerable difference in the number of members of each House, and there was also, until the Legislative Council Reform Act 1950, in the qualifications necessary for members and electors. The number of members in the Upper House is 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years, except that one-half of the members who are elected for provinces at any general election for the Council are entitled to hold their seats for a period of only three years, one member for each of the seventeen provinces retiring every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years.

Prior to the passing of the Act just referred to, which operated from November, 1951, there were property qualifications required for membership of, and franchise for, the Legislative Council. As alternatives to the property qualifications for the Council franchise, certain professional and academic qualifications were also allowed. As amended, however, the qualifications for membership of the Council are possessed by any adult natural-born subject of the Queen, or by any adult alien naturalized for five years and resident in Victoria for two years. Entitlement for enrolment as an elector is extended to every adult natural-born or naturalized subject who has resided in Australia for at least six months continuously and in Victoria for at least three months and in any subdivision for at least one month immediately preceding the date of claim for enrolment. These qualifications for membership and electors apply also in respect of the Legislative Assembly. Reasons for disqualification follow the general pattern for Australia (*see page 48*).

Since the introduction of responsible government in Victoria there have been 38 complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the thirty-eighth was dissolved on 31st October, 1952. The thirty-ninth Parliament was opened on 22nd December, 1952.

Single voting is observed in elections held for either House, plurality of voting having been abolished for the Legislative Assembly in 1899 and for the Legislative Council in 1937. A preferential system of voting (*see Official Year Book No. 6, p. 1182*) was adopted for the first time in Victoria at the election held in November, 1911. Compulsory voting was first observed at the 1927 elections for the Legislative Assembly, and at the 1937 elections for the Legislative Council. The franchise was extended to women by the Adult Suffrage Act 1903, while voting at elections was made compulsory for the Legislative Assembly in 1926 and for the Legislative Council in 1935.

5. **The Parliament of Queensland.**—As stated previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being 23rd March, 1922. The Legislative Assembly is composed of 75 members, each elected for a period of three years and each representing an electoral district.

Any person qualified to be enrolled for any electoral district is qualified for election to the Legislative Assembly. Any person of the age of twenty-one years, who is a natural-born or naturalized British subject with continuous residence within Australia for six months, in Queensland for three months, and in an electoral district for one month prior to making a claim for enrolment, is qualified to enrol as an elector. The classes of persons not qualified to be elected are similar to those for other Australian Parliaments (*see page 48*).

Under the Electoral Districts Act of 1949 the number of members and the number of electorates were increased from 62 to 75, and the increase became effective from the beginning of the thirty-second Parliament, elected in 1950. The Act divided the State into four zones, and a commission of three appointed by the Governor-in-Council completely distributed the prescribed zones into the number of electoral districts, taking into account community or diversity of interest, means of communication, physical features, boundaries of Petty Sessions Districts and of areas of Local Authorities.

Since the establishment of responsible government in Queensland there have been 32 complete Parliaments, the last of which was dissolved on 6th February, 1953. Opinions differ regarding the opening date of the first Queensland Parliament. According to the

Votes and Proceedings of the Legislative Assembly, the House met for the first time on 22nd May, 1860, when the members were sworn and the Speaker elected. The Governor, however, was unable to be present on that date, but he duly attended on 29th May, 1860. and delivered the Opening Address. The thirty-third Parliament was opened on 4th August, 1953.

At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. The election of 1907 was the first State election in Queensland at which women voted, the right being conferred under the Elections Acts Amendment Act 1905. In 1942 the system of preferential voting was abolished and that of election of the candidate obtaining the highest number of votes in the electorate now operates.

6. The Parliament of South Australia.—In this State there is a Legislative Council composed of twenty members and a House of Assembly with 39 members, both Chambers being elective. For the Legislative Council the State is divided into five districts each returning four members, two of whom retire alternately, the term of office being six years. Thirty-nine districts return one member each to the House of Assembly; prior to 1938 there were 46 members representing nineteen districts. The duration of the House of Assembly is three years.

Any person who is at least thirty years of age, is a British subject or legally made a denizen of the State and who has resided in the State for at least three years is qualified for membership in the Legislative Council. Qualifications for the Council franchise are that a person is at least twenty-one years of age, a British subject, an inhabitant of the State with residence for at least six months prior to the registration of the electoral claim, and that he or she has had certain war service, or possesses property qualifications relating to ownership, leaseholding, or inhabitant occupancy. Any person qualified and entitled to be registered as an elector for the House of Assembly is qualified and entitled for election as a member of that House. Qualifications for enrolment as an elector for the House of Assembly are that a person is at least twenty-one years of age, is a British subject, and has lived continuously in Australia for at least six months, in the State for three months and in an Assembly subdivision for one month immediately preceding the date of claim for enrolment. Provisions in the Constitution for disqualification from membership or from the franchise in respect of either House follow the usual pattern for Australia (*see* page 48).

Since the inauguration of responsible government in South Australia there have been 33 complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-third Parliament was opened on 28th June, 1950, and expired on 28th February, 1953. The thirty-fourth Parliament was opened on 25th June, 1953. The duration of the twenty-eighth Parliament was extended from three to five years by the provisions of the Constitution (Quinquennial Parliament) Act 1933, but this Act was repealed by the Constitution Act Amendment Act (No. 2) 1939, and the three-year term was reverted to.

South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised by women for the first time at the Legislative Assembly election on 25th April, 1896. Compulsory voting for the House of Assembly, provided for by the Electoral Act Amendment Act 1942, was first observed at the 1944 election. A system of preferential voting is in operation.

7. The Parliament of Western Australia.—In this State both Chambers are elective. For the Legislative Council there are 30 members, each of the ten provinces returning three members, one of whom retires biennially. At each biennial election the member elected holds office for a term of six years, and automatically retires at the end of that period. The Legislative Assembly is composed of 50 members, one member being returned by each electoral district. Members of the Legislative Assembly are elected for three years.

Since the establishment of responsible government in Western Australia there have been twenty complete Parliaments, the first of which was opened on 30th December, 1800. The twentieth Parliament was opened on 27th July, 1950 and expired on 15th January, 1953. The twenty-first Parliament was opened on 6th August, 1953. The preferential system of voting in use in Western Australia is described in Official Year Book No. 6, p. 1184.

Qualifications required for membership of the Legislative Council are the age of 30 years, residence in Western Australia for two years, being a natural-born British subject or naturalized for five years prior to election and resident in the State for that period, and freedom from legal incapacity. Qualifications required for Council franchise are the age of twenty-one years, residence in Western Australia for six months, being a natural-born British subject or naturalized for twelve months, freedom from legal incapacity, and certain property qualifications relating to freehold, leasehold, or householder occupancy. Qualifications required for membership of the Legislative Assembly are the age of twenty-one years, residence in Western Australia for twelve months, being a natural-born British subject or naturalized for five years and resident in the State for two years prior to election, and freedom from legal incapacity. Qualifications required for the franchise are the age of twenty-one years, residence in Western Australia for six months and in an electoral district continuously for three months, and being a natural-born or naturalized British subject. Persons may be disqualified as members or voters for reasons similar to those for other Australian Parliaments (*see* page 48).

Women's suffrage was granted by the Electoral Act of 1899. The first woman member to be elected to an Australian Parliament was returned at the 1921 election in this State. Voting for the Legislative Assembly was made compulsory in December, 1936, the first elections for which the provision was in force being those held on 18th March, 1939.

8. The Parliament of Tasmania.—In Tasmania there are two legislative Chambers—the Legislative Council and the House of Assembly, both bodies being elective. In accordance with the Constitution Act 1946, the Council now consists of nineteen members, elected for six years and returned from nineteen divisions. Three members retire annually (except in the 1953 elections and in each sixth successive year thereafter, when four retire) and the Council cannot be dissolved as a whole. Prior to the 1946 Act there were eighteen members elected from fifteen divisions, of which Hobart returned three members and Launceston two. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning six members elected under a system of proportional representation which first came into force at the 1909 elections (*see* Official Year Book No. 6, p. 1185). The life of the Assembly was extended from three to five years by the Constitution Act 1936.

Persons qualified for election to the Legislative Council must be 25 years of age and qualified to vote as Council electors, have been resident in Tasmania for a period of five years at any one time or at least two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for at least five years. Electors for the Council must be twenty-one years of age, natural-born or naturalized subjects and resident in Tasmania for a period of twelve months, with certain freehold or occupancy property qualifications or with certain academic, professional, defence force, or war service qualifications. For the House of Assembly members must be twenty-one years of age, have been resident in Tasmania for a period of five years at any one time or for a period of two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for a period of five years. Electors must be twenty-one years of age, natural-born or naturalized subjects and resident in Tasmania for a period of six months continuously. Reasons for disqualification of members or voters are similar to those for other Australian Parliaments (*see* page 48).

The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been 29 complete Parliaments since the inauguration of responsible government. The thirtieth Parliament was opened on 7th June, 1950.

The suffrage was granted to women under the Constitution Amendment Act 1903 and compulsory voting for both Houses came into force on the passing of the Electoral Act in 1928. The system of voting is proportional representation by single transferable vote.

9. Superannuation Funds of the Parliaments of the Commonwealth and of the Australian States.—(i) *General.* In Official Year Book No. 38 there is a conspectus of Superannuation Funds of the Parliaments of the Commonwealth and of the five States (New South Wales, Victoria, Queensland, South Australia and Western Australia) in which such schemes operate (*see* pp. 91–9). This conspectus summarized the main features of each fund as at 30th June, 1949. Although the schemes are still essentially

as described in the conspectus, there have subsequently been several amending Acts providing for extensions or increases in benefits, increased contributions, etc., in some of the schemes. The Commonwealth Retiring Allowances Act 1952 provided *inter alia* for additional benefit of £1,200 a year, subject to certain conditions, to a retired Prime Minister, and in case of his death, additional benefit of £750 a year to his widow.

(ii) *Finances.* For particulars of the financial operations of these schemes see Chapter XVI.—Private Finance of this volume.

§ 3. Administration and Legislation.

1. *The Commonwealth Parliaments.*—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9th May, 1901, by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King. The Rt. Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since Federation :—

COMMONWEALTH PARLIAMENTS.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First	9th May, 1901	23rd November, 1903
Second	2nd March, 1904	5th November, 1906
Third	20th February, 1907	19th February, 1910
Fourth	1st July, 1910	23rd April, 1913
Fifth	9th July, 1913	30th July, 1914(a)
Sixth	8th October, 1914	26th March, 1917
Seventh	14th June, 1917	3rd November, 1919
Eighth	26th February, 1920	6th November, 1922
Ninth	28th February, 1923	3rd October, 1925
Tenth	13th January, 1926	9th October, 1928
Eleventh	9th February, 1929	16th September, 1929
Twelfth	20th November, 1929	27th November, 1931
Thirteenth	17th February, 1932	7th August, 1934
Fourteenth	23rd October, 1934	21st September, 1937
Fifteenth	30th November, 1937	27th August, 1940
Sixteenth	20th November, 1940	7th July, 1943
Seventeenth	23rd September, 1943	16th August, 1946
Eighteenth	6th November, 1946	31st October, 1949
Nineteenth	22nd February, 1950	19th March, 1951(a)
Twentieth	12th June, 1951	21st April, 1954
Twenty-first	4th August, 1954 .. ..	.. .. .

(a) A dissolution of both the Senate and the House of Representatives granted by the Governor-General, acting on the advice of the Ministry, and under Section 57 of the Constitution.

2. *Governors-General and Commonwealth Ministries.*—(i) *Governors-General.* The following statement shows the names of the Governors-General since the inception of the Commonwealth :—

GOVERNORS-GENERAL.

Rt. Hon. JOHN ADRIAN LOUIS, EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), K.T., G.C.M.G., G.C.V.O. From 1st January, 1901 to 9th January, 1903.

Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 17th July, 1902 to 9th January, 1903 (Acting).

Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 9th January, 1903 to 21st January, 1904.

Rt. Hon. HENRY STAFFORD, BARON NORTHCOTE, G.C.M.G., G.C.I.E., C.B. From 21st January, 1904 to 9th September, 1908.

Rt. Hon. WILLIAM HUMBLE, EARL OF DUDLEY, G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908 to 31st July, 1911.

Rt. Hon. THOMAS, BARON DENMAN, G.C.M.G., K.C.V.O. From 31st July, 1911 to 18th May, 1914.

Rt. Hon. SIR RONALD CRAUFURD MUNRO FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18th May, 1914 to 6th October, 1920.

Rt. Hon. HENRY WILLIAM, BARON FORSTER OF LEPE, G.C.M.G. From 6th October, 1920 to 8th October, 1925.

Rt. Hon. JOHN LAWRENCE, BARON STONEHAVEN, G.C.M.G., D.S.O. From 8th October, 1925 to 22nd January, 1931.

Rt. Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G. From 22nd January, 1931 to 23rd January, 1936.

General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.C., G.C.M.G., C.B., D.S.O., K.G.ST.J. From 23rd January, 1936 to 30th January, 1945.

His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., K.T., K.P., P.C., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30th January, 1945 to 11th March, 1947.
 Rt. Hon. SIR WILLIAM JOHN MCKELL, G.C.M.G. From 11th March, 1947 to 8th May, 1953.
 Field-Marshal SIR WILLIAM JOSEPH SLIM, G.C.B., G.C.M.G., G.C.V.O., G.B.E., D.S.O., M.C., K.St.J. From 8th May, 1953.

(ii) *Administrators.* In addition to the holders of the office of Governor-General listed above certain persons have, from time to time, been appointed as Administrator of the Government of the Commonwealth during the absence from Australia or illness of the Governor-General. The following is a list of such appointments.

	Term of Office.
Rt. Hon. Frederic John Napier, Baron Chelmsford, K.C.M.G.	21st December, 1909 to 27th January, 1910
Lieut.-Colonel the Rt. Hon. Arthur Herbert Tennyson, Baron Somers, K.C.M.G., D.S.O., M.C.	3rd October, 1930 to 22nd January, 1931
Captain the Rt. Hon. William Charles Ardeckne Vanneck, Baron Huntingfield, K.C.M.G., K.St.J.	29th March, 1938 to 24th September, 1938
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.	5th September, 1944 to 30th January, 1945
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.	18th January, 1947 to 11th March, 1947
General* Sir John Northcott, K.C.M.G., C.B., M.V.O.	19th July, 1951 to 14th December, 1951

(iii) *Commonwealth Ministries.* (a) *Names and Tenure of Office, 1901 to 1951.* The following list shows the name of each Commonwealth Ministry to hold office since 1st January, 1901, and the limits of its term of office.

COMMONWEALTH MINISTRIES.

- (i) BARTON MINISTRY, 1st January, 1901 to 24th September, 1903.
- (ii) DEAKIN MINISTRY, 24th September, 1903 to 27th April, 1904.
- (iii) WATSON MINISTRY, 27th April, 1904 to 17th August, 1904.
- (iv) REID-MCLEAN MINISTRY, 18th August, 1904 to 5th July, 1905.
- (v) DEAKIN MINISTRY, 5th July, 1905 to 13th November, 1908.
- (vi) FISHER MINISTRY, 13th November, 1908 to 1st June, 1909.
- (vii) DEAKIN MINISTRY, 2nd June, 1909 to 29th April, 1910.
- (viii) FISHER MINISTRY, 29th April, 1910 to 24th June, 1913.
- (ix) COOK MINISTRY, 24th June, 1913 to 17th September, 1914.
- (x) FISHER MINISTRY, 17th September, 1914 to 27th October, 1915.
- (xi) HUGHES MINISTRY, 27th October, 1915 to 14th November, 1916.
- (xii) HUGHES MINISTRY, 14th November, 1916 to 17th February, 1917.
- (xiii) HUGHES MINISTRY, 17th February, 1917 to 10th January, 1918.
- (xiv) HUGHES MINISTRY, 10th January, 1918 to 9th February, 1923.
- (xv) BRUCE-PAGE MINISTRY, 9th February, 1923 to 22nd October, 1929.
- (xvi) SCULLIN MINISTRY, 22nd October, 1929 to 6th January, 1932.
- (xvii) LYONS MINISTRY, 6th January, 1932 to 7th November, 1938.
- (xviii) LYONS MINISTRY, 7th November, 1938 to 7th April, 1939.
- (xix) PAGE MINISTRY, 7th April, 1939 to 26th April, 1939.
- (xx) MENZIES MINISTRY, 26th April, 1939 to 14th March, 1940.
- (xxi) MENZIES MINISTRY, 14th March, 1940 to 28th October, 1940.
- (xxii) MENZIES MINISTRY, 28th October, 1940 to 29th August, 1941.
- (xxiii) FADDEN MINISTRY, 29th August, 1941 to 7th October, 1941.
- (xxiv) CURTIN MINISTRY, 7th October, 1941 to 21st September, 1943.
- (xxv) CURTIN MINISTRY, 21st September, 1943 to 6th July, 1945.
- (xxvi) FORDE MINISTRY, 6th July, 1945 to 13th July, 1945.

* Lieutenant-General Sir John Northcott was granted honorary rank of General whilst administering the Government of the Commonwealth.

COMMONWEALTH MINISTRIES—*continued.*

- (xxvii) CHIFLEY MINISTRY, 13th July, 1945 to 1st November, 1946.
 (xxviii) CHIFLEY MINISTRY, 1st November, 1946 to 19th December, 1949.
 (xxix) MENZIES MINISTRY, 19th December, 1949 to 11th May, 1951.
 (xxx) MENZIES MINISTRY, 11th May, 1951.

(b) *Names of Successive Holders of Office, 9th February, 1923 to 31st December, 1952.* In earlier issues of the Official Year Book (see No. 21, 1928 and previous issues) there appeared the names of each Ministry up to the Bruce-Page Ministry (9th February, 1923 to 22nd October, 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contains a list, commencing with the Bruce-Page Ministry, which covers the period between the date on which it assumed power, 9th February, 1923, and 31st July, 1951, showing the names of all persons who have held office in each Ministry during that period.

This issue shows only particulars of the latest Menzies Ministry, but includes any changes therein during its term of office up to August, 1954. For any subsequent changes see Appendix to this volume.

MENZIES MINISTRY—from 11th May, 1951 (as at 31st August, 1954).

(The State from which each Minister was elected to Parliament is added in parentheses).

<i>Departments.</i>	<i>Ministers.</i>
Prime Minister	The Rt. Hon. ROBERT GORDON MENZIES, C.H., Q.C. (Vic.).
Treasurer	The Rt. Hon. SIR ARTHUR WILLIAM PADDEN, K.C.M.G.* (Qld.).
Vice-President of the Executive Council and Minister for Defence Production	The Rt. Hon. SIR ERIC JOHN HARRISON, K.C.V.O.† (N.S.W.).
Minister for Labour and National Service and Minister for Immigration	The Hon. HAROLD EDWARD HOLT (Vic.).
Minister for Commerce and Agriculture	The Hon. JOHN McEWEN (Vic.)
Minister for External Affairs	The Rt. Hon. RICHARD GARDINER CASEY, C.H., D.S.O., M.C. (Vic.).
Minister for Defence(a)	The Hon. SIR PHILIP ALBERT MARTIN McBRIDE, K.C.M.G.† (S.A.).
Minister for Health	The Rt. Hon. SIR EARLE CHRISTMAS GRATTON PAGE, G.C.M.G., C.H., (N.S.W.).
Minister for Trade and Customs	Senator the Hon. NEIL O'SULLIVAN (Qld.).
Minister for Shipping and Transport	Senator the Hon. GEORGE McLEAY (S.A.).
Postmaster-General (b)	The Hon. HUBERT LAWRENCE ANTHONY (N.S.W.).
Minister for the Navy and Minister for the Army(c)	The Hon. JOSIAH FRANCIS (Qld.).
Attorney-General	Senator the Hon. JOHN ARMSTRONG SPICER, Q.C. (Vic.).
Minister for National Development	Senator the Hon. WILLIAM HENRY SPOONER, M.M. (N.S.W.).
Minister for Repatriation	Senator the Hon. WALTER JACKSON COOPER, M.B.E. (Qld.).
Minister for Supply	The Hon. HOWARD BEALE, Q.C. (N.S.W.).
Minister for the Interior and Minister for Works(d)	The Hon. WILFRED SELWYN KENT HUGHES, M.V.O., O.B.E., M.C., E.D. (Vic.).
Minister for Air and Minister for Civil Aviation(e)	The Hon. ATHOL GORDON TOWNLEY (Tas.).
Minister for Territories	The Hon. PAUL MEERNAA CAEDWALLA HASLUCK (W.A.).
Minister for Social Services(f)	The Hon. WILLIAM McMAHON (N.S.W.).

* K.C.M.G., June, 1951. † P.C., June, 1952; K.C.V.O., April, 1954. ‡ K.C.M.G., January, 1953.

(a) Also Minister for the Navy and Minister for Air prior to 17th July, 1951. (b) Designation changed from Postmaster-General and Minister for Civil Aviation, 4th August, 1954. (c) Designation changed from Minister for the Army, 4th August, 1954. (d) Designation changed from Minister for the Interior and Minister for Works and Housing, 4th June, 1952. (e) Minister for Social Services prior to 4th August, 1954. (f) Minister for the Navy and Minister for Air from 17th July, 1951 to 4th August, 1954.

(iv) *Commonwealth Ministers of State.* In Official Year Book No. 38 a statement was included showing the names of the Ministers of State who had administered the several Departments during the period 1st April, 1925 to 31st December, 1949 (pp. 74-79). This was in continuation of a similar statement covering the period from the inauguration of Commonwealth Government to 1925 which appeared in Official Year Book No. 18.

3. **Governors and State Ministers.**—The names of the Governors and members of the Ministries in each State in August, 1954, are shown in the following statement. (Changes since August, 1954 are shown in the Appendix to this volume.)

NEW SOUTH WALES.

Governor—LIEUT.-GENERAL SIR JOHN NORTHCOTT, K.C.M.G., K.C.V.O., C.B.

Ministry (from 23rd February, 1953).

<i>Premier and Colonial Treasurer—</i> THE HON. J. J. CAHILL.	<i>Secretary for Lands—</i> THE HON. F. H. HAWKINS.
<i>Deputy Premier and Minister for Education—</i> THE HON. R. J. HEFFRON.	<i>Secretary for Public Works and Minister for Local Government—</i> THE HON. J. B. RENSHAW.
<i>Minister of Justice and Vice-President of the Executive Council—</i> THE HON. R. R. DOWNING, M.L.C.	<i>Minister for Conservation—</i> THE HON. A. G. ENTICKNAP.
<i>Chief Secretary, Minister for Immigration and Minister for Co-operative Societies—</i> THE HON. C. A. KELLY.	<i>Minister for Labour and Industry and Minister for Social Welfare—</i> THE HON. A. LANDA.
<i>Minister for Health—</i> THE HON. M. O'SULLIVAN.	<i>Secretary for Mines—</i> THE HON. W. M. GOLLAN.
<i>Minister for Agriculture and Minister for Food Production—</i> THE HON. E. H. GRAHAM.	<i>Minister for Housing—</i> THE HON. J. F. McGRATH.
<i>Attorney-General—</i> THE HON. W. F. SHEAHAN, Q.C.	<i>Minister for Transport—</i> THE HON. E. WETHERELL.
	<i>Minister without Portfolio—</i> THE HON. R. B. NOTT.
	<i>Minsiter without Portfolio—</i> THE HON. J. J. MALONEY, M.L.C.

VICTORIA.

Governor—GENERAL SIR REGINALD ALEXANDER DALLAS BROOKS, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Ministry (from 17th December, 1952).

<i>Premier and Treasurer—</i> THE HON. J. CAIN.	<i>Minister of Forests and Minister of Mines—</i> THE HON. D. P. J. FERGUSON, M.L.C.
<i>Chief Secretary—</i> THE HON. L. W. GALVIN.	<i>Minister for Education—</i> THE HON. A. E. SHEPHERD.
<i>Minister of Transport and a Vice-President of the Board of Land and Works—</i> THE HON. P. L. COLEMAN, M.L.C.	<i>Commissioner of Crown Lands and Survey, Minister of Soldier Settlement, Minister for Conservation and President of the Board of Land and Works—</i> THE HON. J. H. SMITH.
<i>Attorney-General, Minister in Charge of Prices and Minister in Charge of Immigration—</i> THE HON. W. SLATER, M.L.C.	<i>Commissioner of Public Works and a Vice-President of the Board of Land and Works—</i> THE HON. S. MERRIFIELD.
<i>Minister of Health—</i> THE HON. W. P. BARRY.	<i>Minister in Charge of Electrical Undertakings and Minister of Labour and Industry—</i> THE HON. J. W. GALBALLY, M.L.C.
<i>Minister of Agriculture, Minister of State Development and Decentralization, Minister of Water Supply and a Vice-President of the Board of Land and Works—</i> THE HON. C. P. STONEHAM.	<i>Ministers without Portfolio—</i> THE HON. F. R. SCULLY. THE HON. M. J. GLADMAN.
<i>Minister in Charge of Housing and Minister in charge of Materials—</i> THE HON. T. HAYES.	

GOVERNORS AND STATE MINISTERS—*continued.*

QUEENSLAND.

Governor—LIEUT.-GENERAL SIR JOHN DUDLEY LAVARACK, K.C.V.O., K.B.E., C.B., C.M.G., D.S.O.

Ministry (from 16th March, 1953).

Premier and Chief Secretary and Vice-President of the Executive Council— THE HON. V. C. GAIR.	Secretary for Labour and Industry— THE HON. A. JONES.
Minister for Transport— THE HON. J. E. DUGGAN.	Secretary for Health and Home Affairs— THE HON. W. M. MOORE.
Secretary for Public Lands and Irrigation— THE HON. T. A. FOLEY.	Attorney-General— THE HON. W. POWER.
Treasurer— THE HON. E. J. WALSH.	Secretary for Public Works and Housing— THE HON. P. J. R. HILTON.
Secretary for Agriculture and Stock— THE HON. H. H. COLLINS.	Secretary for Public Instruction— THE HON. G. H. DEVRIES.
	Secretary for Mines and Immigration— THE HON. E. J. RIORDAN.

SOUTH AUSTRALIA.

Governor—Air Vice-Marshal SIR ROBERT ALLINGHAM GEORGE, K.C.V.O., K.B.E., C.B., M.C.

Ministry (from 15th May, 1944).

Premier, Treasurer and Minister of Immigration— THE HON. T. PLAYFORD.	Minister for Works and Minister of Marine— THE HON. M. MCINTOSH.
Chief Secretary, Minister of Health, and Minister of Mines— THE HON. SIR LYELL McEWIN, K.B.E., M.L.C.	Minister of Agriculture and Minister of Forests— THE HON. A. W. CHRISTIAN.
Attorney-General and Minister of Industry and Employment— THE HON. R. J. RUDALL, M.L.C.	Minister of Education— THE HON. B. PATTINSON.
Minister of Lands, Minister of Repatriation, and Minister of Irrigation— THE HON. C. S. HINCKS.	Minister of Local Government, Minister of Roads and Minister of Railways— THE HON. N. L. JUDE, M.L.C.

WESTERN AUSTRALIA.

Governor—LIEUT.-GENERAL SIR CHARLES GAIRDNER, K.C.M.G., K.C.V.O., C.B., C.B.E.

Ministry (from 23rd February, 1953.)

Premier, Treasurer and Minister for Child Welfare— THE HON. A. R. G. HAWKE.	Minister for Railways, Transport and Police— THE HON. H. H. STYANTS.
Minister for Works and Water Supplies and Deputy Premier— THE HON. J. T. TONKIN.	Minister for Health and Justice— THE HON. E. NULSEN.
Minister for Education, Native Welfare and Labour— THE HON. W. HEGNEY.	Minister for Housing and Forests— THE HON. H. E. GRAHAM.
Chief Secretary and Minister for Local Government and Town Planning— THE HON. G. FRASER, M.L.C.	Minister for Mines, Industrial Development and Fisheries— THE HON. L. F. KELLY.
Minister for Lands and Agriculture— THE HON. E. K. HOAR.	Minister for the North-West and Supply and Shipping— THE HON. H. C. STRICKLAND, M.L.C.

GOVERNORS AND STATE MINISTERS—*continued.*

TASMANIA.

Governor—THE RT. HON. SIR RONALD HIBBERT CROSS, K.C.V.O.

*Ministry (from 25th February, 1948).*Premier, Minister for Education and
Minister administering Hydro-Electric
Commission Act—

THE HON. R. COSGROVE.

Attorney-General—

THE HON. R. F. FAGAN.

Treasurer and Minister for Transport—

THE HON. J. L. MADDEN.

Minister for Agriculture—

THE HON. J. J. DWYER, V.C.

Minister for Lands and Works and Minister
for Mines—

THE HON. E. E. REECE.

Chief Secretary—

THE HON. A. J. WHITE.

Honorary Ministers—

THE HON. C. H. HAND

(Minister for Forests and Minister
controlling the Tourist and Immi-
gration Department).

THE HON. C. A. BRAMICH

(Minister for Housing).

THE HON. R. J. D. TURNBULL

(Minister for Health).

4. Leaders of the Opposition, Commonwealth and State Parliaments.—The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in August, 1954.

Leader of the Opposition, Commonwealth and State Parliaments—

Commonwealth—The Rt. Hon. H. V. Evatt, Q.C.*New South Wales*—Lt.-Col. E. M. Robson, D.S.O.*Victoria*—The Hon. H. E. Bolte.*Queensland*—G. F. R. Nicklin.*South Australia*—M. R. O'Halloran.*Western Australia*—The Hon. Sir Ross McLarty, K.B.E., M.M.*Tasmania*—R. C. Townley.

5. The Course of Legislation.—The actual legislation by the Commonwealth Parliament up to the end of 1952 is indicated in alphabetical order in Vol. XL. "The Acts of the Parliament of the Commonwealth of Australia passed during the year 1952, in portion of the First Session of the Nineteenth Parliament of the Commonwealth, with Tables and Index."

A "Chronological Table of Acts passed from 1901 to 1952, showing how they are affected by subsequent legislation or lapse of time" is also given, and, further, "A Table of Commonwealth Legislation passed from 1901 to 1952 in relation to the several provisions of the Constitution", is furnished. Reference should be made to these for complete information.

6. Legislation during 1952 and 1953.—The following paragraphs present a selection from the legislative enactments of the Commonwealth Parliament during the years 1952 and 1953. The acts included have been selected as the more important new measures and amending measures enacted during the respective years. The selection is somewhat arbitrary, however, because of the task of determining, in view of the limitations on space that might reasonably be allotted, the relative importance of the acts passed. Certain principles regulating the choice of acts have nevertheless been generally observed. Ordinary appropriation and loan acts are excluded, as are also acts relating to less important changes in existing forms of taxation, in superannuation and pension schemes, and in workers' compensation. Acts providing for minor amendments to existing statutes and continuance acts are similarly excluded.

The total enactments of the Commonwealth Parliament for a number of years at fairly even intervals since 1901 show a steady increase. About 17 acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952 and 96 in 1953.

In Official Year Book No. 40 (see pp. 66–70) and previous Year Books similar information was published for the principal legislative enactments of State Parliaments.

Legislation Passed in 1952.—*Air Navigation (Charges) Act 1952.* Imposes charges payable by aircraft for the use of aerodromes, air route and airway facilities and meteorological services and search and rescue services maintained, operated or provided by the Commonwealth.

Atomic Energy (Control of Materials) Act 1952. Amends the Atomic Energy (Control of Materials) Act 1946 and makes provisions relating to the mining of prescribed substances in the Territories of the Commonwealth.

Aluminium Industry Act 1952. Approves a Supplementary Agreement made between the Commonwealth and the State of Tasmania relating to the production of aluminium, alters the constitution of the Australian Aluminium Production Commission and appropriates a further sum of £4,250,000 for the purposes of the Commission.

Australian National Airlines Act 1952. Amends the provisions of the Australian National Airlines Act 1945-1947 relating to vacation of office of the Commissioners, the rights of officers of the Commission, fares and charges for transport and the finances of the Commission.

Civil Aviation Agreement Act 1952. Approves the agreement made on 24th October, 1952, between the Commonwealth of Australia and the Australian National Airways Proprietary Limited.

Conciliation and Arbitration Act 1952. Amends the Conciliation and Arbitration Act 1904-1951 in many respects including the insertion of new provisions providing for reference of matters to the Court by a Conciliation Commissioner or a judge, for appeals to the Court against awards, orders and decisions of Conciliation Commissioners.

Cotton Bounty Act 1952. Provides for an increase in the rate of bounty on cotton produced in Australia.

Customs Tariff 1952. Amends the Schedule to the Customs Tariff 1933-1950 and imposes new duties of customs on a wide range of goods.

Dairying Industry Act 1952. Provides for the payment of bounties on the production of butter and cheese.

Defence (Special Undertakings) Act 1952. Provides for the protection of special defence undertakings in the Monte Bello group of Islands and other areas declared to be prohibited areas for the purposes of the Act.

Diplomatic Immunities Act 1952. Confers on the representatives in Australia of other parts of the Queen's dominions the same immunities as envoys are entitled to.

Explosives Act 1952. Authorizes the making of regulations relating to the handling of explosives for use or capable of being used for defence purposes.

Fisheries Act 1952. Provides for the regulation of fisheries in Australian waters.

Land Tax Abolition Act 1952. Provides that land tax shall not be levied for the financial year which commenced on 1st July, 1952, or for any subsequent year.

Loan (International Bank for Reconstruction and Development) Act 1952. Authorizes the raising of a loan not exceeding 50 million dollars from the International Bank for Reconstruction and Development.

Navigation Act 1952. Makes extensive amendments to the Navigation Act 1912-1950 relating to the complement of officers and crew of ships, the engagement of ships' crews, crew accommodation and the jurisdiction of the Commonwealth Court of Conciliation and Arbitration to deal with industrial disputes in the maritime industry.

New Guinea Timber Agreement Act 1952. Approves the agreement made between the Commonwealth and Bulolo Gold Dredging Limited on 20th May, 1952, relating to the cutting and removal of timber in the Territory of New Guinea.

Oil Agreement Act 1952. Approves the agreement made between the Commonwealth and the Anglo-Iranian Oil Company Limited on 26th September, 1952, relating to the sale of the shares owned by the Commonwealth in Commonwealth Oil Refineries Limited.

Parliamentary Allowances Act 1952. Repeals the Parliamentary Allowances Act 1920-1947 and enacts new provisions relating to the allowances payable to the members of each House of the Parliament.

Patents Act 1952. Repeals the Patents Act 1903-1950 and enacts new legislation relating to the grant of patents of inventions.

Pearl Fisheries Act 1952. Provides for the regulation of Pearl Shell, Trochus, Bêche-de-mer and Green Snail Fisheries in Australian waters.

Repatriation Act 1952. Increases rates of pensions payable to former members of the Defence Forces.

Security Treaty (Australia, New Zealand and the United States of America) Act 1952. Approves the Security Treaty made between Australia, New Zealand and the United States of America on 1st September, 1951.

Stirling North to Brachina Railway Act 1952. Provides for the construction of a railway from Stirling North to Brachina in the State of South Australia.

Treaty of Peace (Japan) Act 1952. Approves the Treaty of Peace with Japan signed at San Francisco on 8th September, 1951, and provides for the making of regulations for carrying out or giving effect to the Treaty.

Wool Tax Act (No. 1) 1952 and Wool Tax Act (No. 2) 1952. Impose taxes on wool produced in Australia and received by a wool-broker or dealer, and on wool produced in Australia and exported from Australia.

Legislation passed in 1953.—*Atomic Energy Act 1953.* Repeals the Atomic Energy (Control of Materials) Act 1946-1952, and establishes the Australian Atomic Energy Commission, defines the functions and powers of the Commission, provides for the control of prescribed substances, namely, uranium, thorium, plutonium, neptunium and other substances which may be used in connexion with the production of atomic energy and provides security measures in relation to the production of Atomic Energy.

Banking Act 1953. Makes extensive amendments to the Banking Act 1945, particularly to the provisions relating to the special accounts to be lodged by banks with the Commonwealth Bank and relating to Statistics.

Commonwealth Bank Act 1953. Makes extensive amendments to the Commonwealth Bank Act 1945-1951. It inserts provisions which establish the Commonwealth Trading Bank of Australia and defines its powers and functions.

Commonwealth Observatory Trust Fund Act 1953. Repeals the Solar Observatory Trust Fund Act 1930-1932 and the Commonwealth Observatory Fund Act 1944. It establishes the Commonwealth Observatory Trust Fund into which are to be paid donations made to the Commonwealth Observatory and out of which are to be paid moneys approved by the Minister for the purposes of the Observatory.

Entertainments Tax Abolition Act 1953. Repeals the Acts under which entertainments tax was imposed and collected.

Estate Duty Convention (United States of America) Act 1953. Gives the force of law to the Convention between the Commonwealth and the United States of America for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on the estates of deceased persons.

Flax Industry Act 1953. Establishes the Flax Commission for the purposes of ensuring that sufficient supplies of flax are available for defence purposes, and defines the powers and functions of the Commission.

Gift Duty Convention (United States of America) Act 1953. Gives the force of law to the Convention between the Commonwealth and the United States of America for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on gifts.

Heard Island and McDonald Islands Act 1953. Provides for the government of Heard Island and McDonald Islands and specifies the laws which are to be in force in those Islands.

Income Tax (International Agreements) Act 1953. Gives the force of law to the Conventions signed between the Government of the Commonwealth of Australia and the Government of the United Kingdom and between the Government of the Commonwealth and the Government of the United States of America for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income.

International Wheat Agreement Act 1953. Repeals the International Wheat Agreement Act 1949 and approves the acceptance by Australia of the International Wheat Agreement signed at Washington, United States of America, on 20th April, 1953.

Land Tax Abolition Act 1953. Repeals the various Land Tax Acts.

Life Insurance Act 1953. Makes extensive amendments to the Life Insurance Act 1945-1950.

National Health Act 1953. Is an Act relating to the provision of pharmaceutical sickness and hospital benefits, and of medical and dental services.

National Service Act 1953. Amends the provisions of National Service Acts 1951 relating to the exemption of persons whose conscientious beliefs do not allow them to engage in any form of naval, military or air force service.

Navigation Act 1953. Amends the Navigation Act 1912-1952 for the purpose of giving effect to the International Convention for the Safety of Life at Sea, 1948.

Northern Territory (Administration) Act 1953. Amends the Northern Territory (Administration) Act 1910-1952 by replacing the provisions of that Act relating to the appointment of the Administrator of the Territory, the establishment of the Legislative Council for the Territory and the membership of the Council.

Patents, Trade Marks, Designs and Copyright Act 1953. Amends the Patents, Trade Marks, Designs and Copyright (War Powers) Act 1939-1946 and provides for the making of regulations for or in relation to the protection or compensation of persons prejudicially affected by the exercise of the powers conferred by that Act. It provides for the Act to continue in operation until a date to be fixed by Proclamation.

Queensland Tobacco Leaf Marketing Board Guarantee Act 1953. Authorizes the Commonwealth to guarantee the repayment of certain loans to be made by the Commonwealth Bank to the Queensland Tobacco Leaf Marketing Board.

Repatriation Act 1953. Amends the Repatriation Act 1920-1952 by increasing the rates of pensions payable to ex-members of the Forces and their dependants.

Royal Powers Act 1953. Provides that at any time when the Queen is personally present in Australia, any power under an Act exercisable by the Governor-General may be exercised by the Queen.

Royal Style and Titles Act 1953. Gives the assent of Parliament to the adoption by Her Majesty, for use in relation to the Commonwealth and its Territories, of the Royal Style and Titles specified in the Act.

Seamen's Compensation Act 1953. Amends the Seamen's Compensation Act 1911-1949 by increasing the rates and amounts of compensation payable to seamen who are injured in the course of or arising out of their employment.

Social Services Consolidation Act 1953. Amends the Social Services Consolidation Act 1947-1952 by increasing the rate of invalid and old-age pensions.

States Grants (Special Financial Assistance) Act 1953. Grants and applies out of the Consolidated Revenue Fund sums for the purpose of financial assistance to the States in relation to tax reimbursement.

States Grants (Universities) Act 1953. Grants financial assistance to the States in connexion with Universities.

Taxation Administration Act 1953. Provides for the Administration of Specified Acts relating to Taxation, for the appointment of the Commissioner of Taxation, the Second Commissioner of Taxation and Deputy Commissioners of Taxation and of Valuation Boards.

Television Act 1953. Authorizes the Postmaster-General to make television stations available for the transmission of television programmes and to grant licences for commercial television stations.

Therapeutic Substances Act 1953. Provides standards for certain therapeutic substances and for the control of those substances.

Tractors Bounty Act 1953. Amends the Tractor Bounty Act 1939-1950 to provide for increased rates of bounty payable on tractors manufactured for sale and use in the Commonwealth.

Wheat Marketing Act 1953. Amends the Wheat Industry Stabilization Act 1948-1953 to enable the Commonwealth to participate in a joint Commonwealth-State plan for the marketing of Australian wheat.

Wool Stores Act 1953. Vests in the Australian Wool Bureau, established by the Wool Use Promotion Act 1953, the property and rights in respect of land and buildings previously vested in the Australian Wool Realization Commission.

Wool Use Promotion Act 1953. Repeals the Wool Use Promotion Act 1945-1952. It provides for the appointment of the Commonwealth Wool Adviser and establishes the Australian Wool Bureau for the purposes of improving the production and increasing the use of wool. It defines the powers and functions of Adviser and the Bureau.

§ 4. Commonwealth Government Departments.

Official Year Book No. 37 contains, on pp. 76-86, a list of the Commonwealth Government Departments as at 31st March, 1947, showing details of the matters dealt with by each Department, and the Acts administered by the Minister of each Department, and Year Book No. 39 contains, on pp. 100-1, a description of major changes in Departmental structure from 1947 to 1951.

§ 5. Cost of Parliamentary Government.

The tables in this section are intended to represent the expenditure incurred in the operation of the Parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; they do not attempt to cover the expenditure on Commonwealth and State administration generally.

Comparison between individual items should be made with caution because of differences in accounting and presentation.

The following statement shows this expenditure for the Commonwealth and for each State, as well as the cost per head of population, for the years ended 30th June, 1952 and 1953. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, and carried out at the request of the Government.

COST OF PARLIAMENTARY GOVERNMENT, 1951-52.

(£.)

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. Governor-General or Governor(a)—								
Governor's salary	10,000	3,992	6,000	3,850	9,003	2,802	4,111	39,758
Other salaries	10,845	18,425	5,750	7,760	4,058	2,562	3,282	52,682
Other expenses, including maintenance of house and grounds	661,147	26,566	64,687	24,446	7,006	648,049	32,524	264,425
Total	81,992	48,983	76,437	36,056	20,067	53,413	39,917	356,865
2. Ministry—								
Salaries of Ministers	46,913	45,047	31,085	30,469	14,250	12,696	17,794	198,254
Travelling expenses	14,531	(d)	(d)	(d)	(d)	17,171	3,801	35,503
Other	917	2,164	(d)	(d)	(d)	..	8,702	11,783
Total	62,361	47,211	31,085	30,469	14,250	29,867	30,297	245,540
3. Parliament—								
A. Upper House :								
President and Chairman of Committees	2,500	2,967	(e)3,865	..	1,800	3,137	(f) 955	15,224
Allowance to members	114,817	22,088	40,252	..	20,015	35,387	21,404	253,963
Railway passes(g)	10,650	14,980	(h)	..	1,405	5,861	1,401	34,297
Other travelling expenses	(i)8,345	..	..	..	..	..	..	8,345
Postage for members	5,353	(h)	850	..	146	886	..	7,235
B. Lower House :								
Speaker and Chairman of Committees	2,500	4,483	(j)4,544	3,750	3,200	3,137	650	22,264
Allowance to members	232,982	128,088	81,095	85,127	39,390	60,897	26,756	654,335
Railway passes(g)	22,031	27,853	(k)9,000	12,346	2,742	9,762	2,214	85,948
Other travelling expenses	19,338	1,431	..	6,026	..	..	..	26,795
Postage for members	10,650	(k)4,932	2,842	6,968	795	1,395	..	27,582
C. Both Houses :								
Government contribution to Members' Superannuation Fund	10,875	1,126	659	7,361	6,185	..	..	26,206
Printing—								
<i>Hansard</i>	51,952	8,110	13,903	9,974	4,906	9,538	..	98,383
Other	34,212	17,574	10,900	4,444	14,290	3,720	8,667	93,807
Reporting Staff—								
Salaries	30,885	16,065	14,936	5,869	15,538	13,792	..	97,085
Contingencies	2,513	204	278	..	675	272	..	3,942
Library—								
Salaries	25,002	9,241	5,915	3,937	2,444	100	..	46,639
Contingencies	9,877	2,577	1,150	1,944	939	320	..	16,807
Salaries of other officers	229,562	80,869	43,484	15,419	21,484	24,249	13,172	428,239
Other	117,047	2,525	7,976	6,479	9,921	4,122	918	148,988
D. Miscellaneous :								
Fuel, light, heat, power, and water	2,079	2,544	3,472	1,525	4,276	125	..	11,921
Posts, telegraphs, telephones	17,258	8,940	..	2,374	1,931	782	..	23,985
Furniture, stores, and stationery	28,809	8,696	6,237	1,826	13,858	210	..	49,430
Other	144,461	10,138	7,933	8,932	4,258	2,783	2,971	181,476
Total	113,698	375,431	259,291	184,301	170,198	180,475	80,811	2,384,205
4. Electoral—								
Salaries	279,240	6,056	2,704	10,125	7,901	13,925	(n)	319,951
Cost of elections, contingencies, etc.	293,345	6,265	35,415	31,448	3,214	14,562	3,616	387,865
Total	572,585	12,321	38,119	41,573	11,115	28,487	3,616	707,816
5. Royal Commissions, Select Committees, etc.	3,073	24,078	2,346	6,002	43	2,199	2,341	40,082
GRAND TOTAL	1853,709	508,024	407,278	298,401	215,673	294,441	156,082	3,734,508
Cost per head of population	4s. 4d.	3s. 0d.	3s. 6d.	4s. 11d.	3s. 11d.	10s. 0d.	10s. 6d.	8s. 9d.

(a) Includes Executive Council except in Western Australia, where duties are performed by Chief Secretary's Department. (b) Includes interest and sinking funds on loans, £4,729. (c) Includes £34,986 expenditure by the Public Works Department on alterations to Governor's residence. (d) Not available separately. (e) Includes unofficial Leader. (f) Includes Government Leader. (g) Actual amounts paid to the respective Railway Departments, except in New South Wales and Western Australia, where the amounts shown represent the value of railway passes as supplied by the Railway Departments. (h) Included with Lower House. (i) While in Canberra. See also (l). (j) Includes Leader of the Opposition and Leader of the Third Party. (k) Both Houses. (l) Conveyance of members of Parliament and others not elsewhere included. (m) Includes interest and sinking fund, Parliament House, Canberra, £38,398, maintenance of Ministers' and members' rooms, £50,926, and additions, new works, buildings, etc., £22,604. (n) Duties performed by Chief Secretary's Department.

COST OF PARLIAMENTARY GOVERNMENT, 1952-53.

(£.)

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. Governor-General or Governor(a)—								
Governor's salary	10,000	5,000	6,000	3,850	9,950	4,600	3,000	42,400
Other salaries	7,544	21,512	6,170	8,517	4,464	3,270	17,544	69,021
Other expenses, including maintenance of house and grounds	677,030	12,076	40,350	14,241	7,187	22,167	7,757	160,808
Total	94,574	38,588	52,520	26,608	21,601	30,037	28,301	292,229
2. Ministry—								
Salaries of Ministers	63,494	50,328	35,393	29,211	14,250	12,750	18,558	223,984
Travelling expenses	12,565	(c)	(c)	(c)	(c)	14,267	3,271	30,103
Other	206	2,318	(c)	(c)	(c)	..	11,250	13,774
Total	76,265	52,646	35,393	29,211	14,250	27,017	33,079	267,861
3. Parliament—								
A. Upper House :								
President and Chairman of Committees	2,900	3,414	3,671	..	1,800	2,963	(d) 992	15,740
Allowance to members	138,605	27,934	41,045	..	20,175	38,019	24,112	289,890
Railway passes(c)	10,500	15,407	(f)	..	1,489	5,910	1,371	34,677
Other travelling expenses	910,130	..	..	..	..	..	..	10,130
Postage for members	3,437	(f)	1,118	..	200	914	..	5,669
B. Lower House :								
Speaker and Chairman of Committees	2,900	4,824	(h) 3,968	3,750	3,000	2,562	650	21,654
Allowance to members	280,202	147,378	80,937	85,603	39,632	65,357	28,152	727,261
Railway passes(c)	21,831	28,898	(i) 9,000	12,305	2,904	9,558	2,055	86,551
Other travelling expenses	925,185	1,810	..	7,096	..	..	..	34,091
Postage for members	7,047	(i) 4,926	3,773	8,170	606	1,476	..	25,998
C. Both Houses :								
Government contribution to Members' Superannuation Fund	11,193	1,564	11,050	7,360	6,196	..	..	37,363
Printing—								
<i>Hansard</i>	49,224	17,020	16,212	9,766	6,267	12,782	..	111,271
Other	37,756	24,699	13,762	4,906	17,488	3,797	9,444	111,852
Reporting Staff—								
Salaries	32,917	18,392	16,958	6,788	16,301	14,881	..	106,237
Contingencies	1,439	232	227	..	629	285	..	2,812
Library—								
Salaries	26,421	9,567	6,184	3,877	2,901	100	..	49,050
Contingencies	11,450	2,599	1,400	2,426	1,131	320	..	19,326
Salaries of other officers	250,093	94,013	48,382	16,365	24,034	26,413	16,561	475,771
Other	130,708	3,112	7,461	8,897	11,050	518	386	162,132
D. Miscellaneous :								
Fuel, light, heat, power, and water	3,262	3,190	4,715	1,854	4,832	216	..	19,326
Posts, telegraphs, telephones	21,940	7,595	6,390	1,282	2,186	799	1,575	99,159
Furniture, stores and stationery	14,732	9,195	1,806	12,382	1,118	..	..	187,390
Other	131,382	19,438	6,918	7,644	5,456	10,683	5,869	187,390
Total	1225,164	445,207	283,171	189,985	180,659	198,671	91,167	2,614,024
4. Electoral—								
Salaries	310,049	7,020	3,759	12,347	17,626	18,561	(l)	369,362
Cost of elections, contingencies, etc.	375,689	121,911	98,335	90,298	18,122	15,545	6,609	726,509
Total	685,738	128,931	102,094	102,645	35,748	34,106	6,609	1,095,871
5. Royal Commissions, Select Committees, etc.	8,227	14,574	1,553	813	1,889	2,458	2,227	31,741
GRAND TOTAL	2089,968	679,946	474,731	349,262	254,147	292,289	161,383	4,301,726
<i>Cost per head of population</i>	<i>48. 9d.</i>	<i>48. 0d.</i>	<i>48. 0d.</i>	<i>58. 7d.</i>	<i>68. 9d.</i>	<i>98. 6d.</i>	<i>108. 5d.</i>	<i>98. 10d.</i>

(a) Includes Executive Council except in Western Australia, where duties are performed by Chief Secretary's Department. (b) Includes interest and sinking funds on loans, £4,557. (c) Not available separately. (d) Includes Government Leader. (e) Actual amounts paid to the respective Railway Departments, except in New South Wales and Western Australia, where the amounts shown represent the value of railway passes as supplied by the Railway Departments. (f) Included with Lower House. (g) While in Canberra. See also (j). (h) Includes Leader of the Opposition and Leader of the Third Party. (i) Both Houses. (j) Conveyance of members of Parliament and others not elsewhere included. (k) Includes interest and sinking fund, Parliament House, Canberra, £37,027, maintenance of Ministers' and members' rooms, £48,876 and additions, new works, buildings, etc., £12,962. (l) Duties performed by Chief Secretary's Department.

Figures for total cost and cost per head during each of the years 1946-47 to 1952-53 in comparison with 1938-39 are shown in the next table.

COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
TOTAL. (£.)								
1938-39 ..	516,455	232,709	114,497	106,942	97,383	113,793	49,270	1,231,049
1946-47 ..	800,542	346,970	145,532	171,460	114,360	143,957	77,970	1,800,791
1947-48 ..	905,476	335,006	192,063	158,258	123,412	173,073	71,956	1,959,244
1948-49 ..	903,853	367,383	266,559	201,873	145,698	181,227	113,643	2,180,236
1949-50 ..	1,418,532	427,955	361,387	248,174	174,240	213,611	112,615	2,956,514
1950-51 ..	1,624,998	430,814	303,417	246,941	181,758	212,933	117,208	3,118,069
1951-52 ..	1,853,709	508,024	407,278	298,401	215,673	294,441	156,982	3,734,508
1952-53 ..	2,089,968	679,946	474,731	349,262	254,147	292,289	161,383	4,301,726

PER HEAD OF POPULATION. (s. d.)

1938-39 ..	1 6	1 8	1 3	2 1	3 3	4 10	4 2	3 7
1946-47 ..	2 2	2 4	1 5	3 2	3 7	5 9	6 2	4 9
1947-48 ..	2 4	2 3	1 10	2 10	3 9	6 10	5 6	5 2
1948-49 ..	2 4	2 5	2 6	3 7	4 5	6 11	8 6	5 7
1949-50 ..	3 6	2 8	3 4	4 3	5 1	7 10	8 1	7 4
1950-51 ..	3 11	2 8	2 8	4 2	5 1	7 5	8 2	7 6
1951-52 ..	4 4	3 0	3 6	4 11	5 11	10 0	10 6	8 9
1952-53 ..	4 9	4 0	4 0	5 7	6 9	9 6	10 5	9 10

§ 6. Government Employees.

Information concerning the number of employees of Australian Government Authorities may be found in Chapter VIII.—Labour, Wages and Prices.

§ 7. Commonwealth Referenda.

In the pages which follow a summary is given of the various Commonwealth Referenda for alteration of the Constitution. These referenda were held under Section 128 of the Constitution.

In addition, other Commonwealth Referenda have been held, the first occasion being in 1898, when a proposed Constitution, embodied in the Federal Constitution Bill, was submitted to the popular vote but failed to receive the statutory vote of 80,000 in New South Wales. On modification of the bill in the following year the necessary consent was obtained. In 1916, a question was submitted in terms of Section 5 of the Military Service Referendum Act 1916 as to whether the people of Australia were in favour of compulsory overseas military service for the term of the war. The proposal was favoured by a majority of voters in three States and in the Federal Territories, which also participated in this Referendum, but the necessary majority of all votes was not obtained. Affirmative votes cast amounted to 48.39 per cent. of all formal votes. In 1917 another question was submitted. This was prescribed by Regulation 6 of the War Precautions (Military Service Referendum) Regulations 1917 and asked whether the Commonwealth should have power to call up by ballot, compulsory reinforcements for the Australian Imperial Force overseas, up to 27,000 per month. Only two States, and the Federal Territories, voted for the proposal and, inclusive of those of members of the Forces and crews of transports who voted on this occasion, affirmative votes amounted to only 46.21 per cent. of all formal votes.

**COMMONWEALTH REFERENDA FOR ALTERATION OF THE CONSTITUTION.
PROPOSED LAWS AND RESULTS OF VOTING (TO 31st DECEMBER, 1953.)**

NOTE.—On the few occasions on which the requisite majority, both of States and of all electors was obtained, the results of voting are shown in italics.

Short Title of Bill.	Date Submitted to Electors.	Powers or Other Alterations Sought.	In Favour of Proposed Law.	
			Num-ber of States.	Per-cent- age of Formal Voters.
<i>Constitution Alteration (Senate Elections) 1906</i>	12th December, 1906	To alter from January to July the date on which the term of a senator begins, and to provide for other matters connected with the election of senators	<i>Six</i>	<i>82.65</i>
<i>Constitution Alteration (Finance) 1909</i>	13th April, 1910 ..	To vary the financial arrangements between the Commonwealth and the States under the Constitution by providing, <i>inter alia</i> , for specified <i>per capita</i> payments to each State and special payments to Western Australia	Three	49.04
<i>Constitution Alteration (State Debts) 1909</i>	13th April, 1910 ..	To take over the public debts of the States whenever incurred	<i>Five</i>	<i>54.95</i>
<i>Constitution Alteration (Legislative Powers) 1910</i>	26th April, 1911 ..	To deal with (a) trade and commerce, without any limitations, among the States "only; (b) the control and regulation of corporations of all kinds (except those formed solely for religious, charitable, scientific or artistic purposes and not for the acquisition of gain); (c) labour and employment, including wages and conditions of labour and the settlement of industrial disputes generally, including disputes in relation to employment on State railways; and (d) combinations and monopolies in relation to the production, manufacture, or supply of goods or services	One	39.42
<i>Constitution Alteration (Monopolies) 1910</i>	26th April, 1911 ..	To make laws for the Commonwealth to carry on or control an industry or business declared to be the subject of a monopoly and for acquiring for that purpose on just terms any property used in connexion with the industry or business	One	39.89
<i>Constitution Alteration (Trade and Commerce) 1912</i>	31st May, 1913 ..	As in (a) under (Legislative Powers) Referendum 1910, but excluding intra-State trade and commerce on State Railways	Three	49.38
<i>Constitution Alteration (Corporations) 1912</i>	31st May, 1913 ..	As in (b) under (Legislative Powers) Referendum 1910	Three	49.33
<i>Constitution Alteration (Industrial Matters) 1912</i>	31st May, 1913 ..	To make laws with respect to labour, employment, and unemployment, including the terms and conditions of labour, the rights and obligations of employers and employees, strikes and lockouts, the maintenance of industrial peace and the settlement of industrial disputes	Three	49.33
<i>Constitution Alteration (Railway Disputes) 1912</i>	31st May, 1913 ..	To make laws with respect to conciliation and arbitration for the venton and settlement of industrial disputes in relation to employment in the railway service of a State	Three	49.13
<i>Constitution Alteration (Trusts) 1912</i>	31st May, 1913 ..	As in (d) under (Legislative Powers) Referendum 1910, but expressly including "trusts"	Three	49.78

COMMONWEALTH REFERENDA FOR ALTERATION OF THE CONSTITUTION.—
PROPOSED LAWS AND RESULTS OF VOTING (TO 31ST DECEMBER, 1953)
—continued.

Short Title of Bill.	Date Submitted to Electors.	Powers or Other Alterations Sought.	In Favour of Proposed Law.	
			Number of States.	Percentage of Formal Voters.
<i>Constitution Alteration (Nationalization of Monopolies) 1912</i>	31st May, 1913 ..	As in (Monopolies) Referendum 1910, but excluding any industry or business carried on by the Government or a public authority of a State	Three	49.33
<i>Constitution Alteration (Legislative Powers) 1919</i>	13th December, 1919	To extend temporarily the legislative powers of the Commonwealth in regard to trade and commerce, corporations, industrial matters and trusts	Three	49.65
<i>Constitution Alteration (Nationalization of Monopolies) 1919</i>	13th December, 1919	To extend temporarily the legislative powers of the Commonwealth in regard to the nationalization of monopolies	Three	48.64
<i>Constitution Alteration (Industry and Commerce) 1926</i>	4th September, 1926..	To make laws with respect to (a) corporations generally (with certain exceptions); (b) the prevention and settlement of all industrial disputes; (c) the establishment of authorities to regulate industrial matters; (d) investing State authorities with industrial powers; and (e) trusts and combines and industrial associations of employers and employees	Two	43.50
<i>Constitution Alteration (Essential Services) 1926</i>	4th September, 1926..	To make laws for protecting the interests of the public in case of actual or probable interruption of any essential service	Two	42.80
<i>Constitution Alteration (State Debts) 1928</i>	17th November, 1928	To validate the proposals included in the Financial Agreement between the Commonwealth and States relating to State debts and the borrowing of money by the Commonwealth and the States	Six	74.30
<i>Constitution Alteration (Aviation) 1936</i>	6th March, 1937 ..	To make laws with respect to air navigation and aircraft	Two	53.56
<i>Constitution Alteration (Marketing) 1936</i>	6th March, 1937 ..	To make laws under existing powers with respect to marketing without being subject to section ninety-two (freedom of interstate trade) of the Constitution	None	36.26
<i>Constitution Alteration (Post-war Reconstruction and Democratic Rights) 1944</i>	19th August, 1944 ..	To empower the Commonwealth for a period of five years after the cessation of hostilities, to make laws with respect to (i) the re-instatement and advancement of members of the fighting forces, and the advancement of dependants of deceased members; (ii) employment and unemployment; (iii) organized marketing of commodities; (iv) uniform company legislation; (v) trusts, combines and monopolies; (vi) profiteering and prices; (vii) production and distribution of goods (no law in respect of primary production to have effect in a State unless approved by that State and no law to discriminate between States or parts of States); (viii) control of overseas exchange and investment, and regulation of the raising of money according to plans approved by the Australian	Two	45.99

COMMONWEALTH REFERENDA FOR ALTERATION OF THE CONSTITUTION.—
PROPOSED LAWS AND RESULTS OF VOTING (TO 31ST DECEMBER, 1953)
—continued.

Short Title of Bill.	Date Submitted to Electors.	Powers or Other Alterations Sought.	In Favour of Proposed Law.	
			Number of States.	Percentage of Formal Voters.
<i>Constitution Alteration (Post-war Reconstruction and Democratic Rights) 1944—continued</i>	19th August, 1944 ..	Joan Council; (ix) air transport; (x) uniformity of railway gauges; (xi) national works (with the consent and co-operation of the State concerned); (xii) national health in co-operation with the States; (xiii) family allowances; and (xiv) the people of the aboriginal race. (The proposed law contained provisions to safeguard freedoms of speech, expression and religion, and a provision requiring notice of regulations of a legislative character made under the proposed powers to be given to each senator and each member of the House of Representatives)	Two	45.99
<i>Constitution Alteration (Social Services) 1946</i>	28th September, 1946	To make laws for the provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances	Six	54.39
<i>Constitution Alteration (Organized Marketing of Primary Products) 1946</i>	28th September, 1946	To make laws for the organized marketing of primary products, unrestricted by section ninety-two (freedom of interstate trade) of the Constitution	Three	50.57
<i>Constitution Alteration (Industrial Employment) 1946</i>	28th September, 1946	To make laws with respect to terms and conditions of employment in industry, but not so as to authorize any form of industrial conscription	Three	50.30
<i>Constitution Alteration (Rents and Prices) 1947</i>	29th May, 1948 ..	To make laws with respect to rents and prices (including charges)	None	40.66
<i>Constitution Alteration (Powers to deal with Communists and Communism) 1951</i>	22nd September, 1951	To make such laws with respect to communists and communism as the Parliament considers necessary or expedient for the defence or security of the Commonwealth or for the execution or maintenance of the Constitution or laws of the Commonwealth; and to make a law in terms of the Communist Party Dissolution Act 1950, with certain powers of amendment	Three	49.44

CHAPTER IV.

LAND TENURE AND SETTLEMENT.

§ 1. Introduction.

For descriptions of the land tenure systems of the several States and the internal territories *see* Official Year Book No. 4 (pp. 235-333) and subsequent issues, in particular No. 22 (pp. 133-195). Conspectuses of land legislation in force and of the systems of land tenures in the several States have appeared in issues up to and including No. 38, but only a brief summary is given below.

The land legislation in force in the several States may be classified broadly under five major types of land enactments, i.e., Crown Lands Acts, Closer Settlement Acts, Mining Acts, Returned Service Personnel Settlement Acts, and Advances to Settlers Acts, but within the groupings there is, of course, a wide variety of individual acts. In the two internal Territories the legislation relating to lands is embodied in various ordinances.

In each of the States there is a Lands Department under the direction of a Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown Lands. In the Northern Territory the Administrator, under the control of the Minister for Territories, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Australian Capital Territory the administration of the Leases Ordinances is in the hands of the Department of the Interior.

In each of the States there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and allied purposes. In the Northern Territory there are several ordinances relative to mining.

As with land legislation, land tenures may be classified under broad headings; these indicate the nature of the tenure and comprise:—Free Grants and Reservations, Unconditional Purchases of Freehold, Conditional Purchases of Freehold, Leases and Licences under Land Acts, Closer Settlement. Leases and Licences under Mining Acts, and Settlement of Returned Service Personnel. For details of the various particular forms of land tenure within these seven groups in each State *see* Official Year Book No. 38, pp. 114-116 and earlier issues. Descriptions of the systems operating in the two internal Territories may be found on pp. 329-30 and 338 of Official Year Book No. 39.

The following sections contain figures showing the extent of the different tenures in the several States and Territories, together with some general descriptive matter.

§ 2. Free Grants and Reservations.

1. *New South Wales.*—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee simple. Such lands may be placed under the care and management of trustees, not less than three nor more than seven in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During 1951-52 and 1952-53 605 acres and 3,221 acres respectively were permanently reserved or dedicated for miscellaneous recreation reserves and similar purposes. The areas reserved at 30th June, 1953 were as follows, corresponding figures for 30th June, 1952 being shown in parentheses:—For travelling stock, 5,330,597 (5,324,728) acres; pending classification and survey 4,338,891 (4,205,910) acres; forest reserves 2,246,193 (2,347,569) acres; water and camping reserves, 878,520 (820,877) acres; mining reserves, 1,122,457 (1,210,058) acres; for recreation and parks, 437,839 (425,855) acres; other reserves 5,964,403 (5,823,137) acres: total, 20,318,900 (20,158,134) acres.

2. *Victoria.*—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes.

(iii) *Areas granted and Reserved.* During 1952 and 1953 113 acres and 97 acres respectively were granted without purchase. The areas both temporarily and permanently reserved at the end of 1953 were as follows, corresponding figures as at 31st September, 1952, being shown in parentheses :—For roads, 1,794,218 (1,794,218) acres; water reserves 318,434 (318,545) acres; agricultural colleges, etc., 8,434 (8,434) acres; forest and timber reserves, 5,346,412 (5,347,319) acres; reserves in the mallee, 410,000 (410,000) acres; other reserves 551,479 (550,616) acres; total, 8,428,977 (8,429,132) acres.

(iv) *Revoking of Agricultural Reservations.* Under the Agricultural Colleges Act 1944, the land on which the agricultural colleges and experimental farms at Longerenong (2,386 acres) and Dookie (6,048 acres) are established is permanently reserved as sites for the purposes of State Agricultural Colleges and the remainder of the lands previously reserved has become unalienated for treatment as such under the Land Acts.

3. *Queensland.*—(i) *Free Grants.* The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Acts, land to be used for the purpose of any undertaking under the Acts may be vested in fee simple in the Commissioner of Irrigation and Water Supply.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease them for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Acts, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During 1953 the areas granted in fee simple without payment were nil, the area set apart as reserves 523,382 acres as compared with 374,924 in 1952 and reserves cancelled 280,153 acres (111,109 in 1952). The areas reserved, including roads, at the end of 1953 were as follows (figures for the end of 1952 in parentheses) :—Timber reserves 3,207,639 (3,134,965) acres; for State forests and national parks, 5,436,126 (5,281,316) acres; aboriginal reserves 7,847,516 (7,848,313) acres; for streets, surveyed roads and stock routes, 3,640,963 (3,625,097) acres; general reserves, 5,665,037 (5,648,495) acres; total, 25,797,281 (25,538,186) acres.

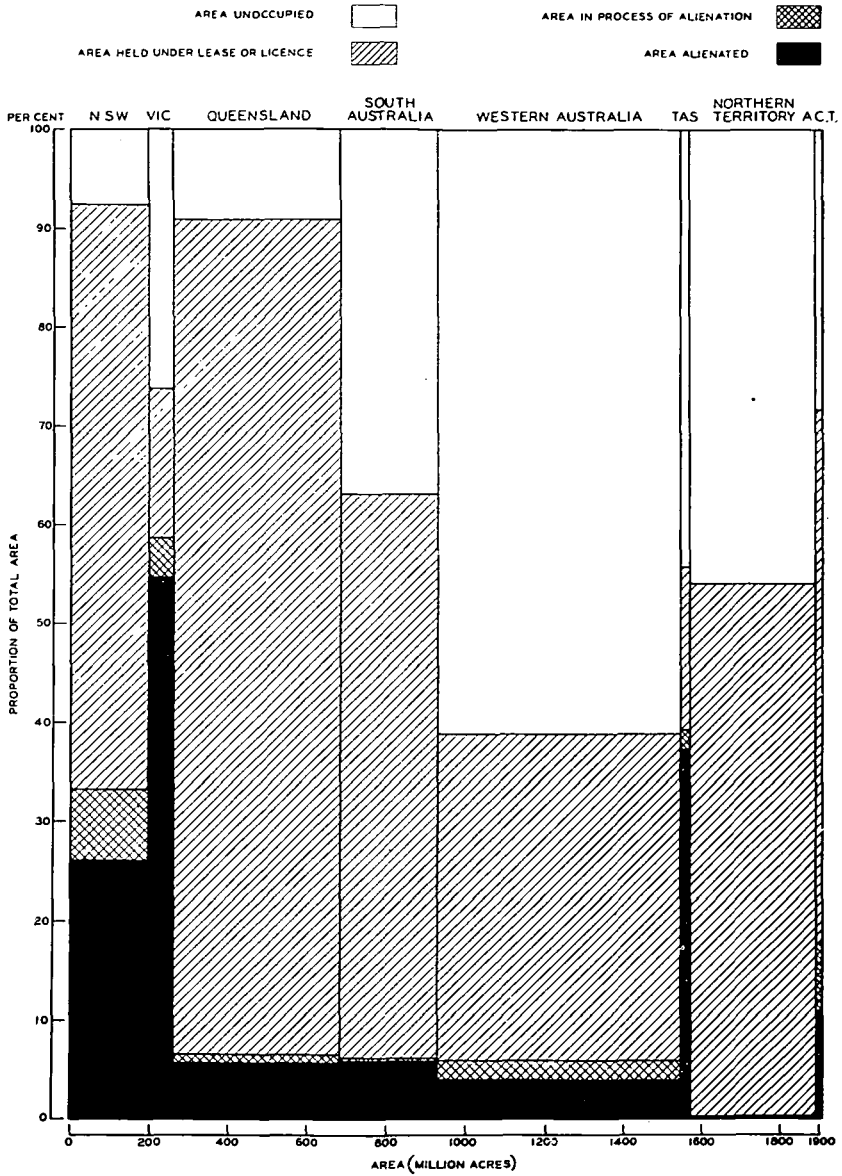
4. *South Australia.*—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for the use and benefit of aboriginals, military defence, forest reserves, railway stations, park lands or any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During 1951-52 and 1952-53 free grants were issued for areas of 766 acres and 2,523 acres respectively while reserves comprising 3,695 acres and 12,531 acres respectively were proclaimed. At 30th June, 1953 the total area of surveyed roads, railways and other reserves was 21,264,891 acres, including 18,272,000 acres set apart as aboriginal reserves. Corresponding figures for 30th June, 1952 were 21,252,360 acres and 18,272,000 acres respectively.

5. *Western Australia.*—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

LAND TENURE: AUSTRALIA, 1953



(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased by the Governor for periods up to 10 years. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the years ended 30th June, 1952 and 1953 respectively, approximately 15,501 acres and 224,079 acres were reserved for various purposes. At 30th June, 1952 the total area reserved was 52,013,929 acres, comprising State forests, 3,441,951 acres, timber reserves 1,799,658 acres and other reserves 46,772,320 acres, while at 30th June, 1953 the total area reserved was 52,238,008 acres (State forests, 3,460,092 acres; timber reserves, 1,796,920 acres and other reserves, 46,980,996 acres).

6. *Tasmania.*—(i) *Free Grants.* No mention is made in the Crown Lands Act respecting free grants of land, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act 1916, returned soldiers who applied prior to 31st March, 1922 were eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants were conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to Her Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* The total area reserved at 30th June, 1952 was 4,067,948 acres, excluding 21,800 acres of land occupied by Commonwealth and State Departments. At 30th June, 1953 the total area reserved was 4,069,320 acres, excluding 21,802 acres occupied by Commonwealth and State Departments.

7. *Northern Territory.*—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands not subject to any right of, or contract for, purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the lands so resumed.

(ii) *Areas Reserved.* The total area of reserves at 30th June, 1953 was 73,439 square miles as compared with 72,123 square miles at 30th June, 1952.

8. *Summary.*—The following table shows the total areas reserved in each State, and the grand totals, for the years 1949 to 1953:—

AREAS RESERVED.
(⁰⁰⁰ Acres.)

Year.	N.S.W. (a)	Victoria. (b)	Q'ld. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (a)	Nor. Terr. (a)	Total.
1949 ..	18,285	8,300	23,617	20,274	50,428	(c)4,016	45,453	170,373
1950 ..	18,585	8,224	25,045	21,240	51,809	4,016	45,455	174,374
1951 ..	19,654	8,429	25,243	21,249	51,998	4,043	45,648	176,264
1952 ..	20,158	8,429	25,538	21,252	52,014	4,068	46,159	177,618
1953 ..	20,319	8,429	25,797	21,265	52,238	4,069	47,001	179,118

(a) At 30th June.

(b) At 31st December.

(c) At 30th June, 1950.

§ 3. Unconditional Purchases of Freehold.

1. *New South Wales.*—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively.

At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding ten years, 4 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-Auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price. A deposit in accordance with the terms and conditions under which the land was previously offered must be lodged, and, if the application be approved by the Minister, the balance of purchase money is payable as required by the specified terms and conditions.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money as determined by the local Land Board.

(iv) *Improvement Purchases.* The owner of improvements in land in authorized occupation by residence under any Mining or the Western Lands Act of land within a gold-field or mineral field may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed $\frac{1}{4}$ acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Areas Sold.* During the year ended 30th June, 1953 (figures for the year ended 30th June, 1952 in parentheses) the total area sold was 340 (388) acres of which none (2 acres) were sold by auction and 38 (18) acres as after auction purchases, while 62 (32) acres were sold as improvement purchases, 193 (164) acres as road purchases and 47 (172) acres as special purchases. The amount realized for the sale of the whole area was £18,848 (£30,684).

2. *Victoria.*—(i) *General.* Lands, not exceeding 100,000 acres in any one year, specially classed for sale by auction, may be sold by auction in fee simple at an upset price not less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of 12 $\frac{1}{2}$ per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough area, areas specially classed for sale, isolated pieces of land not exceeding 150 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas Sold at Auction and by Special Sales.* During 1953 a total of 1,306 acres was disposed of under this tenure, 1,064 acres being country lands and 242 acres town and suburban lands. In 1952 a total of 1,387 acres (1,041 country lands and 346 town lands) were disposed of under this tenure.

3. *Queensland.*—(i) *General.* From 1917 to 1929 the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. Amending legislation giving power to make land available under freehold tenures was passed in 1929, but this provision was repealed by the Act of 1932.

(ii) *Areas Sold, etc.* During 1952 unconditional selections made freehold totalled 636 acres. No unconditional selections were made freehold during 1953.

4. *South Australia.*—(i) *Sales by Auction.* The following lands may be sold by auction for cash:—(a) special blocks; (b) Crown lands which have been offered for lease and not taken up within two years; (c) town lands; and (d) suburban lands which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged within six years without the consent of the Commissioner. If the Commissioner of Crown Lands so determines, town lands may also be offered at auction on terms that the buyer may at his option purchase the lands for cash or on agreement for sale and purchase.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1953 the area of town lands and special blocks sold by auction was 32 acres as compared with 35 acres in 1951–52. In addition, 89,763 acres in 1952–53 and 121,775 acres in 1951–52 were sold at fixed prices, and purchases on credit of 54,239 acres and 65,675 acres respectively were completed, making a total of 144,034 acres in 1952–53 and 187,485 acres in 1951–52.

5. *Western Australia.*—(i) *Sales by Auction.* Town, suburban and village lands must be sold by auction after being surveyed into lots and notified in the *Gazette*. Ten per cent. of the purchase-money must be paid in cash together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within two years, and no Crown grant may be issued until the land is fenced.

(ii) *Areas Sold.* During the years ended 30th June, 1952 and 30th June, 1953 the areas of town and suburban allotments sold by auction were respectively 1,190 acres in 640 allotments and 1,737 acres in 646 allotments.

6. *Tasmania.*—(i) *Sales by Auction.* Town lands may be sold by auction.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset price by private contract.

(iii) *Sales of Land in Mining Towns.* Any person being the holder of a residence licence or business licence who shall be in lawful occupation of any residence area or business area, and who shall be the owner of buildings and permanent improvements upon such land of a value equal to or greater than the upset price of such area, shall be entitled to purchase such area at the upset price at any time prior to the day on which such area is to be offered for sale as advertised. The upset price for such area shall not be less than £10, excluding the value of improvements, cost of survey, and of grant deed. The area which may be so purchased may, with the consent of the Commissioner, exceed one-quarter of an acre, but shall not in any case exceed one-half of an acre.

§ 4. Conditional Purchases of Freehold.

1. *General.*—The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (*see* No. 22, pp. 141-9).

2. *New South Wales.*—At 30th June, 1952 and 1953 the total numbers of incomplete conditional purchases in existence were 41,712 and 37,951 respectively, covering areas of 12,473,006 acres and 12,221,411 acres. During 1951-52 24 applications were received for conditional purchases; 13 were confirmed with an area of 1,315 acres; deeds were issued during the year for 273,757 acres; at the end of the year deeds had been issued for 33,617,163 acres. During 1952-53 applications received for conditional purchases numbered 27, of which 18, with an area of 1,788 acres, were confirmed; during the year deeds were issued for 278,775 acres, bringing the total acreage for which deeds had been issued to 33,895,938 at the end of the year. These figures exclude conversions from other tenures—849 comprising 207,543 acres.

3. *Victoria.*—Excluding selections in the Mallee country, the total area purchased conditionally in 1952 was 12,001 acres, all with residence. The number of selectors was 67. There were no selections in the Mallee in 1952. In 1953 the total area purchased conditionally was 26,828 acres all with residence, the number of selectors being 72. In addition five selectors purchased 236 acres conditionally in the Mallee country during 1953.

4. *Queensland.*—The following selections were made freehold during 1953, (1952 figures are shown in parentheses)—Agricultural farms 90,968 (107,662) acres, prickly pear selections, 153,504 (202,713) acres, and prickly pear development selections, 32,625 (25,157) acres.

5. *South Australia.*—During 1951-52, 17,174 acres were allotted under agreements to purchase, comprising Eyre Peninsula railway lands 2,646 acres, closer settlement lands 11,769 acres, surplus lands 1,930 acres, and other Crown lands 829 acres. Similar purchases in 1952-53 totalled 6,774 acres comprising Eyre Peninsula railway lands 2,908 acres, closer settlement lands 2,349 acres, surplus lands 1,062 acres and other Crown lands 455 acres.

6. *Western Australia.*—During the year ended 30th June, 1953 the number of holdings conditionally alienated was 1,092 compared with 930 during the year ended 30th June 1952, the total areas involved being 1,263,632 acres and 1,007,934 acres, respectively,

comprising conditional purchases by deferred payments with residence 1,261,696 acres and 1,005,125 acres respectively and free homestead farms 1,936 acres and 2,809 acres. Under the heading "deferred payments with residence" are included conditional purchases of grazing lands.

In addition, Crown grants were issued during 1952-53 and 1951-52 for the following selections, the prescribed conditions having been complied with:—Free homestead farms 11,800 acres and 10,780 acres respectively and conditional purchases 344,976 acres and 242,855 acres respectively.

7. **Tasmania.**—During 1952-53 and 1951-52 Crown grants were issued for 25,198 acres and 45,537 acres respectively. The respective total areas sold conditionally were 4,090 acres and 4,153 acres, comprising selections for purchase 3,739 acres and 3,974 acres, and town and suburban allotments 351 acres and 179 acres. The numbers of applications confirmed were 51 and 78 respectively for country selections and 104 and 179 respectively for town and suburban allotments.

§ 5. Leases and Licences under Land Acts.

1. **General.**—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories is given in preceding issues of the Official Year Book (*see* No. 22, pp. 149-63).

2. **New South Wales.**—The following table shows the areas held under various descriptions of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission and the Western Lands Commission at the end of 1951-52 and 1952-53.

AREAS OCCUPIED UNDER LEASE OR LICENCE AT 30th JUNE, 1952 and 30th JUNE, 1953 : NEW SOUTH WALES.(a)
(⁰⁰⁰ Acres.)

Particulars.	Area at 30th June.		Particulars.	Area at 30th June.	
	1952.	1953.		1952.	1953.
<i>Crown Lands or Closer Settlement Acts.</i>			<i>Crown Lands or Closer Settlement Acts—continued.</i>		
Occupation licences	727	639	Group purchase leases	223	222
Conditional leases	11,326	11,112	Irrigation areas	125	268
Conditional purchase leases	142	140	Other leases	30	19
Settlement leases	2,747	2,742			
Improvement leases	52	48	<i>Western Lands Act.</i>		
Annual leases	351	427	Conditional leases	94	85
Scrub and Snow leases	643	641	Perpetual leases	58,552	61,076
Special leases	1,116	1,229	Other long-term leases	16,615	12,557
Permissive occupancies	1,957	2,151	Permissive occupancies	331	352
Prickly pear leases	117	114	Leases being issued—occupa- tion licences	140	145
Crown leases	7,176	7,114	Preferential occupation licences	1,825	3,863
Homestead farms	4,860	4,944			
Homestead selections and grants	1,655	1,679			
Closer settlement leases	2,149	2,249			
Settlement purchase leases	1,046	1,046			
Suburban holdings	52	51	Total	114,051	114,913

(a) Excludes mining leases and permits; forest leases and occupation permits; and leases outside irrigation areas, controlled by the Water Conservation and Irrigation Commission—94,016 acres.

3. **Victoria.**—The area of Crown lands occupied under leases and licences in the year 1953 was as follows (1952 figures in parentheses):—Grazing licences—other than Mallee 4,429,194 (4,138,996) acres, Mallee, 2,943,054 (2,942,483) acres; auriferous lands licences, 15,886 (15,886) acres; perpetual leases—other than Mallee 17,819 (17,819) acres; Mallee, 54,256 (57,543) acres; swamp lands leases, 4,020 (4,020) acres; agricultural college lands, 37,085 (40,791) acres; total, 7,501,314 (7,217,538) acres.

4. **Queensland.**—The total area occupied under lease or licence, excluding mining leases, at the end of 1953 (1952 figures in parentheses) was as follows:—Pastoral leases 249,215,120 (244,113,480) acres; occupation licences, 13,018,200 (17,776,080) acres; grazing selections and settlement farm leases, 88,587,279 (88,051,276) acres; special purpose leases—Crown land, 594,152 (579,312) acres; reserves, 1,453,793 (1,466,720)

acres; perpetual lease (including prickly pear) selections, 6,566,522 (6,533,959) acres; auction perpetual leases 514,751 (514,254) acres; forest grazing leases (reserves), 1,644,440 (1,649,040) acres; total, 361,594,257 (360,684,121) acres.

5. **South Australia.**—The total areas, including repurchased lands held under lease or licence except mining lease and licence, at 30th June, 1953 and 30th June, 1952 were 139,509,859 acres and 138,177,408 acres respectively of which pastoral leases, 117,120,187 acres in 1953 and 115,842,644 acres in 1952 constituted the major proportion.

6. **Western Australia.**—At 30th June, 1952 the total area held under lease or licence issued by the Lands Department amounted to 200,839,082 acres, of which 198,152,532 acres were under pastoral lease. At 30th June, 1953 the total area held under lease or licence amounted to 202,760,626 acres, 198,938,434 acres being under pastoral lease.

7. **Tasmania.**—Crown lands leased at 30th June, 1953 and 30th June, 1952 for other than mining purposes amounted to 2,712,014 acres and 2,704,232 acres respectively of which 2,089,206 acres and 2,077,272 acres respectively were leased for pastoral purposes.

8. **Northern Territory.**—At 30th June, 1952 the total area under lease, etc., was 178,135,029 acres, of which pastoral leases accounted for 127,328,800 acres and other leases, licences and mission stations 50,806,229 acres. The total area under lease, etc., at 30th June, 1953 was 180,014,826 acres (pastoral, 140,151,254 acres; other, 39,863,572 acres).

9. **Australian Capital Territory.**—The number of leases granted under the City Area Leases Ordinance 1936-1951 to 30th June, 1953 (excluding leases surrendered and determined) was 1803. The total area held under grazing, etc., lease and licence (including Jervis Bay area) amounted to 323,092 acres in 1952-53 as compared with 320,626 acres in 1951-52.

Auction sales of city leaseholds are described in Official Year Book No. 22, p. 599. Twelve leases under the Church Lands Leases Ordinance 1924-1932, which require the lessees to submit a definite building programme within a specified period, and one lease under the Church of England Lands Ordinance, 1926, have been granted for church purposes. A further 22 leases have been granted for either church or scholastic purposes under various other Ordinances.

During the year ended 30th June, 1953, 315 leases were granted for residential purposes and 32 for business purposes for a term of 99 years under the City Area Leases Ordinance. The total number of residential and business leases granted under this Ordinance up to 30th June, 1953 was 1,803, representing an unimproved capital value of £597,992. The total numbers of business and residential leases surrendered and determined to the end of June, 1953 was 430.

Under the terms of the City Area Leases Ordinance 1936-1951 each block is leased for a period of 99 years at a rental of five per cent. per annum of the unimproved capital value as assessed by the Commonwealth.

10. **Summary.**—The following table shows particulars of the land held in each State under lease or licence for purposes other than mining and forestry, the total leased or licensed land in the Territories, and the grand totals, for the years 1949 to 1953.

AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY.

('000 Acres.)

Year.	N.S.W. (a)	Vic. (b)	Q'land. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (a)	N.T. (a) (c)	A.C.T. (b)(c)(d)	Total.
1949	114,025	8,891	356,269	137,432	220,283	(e)2,799	158,437	304	998,440
1950	114,125	8,708	358,940	137,419	222,489	2,799	162,561	331	1,007,372
1951	113,918	8,709	359,144	137,514	199,303	2,639	171,841	331	993,399
1952	114,051	7,218	360,684	138,177	200,839	2,704	178,135	321	1,002,129
1953	114,913	7,491	361,594	139,509	202,761	2,712	180,015	323	1,009,318

(a) At 30th June. (b) At 31st December. (c) Leases and licences for all purposes.
(d) Includes Jervis Bay area. (e) At 30th June, 1950.

§ 6. Leases and Licences under Mining Acts.

1. **General.**—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (*see* No. 22, pp. 170–7). The following paragraphs contain particulars of operations during the two years ending 1952–53 or 1953 and of areas occupied at the end of the year, under the various forms of lease, licence, etc., issued for mining purposes.

2. **New South Wales.**—During the year ended 30th June, 1952, 2,560,425 acres were taken up under Mining Acts of which authorities to prospect comprised 2,526,304 acres and mining for minerals other than gold, 33,313 acres. At the end of the year total areas occupied were as follows:—Gold-mining, 4,877 acres; mining for other minerals, 171,533 acres; authorities to prospect, 293,034 acres; other purposes 8,429 acres; total, 477,873 acres. During the year ended 30th June, 1953, 268,565 acres were taken up under Mining Acts, of which 234,676 acres were held under authorities to prospect and 31,708 acres were for mining for minerals other than gold. At the end of the year total areas occupied were:—Gold-mining; 3,567 acres; mining for other minerals, 270,339 acres; authorities to prospect, 2,085,982; other purposes, 12,356; total 2,372,244 acres.

3. **Victoria.**—During 1953 there were 163 leases and licences granted under Mining Acts, including 41 for gold-mining, corresponding figures for 1952 were 140 and 36 respectively. Areas occupied at the end of 1953 were as follows (1952 figures being given in parentheses):—Gold-mining, 20,617 (21,488) acres; petroleum prospecting, 917,880 (800,120) acres; coal, 13,101 (13,019) acres; other purposes, 6,199 (6,362) acres; total, 957,797 (840,989) acres.

4. **Queensland.**—During 1953 and 1952 respectively there were 3,005 and 3,601 miners' rights issued and two business licences were issued in each year. Areas taken up during 1953 (1952 figures in parentheses) totalled 344,205 (13,109) acres, of which petroleum prospecting comprised 320,000 (nil) acres and mining for minerals other than gold, 16,972 (6,600) acres. Total areas occupied at the end of 1953 were as follows:—Gold-mining, 3,005 acres; mining for other minerals, 94,739 acres; miners' homesteads, 426,111 acres; petroleum prospecting, 511,995 acres; coal prospecting, 4,966 acres; total, 10,408,816 acres. Corresponding figures for 1952 were:—Gold-mining, 3,192 acres; mining for other minerals, 84,322 acres; miners' homestead leases, 425,802 acres; petroleum prospecting, 320,000 acres; coal prospecting, 7,028 acres; total, 840,344 acres. In addition, an area estimated at 25,000 acres was held under miners' rights and dredging claims. The area of land held under lease only was 523,855 acres in 1953 and 513,316 acres in 1952.

5. **South Australia.**—Areas taken up under Mining Acts during 1952–53 and 1951–52 totalled 1,895 acres and 19,513 acres respectively, including claims, 1,640 acres and 1,537 acres respectively, and mineral and miscellaneous leases, 255 acres and 6,756 acres respectively. Total areas occupied at the end of 1952–53 were as follows (1951–52 figures in parentheses):—Gold-mining, 564 (637) acres; other mineral and miscellaneous leases, 84,193 (75,205) acres; claims, 9,956 (10,303) acres; oil licences, nil (640,000) acres; other purposes, 29 (13,920) acres; total, 44,742 (740,094) acres.

6. **Western Australia.**—Areas taken up during 1953 and 1952 under Mining Acts totalled 23,137 acres and 29,006 acres respectively, including gold-mining, 11,666 acres and 13,459 acres respectively, and mining for other minerals, 8,922 acres and 13,544 acres respectively. Total areas occupied at the end of 1953 were as follows (1951–52 figures in parentheses):—Gold-mining, 33,290 (35,679) acres; mining for other minerals, 75,263 (77,018) acres; other purposes, 40,379 (38,679) acres; total, 148,932 (151,376) acres.

7. **Tasmania.**—During 1953 (1952 figures in parentheses) the number of leases issued covered 1,055 (3,212) acres, including licences to search for coal or oil, nil (nil) acres; coal-mining, nil (750) acres; and tin-mining, 418 (419) acres. Total areas occupied at the end of 1953 were as follows:—Gold-mining, 665 (701) acres; coal-mining, 6,589 (6,589) acres; mining for other minerals, 20,147 (19,680) acres; licences to search for coal or oil, nil (1,200) acres; other purposes, 3,997 (3,980) acres; total, 31,398 (32,150) acres.

8. **Northern Territory.**—At 30th June, 1953 the number and acreage of holdings under mining leases and tenements were as follows:—Gold-mining leases, 205–2,797 acres; other mineral leases, 326–7,393 acres; gold and other mineral claims, 5–851 acres;

gold and other mineral prospecting areas, 27-486 acres; business and residence areas, 178-50 acres; other purposes, 90-1,209 acres; total, 831-12,786 acres. Corresponding figures at 30th June, 1952 were:—Gold-mining leases, 285-4,417 acres; other mineral leases, 351-7,919 acres; gold and other mineral claims, 5-851 acres; gold and other mineral prospecting areas, 55-913 acres; business and residence areas, 182-48 acres; other purposes, 75-369 acres; total, 953-14,517 acres.

9. **Summary.**—The following table shows the total areas occupied under Mining Acts in each State at the end of the years 1949 to 1952:—

AREAS OCCUPIED UNDER MINING ACTS.

(Acres.)

Year.	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania. (b)	Total. (d)
1949 ..	5,674,449	1,173,573	942,326	36,068,450	137,362	28,101	44,024,261
1950 ..	455,778	1,095,637	1,267,012	36,672,566	145,847	30,462	39,667,302
1951 ..	364,001	1,096,495	1,285,740	36,660,380	137,523	32,744	39,586,873
1952 ..	477,873	840,989	840,344	740,094	151,376	32,150	3,082,826
1953 ..	2,372,244	957,797	1,040,816	44,742	148,932	31,398	4,595,929

(a) Year ended 30th June. (b) Excludes lands held under miners' rights and dredging claims.
(c) Excludes holdings under miners' rights and mineral oil licences. (d) Excludes Northern Territory.

§ 7. Closer Settlement.

1. **General.**—Particulars regarding the methods of acquisition and disposal of land for closer settlement in the several States are given in preceding issues of the Official Year Book (see No. 22, pp. 163-9) and considerable detail of the results of the operations of the several schemes has appeared in subsequent issues. In more recent years, however, the amalgamation, in some States, of closer settlement records with those of other authorities has made it impossible to obtain up-to-date figures for those States and for Australia as a whole, although aggregations of State totals as at the latest dates available have been published as rough approximations intended to convey some idea of the extent of the schemes throughout Australia. Particulars in this issue are restricted to a summary only of the position in each State at the latest date available.

2. **New South Wales.**—Since the inception of closer settlement in 1905 to 30th June, 1952, 2,330 estates totalling 6,335,460 acres had been purchased by the Crown at a cost of £26,699,052 for purposes of closer settlement of civilians and returned service personnel. Particulars of the total areas acquired to 30th June, 1953 are as follows:—Estates purchased, 2,365; farms allotted, 10,996; area, 6,423,561 acres; purchase price, £27,355,000.

Closer settlement is now being effected entirely under perpetual leasehold tenure (closer settlement leases).

3. **Victoria.**—The Closer Settlement Commission was abolished as from 31st December, 1938, and land settlement was placed under the control of the Department of Lands and Survey. On 31st March, 1939 all Closer Settlement and Discharged Soldiers' accounts were amalgamated, the settlers' accounts adjusted and the new debt made payable over an extended period. Particulars of the operations under the provisions of the Closer Settlement Acts to 30th June, 1938, the latest date for which separate details are available, show that 1,402,568 acres were acquired at a cost, including the value of Crown lands taken over, of £10,244,023, and that 8,722 allotments were made, farm allotments comprising 1,162,676 acres, workmen's homes allotments 790 acres, agricultural labourers' allotments 3,484 acres and town allotments 86,599 acres. The figures for area and cost of land acquired for closer settlement purposes include, in addition to 133,128 acres purchased for £1,246,722 and transferred subsequently to discharged soldiers, a total area of 512,757 acres costing £4,125,822 which was purchased originally for the settlement of discharged soldiers.

4. **Queensland.**—Separate records relating to the closer settlement of re-purchased land are no longer kept by the Land Administration Board, and the operations under this heading are now included with "Leases and Licences under Land Acts." The total area acquired to 31st December, 1934 was 970,778 acres, costing £2,292,881. At the same date the area allotted amounted to 915,690 acres distributed over 3,048 selections, consisting of 2,155 agricultural farms, 257 unconditional selections, 544 perpetual lease selections, 9 prickly pear selections, 6 perpetual lease prickly pear selections and 77 settlement farm leases. An area of 13,038 acres was sold by auction.

5. **South Australia.**—The total area re-purchased for closer settlement at 30th June, 1953 was 948,885 acres, at a cost of £2,865,200, the same as at 30th June, 1952. Included in these figures are 51,872 acres purchased for £185,285, and afterwards set apart for returned service personnel, 3,214 acres reserved for forest and waterworks purposes the purchase-money being £16,185, and also 26,563 acres of swamp and other lands, which were purchased for £111,850, in connexion with reclamation of swamp-lands on the River Murray. Of the total area, 817,846 acres have been allotted to 2,785 persons.

6. **Western Australia.**—The total area acquired for closer settlement up to 30th June, 1953 was 2,256,014 acres, costing £4,177,299, as compared with 2,190,042 acres, costing £4,413,267 up to 30th June, 1952. Particulars of operations under the Act for the year ended 30th June, 1953 are as follows:—Area selected during the year, 94,662 acres; number of farms, etc., allotted to date, 2,362; total area occupied to date, 1,897,425 acres; balance available for selection, 337,517 acres.

7. **Tasmania.**—Up to 30th June, 1953, 38 areas had been opened up for closer settlement, the total purchase-money paid by the Government being £371,486 and the total area acquired amounting to 104,294 acres, including 12,149 acres of Crown lands. The number of farms occupied at 30th June, 1953 was 116.

§ 8. Settlement of Returned Soldiers and Sailors : 1914-18 War.

1. **General.**—Information regarding the methods adopted in each State following the commencement of the 1914-18 War for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired, is given in earlier issues of the Official Year Book (*see* No. 13, pp. 1016-23, and No. 18, pp. 187-9). Later modifications were made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

Information on soldier settlement in this section suffers from the same defect, i.e. amalgamation of records, as does that on closer settlement in the foregoing section. and very little information is now available. Publication of those particulars has, therefore, been discontinued.

2. **Losses on Soldier Settlements.**—For information regarding the financing arrangements for soldier settlement after the 1914-18 War, and the losses which occurred in connexion with it, *see* earlier issues of the Official Year Book, in particular, No. 28, pp. 131-2.

§ 9. Settlement of Returned Service Personnel : 1939-45 War.

1. **War Service Land Settlement Scheme.**—(i) *General.* The War Service Land Settlement Agreements Act 1945 authorized the execution by or on behalf of the Commonwealth of agreements between the Commonwealth and the States for proposals to settle discharged members of the Forces and other eligible persons on land in the States. The proposals were subsequently ratified by the States, and the agreements were signed in November, 1945.

For more detailed information about the agreements and the methods of operation and administration of the scheme *see* Official Year Book No. 37, pp. 113-8, and issue No. 39 contains a brief general description of the scheme.

(ii) *Summary of Operations to 30th June, 1953.* The tables hereunder show the operations of the War Service Land Settlement Scheme in each State up to 30th June, 1953.

WAR SERVICE LAND SETTLEMENT (1939-45 WAR): SUMMARY TO

30th JUNE, 1953.

State.	Land Submitted by States.		Land Approved by Commonwealth.				Land under Con- sidera- tion.	Land Rejected or With- drawn.
			As Suitable for Soldier Settlement.		Acquired by States.			
	Sub- missions.	Area.	Pro- perties.	Area.	Pro- perties.	Area.	Area.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	Acres.	Acres.
New South Wales—								
Subdivision ..	113	1,599,204	97	1,333,139	64	848,555	22,365	243,700
Irrigation Lands ..	25	256,074	24	223,349	15	169,344	1,077	31,648
Western Division ..	147	5,353,895	138	4,638,309	136	3,943,617	..	715,586
Promotion Scheme ..	537	1,266,938	413	1,114,819	394	1,105,444	..	152,119
Irrigation Lands ..	74	110,447	69	99,254	43	72,399	..	11,193
Total, New South Wales ..	896	8,586,558	741	7,408,870	652	6,139,359	23,442	1,154,246
Victoria—								
Irrigation Lands ..	18	175,844	18	132,356	17	95,007	..	43,488
Other ..	213	858,882	203	812,963	(a) 188	767,733	28,411	17,508
Total, Victoria ..	231	1,034,726	221	945,319	205	862,740	28,411	60,996
Queensland ..	182	531,259	145	455,476	(b) 132	396,872	4,200	71,583
South Australia ..	188	708,002	156	568,970	(a) 148	550,822	5,465	133,567
Western Australia ..	747	2,575,304	539	1,788,740	518	1,214,986	287,044	499,520
Tasmania ..	106	509,095	70	330,748	64	129,943	53,682	124,665
Total, Australia	2,350	13,944,944	1,872	11,498,123	1,719	9,294,722	402,244	2,044,577

State.	Land Approved by Commonwealth for Subdivision.			Single Properties Approved by Commonwealth.		Land Allotted to Settlers.	
	Pro- perties.	Area.	Hold- ings.	Area.	Pro- perties.	Area.	Hold- ings.
	No.	Acres.	No.	Acres.	No.	Acres.	No.
New South Wales—							
Subdivision ..	88	1,126,750	917	..	..	880,946	743
Irrigation Lands ..	21	195,351	316	..	..	160,204	262
Western Division ..	..	..	..	4,638,309	167	3,509,804	118
Promotion Scheme ..	172	854,375	590	246,815	236	970,133	730
Irrigation Lands ..	31	83,963	152	14,211	36	82,874	149
Total, New South Wales	312	2,260,439	1,975	4,899,335	439	5,603,961	2,002
Victoria—							
Irrigation Lands ..	13	102,858	1,033	2,336	5	69,569	623
Other ..	186	753,102	1,321	7,522	11	720,277	1,224
Total, Victoria	199	855,960	2,354	9,858	16	789,846	1,847
Queensland ..	88	399,241	604	15,143	43	216,480	442
South Australia ..	77	262,689	649	25,920	42	204,457	536
Western Australia ..	140	888,056	418	476,017	369	1,061,565	679
Tasmania ..	22	106,398	204	22,280	36	91,363	136
Total, Australia	838	4,772,783	6,204	5,448,553	945	8,067,672	5,642

(a) Excludes portions of two properties.

(b) Excludes portion of one property.

(iii) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1953 :—

**WAR SERVICE LAND SETTLEMENT (1939-45 WAR) : COMMONWEALTH
EXPENDITURE TO 30th JUNE, 1953.**

(£.)

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
For acquisition of land ...	..	..	..	1,966,616	3,362,453	1,025,750	6,354,819
For development and improvement of land ...	..	..	..	6,755,717	7,039,140	3,102,671	16,897,528
Commonwealth contributions to excess cost over valuation ...	..	267,697	64,053	..	146,758	14,879	493,387
To provide credit facilities to settlers ...	..	..	..	1,309,935	5,024,203	746,070	7,080,208
For remission of settlers' rent and interest ...	209,885	63,245	21,471	57,666	158,407	43,948	554,622
For payment of living allowances to settlers ...	586,315	451,000	137,000	102,378	234,119	47,635	1,558,447
For operation and maintenance of irrigation projects	..	..	..	160,263	10,197	1,000	171,460
Loss on advances ...	..	14	1,132	..	885	..	2,031
Total	796,200	781,956	223,656	10,352,575	15,976,162	4,981,953	33,112,502

Repayments of expenditure to 30th June, 1953 on the acquisition, development and improvement of land amounted to £2,403,446, on the provision of credit facilities to settlers to £2,486,728, and on the payment of living allowances to settlers to £3,000, so that the total expenditure was reduced by £4,890,309 to £28,222,193. In addition, miscellaneous receipts in South Australia, Western Australia and Tasmania to 30th June, 1953 amounted to £767,463.

2. *Loans and Allowances (Agricultural Occupations) Scheme.*—(i) *General.* Full details of the measures taken to provide for the re-establishment of ex-servicemen in rural occupations are contained in Official Year Book No. 37, pp. 117-8.

(ii) *Loans (Agricultural Occupations).* The following table shows particulars for each State and certain Territories to 30th June, 1953 :—

LOANS (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1953.

State.	Applications.			Loans Approved.		Advanced by Commonwealth Treasury to Lending Authorities.	Advanced by Lending Authorities to Applicants. (b)	
	Re-ceived.	Ap-proved.	Refused, With-drawn or Not Yet Approved.	Gross Amount.	Net Approvals.(a)			
					Applica-tions.			Amount.
				£		£	£	
New South Wales	7,735	6,284	1,451	4,938,027	5,470	4,241,156	2,660,000	
Victoria ..	4,815	3,350	1,465	2,175,881	3,089	2,017,220	1,040,000	
Queensland ..	2,365	1,966	399	1,091,260	1,603	886,634	610,000	
South Australia ..	2,093	1,259	834	970,503	1,196	928,889	465,000	
Tasmania ..	3,174	2,270	904	2,126,089	2,136	2,008,733	1,110,000	
Northern Territory ..	1,124	751	373	467,040	721	448,179	300,400	
New Guinea ..	34	15	19	11,945	12	10,148	10,748	
Norfolk Island ..	16	7	9	7,272	6	6,772	3,997	
	3	1	2	1,000	..	..	5,496
Total ..	21,359	15,903	5,456	11,789,017	14,233	10,547,731	6,200,145	
							9,965,106	

(a) After deduction of loans declined after approval—£1,241,286.
principal repaid by borrowers.

(b) Includes advances from

These loans are made to eligible ex-servicemen for the purchase of land, effecting improvements on land, the acquisition of tools of trade, live-stock, plant or equipment, the establishment of a co-operative business with other persons, reduction or discharge of a mortgage, bill of sale, etc.

(iii) *Allowances (Agricultural Occupations).* The following table shows details for each State and New Guinea to 30th June, 1953 :—

ALLOWANCES (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 30th JUNE, 1953.

State.	Applications.			Advanced by Commonwealth Treasury to Bank.	Allowances Paid.
	Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.		
				£	£
New South Wales ..	4,064	3,614	450	578,000	577,492
Victoria ..	3,066	2,311	755	296,500	296,013
Queensland ..	3,035	2,510	525	476,064	476,064
South Australia(a) ..	2,245	1,742	503	319,500	318,964
Western Australia ..	3,007	2,600	407	475,500	475,337
Tasmania ..	627	516	111	114,000	112,968
New Guinea ..	3	2	1	551	551
Total ..	16,047	13,295	2,752	2,266,115	2,257,389

(a) Includes allowances paid to four ex-servicemen in Northern Territory.

These allowances are payable only in respect of the period during which the income derived from the occupation by the ex-serviceman concerned is considered inadequate.

3. *War Service Land Settlement Division—Total Expenditure.*—The following table shows details, by States and Territories, of the total expenditure of the War Service Land Settlement Division for the years 1945-46 to 1952-53, and the aggregate to 30th June, 1953. The aggregate, £43,837,805, includes—War Service land settlement, £33,112,502; agricultural loans, £6,201,644; agricultural allowances, £2,260,115; administrative expenses, £855,300; rural training, £1,408,244.

COMMONWEALTH WAR SERVICE LAND SETTLEMENT DIVISION : EXPENDITURE.
(£.)

Period.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Ter.	N. G'nea.	Total.
1945-46	120,500	153,804	60,000	263,299	610,042	331,769	..	..	1,539,414
1946-47	1,289,426	536,230	261,780	1,285,495	1,337,384	140,506	2,000	..	4,852,821
1947-48	1,191,480	618,637	324,000	887,712	1,769,701	294,936	..	..	5,086,466
1948-49	870,890	388,323	269,158	1,169,650	2,156,805	366,240	..	..	5,221,066
1949-50	629,094	302,966	301,453	1,691,974	2,617,441	641,083	4,453	4,158	6,192,622
1950-51	287,491	145,773	109,691	1,743,583	2,844,116	830,343	4,295	389	5,965,681
1951-52	197,084	177,450	81,396	2,075,184	2,880,716	1,510,783	..	..	6,922,613
1952-53	172,001	403,500	63,708	2,257,968	3,746,099	1,412,346	..	1,500	8,057,122
Total to 30th June, 1953 ..	4,757,966	2,726,683	1,471,186	11,374,865	17,962,304	5,528,006	10,748	6,047	43,837,805

After deducting repayments of expenditure to 30th June, 1953 which amounted to £4,890,309 and miscellaneous receipts (£3,597,987), the net expenditure to 30th June, 1953 was £35,349,509.

§ 10. Advances to Settlers.

1. *General.*—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory appears in preceding issues of the Official Year Book (*see* No. 22, pp. 179-186).

The summaries of loans and advances in the following paragraphs are compiled from returns supplied by the various State government lending agencies in the several States. They include the transactions in lands acquired under closer and soldier settlement schemes, but exclude the balances owing on former Crown lands sold on the conditional purchase, etc., system.

The amounts outstanding do not represent the actual differences between the total advances and settlers' repayments, for considerable remissions of indebtedness have been made in all States as a result of reappraisements of land values and the writing down of debts. In general, they include both principal and interest outstanding.

A summary for Western Australia is not included, as practically the only Governmental funds being made available are Commonwealth (see § 9 above).

In New South Wales and Victoria expenditure on the acquisition, development and improvement of land for war service land settlement is provided for by the States, and particulars thereof are included in the respective summaries. In Queensland no money is paid for the value of the land acquired, most land being occupied on lease from the Government, but advances in respect of improvements are included. In the other States, this expenditure is provided for by the Commonwealth and particulars are included in § 9 above.

Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and certain advances for the purchase of wire-netting and for other purposes made from finance provided by the Commonwealth are included in the summaries following.

2. **New South Wales.**—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1953 :—

ADVANCES TO SETTLERS, ETC. : NEW SOUTH WALES.

Advances, etc.	Advances, etc., made during—		Total Advances, etc., at 30th June, 1953.	Balance outstanding at 30th June, 1953.	
	1951-52.	1952-53.		Number of Ac- counts.	Amount.
	£	£	£		£
Department of Lands—					
Closer Land Settlement	10,692	..	15,124,116	5,673 ^(a)	2,443,379
Soldier Settlers, 1914-18 War .. ..	..	..	(b) 3,196,005	436	137,908
1939-45 War	1,359,525	858,516	7,853,242	5,119	3,276,183
Soldier Land Settlement—Acquisition, development and improvement of land, War Service Land Settlement Agreement Act	2,645,107	1,152,415	16,340,118	1,864 ^c	14,799,972
Wire Netting .. ..	..	..	1,494,653	10	1,054
Prickly Pear	8,398	11,859	220,199	194	4,803
Rural Bank—					
General Bank Department—					
Commonwealth Re-establishment and Employment Act 1945	101,974	33,211	4,204,588	2,798	1,649,101
Other	2,199,571	1,824,579	63,496,317	9,515	16,444,642
Government Agency Department—					
Rural Industries	106,019	121,417	8,003,168	614	260,214
Unemployment Relief and Dairy Pro- motion	39,869	232,296	1,834,487	845	341,842
Rural Reconstruction ^(d)	146,342	272,020	12,213,579	883	1,707,694
Shallow Boring	53,065	80,843	1,156,443	191	111,228
Farm Water Supplies	19,993	68,974	160,211	195	132,618
Soil Conservation	155	1,556	2,616	6	2,119
Rivers and Foreshores Improvement .. ..	..	2,317	2,317	30	940
Irrigation Areas	474,993	325,900	(e)	366	2,144,092
Government Guarantee Agency .. ..	..	5,851	225,419	6	3,056
Closer Settlement Agency .. ..	..	..	167,914	49	59,376
Total	7,165,703	4,991,754	135,695,392	28,794	43,520,221

(a) Excludes an amount of £4,670,530 to 30th June, 1953, capitalized on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (b) In addition, the sum of £1,926,937 to 30th June, 1953 has been expended on developmental works on soldiers' settlements.

(c) Includes capital value of Closer Settlement Leases, £11,340,562, and unpaid balance and interest on structural improvements, £3,459,410. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £1,259,106.

(e) Not available.

(f) Incomplete.

3. **Victoria.**—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1953 :—

ADVANCES TO SETTLERS, ETC. : VICTORIA.

Advances, etc.	Advances, etc. made during—		Total Advances, etc., at 30th June, 1953.	Balance outstanding at 30th June, 1953.	
	1951-52.	1952-53.		Number of Persons.	Amount.
State Savings Bank, Crédit Foncier—	£	£	£		£
Civilians	35,326	45,497	11,679,229	931	758,833
Discharged Soldiers	7	407	848,299	50	31,270
Treasurer—					
Cool Stores, Canneries, etc.	158,936	122,094	1,390,813	(a) 3	396,261
Department of Lands and Survey—					
Closer Settlement Settlers and Soldier Settlers	..	..	646,904,855	2,931	3,193,184
Cultivators of Land	169	440	2,463,118	256	47,322
Wire Netting	22,684	31,997	726,199	209	49,039
Soldier Settlement Commission—					
Purchase of land	1,360,723	865,379	10,662,371	..	(c) 13,912,530
Development and Improvement of Holdings	3,127,104	3,226,437	12,126,599	..	
Advances for sales of land not required for Soldier Settlement(d)	100,073	138,626	754,076	2	13,990
Advances for Settlers' Lease Liability, Soldier Settlement Act 1946	1,902,960	2,000,556	5,974,214	869	5,621,891
Advances to assist in acquiring and developing single unit farms	914,518	247,890	8,574,002	1,881	6,735,480
Advances for improvements, stock, implements, etc.	333,678	359,615	1,264,188	900	659,513
Advances for shares in Co-operative Companies, Soldier Settlement Act 1946	9,110	35,660	76,914	210	70,818
Commonwealth Re-establishment and Employment Act 1945 Advances	26,472	5,668	1,795,172	1,167	605,447
Total	7,991,760	7,080,266	105,240,049	9,409	32,095,578

(a) Companies and Co-operative Societies. (b) Represents consolidated debts of settlers (Section 30, Act 4091). (c) After allowing an amount of £1,269,015 representing excess acquisition, development and improvement cost which has been written off. (d) Sale price of land not required for settlement; balance outstanding represents instalments not yet due where terms were given to purchasers.

4. **Queensland.**—The following table shows particulars of advances to 30th June, 1953. The figures exclude transactions in land :—

ADVANCES TO SETTLERS : QUEENSLAND.

Advances.	Advances, etc. made during—		Total Advances, etc., at 30th June, 1953.	Balance outstanding at 30th June, 1953.	
	1951-52.	1952-53.		Number of Ac-counts.	Amount.
Co-ordination of Rural Advances and Agricultural Bank Acts	£	£	£		£
Discharged Soldiers' Settlement (a)	1,332,178	1,296,532	17,429,435	3,237	5,198,303
Water Facilities .. .. .	..	..	2,470,289	288	56,898
Wire Netting, etc. .. .. .	..	..	58,079	8	388
Seed Wheat and Barley .. .. .	..	..	1,019,403	509	48,060
Drought Relief	352	5,995 (b)	143,131	(c)	12,398
War Service Land Settlement	227,216	34,462	961,047	116	257,594
Income (Unemployment Relief and State Development) Tax Acts (d)	474,987	499,995	2,230,857	434	1,917,822
Irrigation .. .. .	..	..	1,184,561	457	76,949
Farmers' Assistance (Debt Adjustment Acts) .. .. .	..	..	54,914	10	3,644
Commonwealth Re-establishment and Employment Act 1945 .. .. .	..	..	1,033,273	118	205,018
Total	20,777	3,647	867,314	678	300,047
Total	2,055,511	1,840,631	27,452,303	(e) 5,855	8,077,121

(a) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest. (c) Not available. (d) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (e) Incomplete.

5. **South Australia.**—The following table shows particulars respecting advances under State Authorities to 30th June, 1953 :—

ADVANCES TO SETTLERS : SOUTH AUSTRALIA.

Advances.	Advances made during—		Total Advances at 30th June, 1953.	Balance outstanding at 30th June, 1953.	
	1951-52.	1952-53.		Number of Persons.	Amount.
	£	£	£		£
Department of Lands—					
Advances to Soldier Settlers	103,509	54,249	5,010,916	345	1,372,221
Advances to Blockholders .. ..	..	..	41,451	..	..
Advances for Sheds and Tanks .. ..	..	..	75,693	33	5,517
Advances under Closer Settlement Acts ..	27,967	22,105	2,715,433	685	921,541
Advances under Agricultural Graduates Settlement Act .. ..	..	..	62,258	17	30,019
Settlement of Returned Service Personnel, 1939-45 War	460,301	380,847	1,301,414	517	1,143,327
Primary Producers Assistance Department—					
Advances in Drought-affected Areas .. ..	..	..	2,146,768	22	8,831
Advances under Farmers Relief Acts .. ..	..	..	4,435,509	35	11,455
Irrigation Branch—					
Advances to Civilians .. ..	..	216	291,394	61	21,438
Advances to Soldier Settlers	668	556	1,047,439	386	404,608
State Bank of South Australia (Crédit Foncier Department)	383,514	791,921	8,980,155	1,230	2,211,486
Advances to Primary Producers .. ..	..	..	..	..	..
Advances to Settlers for Improvements(a) ..	550	9,171	948,807	93	27,653
Advances under Vermin and Fencing Acts ..	2,090	1,697	1,382,586	122	59,532
Advances under Loans to Producers Act ..	76,466	165,429	763,977	50	471,164
Commonwealth Re-establishment and Employment Act 1945	37,490	22,888	790,974	506	368,182
Total	1,092,555	1,449,079	29,994,774	4,102	7,056,974

(a) Reductions in figures due to adjustment of cancelled and re-allotted holdings.

6. **Western Australia.**—The operations prior to 1945 covered in this section related to moneys made available through, or by, the old Agricultural Bank and other Government Departments for the purpose of agricultural development. On 1st October, 1945, however, the Agricultural Bank was reconstituted as the Rural and Industries Bank of Western Australia, and was given authority to operate similarly to the associated banks. Certain securities in the books of the old bank were taken over by the general banking division of the new bank, and the clients concerned then operated with privileges and obligations similar to those provided by other banking institutions. The majority of the remaining securities, also, were eventually transferred.

At present, very limited funds are being made available by the State Government for advances for agricultural development, the bulk of the moneys for this purpose being provided by the Commonwealth Government under the War Service Land Settlement and Commonwealth Re-establishment and Employment Acts. Particulars of this expenditure are shown in § 9 above.

7. **Tasmania.**—The following table shows particulars of advances under State Authorities to 30th June, 1953. Although not regarded as outstanding advances by the Department of Agriculture the figures in connexion with closer and soldier land settlement have been included in the table for comparative purposes; the areas so purchased have been leased on 99-year terms having an option of purchase which the leaseholder may exercise at any time.

ADVANCES TO SETTLERS, ETC. : TASMANIA.

Advances, etc.	Advances made during—		Total Advances at 30th June, 1953.	Balance outstanding at 30th June, 1953.	
	1951-52.	1952-53.		Number of Persons.	Amount.
	£	£	£		£
Agricultural Bank—					
State Advances Act and Rural Credits ..	169,795	39,083	2,790,486	475 (a)	496,132
Orchardists' Relief, 1926 .. ..	..	..	46,832	1	53
Unemployed (Assistance to Primary Producers) Relief Act 1930-1931 .. ..	..	..	114,302	1	10
Bush Fire Relief 1934 .. ..	..	..	14,555	3	57
Crop Losses, 1934-35 .. ..	..	..	10,086	2	213
Assistance to Fruitgrowers Act 1941 .. ..	..	..	34,556	3	333
Flood Sufferers' Relief Act, 1942 .. ..	..	..	3,764	..	..
Flood Sufferers' Relief Act, 1944 .. ..	..	..	1,902	5	580
Commonwealth Re-establishment and Employment Act 1945	11,188	2,876	395,827	344	239,410
Primary Producers' Relief Act 1947 .. ..	..	..	297,846	519	114,408
Minister for Agriculture—					
Soldier Settlers—					
Advances	11,316	1,509	959,573	33 (b)	19,852
Purchase of Estates, etc.(c)	2,880	2,378	2,552,407	(d) 511	474,078
Closer Settlers—					
Advances	2,155	500	97,411	8	2,473
Purchase of Estates, etc.(c)	27	394	520,930	(d) 116	112,447
Total	197,361	46,740	7,840,477	2,021	1,460,046

(a) Excludes £8,956 forfeited properties. (b) Excludes £204,813 advances capitalized, £79,166 advances written off to bad debts, and £40,789 written off to revaluation. (c) Not regarded as outstanding advances by the Department. (d) Number of leaseholders, including those to whom advances have been made.

8. **Northern Territory.**—During the financial year 1951-52 two advances totalling £525 were made while 21 advances totalling £4,881 were made in 1952-53. The total amount advanced to 30th June, 1953, was approximately £32,986. At 30th June, 1953 the balance outstanding from 25 settlers, including interest, was £6,016.

9. **Summary of Advances.**—The following table is a summary for each State (except Western Australia) and the Northern Territory to the 30th June, 1953. The particulars, so far as they are available, represent the total sums advanced to settlers, including amounts spent by the various Governments in the purchase and improvement of estates disposed of by closer and soldier land settlement, while the amounts outstanding reveal the present indebtedness of settlers to the Governments, including arrears of principal and interest but excluding amounts written off debts and adjustments for land revaluations. Particulars of Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and of certain advances for wire-netting and other purposes provided from Commonwealth funds are included.

ADVANCES TO SETTLERS, ETC. : SUMMARY.

State.	Advances, etc., made during—		Total Advances, at 30th June, 1953.	Balance outstanding at June, 1953.	
	1951-52.	1952-53.		Number of Persons.	Amount.
	£	£	£		£
New South Wales(a) ..	7,165,793	4,991,754	6135,695,392	28,794	43,520,221
Victoria(a) ..	7,991,760	7,080,266	105,240,049	9,409	32,095,578
Queensland ..	2,055,511	1,840,631	27,452,303 bc	5,855	8,077,121
South Australia ..	1,092,555	1,449,079	29,994,774	4,102	7,056,974
Tasmania ..	197,361	46,740	7,840,477	2,021	1,460,046
Northern Territory ..	525	4,881	32,986	25	6,016

(a) Includes expenditure on acquisition, development and improvement of land for war service land settlement (see p. 86). (b) Incomplete. (c) Number of accounts.

§ 11. Alienation and Occupation of Crown Lands.

1. **General.**—The figures shown in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out the position in regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory during the latest year for which information is available—1953 in all cases. A summary for each State and Territory and for Australia as a whole is also supplied. Particulars for each year from 1942 to 1952 appear in *Primary Industries Bulletin* No. 46, Part 1.—Rural Industries, page 7. The area occupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—The total area of New South Wales is 198,037,120 acres, of which 26.1 per cent. had been alienated at 30th June, 1953; 7.1 per cent. was in process of alienation; 59.2 per cent. was held under leases and licences; and the remaining 7.6 per cent. was unoccupied, or held by the Crown.

The following table shows particulars as at 30th June, 1953 :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : NEW SOUTH WALES,
30th JUNE, 1953.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. Alienated.		3. Held under Leases and Licences.	
Granted and sold prior to 1862 ..	7,146,579	Homestead selections and grants ..	1,678,558
Sold by auction and other sales, 1862 to date ..	15,508,418	Alienable leases, long-term and perpetual ..	26,228,085
Conditionally sold, 1862 to date ..	33,895,938	Long-term leases with limited right of alienation ..	1,512,340
Granted under Volunteer Land Regulations, 1867 to date ..	172,198	Other long-term leases ..	77,149,937
Granted for public and religious purposes ..	265,904	Short-term leases and temporary tenures ..	8,350,180
	56,989,037	Forest leases ..	2,088,453
		Mining and auriferous leases ..	196,381
Less lands resumed or reverted to Crown ..	5,396,201	Total ..	117,203,934
Total ..	51,592,836		
2. In Process of Alienation.		4. Unoccupied—Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (Approximate) ..	
Conditional purchases ..	12,221,411		15,103,694
Closer settlement purchases ..	1,535,897		
Soldiers' group purchases ..	161,784		
Other forms of sale ..	217,564		
Total ..	14,136,656	5. Total Area of State ..	198,037,120

3. **Victoria.**—The total area of Victoria is 56,245,760 acres, of which 54.6 per cent. had been alienated up to the end of 1953; 4.1 per cent. was in process of alienation under deferred payments and closer settlement schemes; 15.0 per cent. was occupied under leases and licences; and 26.3 per cent. was unoccupied or held by the Crown.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : VICTORIA,
31st DECEMBER, 1953.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i>	30,698,560	3. <i>Leases and Licences held—</i> <i>Under Lands Department—</i>	
		Perpetual Leases	72,075
		Agricultural College Leases	37,085
		Other Leases and Licences	19,906
		Temporary (Yearly) Grazing Licences	7,372,248
2. <i>In Process of Alienation—</i>		Under Mines Department(a)	957,797
Exclusive of Mallee and Closer Settlement Lands	362,474	Total	8,459,111
Mallee Lands (exclusive of Closer Settlement Lands)	1,439,178		
Closer Settlement Lands	527,476	4. <i>Occupied by the Crown or Un-</i> <i>occupied</i>	14,758,928
Village Settlement	33		
Total	2,329,161	5. <i>Total Area of State</i>	56,245,760

(a) Includes State Coal Mine area, 7,575 acres and State Electricity Commission area, 2,800 acres.

4. *Queensland.*—The total area of this State is 429,120,000 acres, of which, on 31st December, 1953, 5.7 per cent. was alienated; 0.8 per cent. was in process of alienation; and 84.4 per cent. was occupied under leases and licences. The remainder, 9.1 per cent., was either unoccupied or held as reserves or for roads.

The distribution is shown in the following table :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : QUEENSLAND,
31st DECEMBER, 1953.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated—</i>		3. <i>Occupied under Leases and</i> <i>Licences—</i>	
By Purchase	24,325,859	Pastoral Leases	249,215,120
Without Payment	92,121	Occupation Licences	13,018,200
		Grazing Selections and Settle- ment Farm Leases	88,587,279
		Leases—Special Purposes	2,047,945
		Mining Leases	537,154
		Perpetual Leases Selections and Perpetual Lease Prickly Pear Selections	6,566,522
		Auction Perpetual Leases, etc. Forest Grazing Leases (of Reserves)	(b) 514,751
		Total	1,644,440
Total	24,417,980	Total	362,131,411
		4. <i>Reserves (net, not leased), Surveyed</i> <i>Roads and Surveyed Stock</i> <i>Routes</i>	22,699,048
2. <i>In Process of Alienation</i>	3,330,790	5. <i>Unoccupied</i>	16,540,771
		6. <i>Total Area of State</i>	429,120,000

(a) Special leases of Crown Land, 594,152 acres; special leases of reserves, 1,453,793 acres.

(b) Includes 481,157 acres over which perpetual country leases were granted to Queensland-British Food Corporation.

5. **South Australia.**—The area of South Australia is 243,244,800 acres and at 30th June, 1953, 5.9 per cent. was alienated ; 0.2 per cent. in process of alienation ; 57.1 per cent. occupied under leases and licences ; and 36.9 per cent. occupied by the Crown or unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : SOUTH AUSTRALIA,
30th JUNE, 1953.
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> —		3. <i>Held under Lease and Licence</i> —	
Sold	14,106,469	Perpetual Leases, including Ir-	•
Granted for Public Purposes ..	138,708	rigation Leases	18,667,736
		Pastoral Leases	117,120,187
		Other Leases and Licences ..	2,998,951
		Mining Leases and Licences ..	94,742
Total	14,245,177	Total	138,881,616
2. <i>In Process of Alienation</i> ..	400,052	4. <i>Area Unoccupied (a)</i>	89,717,955
		5. <i>Total Area of State</i>	243,244,800

(a) Includes surveyed roads, railways and other reserves, salt water lakes, lagoons, and fresh water lakes.

6. **Western Australia.**—The total area of Western Australia is 624,588,800 acres, of which, at 31st December, 1953, 3.9 per cent. was alienated ; 2.0 per cent. was in process of alienation ; and 32.9 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 61.2 per cent. was unoccupied.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : WESTERN AUSTRALIA,
31st DECEMBER, 1953.
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i>	24,137,676	3. <i>Leases and Licences in Force</i> —	
		(i) Issued by Lands Department—	
		Pastoral Leases	198,024,098
		Special Leases	2,261,236
		Leases of Reserves	582,022
		Residential Lots	4,724
		Perpetual Leases	973,545
2. <i>In Process of Alienation</i> —		(ii) Issued by Mines Department—	
Midland Railway Concessions ..	54,800	Gold-mining Leases	24,860
Free Homestead Farms	394,298	Mineral Leases	43,155
Conditional Purchase	9,513,986	Miners' Homestead	
Selections under the Agricultural		Leases	32,841
Lands Purchase Act	343,031	(iii) Issued by Forests Department—	
Grazing Land	2,322,702	Timber Permits	3,687,330
Town and Suburban Lots	3,462	Total	205,633,811
Crown Grants of Reserves	74,926		
Total	12,707,205	4. <i>Area Unoccupied</i>	382,110,108
		5. <i>Total Area of State</i>	624,588,800

7. Tasmania.—The total area of Tasmania is 16,778,000 acres, of which, at 30th June, 1953, 37.2 per cent. had been alienated; 2.1 per cent. was in process of alienation; 16.3 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement; while the remainder (44.4 per cent.) was unoccupied or reserved by the Crown.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : TASMANIA,
30th JUNE, 1953.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. Alienated	6,238,642	3. Leases and Licences—continued.	
2. In Process of Alienation ..	344,401	(i) Issued by Lands Department—continued.	
3. Leases and Licences—		Soldier Settlement ..	94,216
(i) Issued by Lands Department—		Short-term Leases ..	8,342
Islands	161,100	(ii) Issued by Mines Department ..	(a) 31,398
Ordinary Leased Land ..	1,928,106	Total	2,743,412
Land Leased for Timber	493,393	4. Area Occupied by the Crown or Un-	
Closer Settlement ..	26,857	occupied(b)	7,451,545
		5. Total Area of State	16,778,000

(a) At 30th December, 1953. (b) Includes reservations for roads and various other public purposes 4,069,320 acres, lands occupied by Commonwealth or State Departments, 21,802 acres and land acquired for Soldier and Closer Settlement but not leased, 2,385 acres.

8. Northern Territory.—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1953, only 0.1 per cent. was alienated; 53.7 per cent. was held under leases and licences; 14.1 per cent. was reserved for aboriginal, defence and public requirements; and the remaining 32.1 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1953 :—Alienated, 455,322 acres; leased—pastoral leases, 140,151,254 acres, other leases, licences and mission stations, 39,863,572 acres, total leased, 180,014,826 acres; reserved for aboriginal, defence and public requirements, 47,000,885 acres; unoccupied and unreserved, 107,645,767 acres; total, 335,116,800 acres.

9. Australian Capital Territory.—Alienated land of the Territory (excluding the Jervis Bay area) at the end of 1953 comprised 10.9 per cent. of the total area; land in process of alienation 6.8 per cent.; land held under lease and licence 53.8 per cent.; land otherwise occupied, including city tenures, 6.9 per cent.; and unoccupied 21.6 per cent.

The following are the particulars of land areas in the Australian Capital Territory at the end of 1953 :—Alienated, 65,857 acres; in process of alienation, 41,224 acres; leased—grazing, agricultural, etc., leases, 303,130 acres, grazing licences, 7,174 acres, total leased, 310,304 acres; otherwise occupied, 35,969 acres; unoccupied, 129,446 acres; total, 582,800 acres. Including the Jervis Bay area of 18,000 acres—12,788 acres leased and 5,212 acres otherwise occupied—the grand total for the whole Territory is 600,800 acres.

10. Summary.—The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1953 :—

ALIENATION AND OCCUPATION OF CROWN LANDS, 1953.

State or Territory.	Private Lands.				Crown Lands.				Total Area.
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		
	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.
N.S.W.(a) ..	51,593	26.05	14,137	7.14	117,204	59.18	15,103	7.63	198,037
Victoria(b) ..	30,699	54.58	2,329	4.14	8,459	15.04	14,759	26.24	56,246
Queensland(b) ..	24,418	5.69	3,331	0.78	362,131	84.39	39,240	9.14	429,120
S. Aust.(a) ..	14,245	5.86	400	0.16	138,882	57.10	89,718	36.88	243,245
W. Aust.(b) ..	24,137	3.86	12,707	2.03	205,634	32.93	382,110	61.18	624,588
Tasmania(a) ..	6,239	37.18	345	2.06	2,743	16.35	7,451	44.41	16,778
Nor. Terr.(a) ..	455	0.13	..	..	180,015	53.72	154,647	46.15	335,117
A.C.T.(b) ..	66	10.98	41	6.82	323	53.75	171	28.45	601
Australia ..	151,852	7.98	33,290	1.75	1,015,391	53.34	703,199	36.93	1,903,732

(a) At 30th June.

(b) At 31st December.

The diagram on page 73 shows in graphical form the areas alienated from the State, those in process of alienation under the various systems of deferred payments, the areas held under leases or licences and the areas left unoccupied.

CHAPTER V.

THE TERRITORIES OF AUSTRALIA.

NOTE.—The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are :—Norfolk Island ; Papua (formerly British New Guinea) ; the Territory of New Guinea (under Trusteeship Agreement with the United Nations) ; Nauru (under Trusteeship Agreement with the United Nations) ; The Territory of Heard and McDonald Islands ; the Australian Antarctic Territory ; and the Territory of Ashmore and Cartier Islands. Information on all except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pp. 5-7 of this issue.

THE NORTHERN TERRITORY.

§ 1. Area and Population.

1. **Area.**—Upon the extension of New South Wales westward to the 129th meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles, or 335,116,800 acres—about six times as large as Victoria.

2. **Population.**—(i) *Population excluding Full-blood Aborigines.* At the Census of 30th June, 1954 the population of the Northern Territory, excluding full-blood aborigines, was 10,305 males, 6,184 females, 16,489 persons. Corresponding figures at the Census of 30th June, 1947 were, respectively, 7,378, 3,490 and 10,868.

The white population of the Northern Territory increased slowly from 670 at the Census of 1881 to 3,767 in 1918. By 1921 it had decreased to 2,459, and in 1933 was only 3,306. At the Census of 1947 it had risen to 9,116, an increase of 176 per cent. on the 1933 figures.

Although at one time there were more than 4,000 Chinese in the Territory, at 30th June, 1947 there were only 250, these comprising the major proportion of the 388 full-blood non-European population, excluding Australian aborigines, at that date.

The half-caste population recorded at the Census of 1947 numbered 1,364, of whom 1,247 were half-caste Australian aborigines. Corresponding figures at the 1933 Census were, respectively, 800 and 743.

(ii) *The Aborigines.* The total number of full-blood aborigines at 30th June, 1953 was estimated at 13,490, of whom approximately 3,224 (2,363 males and 861 females) were in regular employment. By virtue of Aborigines Ordinance No. 2 of 1953, part aborigines are not now deemed to be aborigines within the meaning of the Aborigines Ordinance 1918-1953, except children who were committed to institutions prior to the commencement of the ordinance and those who have requested the Director of Native Affairs to declare them aborigines within the meaning of the ordinance. The total number of such persons is approximately 430. There are sixteen "aboriginal" reserves, comprising an area of approximately 68,288 square miles. (See also Chapter IX.—Population.)

§ 2. Legislation and Administration.

On 1st January, 1911 the Territory was transferred by South Australia to the Commonwealth. The terms are outlined in Official Year Book No. 15, p. 940. For particulars of the administration up to the Northern Territory (Administration) Act 1931, when it was placed in the hands of an Administrator, residing at Darwin, see Official Year Book No. 38 and earlier issues.

The Northern Territory (Administration) Act 1947 enabled the Northern Territory to set up a Legislative Council. The Council consists of the Administrator and seven official and six elected members who make ordinances for the Territory, which must be submitted to the Administrator for assent. The Administrator may, or may not, assent to them, or he may reserve them for the Governor-General. The Governor-General may also disallow any ordinance assented to by the Administrator within six months from the date of assent, and the operation of ordinances relating to certain land or pecuniary transactions or to aboriginal affairs are dependent on his approval. Money votes may be proposed in the Council only by the Administrator himself, or by his permission or direction.

The Territory elects a member to the House of Representatives, who was granted the right to take part in debates but not to vote, except on a motion for the disallowance of any ordinance of the Northern Territory or on any amendment of any such motion. However, the power of the Federal Parliament to disallow ordinances was repealed by the Northern Territory (Administration) Act 1947 referred to above.

§ 3. Physiography.

1. **Tropical Nature of the Country.**—The Territory is within the torrid zone, with the exception of a strip $2\frac{1}{2}$ degrees wide which lies south of the Tropic of Capricorn.

2. **Contour and Physical Characteristics.**—The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast-line are enumerated in Official Year Book No. 1, p. 66; the rivers in No. 2, p. 76; the mountains in No. 3, p. 67; the lakes in No. 4, pp. 77, 78; the islands in No. 5, pp. 71, 72; and the mineral springs in No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

§ 4. Climate, Fauna and Flora.

1. **The Seasons.**—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Further particulars appear in Official Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous) and frogs abound. There are many varieties of fresh-water fish and littoral mollusca. Butterflies and

beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their number has been greatly reduced by indiscriminate shooting. Buffalo shooting is now controlled.

3. *Flora*.—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. In the north, cypress pine, bloodwood and paperbark timbers are now cut and milled for local building purposes. These three timbers are resistant to termites. On the wide expanses of plain country in the interior there is little vegetation, the principal orders represented being:—*Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Goodeniaceae*, *Leguminosae*, *Utricaceae*.

More detailed particulars regarding fauna and flora are given in Official Year Book No. 6, pp. 1116-7.

§ 5. Production.

1. *Agriculture*.—Up to the present, agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coconuts, mangoes, bananas, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is employed it cannot be produced with profit. There is a large stretch of first-class coconut land on the coast, but so far planting has not been attempted on a commercial scale. For the encouragement of primary production a Primary Producers' Board was established in 1931. Since the end of the 1939-45 War, returned servicemen and others have had some success growing vegetables, fruit and other crops in the Darwin area and also as far south as Katherine. Vegetables grown were of consistently good quality and found ready local markets. In 1949 a group of Queensland farmers began an experiment in large-scale sorghum growing near Newcastle Waters, but the experiment has been unsuccessful in its early seasons.

During 1952 a Growers' Co-operative Market was established in Darwin, providing a regular supply of local fruit and vegetables. This venture is at present prospering. Bananas and beans in season have been supplied regularly to southern markets within the limits of aircraft backloading space. The 1952 peanut harvest was very profitable to most Daly River farmers but gave poor returns in the Katherine area. In June, 1952 field work began on Government experimental plots in the Darwin area and in January, 1953 an experimental base at Katherine was established. Pineapples, tobacco, rice, peanuts and grain sorghum are the main crops under trial. It has already been established that these crops can be grown successfully. The experiments aim at widening the soil range and investigating the possibilities of economic production.

2. *Pastoral Industry*.—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry, however, progressed steadily and development of stock routes and other plans for the expansion of the industry are continuing.

Cattle exported during 1952-53 numbered 81,367—32,568 to Queensland, 42,149 to South Australia, and 6,650 to Western Australia. Importations of live stock were:—bulls, 700; other cattle, 7,587; stallions, 2; other horses, 475; rams, 15; other sheep, 3,114.

The estimated number of livestock in the Territory at the end of the years 1939 and 1949 to 1953 is given in the table hereunder :—

NORTHERN TERRITORY : LIVESTOCK.

31st December—	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
1939	32,721	922,581	38,587	483	20,335	331	1,443	366
1949	32,904	1,048,875	25,725	419	12,102	165	935	466
1950	29,366	1,019,149	28,888	1,122	12,329	94	918	603
1951	32,519	1,057,906	30,935	794	10,520	98	1,180	603
1952	34,645	935,602	33,773	799	11,861	100	873	546
1953	36,985	966,033	31,232	1,132	12,502	53	1,475	626

3. **Hides and Skins.**—The number of hides and skins exported from the Northern Territory during 1952–53 was as follows :—buffalo, 14,810; sheep, 2,093; crocodile, 706; and cattle, 5,482. In addition, a considerable number of kangaroo skins were exported, but details are not available.

4. **Mining.**—Alluvial gold digging in the Northern Territory commenced in 1869 and in 1881 maximum production was achieved when the yearly return was valued at £111,945. The value of minerals produced in the Territory in 1952 was an all-time record, and for the first time exceeded £1,000,000. The main mineral was gold, most of which was won at Tennant Creek and the majority from one mine “Noble’s Nob”. Three batteries are operated by companies on this field, which is noted for its rich patches of ore. The value of wolfram production increased, mainly at Hatches Creek, where a Government-owned treatment plant is in operation. The Harts Range Mica Field continues to produce the bulk of Australian high grade mica. Tin concentrates were produced at Maranboy, where a Government-owned treatment plant is in operation. A uranium project was developed at Rum Jungle by the Department of Supply, and handed over to a private company to work as agents for the Commonwealth. Regional surveys were conducted in various parts of the Territory by officers of the Bureau of Mineral Resources. Some leases in addition to Rum Jungle have been granted and are now in course of development.

The following table shows the value of mineral production for the years 1948 to 1952 compared with 1939 :—

NORTHERN TERRITORY : MINERAL PRODUCTION.

(£.)

Year.	Gold.	Tin Concentrates.	Ochre.	Copper Ore.	Mica.	Wolfram.	Tantalite.	Silver-lead.	Total Value all Minerals.
1939	163,414	4,487	607	2,248	15,539	58,183	..	..	244,478
1948	163,482	12,055	2,374	7,370	75,796	30,780	814	1,407	294,078
1949	369,027	10,138	501	145,839	52,014	20,521	240	973	599,253
1950	543,121	15,139	4,199	56,741	61,813	25,647	520	883	708,063
1951	603,313	22,446	797	44,409	59,084	257,164	260	..	987,473
1952	737,153	10,142	..	130,700	91,725	412,772	..	..	1,386,061a

(a) Includes limestone, £1,930; silver, £1,639.

5. **Pearl and Other Fisheries.**—In 1884, mother-of-pearl-shell was discovered in the harbour of Port Darwin. Since that time the areas fished have extended to the various banks to seaward and coastwise along the Northern Territory coast. Production of shell has varied considerably, year by year, since the war, but since 1950 has shown a decided increase :—1949—40 tons, value, £18,000; 1950—40 tons, value, £20,000; 1951—86 tons, value, £60,200; 1952—116 tons, value, £63,800; 1953—166 tons, value, £116,200.

The 1954 season was fished by eleven vessels compared with ten for 1953. The price of shell still remains high, £700 a ton for good grade shell being the average for 1953.

Darwin continues to provide a firm and ready market for fish, but supplies are somewhat irregular.

§ 6. Land Tenure.

1. **General.**—A description of the system of land tenure in force in the Territory in 1928 is given in Official Year Book No. 22, Chapter V.—Land Tenure and Settlement. It was revised in Official Year Book No. 39, pp. 329-30, and Chapter IV.—Land Tenure and Settlement of this issue contains statistical information on the subject.

Almost half the land in the Northern Territory is reserved, or unoccupied and unreserved, the remainder, apart from a very small proportion alienated, being held under various forms of lease and licence, which are described briefly below and in more detail in Official Year Book No. 39, pp. 329-30.

2. **Pastoral, Agricultural, etc., Leases.**—*Pastoral Leases*—granted for periods not exceeding 50 years.

Pastoral Homestead Leases—granted in perpetuity but are available only to persons who intend to hold *bona fide* on the leased land. Firms or companies are incapable of holding this type of lease.

Agricultural Leases—granted in perpetuity, with area for any one lease limited according to type of farm (Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres; Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres).

Leases of Town Lands—except in Darwin, granted in perpetuity (in Darwin granted for periods up to 99 years).

Miscellaneous Leases—granted for any prescribed or approved purpose, for periods not exceeding 21 years.

Grazing Licences—granted to graze stock on Crown lands for periods not exceeding one year.

Occupation Licences—granted for manufacturing, industrial or any prescribed purposes, for periods not exceeding 5 years.

Miscellaneous Licences—granted for periods not exceeding 12 months.

Leases to Aborigines—granted for areas not exceeding 160 acres each for any period of years upon such terms and conditions as thought fit.

The foregoing leases and licences are granted at specified rentals or rentals fixed by the Administrator and subject to re-appraisalment, and under various prescribed or specified conditions.

3. **Mining Leases, etc.**—*Holdings under Miners' Rights*—entitling holder, for a fee of 5s. for 12 months from date of issue, to occupy Crown lands for mining and to carry out works thereon.

Gold-mining Leases—granted for a period of 21 years, renewable for a further 21 years, for areas not exceeding 20 acres each, at an annual rent of 2s. per acre and with payment of a royalty of 3d. in the £1.

Mineral Leases—granted in blocks not exceeding 40 acres each, at an annual rent of 1s. per acre, with term and renewal and royalty as for gold-mining leases.

Dredging Claims—granted for gold or minerals claims, the area not exceeding 300 acres each, at an annual rent of 2s. per acre.

Mineral Oil and Coal Licences—granted to search for mineral oil and/or coal over an area not exceeding 1,000 square miles for a period of 5 years, at an annual fee of £10, with preferential rights to lease if payable quantities are discovered and a reward area also in respect of oil.

Mineral Oil and Coal Leases—granted for a period of 21 years, renewable for a further 21 years, for mining areas not exceeding 160 acres each for mineral oil and 640 acres for coal, at an annual rent of 1s. per acre, and royalty of 5 per cent. for oil and fixed by regulation in the case of coal.

Business and Residence Areas—granted at the prescribed fee, authorizing the holder to occupy on a gold or mineral field an area not exceeding one acre for residence and carrying on business (one-quarter of an acre if for residence only).

Garden Areas—granted under prescribed conditions, on a gold or mineral field for growing fruit or other garden produce, the area of each garden not exceeding 5 acres.

There are various conditions regarding working, employment and value of machinery used, which apply to the foregoing leases and licences.

§ 7. Trade, Transport and Communication.

1. **Trade.**—No record is kept of the trade between the States and the Territory. Direct oversea imports amounted to £34,000 in 1938–39. In the post-war years 1945–46 to 1948–49 they averaged about £200,000 a year, but in the three years 1950–51 to 1952–53 the average was about £620,000 a year. Direct oversea exports amounted to £13,000 in 1938–39 and are still relatively small—£35,000 in 1925–53.

2. **Shipping.**—The Territory is dependent for its shipping facilities on a visit every two months by a ship of the Australian Shipping Board from the eastern States and a monthly service from Western Australia by ships of the Western Australian State Shipping Service. An oversea tanker visits Darwin quarterly with supplies of aircraft fuel and other petroleum products. During the post-war years up to 1951–52 oversea and interstate shipping averaged about 30 entrances and 50,000 net tons a year; during 1952–53, 39 vessels used the port with a corresponding increase in tonnage. Figures for pre-war years were between two and three times greater.

3. **Air Services.**—Darwin, a first class international airport, is the first port of arrival in Australia for virtually all aircraft from Europe and Asia. Qantas Empire Airways Ltd. (under contract to the Commonwealth Government) operates, through Darwin, a Sydney–Singapore–London passenger and freight service; a Sydney–Hong Kong–Japan service; and a Sydney–Manila–Japan service. British Overseas Airways Corporation operates a London–Singapore–Sydney service, and Australian National Airways, in conjunction with Air-Ceylon, operates a service to London. Both these services also call at Darwin. Regular inland services calling at Darwin are Trans-Australia Airlines (Adelaide–Darwin and Brisbane–Darwin), MacRobertson-Miller Aviation, which runs regular services between Darwin and Perth, and Darwin and Wyndham, and Connellan Airways, which operates services between Alice Springs, Wyndham, Borroloola, Katherine and the Queensland border. From Darwin the Aerial Medical Service operates two aircraft and the North Australian Airways local charter flights. An aero club with headquarters at the airport also operates.

4. **Railways.**—Under the agreement made between the Commonwealth and the State of South Australia for the transfer of the Northern Territory, which was ratified by the Northern Territory Acceptance Act 1910, the Commonwealth was to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin via Port Augusta).

The northern line from Adelaide terminates at Alice Springs, about 192 miles north of the southern boundary of the Territory. The Commonwealth Government acquired, on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926 the control thereof was transferred to the Commonwealth Railways Commissioner. The extension to Alice Springs (293 miles) was opened for traffic in 1929. The line from Darwin to Pine Creek, about 146 miles, was extended to Katherine River (200 miles from Darwin) in 1917, and as far as Birdum (316 miles from Darwin) in 1929.

The Clapp plan for the standardization of Australian railways recommended, *inter alia*, the construction of a standard gauge (4 ft. 8½ in.) strategic and developmental railway between Dajarra (Queensland) and Birdum, and the conversion to standard gauge of the Birdum–Darwin line, but not the conversion of the Port Augusta–Alice Springs line nor the construction of a 4 ft. 8½ in. line between Alice Springs and Birdum. Provision for both of the last two projects, however, was included in an agreement with South Australia enacted in 1949.

It was agreed by the Governments of the Commonwealth and South Australia in 1950 that a standard gauge railway from Stirling North to Leigh Creek coalfields (157 miles) should be constructed. This is now under construction and is regarded as the first step in the ultimate provision of a standard gauge railway between Port Augusta and Alice Springs.

5. **Roads.**—During the war, roads were built connecting Alice Springs with Darwin, and Mount Isa (Queensland) with Tennant Creek. The first of these roads, known as the North–South Road or Stuart Highway, is 954 miles long, and runs via Larrimah

and Tennant Creek. The Mount Isa-Tennant Creek Road (Barkly Highway) is 403 miles long. Both were used extensively during the war, the Stuart Highway, in particular, experiencing very heavy and continuous traffic. Since the war, the Stuart Highway has been used continually as a means of transporting foodstuffs and other supplies to Darwin and northern centres, and is now the main route for overland tourists and travellers from the southern States to Darwin. Both roads have good water bores and communications. There are now 12,394 miles of road in the Territory.

6. Posts, Telegraphs, Telephones and Wireless.—Postal communication is maintained by road and rail transport between Darwin and the capital cities of Australia. In addition, the vessels belonging to the Western Australian State Shipping Service give a regular service between Fremantle and Darwin. Mail is also carried between the capital cities of Australia and Darwin by the airway companies operating in each State. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The transcontinental telegraph line, covering a length of 2,230 miles, runs in a northerly direction from Adelaide to Darwin, and provides telegraphic communication between Darwin and other parts of the world.

Long-distance telephone communication is established between Darwin and the other capital cities of Australia, and oversea telephone communication through Sydney is also available.

Regional national broadcasting stations are situated at Darwin and Alice Springs. The majority of homesteads on pastoral leases are equipped with pedal wireless sets operated under licence from the Postmaster-General's Department. These stations are in daily communication with Flying Doctor Bases situated at Alice Springs (Northern Territory), Wyndham (Western Australia) and Cloncurry (Queensland), and are used for transmission of radio-telegrams and other communications.

§ 8. Education.

1. General.—The South Australian Education Department provides teachers and determines the curriculum for all schools in the Northern Territory with the exception of pre-school kindergartens and schools for full-blood aboriginal children. An officer of the South Australian Education Department is on loan to the Northern Territory Administration. This officer, designated the Assistant Supervisor of Education, Northern Territory Schools, works in close co-operation with the Administration.

The number of teachers at 30th June, 1953 in schools catering for white and part-aboriginal children was 48, all officers of the South Australian Education Department.

The number of pupils under instruction in departmental schools on 30th June, 1953 was 1,459, of whom 1,306 were in the primary section, while the number of children in convent schools at 30th June, 1953 was 393, including 32 post-primary pupils.

Facilities have been provided in schools at Alice Springs and Darwin for instruction to Leaving (Matriculation) standard in general and commercial courses and also in craft subjects. Students sit for the examinations (Intermediate and Leaving) of the Public Examination Board, University of Adelaide. Six exhibitions are offered annually on the results of the Intermediate examinations. These exhibitions carry a subsistence allowance of £50 a year, £5 for books, and return fares between home and school once a year, and are tenable for two years at any approved secondary school in Australia.

New schools at Darwin and Alice Springs have been completed. Part of the new Darwin school was occupied by infant grades in February, 1953, and the remainder in February, 1954. Plans have been prepared for surfacing and beautifying part of the grounds. The total enrolment at the Darwin school on 30th June, 1953, was 799 including 103 secondary students. Consideration is being given to building a separate technical high school in Darwin, and a site has been set aside in the town plan for this purpose. Because of the scattered nature of Darwin, transport is provided for school children and more than 670 children are taken to school every day in government buses. At Alice Springs, 147 children are carried to and from school each day.

Alice Springs has established itself as the educational centre for a large part of the Northern Territory. More than one hundred and sixty children from outback areas are accommodated at hostels provided by Methodist, Church of England and Roman Catholic organizations. A boarding allowance of £40 a year for each child is paid by the Commonwealth Government to assist parents to keep their children at school, and the Government also makes a contribution towards children's return fares between home and school each term.

The construction of a new school at Alice Springs was commenced in August, 1952, and it was expected that the school would be fully occupied by February, 1955. A well-equipped woodwork room, and other practical rooms providing for the teaching of sheet-metal work, domestic arts and science are included. A fine library is also provided.

A new school comprising two Hawksley buildings, was opened at the Mission Settlement on Croker Island in February 1953, and caters for part-aboriginal children ranging from infants to Intermediate standard. Enrolments at Croker Island School on 30th June, 1953, were 56. A new three-roomed school was also opened at Batchelor in September, 1953, and enrolments since then have increased to 50 pupils. Both schools have been built on tropical lines, and domestic arts and woodwork are being taught at Croker Island.

For the year ended 30th June, 1953, 108 primary and 5 secondary pupils received instruction from the Correspondence School of South Australia.

A pre-school kindergarten is functioning at Alice Springs, and there are three centres in Darwin. The salaries of teachers in three of these kindergartens are being subsidized by the Government to an amount of £3,883 per annum. Two pre-school kindergarten scholarships are offered each year to Territory girls to qualify as pre-school teachers.

2. **School of the Air.**—The "School of the Air" was officially opened by the Administrator on 8th June, 1951. The school has an enrolment of 50 pupils, some of whom live 400 miles from Alice Springs. Five half-hour lessons are given each week from the studio in the Alice Springs school. A unique feature of this service is that children are able to converse with their teacher.

The programme of lessons includes stories and songs for the younger children; number, spelling and language lessons; health talks; appreciation of music and literature; social studies and a "Question and Answer" session.

3. **Native Education.**—At 30th June, 1953, there were 21 special schools for full-blood aboriginal children. These consisted of seven government schools, thirteen mission schools and one private school. At these schools 1,110 children were enrolled, and of this number 820 attended the non-government schools.

New school buildings and residences were erected for the government schools at Yuendumu and Areyonga and for a new school at Jay Creek. The number of teachers in government schools then rose to twelve. The education of adult natives has begun at one centre and has been planned to start at others. The staff, curriculum and supervision of these schools are under the control of the Commonwealth Office of Education, which has a Senior Education Officer in the Northern Territory who works in close association with the Native Affairs Branch as, at this stage, the education of full-bloods is linked more closely with the overall native welfare programme than with the normal school service. Advisory services by the Commonwealth Office of Education to most government or mission schools have been extended to include visits from a teacher of vocational subjects. This work is designed to assist with the preparation of the native population for vocations in the Northern Territory.

4. **Theoretical Training of Apprentices.**—The recognition that technical school training is an extension of workshop training has led to the introduction of day-time classes which apprentices attend without loss of pay. Apprentices are directed by the

Apprentices Board to undertake correspondence courses conducted by the Technical Correspondence School of the South Australian Education Department and the Sydney Technical School, these courses covering the work prescribed for the various trades in South Australia and New South Wales.

§ 9. Native Welfare.

To give effect to the Government's native welfare policy, a series of measures is being introduced in the Legislative Council for the Northern Territory.

The Welfare Ordinance, which the Council passed in June, established the principle that native people would be committed to the care of the State on the grounds of their need for special care and assistance and not on the grounds of race or colour and it laid on the Director of Welfare a positive responsibility for the advancement of wards in his care. The Employment Ordinance provides for the training of wards and assistance in establishing them in occupations, either on their own account or as employees. The Ordinance envisages apprenticeships for the better-educated wards and training-on-the-job for those wards not yet capable of entering into apprenticeships. It also envisages financial aid to natives or groups of natives who may, under the guidance of the Director, be able to engage on activities (for example in agriculture, cattle raising, hunting or fishing) on their own behalf. The Director of Welfare will be responsible for supervising employment for the wards in his care, and protective legislation for those in employment is retained. The legislation does not, of course, apply to any persons who are not wards and it is envisaged that native people who have ceased to be wards will come within the normal industrial customs of the country.

§ 10. Finance.

Details of revenue and expenditure of the Territory for the years 1948-49 to 1952-53 are shown below :—

NORTHERN TERRITORY : REVENUE AND EXPENDITURE. (£.)

Item.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
REVENUE.					
Taxation—					
Probate and Stamp Duties	4,951	7,185	9,307	6,201	5,565
Motor Registration	(a)	(a)	(a)	(a)	11,354
Total	(a)	(a)	(a)	(a)	16,919
Business Undertakings—					
Railways—					
North Australia	28,839	34,880	38,227	48,929	42,160
Central Australia	679,161	775,845	815,739	1,241,050	1,290,297
Postmaster-General's Depart- ment	96,424	118,292	135,218	166,533	182,788
Electricity Supply	81,937	103,177	119,054	139,572	260,521
Total	886,361	1,032,194	1,108,238	1,596,084	1,775,769
Other—					
Rent and Rates	70,937	77,068	88,307	101,263	115,758
Miscellaneous	61,723	86,523	101,939	167,536	177,839
Total	132,660	163,591	190,246	268,799	293,597
Grand Total	1,023,972	1,202,970	1,307,791	1,871,084	2,086,282

(a) Not available.

NORTHERN TERRITORY: REVENUE AND EXPENDITURE—*continued.*
(£)

Item.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
EXPENDITURE.					
Public Debt Charges—					
Interest(b)	309,837	331,356	347,934	342,912	341,285
Debt Redemption(c) ..	106,848	112,188	117,794	123,679	129,848
Other	6	1,406	470	..	133
Total	416,691	444,950	466,198	466,591	471,266
Business Undertakings—					
Railways—					
North Australia	55,485	74,090	69,324	90,966	114,477
Central Australia	656,935	727,689	867,206	1,178,320	1,296,618
Postmaster-General's Department	115,281	123,239	164,138	181,093	165,095
Electricity Supply	121,260	152,235	202,560	280,064	266,614
Water Supply .. ..	..	36,023	48,771	56,151	71,104
Hostels Loss	30,755	35,061	45,259	29,185	42,653
Total	979,716	1,148,337	1,397,258	1,815,779	1,956,561
Social Expenditure—					
Aboriginal Affairs	70,208	101,064	175,094	286,041	278,492
Educational Services	25,700	31,963	53,718	75,838	95,476
Public Health, Recreation and Charitable	189,232	250,139	326,489	389,158	508,166
Law, Order and Public Safety	14,734	16,540	20,050	31,357	35,063
Total	299,874	399,706	575,351	782,394	917,197
Capital Works and Services—					
Railways—					
North Australia	3,511	21,415	20,105	20,209	162,020
Central Australia	37,201	76,654	5,115	133,699	676,298
Postmaster-General's Department	(a)	(a)	4,924	4,144	8,164
Water Supplies, Roads, Stock Routes, etc.	66,170	58,178	106,082	215,366	174,780
Darwin Lands Acquisition ..	118,521	79,790	112,439	..	56,209
Buildings, Works, Sites, etc. ..	346,489	477,198	975,675	974,058	858,459
Plant and Equipment	118,374	91,978	167,125	91,651	116,707
Total	690,266	805,213	1,391,465	1,439,127	2,052,637
All Other—					
Territory Administration ..	364,962	486,961	553,947	529,127	683,711
Developmental Services	44,376	56,822	93,304	88,170	117,419
Municipal, Sanitary and Garbage Services	46,906	57,207	67,568	73,565	88,336
Shipping Subsidy	1,750	4,767	4,700	3,800	3,800
Airmail Service Subsidy .. ..	..	10,400	5,200	5,200	11,000
Rent, Repairs and Maintenance, n.e.i.	126,917	114,191	149,588	125,233	153,608
Freight Concessions on North Australian and Central Australia Railways	203,841	196,339	296,538	512,678	530,450
Total	788,752	926,687	1,170,845	1,337,773	1,588,324
Grand Total	3,175,299	3,724,893	5,001,117	5,841,664	6,985,985

(a) Not available. (b) Includes Railways Interest, 1948-49, £203,867; 1949-50, £195,343; 1950-51, £193,321; 1951-52, £189,853; 1952-53, £189,432. (c) Includes Railways Debt Redemption, 1948-49, £83,974; 1949-50, £88,170; 1950-51, £92,575; 1951-52, £97,199; 1952-53, £102,044.

AUSTRALIAN CAPITAL TERRITORY.

1. *Introductory.*—Information regarding the selection and establishment of Canberra as the Australian capital city, the physiography of the Territory and its early history will be found in previous issues of the Official Year Book—*See List of Special Articles.* etc., at the end of this volume under Canberra and Federal Capital City.

On 12th March, 1913 the official ceremony to mark the start of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced.

On 9th May, 1927 Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York—afterwards His Majesty King George VI.—the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—afterwards His Majesty King George V.—on 9th May, 1901. (For particulars of the opening ceremony *see* Official Year Book No. 21, p. 604.)

The development of the Territory administration prior to the taking over of control by the Federal Capital Commission on 1st January, 1925 is described in summarized form in Official Year Book No. 18, and in Official Year Book No. 22 a summary is given of the administrative activities of the Federal Capital Commission. The administration of the Territory by this authority was continued until 30th April, 1930, when the Seat of Government (Administration) Act 1924–1929 was repealed, and the powers and functions of the Commission reverted to the Government.

Since April, 1932 the general control of the Territory has been exercised by the Minister for the Interior, certain specific services, however, being undertaken by the Department of Health, the Department of Works (prior to 1952 the Department of Works and Housing), and the Attorney-General's Department.

An amendment to the Seat of Government Acceptance Act in 1938 provides that the Territory shall be known as the Australian Capital Territory.

2. *Progress of Work.*—(i) *General.* The purpose behind all planning and works undertaken during the financial year 1952–53 has been considered in the light of centralizing all Departmental Head Offices in Canberra, a movement which is to be accelerated over the next few years. Therefore it has been necessary to direct the works programme mainly towards providing houses and office accommodation to cope with the present heavy demand and to allow for expansion as other Departments are brought to the National Capital. Concentration on housing projects has made necessary an equivalent expansion in the engineering services of water supply, sewerage, drainage, roads and electricity supply to serve new projects.

The increasing population has also required expansion of schools, kindergarten and community facilities. There has been extensive building construction in the establishment of the Australian National University; and in connexion with housing and facilities for the expansion of Defence Services at Duntroon, Fairbairn, Harman and Belconnen.

During 1952–53, the total cost of capital and maintenance works in the Works programme was £5,593,544.

The average combined labour forces of the Department of Works and contractors working for the Department during 1952–53 totalled 2,991 men.

(ii) *Works Programme.* (a) *Housing.* During 1952–53, 558 dwelling units were completed (487 built by contract and 71 by day labour), including 90 brick, 6 brick veneer, 36 brick flats, 197 timber, and 229 prefabricated (93 Riley Newsum, 90 Monocrete, 46 Econo-Steel). Of the total units, 216 and 63 respectively, were built in the newly developed suburbs of O'Connor and Narrabundah, 181 in the longer established but recently extended suburbs of Ainslie (40) and Yarralumla (141), 15 in the suburb of Turner, 48 in Griffith and 12 in the outlying suburb of Duntroon, the Royal Military College area. Five hundred and twelve were built for the Department of the Interior, 17 for the Defence Forces, 16 for War Service Homes and 13 for the Australian National University. At 30th June, 1953 there were 535 houses under construction. Private builders completed 124 houses, four business premises, three blocks of flats and 21 other structures.

(b) *Other Building.* Major projects completed during the year 1952-53 included a pre-school play centre at O'Connor; the Physical Science Building at the Australian National University; extensions to the Naval Wireless Transmitter at Belconnen; an annexe to the National Library comprising six Romney huts and a brick administrative building; a Bristol aluminium and brick laboratory at Acton for the Bureau of Mineral Resources; the infants' school at Narrabundah; and a new obstetric block at the Canberra Community Hospital.

Work on University House was nearing completion and work was commenced on the Turner infants' school and site preparations for Griffith infants' school. Work was also commenced on the dome for a 74-inch telescope and a building to house the 26-inch Yale Columbia Telescope at Mt. Stromlo. A new 50-bed ward at Canberra Community Hospital was commenced for the Department of Health.

Further progress was made on the Central Administrative Block of C.S.I.R.O. at Black Mountain and the erection of new telephone exchanges at Braddon and Barton was commenced.

Further progress was made on the permanent Administrative Building, and about one-quarter had been completed at 30th June, 1953. During the year work was concentrated mainly on "A" block.

Additions to Capital Hill and Ainslie Hostels were completed during the year.

Major works were the construction of the apron and taxiway at Canberra Airport and subdivisional roads in Ainslie and Narrabundah. The Cotter Road and other main roads were improved.

(c) *Engineering Works and Services.* During 1952-53, 35 miles of subdivisional roads were constructed to serve newly built areas, bringing the length of city roads at 30th June, 1953 to 196 miles, comprising 3 miles of concrete, 101 miles of bitumen paved and 92 miles of gravel; 10 miles of road in the city were sealed. At the same date the length of city footpaths was 102 miles. Road maintenance work during 1952-53 included the resealing of 15 miles of city roads and 5 miles of country main roads.

During 1952-53, 56,641 feet of water mains were laid to reticulate water services to new houses. At 30th June, 1953, 6,100 houses and buildings had been connected to the water supply system. The consumption for 1952-53 was 1,592 million gallons with an average daily consumption of about 145 gallons per head. The 20-inch feeder mains to Griffith and O'Connor were major works completed.

During the same period 44,594 feet of sewer mains were laid to connect newly built houses to the sewerage system and 5,815 houses and buildings had been connected to the sewerage system by 30th June, 1953.

Extensions to electricity low-tension supply lines to service newly built houses in various areas were completed and street lighting provided. Other electrical work included installation of three kiosk sub-stations at Deakin and Yarralumla.

3. *Forestry.*—A considerable amount of reforestation work has been undertaken and plantations (mainly *Pinus radiata*) have been established at Uriarra, Mount Stromlo, Pierce's Creek, Green Hills and Kowen. Experimental plots have been established in the Brindabella mountains and soil conservation areas at various locations throughout the Territory.

The total area of softwood plantations at 30th June, 1953 was 16,000 acres, of which 14,000 acres were *Pinus radiata*, the balance consisting of other softwood species, chiefly *Pinus ponderosa* and *Pinus laricio*.

Forestry operations were begun on Mount Stromlo in 1915. Plantings up to 1925 were chiefly on decorative lines, but since then a much wider programme has been undertaken. Sawmill timber is now being obtained from the logs resulting from thinning operations and clear felling of mature plantations. The yearly output of pine timber has increased from 30,000 super. feet in 1930-31 to approximately 10,000,000 super. feet at the present time. During 1952-53 the amount actually cut was 19,590,000 super. feet due to the necessity of converting pine at Mount Stromlo which was killed by fire in February, 1952. This conversion is now complete and the output has reverted to normal. The present output consists of approximately 50 per cent. saw log timber producing building material and 50 per cent. case-making materials.

In 1926 a comprehensive review was undertaken of the Territory's potentialities for forest development. A system of forest management was instituted in the existing forest area, and a considerable amount of survey and assessment work has been completed,

resulting in the extension of operations, including fire protection, to 100,000 acres of hardwood forests in the Cotter catchment area. Hardwood timber produced during the year ended June, 1953 amounted to 3,463,000 super. feet log measure all of which was used in building operations in Canberra.

4. Lands.—(i) *General.* Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land and Chapter IV.—Land Tenure and Settlement of this issue contains statistical information on the subject.

Under the Seat of Government (Administration) Act 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the city area are granted under the City Area Leases Ordinance 1936–1951, and leases of other lands under the Leases Ordinance 1918–1937. Land is also leased for various purposes in the city area under the Church Lands Leases Ordinance 1924–1932 and the Leases (Special Purposes) Ordinance 1925–1943, and one lease under the Church of England Lands Ordinance 1926 has been granted for church purposes.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other pests. The lands are classified into three grades of agricultural and three grades of grazing land. Leases may be granted for grazing, fruitgrowing, horticulture, agriculture or other purposes for a period not exceeding 25 years. The annual rental is 4 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £10,000, exclusive of the value of buildings and fences thereon.

Under the City Area Leases Ordinance 1936–1951 the Government may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to 5 per cent. of the unimproved value of the land, which value is subject to re-appraisal at the expiration of 20 years, and thereafter every 20 years. A suitable building must be commenced within 6 months and completed within 12 months unless an extension of time is allowed.

(ii) *Jervis Bay Territory.* The Commonwealth acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Australian Capital. The Royal Australian Naval College was established in this area on a site known as Captain's Point, but was removed in 1930 to Flinders Naval Base, Victoria. Leases have been granted over an area of about 13,000 acres in the Jervis Bay Territory.

5. *Transport and Communication.*—Canberra is connected with the railway system of New South Wales at Queanbeyan by a line $4\frac{1}{2}$ miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. The railway terminus is situated in the suburb of Kingston. A daily passenger service operates each way between Canberra and Sydney and Canberra and Melbourne.

Two airlines provide several services daily each way on the Sydney–Canberra–Melbourne route.

Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia.

There are three radio broadcasting stations in the Australian Capital Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station.

6. *Population.*—From 1911 until 1921 the population of the Australian Capital Territory remained at about 2,000 persons. In 1922 it commenced to rise, and by 1927 was nearing 6,000. The following year, with the transfer of departments from Melbourne, it passed 8,000. Since then the general trend has been upward.

The census return of population on 30th June, 1938, was 11,290 in the Australian Capital Territory and 272 in the Jervis Bay Territory, or a total of 11,562 persons. The population at the Census of 30th June, 1947, was 16,905 persons—15,156 in the city area, 1,389 in the rural districts and 360 in the Jervis Bay area. A census was taken of the

city area on 14th–16th September, 1951, the population then being 23,617 persons. At that time the estimated population of the Australian Capital Territory was 25,400 persons. The population of the Territory at the Census of 30th June, 1954 was 30,315 persons, and of Canberra, 28,277 persons.

7. **Production.**—During 1952–53 the production of the more important items of the agricultural and pastoral industry was—Wheat, 7,764 bushels; wool, 2,245,000 lb.; whole milk, 688,000 gallons; butter, 5 tons; meat (bone-in weight, fresh), 2,826 tons. The numbers of livestock depastured at 31st March, 1954 were—Horses, 831; cattle, 9,394; sheep, 251,700; and pigs, 276.

8. **Education.**—Arrangements exist with the New South Wales Education Department for the administration of education up to and including the secondary level in the Territory, the expenditure involved being refunded to the State.

There are eleven public schools in the Australian Capital Territory. The largest is situated at Telopea Park, Barton, with accommodation for 1,200 scholars. Secondary education is provided at the Canberra High School, Acton, and the Telopea Park Central School has a secondary department. The High School has accommodation for 450 scholars, and its curriculum provides a standard of education comparable in range of subjects with that provided at the Government High Schools in New South Wales. The High School also provides for commercial and junior technical classes, and has an evening continuation college attached, with commercial, matriculation and other classes.

In addition, there are five private schools in the Territory. These are the Canberra Grammar School, the Canberra Church of England Girls' Grammar School, St. Christopher's Convent School, St. Patrick's Convent School and St. Edmund's Christian Brothers War Memorial College. St. Patrick's School provides infants' and primary education, St. Edmund's primary and secondary, while the other three provide infants', primary and secondary education.

The Australian Capital Territory Education Ordinance 1937–1952 provides for bursaries, registration of private schools and compulsory attendance. Three bursaries were awarded in 1953.

During 1953 classes in English for newcomers to the country were conducted to assist in their assimilation into the local community.

The Canberra Technical College at Kingston, which is controlled and staffed in a manner similar to that of the public schools, is provided with modern equipment for supplementary courses for apprentices and journeymen desirous of improving their trade qualifications. Tuition is also given in a wide range of professional and vocational courses for students of building, surveying, accountancy and commercial subjects, engineering and printing. Special facilities have been established for recreational as well as instructional purposes in the fields of art, pottery, women's handicrafts, woodwork and the like. Provision is also made for the training of ex-service personnel under the Commonwealth Reconstruction Training Scheme.

The Canberra Nursery School, Acton, which provided pre-school education for children between the ages of 3 and 5 years, was closed in December, 1952, but eleven neighbourhood pre-school centres, together with a mobile unit, provide modified nursery school facilities for children between the ages of 3 and 5 years. Additional centres of this type are being established.

Education at university level is provided by the Canberra University College, details of which will be found in Chapter XI.—Education.

An area of about 250 acres has been set aside at Acton, for the Australian National University. Provision has been made for the University to establish such research schools as may be thought desirable, including a School of Medical Research, and Research Schools of Physical Sciences, Social Sciences and Pacific Studies. Further reference to this University appears in § 8 of Chapter XI.—Education.

9. Finance.—Details of revenue and expenditure for the years 1948-49 to 1952-53 are given in the following table:—

AUSTRALIAN CAPITAL TERRITORY : REVENUE AND EXPENDITURE.
(£.)

Item.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
REVENUE.					
Taxation—					
Motor Registration	18,354	22,451	30,267	37,723	41,973
Liquor	7,277	10,127	12,978	15,689	21,034
Rates	12,296	12,948	15,717	18,271	22,312
Other	846	932	1,042	765	1,196
Total	38,773	46,458	60,004	72,448	86,515
Business Undertakings—					
Railways	9,084	12,595	14,995	10,246	24,493
Electricity Supply	135,768	146,136	192,739	230,363	328,108
Water Supply and Sewerage ..	16,214	10,695	18,534	24,086	22,002
Abattoirs	9,788	14,842	16,953	22,337	28,706
Total	170,854	184,268	243,221	287,032	403,309
Rent—					
Housing	216,449	243,706	290,664	334,020	409,915
Land	48,397	49,714	53,215	77,832	91,038
Miscellaneous	10,049	10,008	20,775	11,246	13,299
Total	274,895	303,428	364,654	423,098	514,252
Interest	6,240	5,480	5,302	11,798	17,335
Fees for Services and Fines ..	8,295	9,135	13,568	18,456	21,325
Mortgages—Principal	4,861	4,118	114,434	267,399	128,037
Other	24,089	111,819	44,532	73,644	61,619
Grand Total	528,007	664,706	845,715	1,153,875	1,232,392
EXPENDITURE.					
Public Debt Charges—					
Interest	213,423	192,860	183,629	173,836	172,579
Debt Redemption	70,552	74,052	77,720	81,530	85,605
Other .. ..	..	433	3,045	..	42
Total	283,975	267,345	264,394	255,366	258,226
Business Undertakings(a)—					
Railways	17,666	18,689	26,260	37,058	45,802
Electricity Supply	119,850	174,963	330,113	329,707	436,271
Water Supply and Sewerage ..	33,249	41,881	54,307	59,040	69,279
Abattoirs	9,730	11,225	14,065	17,736	20,310
Brickworks Loss	(b)	(b)	(b)	(b)	25,000
Transport Services(c)	28,000	26,285	46,000	63,000	60,000
Firewood Supplies Loss .. ..	..	1,000	1,000	1,000	1,000
Hostels(d)	61,580	70,273	92,483	64,688	26,513
Total	270,075	344,316	564,228	572,229	684,175

NOTE.—For notes see end of table, page 111.

AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

—continued.

(£.)

Item.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
EXPENDITURE—continued.					
Social Expenditure(a)—					
Education—					
Primary and Secondary ..	83,731	94,453	127,718	158,298	183,356
Technical College ..	15,229	20,266	20,479	28,005	39,191
University ..	23,300	23,500	40,800	48,100	60,300
Science, Art, Research, etc.	1,644	3,646	4,453	4,444	5,459
Nursery Schools and Pre-School Centres ..	5,130	6,044	8,886	12,690	18,724
Public Health and Recreation	17,951	23,557	45,068	62,218	75,369
Charitable—					
Hospital—General ..	49,534	70,222	96,421	135,487	144,733
Relief of Aged, Indigent, etc.	1,429	1,492	1,021	2,933	2,739
Other ..	7,284	8,062	6,914	8,459	11,250
Law, Order and Public Safety—					
Justice ..	7,627	9,884	11,953	14,297	17,399
Police ..	34,274	35,955	45,140	63,995	74,492
Public Safety ..	8,718	7,282	11,170	16,264	18,499
Total ..	255,851	304,363	426,023	555,190	651,511
Capital Works and Services(e)—					
Business Undertakings—					
Railways ..	1,522	645	200	7,620	3,166
Electricity Supply ..		134,796	230,507	223,297	272,038
Water Supply and Sewerage		175,854	298,228	362,735	364,006
Abattoirs ..		973	4,477	8,558	9,856
Transport Services ..		24,955	94,740	46,844	41,956
Hostels(f) ..		374,390	7,231	1,918	420
Brickworks ..		..	..	..	7,738
Total ..		711,613	635,383	650,972	699,180
Social Expenditure—					
Primary and Secondary Education ..		..	34	3,003	5,499
Technical College ..		3,655	..	..	..
University ..		7,750	..	..	..
Public Health and Recreation		9,367	12,476	3,631	17,884
Hospital—General ..		9,252	36,426	37,361	66,285
Police ..		..	839	146	3,238
Public Safety ..		13,155	173	2,214	5,528
Total ..		43,179	49,948	46,355	98,434
Other—					
Roads and Bridges ..		81,062	120,506	110,616	264,307
Parks and Gardens, etc. ..		35,358	30,776	24,695	26,540
Lands and Surveys ..		14,750	251	72	2,509
Forestry ..	32,531	30,396	35,121	80,370	33,050
Housing ..	(b)	1,200,272	1,934,352	2,287,179	1,578,790
Public Works, n.e.i. ..	(b)	309,524	907,038	658,897	546,790
Total Capital Works and Services ..	1,843,570	2,426,154	3,713,375	3,859,156	3,249,600

NOTE.—See next page for notes.

AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

—continued.

(£.)

Item.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
EXPENDITURE—continued.					
All Other—					
Roads and Bridges ..	62,648	73,999	126,027	184,824	243,480
Parks and Gardens, etc. ..	101,643	140,969	161,971	189,546	204,905
Public Works, n.e.i. ..	50,168	30,100	68,421	27,112	28,093
Lands and Surveys ..	17,310	19,718	33,602	43,584	43,910
Agriculture and Pasture ..	12,900	24,589	23,570	26,162	19,291
Forestry	27,340	35,695	50,898	12,000	10,000
Housing	(b)	53,266	80,307	94,038	102,220
Legislative and General Administration	175,593	242,816	147,218	175,458	183,442
Miscellaneous	1,700	2,011	4,750	(g) 60,641	(g) 79,380
Total	449,302	623,163	696,764	813,365	914,721
Grand Total	3,102,773	3,965,341	5,664,784	6,055,306	5,758,233

(a) Other than Capital Works and Services. (b) Details not available. (c) Payment to Australian Capital Territory Transport Trust Account (loss on omnibus service). (d) Includes loss on operations 1948-49, £55,000; 1949-50, £62,620; 1950-51, £75,559; 1951-52, £54,900; and 1952-53, £12,700. (e) Excludes repairs and maintenance. (f) Expenditure on plant and equipment by Department of Interior only. (g) Includes restoration of bushfire damage, 1951-52, £54,441 and 1952-53, £72,783.

The following table, which was prepared by the Department of the Interior, shows the total receipts and expenditure of the Australian Capital Territory from 1901-2 to 30th June, 1953 :—

AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND EXPENDITURE TO
30th JUNE, 1953.

Receipts.	£	Expenditure.	£
Commonwealth Treasury—		Lands	926,024
Parliamentary Appropriations—		Engineering works	11,306,391
Revenue	30,965,941	Architectural works	15,066,164
Loan	5,715,206	Other capital expenditure, sundry debtors, etc.	2,122,127
		Seat of Government Establishment Account, being maintenance and administration less revenue; expenditure of a capital nature for which assets no longer exist; profit and loss accounts of trading activities, etc.	a 7,260,441
Total Receipts	36,681,147	Net Expenditure	36,681,147

(a) Excludes interest £5,705,326 net.

The foregoing figures exclude part cost of national buildings (Parliament House, the Secretariats, etc.), federal highways within the Territory, the Queanbeyan-Canberra Railway, the housing loan, etc., and loans for housing.

NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude $29^{\circ} 3' 30''$ South, longitude $167^{\circ} 57' 5''$ East. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from Auckland, 660 miles. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 49° and 85° F. with a mean of 68° F. The average annual rainfall is 53 inches. It has been said that the healthy climate together with the beauty of its landscapes and seascapes, should make Norfolk Island "the Madeira of the Pacific". The island, both pre-war and post-war, has been popular as a tourist resort. Pre-war the only means of transport to the island was by ship. However, with the inauguration of direct air services from Australia and New Zealand the majority of tourists now take advantage of these services. The tourist traffic is rapidly increasing.

2. **Settlement and Population.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Supply* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed to Norfolk Island in 1856. The new community numbering 94 males and 100 females were the descendants of British sailors and Tahitian women. The last of those transferred died at Norfolk Island on 1st March, 1943. The population of the island as disclosed by the Census of 30th June, 1954 was 942, consisting of 478 males and 464 females.

3. **Administration.**—In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and finally by the passage of the Norfolk Island Act 1913 it was accepted by the Federal Parliament as a territory of Australia. From July, 1914 until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, and then, until 25th June, 1941, by the Territories Branch of the Prime Minister's Department, but is now administered by the Minister for Territories through an Administrator. An amending measure, the Norfolk Island Act 1935, provided for the establishment of an Advisory Council of eight elected members which may advise the Administrator on matters affecting Norfolk Island.

4. **Economic Activity.**—The major economic activities of the island are primary production, the tourist trade and employment in Government instrumentalities.

(i) **Primary Industries.** The soil on the island is particularly fertile, the climate equable, and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation and trading difficulties with New Zealand have hampered production in the past. A recent relaxation of some restrictions enables out-of-season fruit and vegetables up to a limit of 3,000 lb. per week to be sent by air freight to Auckland.

Pre-war the principal primary product was passion fruit pulp. However, the introduction of disease together with the high cost of trellising and land reclamation has led to the curtailment of this industry. The production of bean seed has now become the main export industry. The island's isolation from many plant diseases found on the mainland, plus the fairly reliable dry period (which is conducive to the setting and maturing of seed), together with improved prices, induced a rapid expansion of production. In 1952-53, 3,374 bushels were exported and prices ranged from £5 to £5 10s. per bushel. These conditions also favour the production of other types of seed. Lord Howe Island Palm, Wild Lemon and Norfolk Island Pine seeds are the most important.

Island conditions are also conducive to good pasture growth but for a number of reasons meat production is insufficient to satisfy the demands of both the tourists and the local inhabitants. However, as a joint product to pastoral pursuits quantities of hides and wool are exported.

Fish and (in certain months) whales abound off the island. In the past a number of ventures have been formed to exploit these resources. They have been short-lived owing, for the most part, to the lack of a sheltered harbour.

(ii) *Tourists.* The unique history and unusual beauty of the island had always attracted a number of tourists in pre-war days. The building of the airstrip during the war has made the island far more accessible and a considerable tourist industry has developed, particularly with visitors from New Zealand. The industry is at present limited only by the accommodation available. Approximately 120 can now be catered for and accommodation is being continually expanded.

(iii) *Government Instrumentalities.* A large proportion of the population is employed by Commonwealth Government instrumentalities which are:—Department of Civil Aviation, Norfolk Island Administration, Department of Works, Overseas Telecommunications Commission and Department of the Interior (Meteorological Branch). The bulk of the finance for the operation of these instrumentalities is supplied by the Commonwealth Government and this greatly increases the income of the island.

5. *Trade, Transport and Communication.*—Imports to Norfolk Island in 1938–39 amounted to £27,590, mainly from Australia. Since the 1939–45 War they have risen from £32,402 in 1945–46 to £211,877 in 1952–53, the major proportion (£148,923 or 70 per cent.) still coming from Australia, although New Zealand supplied about 29 per cent. in the latter year. Exports were valued at £16,970 in 1938–39, and have risen from £9,024 in 1945–46 to £42,131 in 1952–53. Australia again is the principal country concerned (£28,908), with New Zealand's proportion of the trade showing a steady increase from negligible amounts pre-war and early post-war to one-quarter or one-third of the total exports in recent years.

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are (a) the produce or manufacture of Norfolk Island; (b) shipped direct to Australia; and (c) not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the Territory is maintained at approximately seven-weekly intervals by Burns Philp & Co. Ltd., Sydney. The journey from Sydney to Norfolk Island occupies about four days.

The construction of the aerodrome on the island was completed during 1943. A fortnightly passenger and air freight service between Sydney and Norfolk Island is maintained by Qantas Empire Airways Ltd. There is also a weekly air service from New Zealand.

There are approximately 50 miles of usable road on Norfolk Island. As a substantial section of the population possesses private motor cars and taxi-cab services are available, transport is almost exclusively by motor vehicle.

The cable from Great Britain via Vancouver, Fanning Island, Fiji bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. Until 10th June, 1947 the post office at Norfolk Island was part of the Commonwealth postal system, but as from that date Norfolk Island was established as a separate postal administration with its own issue of stamps.

6. *Social Condition.*—Education is free and compulsory up to the age of fifteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' super-primary course of instruction in cultural subjects and in woodwork, needlework, leatherwork, basketry

and hat-making. The headmaster and assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1953 was 138. Dental examination and free dental service are provided for school children.

The Court of Norfolk Island is a court of record with dual jurisdiction. Sitting in its *Limited Jurisdiction* the Court has power to hear and determine actions of claims not exceeding £30 and to punish summarily all crimes and offences involving a pecuniary penalty or a sentence of imprisonment not exceeding six months. In its *Full Jurisdiction* the Court can hear and determine all actions, punish all crimes and offences, grant probate and letters of administration, hear and determine appeals from any conviction of the Court sitting in its *Limited Jurisdiction*, and has authority in all other matters. An appeal lies to the High Court of Australia from any judgment, order, decree or sentence of the Court sitting in its *Full Jurisdiction* when constituted by a Judge or the Chief Magistrate.

7. *Finance*.—The revenue of the Territory, together with an annual grant from the Commonwealth Government in aid of administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal sources of revenue in 1952–53 were:—Sale of liquor, £22,444; Commonwealth subsidy, £40,000; customs duties, £8,872. The total revenue was £97,506. Major items of expenditure in 1952–53 were:—administrative, £17,461; miscellaneous services, £12,806; repairs and maintenance, £8,975; business undertakings, £28,066. Total expenditure amounted to £73,265. In 1938–39 revenue amounted to £11,784 and expenditure to £13,565.

PAPUA AND NEW GUINEA.

§ 1. Administration.

Following the outbreak of the Pacific War civil administration in Papua and New Guinea was suspended on 11th February, 1942 and military control commenced. The Territory of New Guinea came under Japanese occupation in 1942, but the greater part had already been recaptured by Australian and Allied Forces when the Japanese surrendered in August, 1945. Information relating to the transfer back from military to civil control under the Papua-New Guinea Provisional Administration Act 1945–1946 may be found in Official Year Book No. 39 and earlier issues.

The Papua-New Guinea Provisional Administration Act 1945–1946 was repealed by the Papua and New Guinea Act 1949 which came into force on 1st July, 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provides for an Administrative Union, one Administrator, one Supreme Court and one Public Service.

Provision is made for an Executive Council of not less than nine officers of the Territory, who shall be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members, namely:—(a) the Administrator; (b) sixteen officers of the Territory (who shall be known as official members); (c) three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory; (d) three non-official members representing the interests of the Christian missions in the Territory; (e) three non-official native members; and (f) three other non-official members.

The Legislative Council was inaugurated on 26th November, 1951 by His Excellency Sir John Northcott, while Administrator of Australia.

Subject to the Act, provision may be made by Ordinance for the establishment of Advisory Councils for Native Matters and Native Village Councils.

The Act also makes provision for the continuance of the existing laws of the Territory of Papua and the Territory of New Guinea.

§ 2. Finance.

The following table shows particulars of the financial operations of the Papua and New Guinea Administration since its inception in July, 1949, together with those of the earlier provisional administration in 1948–49, and of the combined Territories in 1938–39. Further information on each Territory will be found on pages 124 and 131.

TERRITORY OF PAPUA AND NEW GUINEA: REVENUE AND EXPENDITURE.
(£.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
REVENUE.						
Taxation—						
Customs Duties	257,460	806,798	915,036	970,880	1,475,117	1,455,054
Stamp Duties	7,061	20,691	8,211	13,267	10,742	7,217
Licences	15,185	16,380	17,574	20,140	39,104	49,435
Other Taxes	45,831	..	..	..	..	..
Commonwealth Grants	42,500	3,196,668	4,184,454	4,354,564	5,285,559	4,657,022
Post Office	40,548	51,896	52,707	69,067	94,946	158,013
Lands	24,429	19,175	25,738	29,034	48,172	68,218
Forestry	(a)	46,480	34,849	33,436	105,676	94,362
Agriculture	11,381	25,752	31,738	61,496	75,659	66,445
Mining—						
Royalty on Gold	b 107,975	49,053	58,636	67,845	79,684	109,246
Other	18,682	10,867	12,248	11,237	9,084	9,697
Harbour Dues, Wharfage, etc.	16,930	107,494	128,819	144,708	111,566	87,902
Fees, Fines and Forfeitures, n.e.l.	11,122	22,965	29,799	44,397	50,587	54,571
Electric Light and Power Supply	6,094	18,455	30,837	48,455	65,573	91,401
Other Revenue	36,969	37,265	54,328	351,387	224,957	182,773
Total	642,167	4,429,939	5,584,974	6,220,813	7,676,426	7,091,356

EXPENDITURE.						
Post Office	8,875	105,558	151,733	183,769	246,529	255,186
Social Expenditure—						
Education	12,904	147,238	395,903	393,032	438,322	409,388
Public Health Services, Hospitals, etc.	113,571	564,025	908,495	1,172,958	1,351,508	1,176,800
Law, Order and Public Safety	92,797	232,898	315,543	487,295	553,010	502,746
Grants to Missions for Education and Medical Services	14,238	41,713	46,021	153,532	117,516	153,200
District Services and Native Affairs	128,398	733,553	788,174	820,394	932,773	705,020
Wages due to Natives under Pre-war Contracts .. .. .	..	2,633	95	..	..	..
Compensation to Natives for War Injuries and War Damage .. .. .	..	368,486	272,567	116,421	286,653	280,505
New Works, Buildings, etc.	(b) 69,146	628,879	919,933	1,413,234	1,755,970	1,592,690
Other Public Works and Services	57,422	488,127	745,199	315,520	605,820	593,773
Electric Light and Power	2,837	76,523	116,802	153,460	243,811	282,102
Legislative, General Administration and Other Expenditure	179,514	621,745	887,955	1,176,797	1,164,345	1,170,770
Total	679,702	4,011,378	5,548,420	6,386,412	7,696,257	7,122,180

(a) Included with Lands.

(b) Trust Territory of New Guinea only.

§ 3. Agriculture and Animal Industry.

1. **Soils.**—Although a large proportion of Papua and New Guinea is covered by skeletal soils unsuitable for agriculture, there are extensive areas in all parts where fertile soils occur, suitable for growing a wide range of crops. Most of the agriculture of the Territory up to the present has been on soils of the coastal plains, which, apart from the swamp soils, consist mainly of alluvium and podsolized alluvium. So far, these have been mostly under coconut plantations, although other crops such as rubber have also been grown. The swamp soils, of which there are extensive areas in the Delta plains and other parts of the Gulf of Papua, and in smaller areas, are found intermittently around the coasts and along the lower reaches of the rivers, and are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the Central Plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas),

Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the trough occupied by the Ramu and Markham Rivers.

2. *Climate*.—The climate, particularly the rainfall, over so wide an area as Papua and New Guinea, with its numerous islands and varying elevations, naturally presents many variations. Generally speaking, the climate is moist and tropical, except at high altitudes. There are only small differences in both daily and seasonal extremes. The Territory has no winter and summer, and thus no great variation in day-length over the year. The two seasons which are experienced are generally described as the "south-east" and the "north-west", corresponding with the periods of the year when the south-east trade winds and the north-west monsoons direct the main Territory air-flow. The south-east season prevails approximately from May to October, the trade winds attaining maximum velocities during July and August. The north-west monsoon operates over a considerably shorter period, between the end of December and about March. During the periods between these seasons, November and early December, and about March to April, there are two short spells of calm weather.

Rainfall varies considerably from an average annual rainfall of 245 in. at Gasmata in New Britain and 231 in. at Kikori in Papua, to about 88 in. at Wewak in New Guinea and 40 in. at Port Moresby.

Although the Territory has no summer and winter, it has a wide temperature range, due to altitude differences, varying from an absolute highest temperature of about 100° F. along the coast, to freezing point on its highest peak, Mt. William (15,400 ft.).

Humidity in the Territory is very high throughout the year. Some coastal stations register an average relative humidity of more than 90 per cent. Humidities below 60 per cent. are rare at coastal stations, average figures varying from 80 per cent. at 9 a.m. to 65 per cent. at noon and 75 per cent. at 3 p.m. Humidity in mid-mountain forests appears to be higher than in the lowlands, while in the mossy forests there are periods when the whole belt is saturated.

3. *Suitable Crops*.—The crops which can be grown in Papua and New Guinea include copra, rubber, tea, coffee, cocoa, jute, kenaf, manila hemp, sisal, rice, pepper, tobacco, peanuts, kapok, cassava, ginger, cinchona, nutmeg, vanilla, tropical fruits and vegetables, sago and tung oil.

The agricultural commodities which, because of their marketing prospects and suitability for production in the Territory, are considered to have the best possibility for development are copra, rubber, cocoa, coffee, tea, kenaf, sisal, manila hemp, and peanuts for export; and rice, fresh meat, dairy products, fresh vegetables and fresh fruit (e.g. bananas, papaws, citrus and pineapples) for local consumption.

4. *Plantation Agriculture*.—The principal plantation crops cultivated are coconuts, rubber, cocoa and coffee.

Coconuts. Territory coconut plantations suffered severely from damage and neglect during the 1939-45 War, but rehabilitation has been rapid and about 500 plantations together with native coconut stands produced 76,392 tons of copra for export in 1952-53, valued at £5,273,234. The area (excluding native stands) planted with coconut palms in March, 1953 was 234,000 acres. In addition, 1,377 tons of desiccated coconut, valued at £329,862, 3,568 tons of coconut oil valued at £473,026 and 2,085 tons of coconut meal valued at £35,463 were exported in 1952-53.

A contract with the United Kingdom commenced on 1st March, 1949, for a period of nine years, for the sale of Territory copra in excess of Territory and Australian requirements. The price of copra sold for the first contract year, 1949, was £60 per ton f.o.b. Territory ports, and the contract provides that the price for each subsequent year is to be not more than 10 per cent. higher or lower than the preceding year's and is to be negotiated before the end of the preceding year. Early in 1952 the termination date of the contract was varied to 31st December, 1957 and prices are now negotiated on the basis of calendar years. The price for the calendar year 1954 is £87 10s. per ton f.o.b. Territory ports for sun-dried copra with small price differentials for the other grades.

Rubber. Rubber exports have more than doubled since before the Japanese invasion, increasing from an average of 1,352 tons per year during the three years 1937-38 to 1939-40 to 2,911 tons in 1952-53, valued at £736,080. A total area of 26,800 acres had been planted with rubber trees up to March, 1953.

Cocoa. Exports of cocoa beans increased from 207 tons in 1949-50 and 317 tons in 1950-51 to 639 tons in 1952-53, valued at £174,987. The area (including native stands) planted with cocoa trees in March, 1953 was 15,985 acres.

Coffee. Exports of coffee beans increased from 21 tons in 1949-50 and 33 tons in 1950-51 to 47 tons in 1952-53, valued at £31,055. The area planted with coffee trees in March, 1953 was 748 acres.

5. *Native Agriculture.*—Most of the native inhabitants of Papua and New Guinea are agriculturists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude, and include yams, taro and sweet potatoes, coconuts, bananas, papaws, maize, sugar-cane, cassava, beans, peanuts, rice, cucurbits and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas it is usually cut largely from naturally occurring stands. In other parts of the country small areas of sago are grown along stream banks and in swampy patches and are regarded as a reserve in times of poor harvest. Natives also produce a large amount of copra (about 20,000 tons in 1952-53) and in some areas (e.g. the Gazelle Peninsula in New Britain) are taking an increasing interest in producing cocoa beans for export.

In many localities the natives follow a farming system known as "Bush Fallowing Rotation". The inhabitants of each village have, at any one time, a number of distinct and separate cleared garden areas in the land surrounding the village. The garden clearings may be located some miles from the village and are not usually contiguous. Each garden area may be made up of a number of distinct plots owned by individual natives or families. Communal ownership of gardens is rare. The number of garden clearings (and their area) attached to each village depends on the size of the village and the fertility of the land.

The method of cultivation followed is for the jungle trees to be felled and undergrowth cleared with axes and knives, the larger trees being usually left standing. The timber and foliage is allowed to dry out and then burnt. In some localities there is a little cultivation before the crops are planted, and root vegetables are placed in holes dug with a stick. In other places, however, there is careful preparation of the soil. Some weeding is done while the crops are growing. After harvesting, a second crop is rarely planted immediately in that garden area, but a new area of land is selected, cleared, burnt and planted. The natives return to the first area to harvest fruit from trees, such as papaw and banana, that may have been planted in the garden, but these are soon submerged in the new growth which quickly appears. The plot is allowed to lie fallow for a number of years, the period varying from 7 to 10 years or even longer, depending upon the local population pressure. During this time high secondary jungle has probably grown. Ultimately the natives return to the original plot, and clear, burn and plant again. The cycle continues year by year throughout the agricultural land belonging to the village. The foregoing is a broad generalization of the method followed. However, there are many variations.

The business of growing food is done by both the men and women. The division of work is usually clearly defined within the village itself but this division is not necessarily the same in all areas. Generally it is found that felling the forests is always done by the men, and carrying the harvested food home to the village is nearly always done by the women. However, other work such as cultivating, planting, weeding, may be done by either men or women according to the customs of the particular village or area.

6. *Animal Industry.*—At 31st March, 1953 the livestock in the Territory consisted of 4,816 cattle, 1,863 sheep, 3,280 goats, 4,241 pigs, besides horses, mules and poultry. These figures exclude native-owned livestock. The introduction of rabbits, foxes, hares and monkeys is prohibited.

A number of British breeds of cattle are represented in Territory herds. For dairying Jersey and Australian Illawarra Shorthorns are most popular, while Black Poll, Polled and Horned Shorthorns are represented for meat production. Under good management these breeds have done well in the Territory.

Most of the sheep now in the Territory are Romney Marsh breed located at Nondugl in the highlands of New Guinea. This breed has been tried in various parts of the Territory. It produces a good carcass, and in drier parts a useful sheep. There are also some Asiatic sheep, and crossed with Romney Marsh they produce good carcasses and are hardy. Current investigations on sheep raising include tests and observations to determine the most suitable breeds and areas for grazing for both mutton and wool.

PAPUA.

§ 1. General Description.

1. **Early Administration.**—Particulars of the early administration of Papua are given in Official Year Book No. 19, p. 576.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is now under the control of the Commonwealth, but not included within it, and is divided into six magisterial districts, viz. :—Southern Highlands, Western, Gulf, Central, Milne Bay and Northern.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 920 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (*see* No. 18, p. 633).

§ 2. Population.

1. **Non-indigenous Population.**—At the Census of 30th June, 1954 the non-indigenous population of Papua was 3,867 males, 2,446 females, 6,313 persons. Corresponding figures at the Census of 30th June, 1947 were, respectively, 2,057, 1,182 and 3,239.

The European population of Papua increased slowly, and with some reversals in trend, from less than 700 in 1906, the year in which the Territory came under Commonwealth control, to 1,343 at the Census of 1921. At the 1933 Census, it numbered only 1,148, but amounted to 5,295 at the 1954 Census (3,372 males and 1,923 females).

The non-European section of the non-indigenous population at 30th June, 1954 was 1,018, of whom 34 were full-bloods and 984 were half-castes with one of the parents a European. Comparable figures as at the 1947 and 1933 Censuses, respectively, were :—full-bloods—194 and 786; half-castes—503 and 227.

2. **Native Population.**—It is not possible to give exact data regarding the number of natives, because part of the interior is not as yet under complete Government control. However, the enumerated and estimated population of the Territory of Papua at 30th June, 1953 numbered 392,709 persons. This comprised 278,909 enumerated persons (148,024 males and 130,885 females) and 113,800 estimated. The total number was distributed through districts as follows :—Southern Highlands, 82,053; Western, 45,491; Gulf (including the former Delta district), 58,919; Central, 79,248; Milne Bay, 81,784; Northern, 45,214.

§ 3. Native Labour, Taxation, Health, etc.

1. *Native Labour.*—The laws relating to the employment of natives are uniform in Papua and New Guinea, and may be found in the Native Labour Ordinance 1951-1952. These provide for the engagement of natives under a permit. Permits are issued by a District Officer, and authorize the holder to engage natives for employment on his own behalf, or on behalf of a registered employer who has authorized him to act on his behalf. Under this Ordinance a native may be issued with a Native Assistant's Permit, which authorizes him to solicit natives to work for his employer, or for other employers who have authorized him to act on their behalf.

Natives are employed under written agreements which have been sanctioned and attested by a District Officer. The period of the agreement must not exceed two years, but one further agreement, for a period not exceeding one year, may be drawn up, if both parties desire it. The period, in both cases, begins on the day on which the agreement is sanctioned and attested. Both parties may, by mutual consent, and with the approval of a District Officer, cancel an agreement. On the termination of an agreement, employers are required to repatriate workers to their own villages.

Natives under the age of sixteen years may not be employed. Employers must provide native employees with housing, medical attention, food and clothing free of charge. A minimum monthly wage of fifteen shillings and a working week of 44 hours are prescribed by Ordinance. Provision is also made for compensation in the case of injury or death.

2. *Native Taxes.*—No direct taxes have been levied on natives since the war. Native Village Councils (which are formed voluntarily by the natives) are, however, empowered to levy rates on villagers for the purpose of providing for local services carried out by the Councils.

3. *Health.*—The Department of Health has the general oversight of all medical and dental services. It maintains a large number of hospitals, which are staffed by fully-trained European medical personnel and trained native assistants, for both European and native patients. The Department has adequate facilities for research in tropical medicine.

At 30th June, 1953 there were in the Territory three European hospitals (one privately controlled); 30 native hospitals (one private and 14 mission); 198 village aid posts (72 mission); 106 welfare clinics (44 mission); and three Hansenide colonies. The Missions employ their own doctors and nurses in their medical establishments. A training school has been established for the purpose of training natives in first aid, elementary physics, chemistry, anatomy, physiology and pathology in preparation for their employment as Native Medical Assistants. Natives are also attending the Central Medical School at Suva, Fiji, to be trained as Native Medical Practitioners. The chief complaints treated in hospital are malaria, yaws, tropical ulcers, respiratory infections, hookworm, venereal and skin diseases.

§ 4. Land Tenure.

The basic principle of the land laws of Papua is that all land not specifically alienated by due process from the natives is native land. On 30th June, 1953, of the total estimated area of Papua, approximately 58,000,000 acres, only 1,858,664 acres had been alienated. The distribution of all land in Papua at 30th June, 1953, according to tenure, was as follows:—alienated: held by private non-indigenous inhabitants—freehold, 24,284 acres, leasehold, 271,350 acres; held by administration, 1,502,123 acres; native reserves, 60,907 acres; total alienated, 1,858,664 acres; held by natives, 56,086,936 acres.

Although, as the figures above show, a small amount of freehold land exists in Papua, no further estates in fee-simple or other estate in freehold can be granted under the provisions of the Land Ordinance 1911-1952 of Papua. Leases of various kinds may be granted by the Administration. The principal types of lease available are agricultural leases, pastoral leases, leases of town allotments, business leases and

residence leases of other than town allotments, and various forms of special leases and licences over land. Leasehold terms are liberal and, in general, leases may be granted for periods of up to 99 years. Rent is based on the unimproved value of the land. For agricultural leases the rental rate per annum is 5 per cent. of the unimproved value and for pastoral leases the rate is $2\frac{1}{2}$ per cent. Concessions regarding freedom from, or reduced, rents apply during the early developmental periods of agricultural and pastoral leases. All leases are subject to improvement conditions which may be varied or relaxed under certain circumstances. The following classes of leases were in force in Papua at 30th June, 1953 :—Agricultural, 615—239,672 acres; pastoral, 25—29,549 acres; residence, 141—174 acres; special, 135—773 acres; mission, 313—815 acres; business, 89—177 acres; town allotment, 450—190 acres; total, 1,768—271,350 acres.

Leases of Crown land may be obtained from the Administration. Dealings in privately-owned land are a matter for private treaty. Native-owned land, however, cannot be acquired or leased from the native owners by private individuals. If a lease of land which is native-owned is desired, application must be made to the Administration. If the native owners are willing to sell the land, and the Administrator is satisfied that the land over which the lease is applied for is not required or likely to be required by the native owners, and if otherwise satisfied that the lease should be granted, the Administration itself purchases the land and grants an appropriate form of lease to the applicant.

The registration of titles, interests and dealings in land is provided for under the Real Property Ordinance 1913—1951 modelled on the Torrens system of land registration.

§ 5. Production.

1. **General.**—The products of the Territory are obtained from its agricultural and fishing industries. A factory for the extraction of cutch from mangrove bark is being established at Kikori in the Gulf District. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Natives, however, do produce copra for export and native enterprise in other fields of agricultural production for export purposes is being encouraged. The principal agricultural products of Papua for the export trade are copra and rubber. Nearly all of the timber milled during 1952—53 was absorbed by local building requirements. The main products of fisheries exported from Papua are trochus and green snail shell. Gold and manganese, zinc-lead and copper ores have been mined in commercial quantities.

Agricultural and pastoral conditions in Papua and New Guinea have been dealt with, for the sake of convenience, as a whole, and reference should be made to pp. 115—118 for information on the soils, climate, crops, methods of cultivation, etc., throughout both Territories. The following paragraphs relate to forestry, mining and water-power resources in Papua.

2. **Forestry.**—(i) *General.* A general description of the forest policy which applies in Papua as well as in the Trust Territory of New Guinea is given under the heading "Timber" on page 127.

(ii) *Timbers.* Mixed species tropical rain forest covers most of Papua, although north-east of Port Moresby there is an area of monsoonal savannah country. Because of the mixed nature of the timbers in any one area, their utilization on an economical basis is somewhat difficult. Kwila, the most important hardwood found in millable quantities in Papua and New Guinea occurs in important stands east of Port Moresby. Mangroves occur in large areas fringing the Gulf of Papua and are cut for the preparation of cutch from the bark.

(iii) *Survey Work.* Forestry field work is being carried out in Papua with a view to assessing the forest resources available and to survey areas that will be thrown open for cutting.

(iv) *Permits.* At 30th June, 1953 one timber licence was current and twelve emergency permits had been granted for the supply of timber to the local market only. The total area of forest involved was 65,963 acres. Two emergency permits were issued during the year 1952-53 and one was surrendered.

3. *Mining.*—(i) *Variety of Minerals.* A large number of minerals have been found in Papua including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum and lignite, but mostly not in deposits of economic importance.

Gold was discovered in 1888 and has been found in many parts of Papua. Before the 1939-45 War gold was an important item in the Territory's production and in 1938-39 (valued at more than £150,000) was the major export, but since the war gold production has dwindled to insignificance. The average annual estimated quantity of gold yielded for the five years ended 1952-53 was less than 300 fine oz. compared with almost 28,000 fine oz., the average for the last three pre-war years. During 1952-53 the production of gold realized £2,051, bringing the total value of gold won at 30th June, 1953 to £3,295,051.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

Manganese ore valued at £1,053 and copper ore and copper oxide worth £1,215 were exported from Papua during the year ended 30th June, 1953. Large quantities of copper ore were mined and exported, up to 1940. Good samples of galena (sulphide of lead) have been obtained, but other minerals are not found in commercial quantities.

(ii) *Oil Search.* Since oil search began in Papua in 1911 over £11 million has been spent. The existence of petroleum has been traced at scattered intervals over a large area. At 30th June, 1953 two companies held petroleum prospecting permits under the provisions of the Petroleum (Prospecting and Mining) Ordinances 1951, and oil prospecting was being carried on in the Western, Gulf and Central Divisions.

4. *Water Power.*—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there is at least 10 million horse-power available for this purpose.

§ 6. Trade, Transport and Communication.

1. *Customs Tariff.*—The present customs tariff has been in operation since 1st July, 1950. It provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods, jewellery and certain apparel and piece-goods made of silk. Of 75 items now mentioned in the import schedule, 59 are on the free list and two are partially free. The tariff allows duty-free treatment of necessities, but increases rates on non-necessities. The purpose of the revision was to relieve both general industrial costs and the basic costs of living with a view to encouraging further development of the Territory. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant and machinery to be used mainly for developmental purposes. Under this provision most agricultural machinery would be admitted duty free. The rate of duty on items not specified in the schedule is 10 per cent. ad valorem. No preferential rates are specified in the schedule. A surcharge equal to 10 per cent. of duty payable was imposed as from 17th January, 1952. Export duties are imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced and imported direct from Papua (*see* Chapter VII.—Trade), and a proclamation of 25th September, 1935 exempted from primage duty goods produced or manufactured in the Territory.

2. **Imports and Exports.**—(i) *Total Values.* The table below summarizes and compares the values of imports and exports for the pre-war year 1938–39 and the post-war years 1948–49, 1951–52 and 1952–53.

TERRITORY OF PAPUA : IMPORTS AND EXPORTS.

(£.)

Particulars.	1938–39.	1948–49.	1951–52.	1952–53.
Imports	514,808	3,177,285	5,858,223	4,895,869
Exports—				
Domestic Exports	410,666	633,895	2,376,165	1,985,535
Non-Domestic Exports	79,492	300,217	412,992	337,370
Total Exports	490,158	934,112	2,789,157	2,322,905

(ii) *Imports.* The following table summarizes the sources of imports. In the post-war years Australia has supplied a far greater proportion of the imports than was the case pre-war and this proportion has continued to increase in each successive post-war year. The reduction in total imports in 1952–53 (and to some extent the increased proportion of imports from Australia) was caused for the most part by import restrictions imposed to conserve foreign exchange.

TERRITORY OF PAPUA : COUNTRY OF ORIGIN OF IMPORTS.

(£.)

Country of Origin.	1938–39.	1948–49.	1951–52.	1952–53.
Australia	239,105	2,139,907	3,897,992	3,691,696
Canada	(a)	(a)	11,097	22,102
China .. .. .	..	14,385	15,483	6,861
Hong Kong .. .. .	..	15,095	74,265	55,426
India .. .. .	..	65,629	58,579	36,038
United Kingdom	56,699	312,298	765,760	276,570
United States of America	73,446	287,235	370,401	332,307
Other Countries	145,558	342,736	664,646	474,869
Total Imports	514,808	3,177,285	5,858,223	4,895,869

(a) Not available, included in " Other countries ".

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of Papuan exports are shown below. The reduction in the value in 1952–53 of total exports and exports to Australia in particular arose from the decline in the price of rubber from the peak level it attained in 1951–52. Australia imports practically the whole of the Territory's rubber production.

TERRITORY OF PAPUA : COUNTRY OF DESTINATION, OF EXPORTS.
(£.)

Country of Destination.	1938-39.	1948-49.	1951-52.	1952-53.
Australia	409,408	896,533	2,582,567	1,917,493
United Kingdom	25,840	..	188,430	342,014
Other Countries	54,910	37,579	18,160	63,398
Total Exports	490,158	934,112	2,789,157	2,322,905

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years. The major decline in the return from rubber in 1952-53 is shown. The slight decline in the value of copra exported, despite an increase in price, resulted from the diversion of part of the coconut crop to the production of desiccated coconut. The considerable increase in the value of this latter product is shown under the item "other coconut products".

TERRITORY OF PAPUA : PRINCIPAL DOMESTIC EXPORTS.
(£.)

Commodity.	1938-39.	1948-49.	1951-52.	1952-53.
Rubber	114,949	145,968	1,244,259	736,073
Copra	57,999	441,813	958,109	848,177
Other Coconut Products	48,140	27,255	127,610	328,134
Cocoa Beans .. .. .	..	..	588	3,111
Kenaf Fibre .. .. .	..	..	4,865	5,740
Gold	152,103	264	2,185	2,051
Shell (Marine)	9,600	5,474	19,281	41,220
Hides and Skins (Crocodile)	105	..	11,273	13,823
Other	27,770	13,121	7,995	7,206
Total Domestic Exports	410,666	633,895	2,376,165	1,985,535

3. *Shipping.*—Prior to the war in the Pacific the aggregated entrances and clearances of overseas vessels at Papuan ports each year amounted to well over 200 and the net tonnage to as much as 490,000 tons, 70 or 80 per cent. thereof in each instance being British. Early post-war years showed a considerable reduction in tonnages although not in numbers, but the figures for 1949-50 and 1950-51 were somewhat higher than those for pre-war years. In 1952-53 they declined, however, to 255 entrances and clearances, with a net tonnage of 480,920 tons (entrances, 131—246,667 net tons; clearances, 124—234,253 net tons). British vessels in 1952-53 constituted 96 per cent. of the combined entrances and clearances (244 vessels) and 91 per cent. of the aggregate tonnage (439,501 tons).

A regular passenger and freight service operates between Australia and the Territory of Papua. Vessels trading between Australia and the East also call at Territory ports. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

4. *Other Forms of Transport and Communication.*—Air services link the Territory of Papua and New Guinea with Australia, the British Solomon Islands and Netherlands New Guinea. There are 118 fully operational aerodromes in the whole territory and a further 25 in the course of development. Twenty-eight are the responsibility of the Department of Civil Aviation; 35 are operated and maintained by the Administration

and 48 are owned and maintained by Missions, plantations and mining interests. In addition, there are 28 seadromes. Much of the internal traffic and freight is carried on a charter basis. Regular air services operate from Port Moresby to Daru and Lake Kutubu in the West, Samarai and Esa Ala in the East, to Lae, Wau, Madang and Wewak in New Guinea, and to Rabaul, Manus and Bougainville.

There are nearly 780 miles of roads in Papua, about 664 miles being suitable for medium and heavy traffic, and the greater proportion located in the Central and Northern Districts, which are north-east of Port Moresby.

Radio stations at Port Moresby for both transmission and reception are jointly shared by the Overseas Telecommunications Service and the Administration. The former provides a service between Papua, Australia and the Territory of New Guinea by radio and radio-telephone, while the latter is responsible for radio communications within the Territory.

A medium-wave broadcasting station, 9PA Port Moresby, operates under the control of the Australian Broadcasting Commission.

§ 7. Finance.

The principal source of revenue for the Territory of Papua is the annual grant received from the Commonwealth Government, which in 1952-53 amounted to £1,887,479. Customs duties, £501,923 in 1952-53, are next in importance. The total revenue during 1952-53 was £2,777,271, compared with £3,063,992 in 1951-52 and £165,823 in 1938-39. Of a total expenditure of £2,808,095 in 1952-53, £1,260,551 was spent on public works, £381,200 on medical services, £227,293 on native affairs and £939,051 on ordinary votes. Expenditure amounted to £3,083,823 in 1951-52 and to £166,330 in 1938-39.

For particulars of the finances of the combined Territory administration, *see p. 115.*

TRUST TERRITORY OF NEW GUINEA.

§ 1. General Description.

The land area of the Territory of New Guinea is about 93,000 square miles and the area including the sea within the lines drawn through its extreme outer points is more than one million square miles. As the coast of the Territory has not been completely surveyed, the areas of the various islands are known only approximately.

The approximate areas of the principal islands together with the small islands adjacent thereto are as follows:—North-East New Guinea (also called "The Mainland"), 69,700 sq. miles; Bismarck Archipelago—New Britain, 14,600 sq. miles, New Ireland, 3,340 sq. miles, Lavongai, 460 sq. miles, Admiralty Islands, 800 sq. miles, total Bismarck Archipelago, 19,200 sq. miles; Solomon Islands—Bougainville, 3,880 sq. miles, Buka, 220 sq. miles, total Solomon Islands, 4,100 sq. miles; grand total, 93,000 sq. miles.

Information regarding physiography and climate will be found in Official Year Book No. 22, p. 613, and in the *Official Handbook of the Territory.*

§ 2. Government.

1. **The Military Occupation (1914-18) War.**—On 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government on 9th May, 1921.

2. **Mandate (1920).**—In 1919 it was decided by the Principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth. The issuing of the Mandate was, however, delayed, and it was not until 17th December, 1920 that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 33 (*see p. 264.*)

3. **1939-45 War.**—For the events following the outbreak of the Pacific War and the formation of the Papua-New Guinea Provisional Administration in 1945, *see p. 114* of this chapter and earlier issues of the Official Year Book.

4. **Trusteeship (1946).**—The Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organization on 13th December, 1946. The terms of the Agreement are shown in Official Year Book No. 39, pp. 355-7.

5. **Administration.**—For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration *see* Official Year Book No. 36 and earlier issues.

For administrative purposes the Territory is divided into the following nine districts :—New Britain, comprising New Britain and adjacent islands ; Morobe, Madang, Eastern Highlands, Western Highlands, and Sepik on the mainland ; New Ireland, comprising New Ireland, Lavongai and adjacent islands ; Manus, comprising the Admiralty Group ; and Bougainville in the Solomon Islands. Each district is under a District Officer, assisted by a small staff.

§ 3. Population.

1. **Non-indigenous Population.**—At the Census of 30th June, 1954 the non-indigenous population of the Territory of New Guinea was 7,201 males, 4,241 females, 11,442 persons. Corresponding figures at the Census of 30th June, 1947 were, respectively, 4,369, 1,831 and 6,200.

The European population of the Territory increased from 64 in 1885 to 3,191 at the Census of 1933, and it reached its pre-war peak of 4,608 in 1939. At the 1954 Census the European population numbered 8,020 (5,185 males and 2,835 females).

Malays seem to have been the first Asians brought by the Germans to German New Guinea ; 37 of them were recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays and Javanese in growing numbers from Singapore and Java to work on the plantations ; in the year 1892 there were about 1,800 Asians on the mainland. By 1898 the number had decreased to 300 or 400, but it had risen to 1,830 at the time of the 1933 Census, and at 30th June, 1941 numbered 2,228, mostly Chinese. At the Census of 30th June, 1954 non-Europeans numbered 2,404, of whom Chinese (2,192) constituted the major proportion, whilst half-castes with one of the parents a European numbered 1,018.

The total non-indigenous population at the Censuses of 1921, 1933, 1947 and 1954 was, respectively, 3,173, 5,216, 6,200 and 11,442 persons.

2. **Native Population.**—The enumerated and estimated native population of the Territory of New Guinea as at 30th June, 1953 numbered 1,143,564 persons, comprising enumerated, 967,738 (497,212 males, 447,381 females and 23,145, details of sex not available), and estimated, 175,826. The total population was distributed throughout the several districts as follows :—Eastern Highlands, 278,602 persons ; Western Highlands, 166,550 ; Sepik, 203,282 ; Madang, 133,699 ; Morobe, 176,001 ; New Britain, 87,124 ; New Ireland, 34,838 ; Bougainville, 44,758 ; Manus, 14,710.

§ 4. The Natives.

1. **General.**—The natives are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Some tribes of Negritos exist in the mountains of New Guinea. There is a strain of Papuan, and possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (*See* Official Year Book No. 16, p. 670, and *Official Handbook of the Territory*, Pt. V.)

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows. The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coconut palms are growing on native lands

it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coconut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (*See Official Year Book No. 17, p. 634, and Official Handbook of the Territory.*)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident. For many years an anthropologist was engaged consolidating the work already done, and extending it throughout the Territory. The results of his work appear in special reports.

4. **Education.**—Education in the Territory is provided by the Administration and various mission organizations. Schools for natives have also been established by Native Village Councils. The Education Ordinance 1952 enables the Administrator to establish an education advisory board, district education committees, European and native schools and to grant financial aid for educational purposes. European teachers are recruited from Australia, and native teachers are trained in the Territory by the Administration and the Missions. During the year ended 30th June, 1953, 76 schools were maintained by the Administration for 3,949 children, of whom 326 were Europeans, 298 Asian, 65 part-native and Malay, and 3,260 natives. The total number of pupils in the various grades of mission schools was 83,506, of whom 488 were Europeans and part-native. To assist the educational work of the Missions the Administration provides expert advice, educational equipment and text-books. In addition, the sum of £50,474 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1953.

5. **Health of Natives.**—The main diseases affecting the natives are malaria, yaws, respiratory diseases, dysentery, framboesia, tropical ulcers, hookworm, filariasis and beri-beri. The Department of Health is engaged in combating these diseases with a staff of fully-trained medical officers, medical assistants and orderlies in native hospitals at Administration stations and sub-stations. Its staff also supervises hospitals on plantations. It has adequate facilities for research in tropical medicine, and a training scheme for natives as medical orderlies. The Department also provides the Missions with much of their medical stores and supplies, and maintains two Hansenide colonies for the treatment of natives suffering from Hansen's Disease. The Department also undertakes the general oversight of sanitary conditions in the Territory.

6. **Missions.**—A number of mission societies operate in the Territory.

The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost, the Franciscan Order and the Society of the Divine Word along the coast of north-east New Guinea from Sek to the Dutch border and in the Central Highlands, and the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America) which works in Morobe, Madang, the Central Highlands, New Britain and Manus, the Melanesian Mission (Anglican) in New Britain, the Seventh Day Adventist Mission in Bougainville, New Britain, the mainland of New Guinea and Manus, the East and West Indies Bible Mission and the Baptist Mission in the Central Highlands. The South Seas Evangelical Mission (Undenominational) and the Assemblies of God Mission are also working in the Sepik area. All these societies include teaching with their missionary work.

§ 5. Land Tenure.

The principles governing the acquisition and ownership of land and types of tenure available in New Guinea are in general similar to those which obtain in Papua. In New Guinea, although under the Land Ordinance 1922-1951 grants of freehold estates may be made, as a matter of policy freehold estates are no longer granted by the Administration, all grants now being restricted to leaseholds. However, in New Guinea the amount of freehold land of earlier origin held by private non-indigenous owners amounts to more than half a million acres. Freehold titles to this land, which includes

a good deal of plantation land, may be transferred by purchase subject only to the general provision in New Guinea that dealings in land are subject to the approval of the Administrator.

The area of the Territory of New Guinea is estimated at 59,520,000 acres, of which, at 30th June, 1953, 1.80 per cent. was alienated. The following was the distribution according to tenure on 30th June, 1953 :—alienated; held by private non-indigenous inhabitants—freehold, 519,380 acres, leasehold, 189,351 acres; held by administration, 338,690 acres; native reserves, 26,926 acres; total alienated, 1,074,347 acres; held by natives, 58,445,653 acres.

Leases in force at 30th June, 1953 were as follows :—Agricultural, 563—167,659 acres; dairying, 7—1,500 acres; pastoral, 4—11,296 acres; residential and business, 754—894 acres; special, 75—1,556 acres; mission, 520—1,860 acres; leases granted to Chinese in towns, 240—71 acres; long period leases from German régime, 104—4,515 acres; total, 2,267—189,351 acres.

Under German law there was a system of registration of titles in a "Ground Book", but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the Lands Registration Ordinance 1924—1951.

§ 6. Production.

1. *General.*—The products of the Territory are obtained from its agricultural, mining, fishing and forestry industries. A copra crushing mill at Toboi, near Rabaul, is producing coconut oil at the rate of about 10,000 tons a year. A company (Commonwealth-New Guinea Timbers Ltd.), in which the Commonwealth Government has a controlling interest, has erected a modern factory at Bulolo for the manufacture of plywood and veneer. Production commenced in February, 1954. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Natives, however, produce copra for export and native enterprise in other fields of agricultural production for export purposes is being encouraged. The principal agricultural products of New Guinea for the export trade are copra and cocoa. Most of the timber milled during 1952—53 was absorbed by local building requirements, exports of sawn timber amounting to approximately 10 per cent. of production. The main products of fisheries exported from New Guinea are trochus and green snail shell. Gold is the principal mineral mined.

For information on the agricultural and pastoral industries, which for the sake of convenience is related to the Territory of Papua and New Guinea as a whole, see pp. 115—118. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea.

2. *Timber.*—Surveys of the timber resources of the Morobe District indicate that there are approximately 500 million super. feet of timber in the pine forests of the Bulolo Valley. This is supporting sawmills cutting for local use and export, and flitches are also being exported to Australia for the manufacture of battery separator veneer. Commonwealth-New Guinea Timbers Ltd. are now cutting the plywood forests for plywood production and the area will be progressively reforested as it is cut. Two sawmills controlled by the Administration established at Yalu and Keravat are supplying local requirements. The log export trade has not yet returned to the pre-war volume, but in 1952—53 shipments of some 1,107,746 super. feet of timber in the log were made.

The Forestry Ordinance 1936—1951 provides for the issue of permits and licences to cut timber. Present policy calls for the orderly development of the timber industry on sound forestry principles; the grant of emergency timber permits to provide timber for Territory requirements; the disposal by public tender of timber areas designated by forest officials of the Territory; and the development of the pine stand in the Bulolo Valley by Commonwealth-New Guinea Timbers Ltd. Timber growing on native lands cannot be acquired by private purchasers direct from the natives but must be obtained through the Administration. A prescribed royalty is payable on all forest produce taken under permit or licence. Twenty timber permits, covering an area of 208,000 acres, were in operation during 1952—53.

3. **Fisheries.**—The wealth of the waters of the Territory has been little exploited. Fish are caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Trochus shell to the value of £48,058 and green snail shell to the value of £39,789 were exported during 1952-53.

4. **Mining.**—The production of gold and associated silver is the most important mining activity in New Guinea. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, and in tributaries of the Sepik River. Rich gold deposits were discovered in the Morobe District in 1926; the field is situated about 90 miles (40 by air) inland from Lae, the nearest coastal port. Communication is established with the coast by regular air service and by road transport. Silver is usually found associated with the gold in these deposits. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnetite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland. Except for gold and silver, production of the other minerals has not proved economical.

The granting of rights, leases and claims for mining purposes are provided for in the Mining Ordinance 1928-1947 and Regulations thereunder. Copies of the Ordinance and Regulations may be obtained from the Secretary, Department of Territories, Canberra.

The production of gold in New Guinea during the last three pre-war years averaged about 228,000 fine oz. a year, at an average value of £2,000,000. In 1940-41 it amounted to 263,113 fine oz., valued at £2,808,835. Although the market price of gold has been fixed at a much higher level than in 1938-39, mining costs have risen to a much greater extent and, as a consequence production since the war has been on a much smaller scale, averaging 91,000 fine oz., at a value of £1,200,000 a year over the five years ended 1951-52. Production in 1952-53 amounted to 138,694 fine oz., value, £2,147,766, and in 1951-52 to 110,214 fine oz., value, £1,707,401.

The Petroleum Ordinance 1936 has been superseded by the Petroleum (Prospecting and Mining) Ordinances 1951, which have facilitated the carrying out of geological surveys and prospecting activities generally. A search for petroleum is no longer being actively conducted, however, and no permits to search for petroleum were in force at 30th June, 1953.

§ 7. Trade, Transport and Communication.

1. **Customs Tariff.**—The present customs tariff has been in operation since 1st July, 1950. It provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods, jewellery and certain apparel and piece goods made of silk. Of 75 items now mentioned in the import schedule, 59 are on the free list and two are partially free. The tariff allows duty-free treatment of necessities, but increases rates on non-necessities. The purpose of the revision was to relieve both general industrial costs and the basic costs of living with a view to encouraging further development of the Territory. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant and machinery to be used mainly for developmental purposes. Under this provision, most agricultural machinery would be admitted duty free. The rate of duty on items not specified in the schedule is 10 per cent. *ad valorem*. No preferential rates are specified in the schedule. A surcharge equal to 10 per cent. of duty payable was imposed as from 17th January, 1952.

Export duties are imposed on cocoa, copra, trepang, tortoise shell, mother-of-pearl and trochus shell, cassowary, crown pigeon and heron feathers, rubber, sulphur and sulphur-bearing substances.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) for the free entry into Australia of certain goods produced and imported direct from the Territory of New Guinea (*see* Chapter VII.—Trade), and a proclamation of 25th September, 1935 exempted from primage duty goods produced or manufactured in the Territory.

2. **Imports and Exports.**—(i) *Total Values.* The table below summarizes and compares the values of imports and exports for the pre-war year 1938-39 and the post-war years 1948-49, 1951-52 and 1952-53.

TERRITORY OF NEW GUINEA : IMPORTS AND EXPORTS.
(£.)

Particulars.	1938-39.	1948-49.	1951-52.	1952-53.
Imports	1,340,835	4,393,873	8,154,102	7,175,612
Exports—				
Domestic Exports	2,960,753	2,632,928	5,823,418	7,515,646
Non-Domestic Exports	13,142	569,329	694,463	975,750
Total Exports	2,973,895	3,202,257	6,517,881	8,491,396

(ii) *Imports.* The following table summarizes the sources of imports. In the post-war years Australia has supplied a far greater proportion of the imports than she did pre-war and this proportion has continued to increase in each successive post-war year. The reduction in total imports in 1952-53 (and to some extent the increased proportion of imports from Australia) was caused for the most part by import restrictions imposed to conserve foreign exchange.

TERRITORY OF NEW GUINEA : COUNTRY OF ORIGIN OF IMPORTS.
(£.)

Country of Origin.	1938-39.	1948-49.	1951-52.	1952-53.
Australia	563,594	2,693,647	4,920,231	4,756,600
Canada	6,333	(a)	75,240	27,721
China	69,831	304,310	19,184	2,614
Hong Kong	(a)	57,879	367,910	238,272
India	20,235	130,622	144,455	222,355
United Kingdom	154,501	273,831	592,885	386,314
United States of America	265,591	518,576	565,513	687,965
Other Countries	260,750	415,008	1,468,684	853,771
Total Imports	1,340,835	4,393,873	8,154,102	7,175,612

(a) Not available; included under "Other countries".

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of New Guinea exports are shown below. The growth in total exports has been outstanding. The increase in exports to Australia in 1952-53 arose from increased gold exports, and increased prices and slightly increased quantities of coconut products. The major source of increased export earnings, however, arose from increased quantities of coconut products at higher prices to the United Kingdom.

TERRITORY OF NEW GUINEA : COUNTRY OF DESTINATION OF EXPORTS.
(£.)

Country of Destination.	1938-39.	1948-49.	1951-52.	1952-53.
Australia	2,313,127	2,614,367	3,746,451	4,344,448
United Kingdom	337,605	268,744	2,503,723	3,864,907
Other Countries	310,021	319,146	267,707	282,041
Total Exports	2,960,753	3,202,257	6,517,881	8,491,396

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years. The increase in value of approximately 30 per cent. arose mainly from increased quantities of exports of the two major products (coconut products and gold) and increased prices of the former product.

TERRITORY OF NEW GUINEA : PRINCIPAL DOMESTIC EXPORTS.

(£.)

Item.	1938-39.	1948-49.	1951-52.	1952-53.
Copra	727,949	1,522,681	3,589,383	4,425,057
Other Coconut Products	72,274	32,645	136,562	523,369
Cocoa Beans	6,580	36,413	147,503	171,876
Coffee Beans	843	3,499	10,348	30,332
Peanuts	105	..	868	20,853
Gold	2,129,263	982,572	1,707,401	2,147,766
Silver .. .. .	..	8,481	20,523	23,399
Shell (Marine)	10,649	24,426	77,303	87,894
Timber	6,911	21,523	127,621	75,833
Other	6,179	688	5,906	9,267
Total Domestic Exports	2,960,753	2,632,928	5,823,418	7,515,646

3. *Shipping.*—A regular passenger and freight service operates between Australia and the Territory of New Guinea. Vessels trading between Australia and the East also call at Territory ports. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the Territory. Shipping within the Territory is regulated by the Shipping Ordinances 1951 and the Coastal Shipping, Ports and Harbours Regulations.

Main ports of call for oversea vessels are established at Lae, Madang and Wewak (mainland), Rabaul (New Britain), Kavieng (New Ireland), Lorengau (Manus), and Kieta (Bougainville). Ports proclaimed under the Coastal Shipping, Ports and Harbour Regulations for the service of local vessels are, in addition to the main ports above-mentioned, Salamaua, Aitape and Wanimo (mainland), Gasmata and Talasea (New Britain), Namatanai (New Ireland), and Buka Passage (Bougainville).

There are no prepared inland waterways. The natural river system is not generally suitable for vessels except those of small tonnage.

Prior to the 1939-45 War the annual average entrances and clearances of oversea vessels at ports of New Guinea amounted to about 240, and the aggregate net tonnage to 660,000 tons, about 80 per cent. being of British nationality. Oversea shipping in post-war years has not reached these figures, either in numbers or in tonnage, and in 1952-53 entrances numbered 107 with a net tonnage of 268,465 tons, and clearances 103 (263,014 net tons)—total 210 (531,479 net tons), of which 80 per cent. was British.

4. *Other Forms of Transport and Communication.*—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 200 miles long in New Ireland and also a road 90 miles long from Lae to Wau in the Morobe District. The total mileage of roads in the Territory of New Guinea at 30th June, 1953 was 2,675, of which 727 were suitable for heavy traffic.

The discovery of gold in New Guinea resulted in great aviation activity in the vicinity of the goldfields. On account of the mountainous country and dense undergrowth between the coast and the goldfields the task of transporting food and stores to the fields and of bringing the gold to the seaboard by land was a slow and costly process. The fields are situated about 90 miles (40 by air) inland from Lae and air transport played an important part in the development of the area. Further reference to New Guinea air activities is contained in Chapter VI.—Transport and Communication, and in this chapter, page 123.

A radio telephone trunk service has been installed linking Lae, Rabaul, Madang, Port Moresby and Samarai. Arrangements are being made to bring these stations into

the oversea radio telephone circuit. Three zone or group centres for radio telephone communication have been established with the following associated stations:—Lae—12 associated stations; Madang—33; Rabaul—52. There were a total of 134 teleradio stations licensed in the Territory of New Guinea at 30th June, 1952, of which 22 were not operating.

§ 8. Revenue and Expenditure.

The principal sources of revenue for the Territory of New Guinea are the grant by the Commonwealth Government and customs duties. Total expenditure in 1952-53 amounted to £4,314,085, towards which the grant contributed £2,769,543 and customs duties, £1,041,033. The major groupings into which the various items of expenditure during 1952-53 may be classed were as follows:—Health, £848,001; district services and native affairs, £758,232; education, £249,727; justice, £274,024; agriculture, etc., £213,188; customs and marine, £125,327; forestry, £140,061; capital works and services, £718,848; maintenance, £489,166. Total expenditure in 1951-52 was £4,612,434. In 1938-39 revenue and expenditure each amounted to about £500,000, customs duties and royalty on gold constituting the major items of revenue and district services and native affairs the major items of expenditure.

For information on the finances of the combined Territory administration *see* Papua and New Guinea, § 2, pp. 114-115.

TRUST TERRITORY OF NAURU.

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about 5,263 acres, of which approximately two-thirds is phosphate-bearing. It is situated in latitude 0° 32' south and longitude 166° 55' east. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that most of the Nauruans reside. With the exception of a small fringe around an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by an old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners and the Missions, the whole of the island is owned by individual natives. The temperature range is from 76° F. at night to 94° F. during the day and the average humidity about 80 per cent. Normally the rainfall is comparatively low for islands of the Pacific, the average for twenty years from 1920 to 1940 being 80.5 inches. However, falls as high as 181.76 inches during 1940 and as low as 12.29 inches during 1950 have been recorded.

2. **History.**—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate was confirmed by the Council of the League of Nations on 17th December, 1920. On 2nd July, 1919 the British, Australian and New Zealand Governments agreed that the administration (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator, who took up duty in June, 1921. The agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is shown in the Schedule to that Act. A supplementary agreement concerning Nauru was drafted in May, 1923 and ratified by the Commonwealth Parliament by the Nauru Island Agreement Act 1932.

On 25th August, 1942, nine months after the outbreak of the war in the Pacific, communications with Nauru ceased, and the island was occupied by Japanese forces. It was re-occupied by a joint Australian Naval and Military Force on 14th September, 1945 and civil administration was re-established on 1st November, 1945.

3. **Trusteeship Agreement.**—On 1st November, 1947 the General Assembly of the United Nations approved a Trusteeship Agreement for the Territory of Nauru submitted by the Governments of Australia, New Zealand and the United Kingdom in substitution for the terms of the mandate under which the Territory had been administered. This

Agreement designates the Governments of Australia, New Zealand and the United Kingdom as the Joint Administering Authority, with the Government of Australia continuing, on behalf of the Administering Authority, to exercise full powers of legislation, administration and jurisdiction in and over the Territory. The terms of the Agreement were given in Official Year Book No. 39, pp. 370-1.

4. **Administration.**—The administration of the island is vested in the Administrator, who is obliged to conform to instructions issued by the Government which appointed him. Until the Government of Australia ceases to exercise full powers of legislation, administration and jurisdiction in and over the Territory on behalf of the Administering Authority in pursuance of Article 4 of the Trusteeship Agreement, all ordinances made by the Administrator are subject to confirmation or disallowance by the Governor-General of Australia acting on the advice of the Federal Executive Council. All administration expenses are met from local revenue and phosphate royalties. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed to a large extent by the natives. The store books, however, are audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

5. **Population.**—The Nauruan component of the population of Nauru numbered about 1,100 in 1921, but had grown to more than 1,800 before the Japanese invasion in August, 1942. In 1946 it numbered less than 1,400 but by 30th June, 1954 it had risen again to 1,828. Chinese have for many years formed a considerable part of the population of Nauru; their numbers increased, with some reversals of trend, from about 600 in 1921 to more than 1,500 before the 1939-45 War. After the war they increased from about 800 in 1946 to 1,491 in 1950, but at the Census of 30th June, 1954 numbered only 550. The number of other Pacific islanders in the early 1920's was almost 300, but they subsequently declined to less than 40. In recent years the numbers have increased, and at the 1954 Census there were 623 persons. The European population after 1921 fluctuated, but with a generally upward trend, between one and two hundred persons, and in 1940 numbered 192. In 1948 it numbered 247 and in 1954 it was 262. The total non-indigenous population of Nauru at the Census of 30th June, 1954 was 1,269 males, 376 females, 1,645 persons. The total population was 3,473.

6. **Health.**—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but elephantiasis is occasionally met with. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied. The total number of persons receiving treatment at 30th June, 1953, was 46 of whom 10 were in segregation at the Leper Hospital. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commissioners for their employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amoebic and bacillary, is endemic. A regular anti-mosquito campaign is conducted. Steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo a medical examination at intervals of three months. Baby clinics have been established to give help and advice to Nauruan mothers in regard to infant nurture.

7. **Education.**—The Administration assumed full responsibility for education on 1st October, 1923. Prior to that date the education of native children was undertaken by the Missions, which were subsidized by the Administration. There are eight primary schools and one secondary school for natives, together with one primary school for Europeans. At 30th June, 1953, 456 natives and 35 Europeans were enrolled in the primary schools, and 57 at the secondary school. A teacher, who is on loan from the Victorian Education Department, is in charge of the European school, but education is controlled by a Director of Education.

The curriculum is based on that used in Australian schools, and the teaching is generally in English. Education is compulsory for native children from six to sixteen years. At 30th June, 1953, 31 Nauruans were attending secondary schools in Australia, many as scholarship holders under the Nauru Royalty Trust Fund Scheme; 11 were

studying to be teachers, 5 to be accountants, 3 to be missionaries, 2 to be nurses, and one each to be a doctor, a chemist, a native affairs officer, a stenographer, and a refrigeration and typewriter mechanic while 5 professions were to be decided. In addition to these, there were 5 students at the Central Medical School, Suva. Altogether, 15 students were sponsored by the Administration, 3 by the Missions and the others by their own families.

8. **Judiciary.**—The judicial power is vested in the Administrator in a Central Court and a District Court. The right of appeal is provided.

9. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.

10. **Phosphate Deposits.**—(i) *General.* From 1906 to 1919 the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office). The quantity remaining on Nauru has been estimated at about 70 million tons, and the exports average 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it had workings) were bought by the British, Australian and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42 and 16 per cent. respectively. The Agreement of 2nd July, 1919 provides for the working of the deposits by three British Phosphate Commissioners, one appointed by each Government; and the three countries are entitled to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Royalty on Phosphate.* Under an agreement between the British Phosphate Commissioners and the Nauruan landowners, an increased royalty of 1s. 4d. per ton of phosphate exported was payable at 30th June, 1953 as follows:—

(a) 3d. to the Nauru Royalty Trust Fund to be used for the benefit of Nauruans;

(b) 8d. to the landowner, being an immediate payment of 6d. per ton, and 2d. per ton to be invested on his account;

(c) 5d. to the Nauruan Community Long Term Investment Fund.

From 1st July, 1947 the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £45 per acre, with a minimum payment of £7 10s. for areas less than an acre.

(iii) *Nauru and Ocean Island Phosphate Industry.* Exports of phosphate from Nauru and Ocean Island in 1939–40 amounted to 1,243,428 tons, of which Australia received 54 per cent. and New Zealand 32 per cent. Following the interruption to production by the war in the Pacific, this figure was not exceeded until 1949–50 when 1,285,998 tons were exported (76 per cent. to Australia, 24 per cent. to New Zealand). Figures for 1952–53 were:—1,519,314 tons exported, 60 per cent. Australia, 40 per cent. New Zealand.

Receipts from sale of phosphate in 1939–40 amounted to £1,041,418. and the f.o.b. cost, including interest on capital sinking fund, etc., amounted to £1,037,208. In 1946–47 sales and costs each amounted to about £500,000, but they have since increased to more than £2,500,000. In 1952–53 receipts from sales, etc., amounted to £2,713,458, and costs, etc., to £2,681,976.

During the period of the Japanese occupation from August, 1942 to September, 1945, while waiting to resume activities at Nauru and Ocean Island, the Commissioners were engaged in meeting the phosphate requirements of Australia and New Zealand from other available sources. A programme of improvements and additions to equipment has been commenced.

The amount due by the British Phosphate Commissioners to the partner Governments for purchase-money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1942, this had been reduced to £3,024,373. The partner Governments agreed to a suspension of interest and sinking fund payments from 1st July, 1942 while operations at Nauru and Ocean Island were curtailed. Modified payments were resumed in 1946–47, pending a review of the position.

The review was carried out in 1950, as a result of which the revised capital indebtedness of the Commissioners to the partner Governments at 30th June, 1950 was determined

at £3,881,711. Interest and sinking fund payments were resumed with effect from 1st July, 1950 on the basis of repayment of the revised capital indebtedness in 35 years.

(iv) *Employees.* Apart from a limited number of Europeans, the employees are Chinese and Pacific Islanders engaged under a one year's contract. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

(v) *Christmas Island Phosphates.* It may be appropriate to refer here to the phosphate deposits on Christmas Island in which the Australian Government is interested. The concession to work phosphate at Christmas Island, situated in the Indian Ocean near Java was held from 1897 by the Christmas Island Phosphate Company Limited, a private company incorporated in England.

The Australian and New Zealand Governments, jointly, acquired the Company's interests and assets at Christmas Island as at 31st December, 1948.

The undertaking is controlled by a Board of Commissioners appointed by the Australian and New Zealand Governments. Phosphate is distributed by the British Phosphate Commissioners who have been appointed by the Board as its managing agents.

11. *Transport.*—There is no air service to Nauru. The island has an aerodrome but only two trips were made during the year ended 30th June, 1953.

There is relatively frequent sea communication with the island. During 1952–53, 152 vessels called there. Most of the vessels are run or chartered by the British Phosphate Commission for the carriage of phosphate. Many of them also provide for the carriage of passengers and other cargo as required.

12. *Trade.*—The Customs Tariff of Nauru provides for the free admission of all goods other than cigars, cigarettes, tobacco, spirits, wines, beer, cider and perry, and cylinder blocks for motor cycle engines. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt. The tariff rates apply to all countries alike. Imports into Nauru were valued at £192,749 in 1940 and exports (808,400 tons of phosphate) at £541,168. In 1952–53, imports were valued at £674,190 and exports (1,227,103 tons of phosphate) at £1,994,045. Of the total imports in 1952–53, Australia supplied 84 per cent. (valued at £571,539); the balance came mainly from New Zealand, the United Kingdom, the United States and Hong Kong, in that order.

In 1952–53, 758,831 tons of phosphate were exported to Australia, and 468,272 tons to New Zealand.

13. *Revenue and Expenditure.*—The revenue of the Administration has risen from £33,084 in 1939 to £163,408 in 1952–53, and expenditure from £29,391 to £179,423.

Of the revenue for the year ended 30th June, 1953, royalty on phosphate amounted to £19,968, post office and radio receipts, £5,980, and customs duties, £1,481. Main items of expenditure were salaries, £93,234, works and services, £39,900, and stores and materials, £34,990.

TERRITORY OF HEARD AND McDONALD ISLANDS.

On 26th December, 1947 by an exchange of notes with the United Kingdom Government, the United Kingdom sovereignty over the Heard and McDonald Islands was transferred to the Commonwealth of Australia. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act passed 18th March, 1953.

At the end of 1947 an Australian scientific post was established on Heard Island and maintained as a scientific base, but following on the establishment of the base at Mawson, on MacRobertson Land in the Australian Antarctic Territory, the Heard Island base was discontinued. Heard Island lies 2,500 miles south-west of Fremantle in the South Indian Ocean, and is about 27 miles long and 13 miles wide. The McDonald Islands are 26 miles to the west of Heard. They are small, rocky and precipitous.

AUSTRALIAN ANTARCTIC TERRITORY.

On 13th February, 1954 the Australian Antarctic Research Expedition established a base on MacRobertson Land at latitude 67° 36' S. and longitude 62° 53' E. The base has been named Mawson in honour of Sir Douglas Mawson and is the first permanent Australian station to be set up on the Antarctic continent. It will conduct meteorological and other research.

CHAPTER VI.

TRANSPORT AND COMMUNICATION.

NOTE.—The statistics in this chapter cover the years 1952–53 and, where possible, 1951–52. In some cases, however, space does not permit of the inclusion of figures for 1951–52. These will be found in *Transport and Communication Bulletin* No. 43 unless otherwise specifically indicated.

A. SHIPPING.

§ 1. System of Record.

In the system of recording statistics of oversea shipping, Australia is considered as a unit, and therefore only one entry and one clearance is counted for each voyage, without regard to the number of States visited (*see also* Section 5 following, paragraph 1).

On arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month the information so obtained is forwarded to this Bureau. This arrangement has been in operation since 1st July, 1924.

The volume of the vessel, as distinct from the cargo it carries, is recorded in net tons, i.e., the gross tonnage or internal cubic capacity less certain deductions on account of crew spaces, engine room, water ballast and other spaces not used for passengers or cargo. It is thus a rough measure of the capacity of the vessel for cargo or passengers. The unit of measurement is the *ton register* of 100 cubic feet.

Cargo is recorded in *tons weight* or in *tons measurement* (40 cubic feet).

From 1st July, 1914 the Trade and Shipping of Australia have been recorded for the fiscal years ending 30th June.

Particulars of vessels exclusively engaged in transporting troops and war materials during the 1939–45 War years are excluded from the following tables of "oversea" and "interstate" shipping movement which, therefore, relate only to vessels engaged in normal trade (i.e., carrying part or full cargo for civil purposes), and are strictly comparable with pre-war and post-war figures.

§ 2. Oversea Shipping.

1. **Total Movement.**—The following table shows the number of entrances and clearances combined of oversea vessels at Australian ports, and the aggregate net tonnage, during each of the years 1938–39 and 1948–49 to 1952–53:—

**OVERSEA SHIPPING : ENTRANCES AND CLEARANCES (COMBINED) OF
VESSELS DIRECT, AUSTRALIA.**

Particulars.	1938–39.	1948–49.	1949–50.	1950–51.	1951–52.	1952–53.
Number of Vessels ..	3,814	3,486	3,907	3,903	4,136	4,041
Net Tonnage '000 tons	13,546	15,013	17,378	17,307	18,225	17,571

The average net tonnage per vessel has risen from 2,919 tons per vessel in 1921–22 to 4,348 tons in 1952–53.

Particulars of the total overseas movement of shipping for each year from 1822 to 1920-21 will be found in Official Year Book No. 15, p. 507, and for years subsequent thereto, but not shown in the table above, in Official Year Book No. 40, p. 97.

2. **Total Oversea Shipping, States.**—The following table shows, for each State, the number of entrances and clearances of vessels direct from and to overseas countries, and the aggregate net tonnage, during the year 1952-53 :—

OVERSEA SHIPPING : ENTRANCES AND CLEARANCES OF VESSELS DIRECT. STATES, 1952-53.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances .. No.	600	314	305	242	469	51	7	1,988
'000 net tons	2,456	1,370	1,095	975	2,579	211	18	8,704
Clearances .. No.	500	347	401	213	543	42	7	2,053
'000 net tons	1,907	1,515	1,516	948	2,758	204	19	8,867

3. **Shipping Communication with Various Countries.**—Records of the number and tonnage of vessels arriving from and departing to particular countries, as they are invariably made, may be misleading for the reason that the tonnage of a vessel can be recorded against one country only, notwithstanding that the same vessel on the same voyage may carry cargo or passengers to or from Australia from or to several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

OVERSEA SHIPPING : COUNTRY GROUPS FROM WHICH ENTERED OR FOR WHICH CLEARED, AUSTRALIA.

Countries.	With Cargo or in Ballast.	Net Tonnage Entered ('000).			Net Tonnage Cleared ('000).		
		1950-51.	1951-52.	1952-53.	1950-51.	1951-52.	1952-53.
United Kingdom and European Countries	Cargo	3,393	3,547	2,484	2,900	3,081	3,276
	Ballast	10	24	35	57	69	38
New Zealand(a)	Cargo	484	546	541	675	828	719
	Ballast	204	210	358	40	64	34
Asiatic Countries and Pacific Islands	Cargo	3,402	3,220	3,401	1,848	1,608	1,969
	Ballast	179	154	892	2,296	2,369	1,927
Africa(a)	Cargo	308	144	97	342	120	94
	Ballast	4	5	99	28	17	27
North and Central America ..	Cargo	582	1,088	740	375	475	442
	Ballast	3	..	3	117	608	337
South America	Cargo	31	35	49	29	6	4
	Ballast	..	..	5	..	7	..
Total	Cargo	8,200	8,580	7,312	6,169	6,118	6,504
	Ballast	400	393	1,392	2,538	3,134	2,363
Total Cargo and Ballast..	..	8,600	8,973	8,704	8,707	9,252	8,867

(a) See explanation above.

4. **Nationality of Oversea Shipping.**—Owing to war conditions, the proportion of shipping of British nationality progressively declined from 72.82 per cent. of the total tonnage entered in 1938–39 to 43.40 per cent. in 1943–44. On the other hand, the proportion of American (U.S.) shipping visiting Australia during the same period advanced from 2.61 per cent. in 1938–39 to 33.07 per cent. in 1943–44. Thereafter the trend was reversed, and in 1950–51 the proportion of British shipping entered was 70.83 per cent. and of American 2.34 per cent. In 1952–53 the proportion of British shipping entered had fallen to 64.90 per cent.

Particulars of the nationality of overseas shipping which entered Australia during each of the years 1950–51 to 1952–53 are given in the following table :—

OVERSEA SHIPPING : NATIONALITY OF VESSELS ENTERED, AUSTRALIA.

('000 Net Tons.)

Nationality.	1950-51.	1951-52.	1952-53.	Nationality.	1950-51.	1951-52.	1952-53.
BRITISH—				FOREIGN—continued.			
Australian ..	214	211	229	Japanese ..	..	3	161
Canadian ..	26	17	17	Norwegian ..	665	935	719
New Zealand ..	167	257	375	Panamanian(a) ..	..	501	386
United Kingdom ..	5,452	5,160	4,839	Swedish ..	196	184	267
Other British ..	232	182	189	Other Foreign ..	660	242	213
In Cargo ..	5,781	5,522	4,732	In Cargo ..	2,419	3,058	2,580
In Ballast ..	310	305	917	In Ballast ..	90	88	475
Total British ..	6,091	5,827	5,649	Total Foreign ..	2,509	3,146	3,055
Proportion of total %	70.83	64.94	64.90	Proportion of total %	29.17	35.06	35.10
FOREIGN—				ALL NATIONALITIES—			
American (U.S.) ..	201	246	205	In Cargo ..	8,200	8,580	7,312
Danish ..	154	129	109	Proportion of total %	95.35	95.62	84.01
Dutch ..	326	397	470	In Ballast ..	400	393	1,392
French ..	115	101	148	Proportion of total %	4.65	4.38	15.99
German ..	..	27	10	 			
Italian ..	192	381	367	Total, All Nationalities	8,600	8,973	8,704

(a) Not available prior to 1st July, 1951.

The Australian tonnage which entered Australian ports from overseas during the year 1952–53 represented 2.63 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Island trade.

The proportion of overseas shipping tonnage which entered Australia in cargo fell from 88.87 per cent. in 1938–39 to 79.37 per cent. in 1947–48, but thereafter rose to 95.62 per cent. in 1951–52. The proportion declined to 84.01 per cent. in 1952–53. The proportion of shipping which cleared in cargo, however, declined from 87.64 per cent. in 1938–39 to 66.12 per cent. in 1951–52, the trend over the period being generally downward. In 1952–53 the proportion rose to 73.35 per cent.

§ 3. Shipping at Principal Ports.

1. **Total Shipping, Australia.**—The following table shows the total volume of shipping—oversea, interstate and coastwise—which entered the principal ports of Australia during the years 1951–52 and 1952–53. Warships are excluded from the table. Corresponding figures for each year from 1947–48 will be found in *Transport and Communication Bulletin* No. 44.

TOTAL SHIPPING : ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA.

Port of Entry.	1951-52.		1952-53.		Port of Entry.	1951-52.		1952-53.	
	Num-ber.	Net Tons.	Num-ber.	Net Tons.		Num-ber.	Net Tons.	Num-ber.	Net Tons.
		('000).		('000).			('000).		('000).
<i>New South Wales—</i>					<i>South Australia—</i>				
Sydney ..	3,938	8,201	4,163	8,540	Adelaide ..	2,659	4,950	2,783	5,151
Newcastle ..	2,233	3,235	2,283	3,497	Port Lincoln ..	286	421	257	398
Port Kembla ..	507	1,561	540	1,626	Port Pirie ..	295	658	396	750
					Wallaroo ..	311	263	192	170
					Whyalla ..	417	1,274	468	1,449
<i>Victoria—</i>					<i>Western Australia—</i>				
Melbourne ..	2,316	8,585	2,416	8,368	Fremantle ..	1,009	5,256	943	4,948
Geelong ..	223	718	386	989	Albany ..	66	287	49	178
					Bunbury ..	54	134	73	192
					Carnarvon ..	105	159	114	172
<i>Queensland—</i>					Geraldton ..	103	287	110	291
Brisbane ..	815	2,703	960	3,081	Yampi ..	74	53	130	320
Bowen ..	98	148	86	189	<i>Tasmania—</i>				
Cairns ..	249	462	303	613	Hobart ..	296	1,255	360	837
Gladstone ..	74	204	113	318	Burnie ..	163	233	221	300
Mackay ..	54	130	67	182	Devonport ..	173	194	207	223
Rockhampton ..	79	129	105	216	Launceston ..	223	313	475	401
Thursday Island ..	74	22	60	22	<i>Northern Territory—</i>				
Townsville ..	257	836	275	882	Darwin ..	37	75	37	65

2. Total Shipping—Australia, New Zealand and United Kingdom.—The following table shows the total shipping tonnage which entered the principal ports of Australia during 1952-53, and of New Zealand and the United Kingdom during 1953.

TOTAL SHIPPING : ENTRANCES AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM.
(’000 Net Tons.)

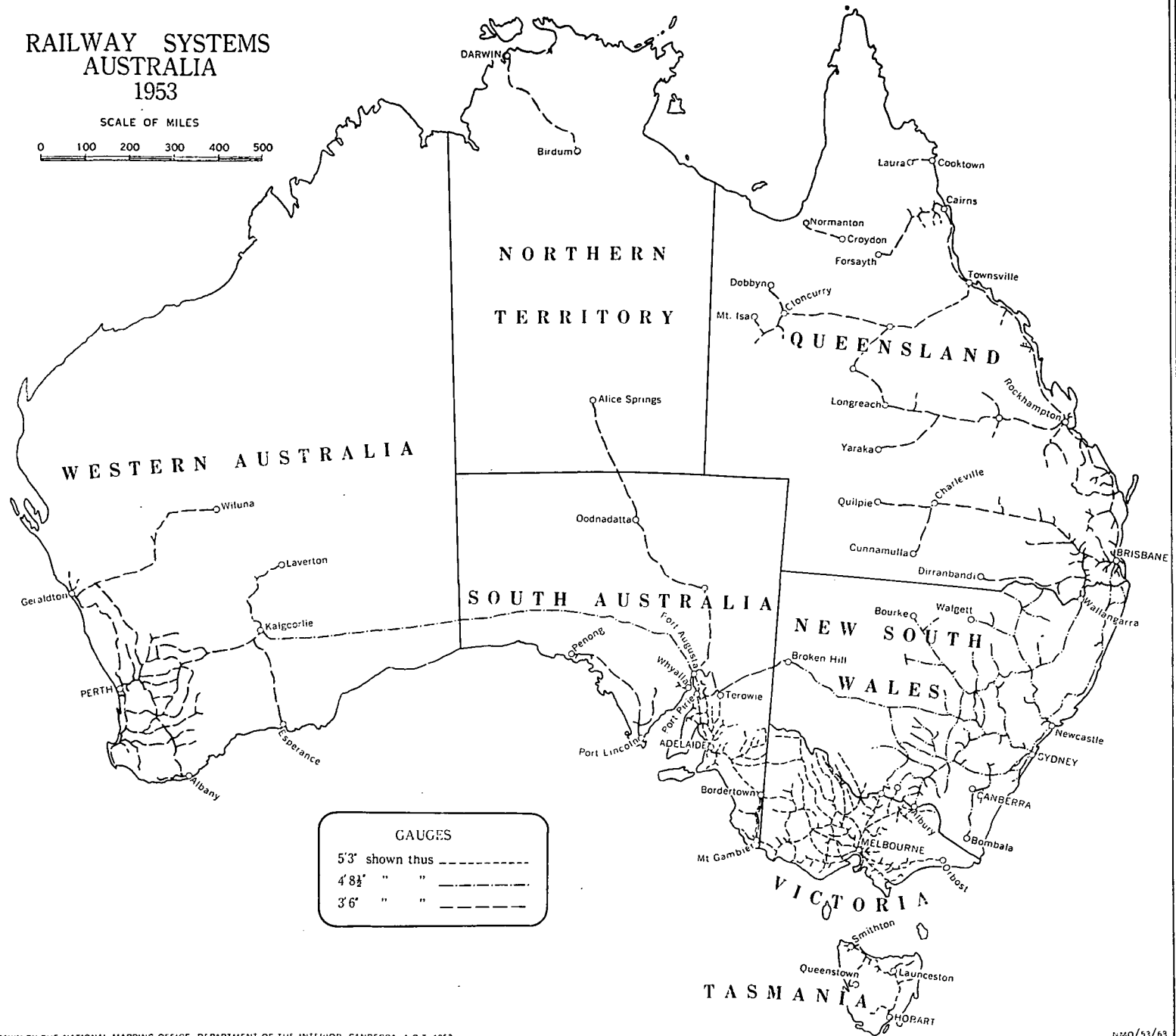
Port.	Net Tonnage Entered.	Port.	Net Tonnage Entered.	Port.	Net Tonnage Entered.
<i>AUSTRALIA—</i>		<i>AUSTRALIA—continued.</i>		<i>ENGLAND AND WALES—</i>	
Sydney (N.S.W.) ..	8,540	Geraldton (W.A.) ..	291	<i>continued.</i>	
Melbourne (Vic.) ..	8,368	Devonport (Tas.) ..	223	Hull ..	4,968
Adelaide (S.A.) ..	5,151	Rockhampton (Qld.) ..	216	Manchester (including Runcorn) ..	4,187
Fremantle (W.A.) ..	4,948			Dover ..	3,860
Newcastle (N.S.W.) ..	3,497	<i>NEW ZEALAND—</i>		Swansea ..	3,455
Brisbane (Qld.) ..	3,081	Wellington ..	3,758	Bristol ..	3,393
Port Kembla (N.S.W.) ..	1,626	Auckland ..	2,362	Harwich ..	3,261
Whyalla (S.A.) ..	1,449	Lyttleton ..	2,285	Tyne Ports ..	3,216
Geelong (Vic.) ..	989	Otago ..	1,010	Middlesbrough ..	2,897
Townsville (Qld.) ..	882	Napier ..	422	Plymouth ..	1,947
Hobart (Tas.) ..	837	New Plymouth ..	386		
Port Pirie (S.A.) ..	750	Bluff ..	384		
Cairns (Qld.) ..	613			<i>SCOTLAND—</i>	
Launceston (Tas.) ..	401	<i>ENGLAND AND WALES—</i>		Glasgow ..	4,756
Port Lincoln (S.A.) ..	398	London ..	22,899		
Yampi (W.A.) ..	320	Liverpool (including		<i>NORTHERN IRELAND—</i>	
Gladstone (Qld.) ..	318	Birkenhead) ..	15,084	Belfast ..	977
Burnie (Tas.) ..	300	Southampton ..	14,581		

§ 4. Vessels Built and Registered.

1. Vessels Built.—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1938 and 1949 to 1953, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

RAILWAY SYSTEMS AUSTRALIA 1953

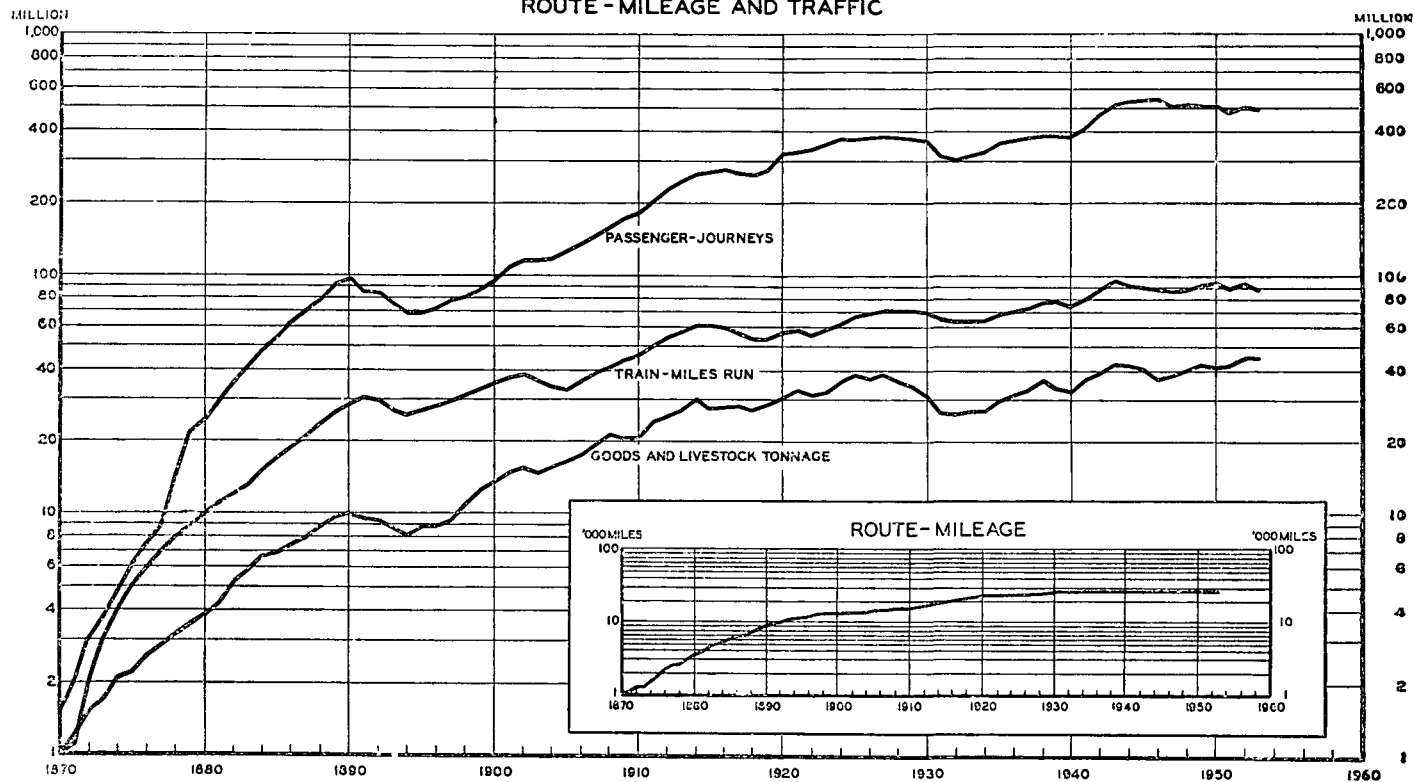
SCALE OF MILES
0 100 200 300 400 500



GOVERNMENT RAILWAYS: AUSTRALIA, 1870 to 1953

RATIO GRAPH

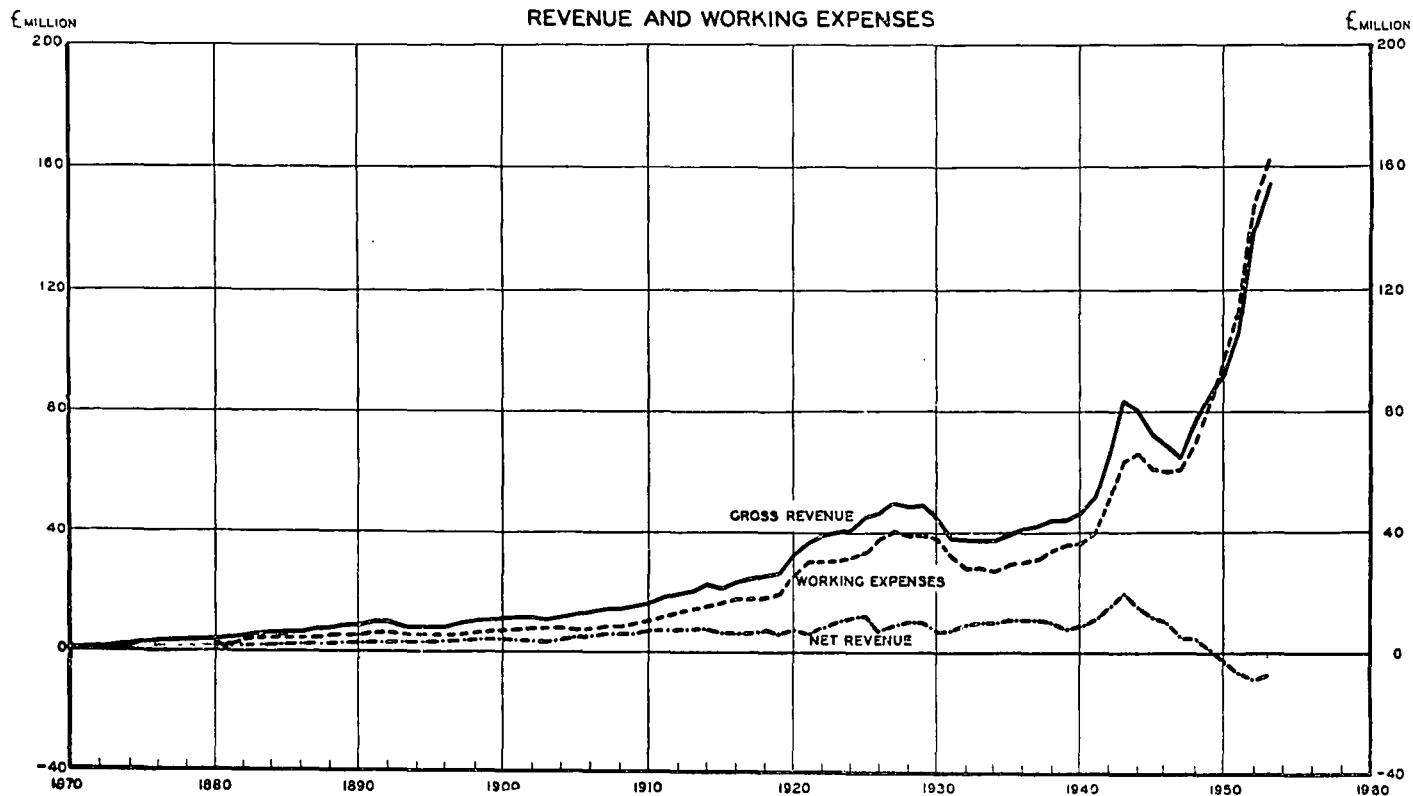
ROUTE - MILEAGE AND TRAFFIC



NOTE:— VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

GOVERNMENT RAILWAYS : AUSTRALIA, 1870 to 1953

REVENUE AND WORKING EXPENSES

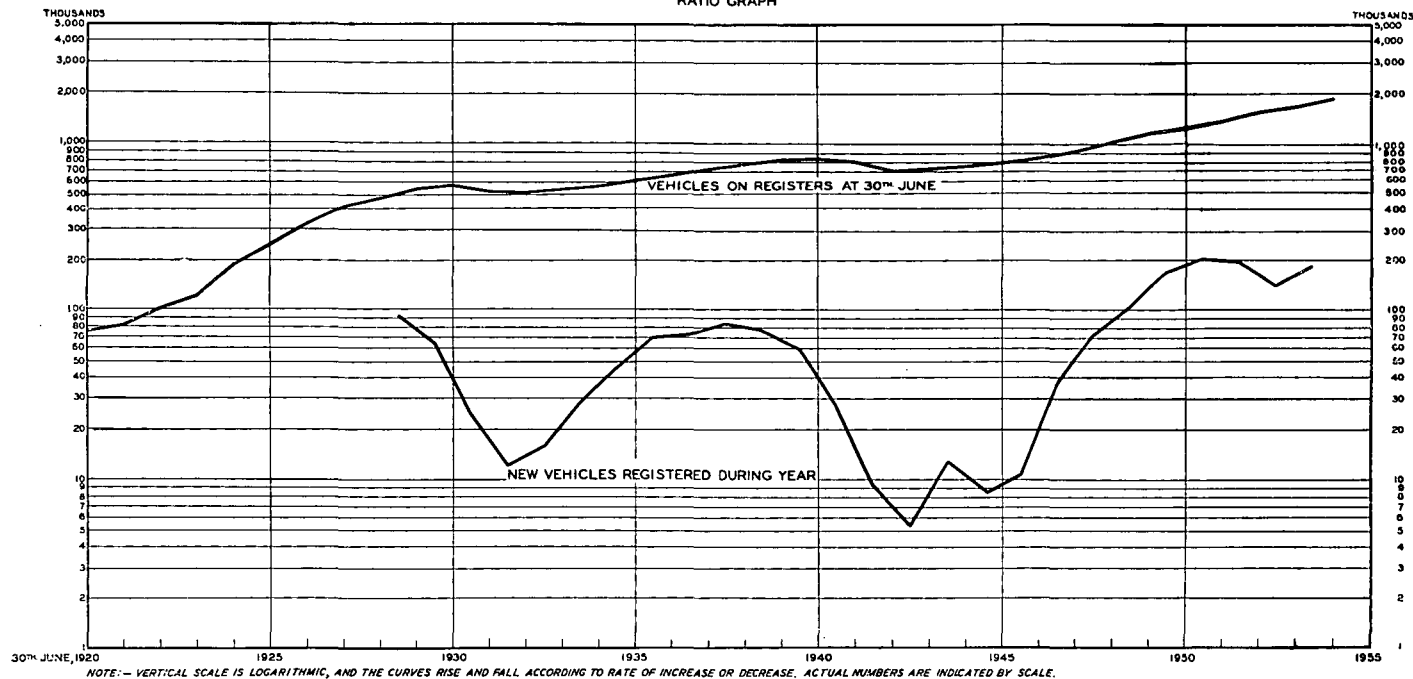


NOTE—Gross Revenue excludes Government Grants.

MOTOR VEHICLE REGISTRATIONS: AUSTRALIA, 1920 to 1954

(EXCLUDING MOTOR CYCLES)

RATIO GRAPH



(See pages 169-70)

VESSELS BUILT AND REGISTERED IN AUSTRALIA.

Year.	Steam.		Motor.(a)		Sailing.		Total.	
	Tonnage.		Tonnage.		Tonnage.		Tonnage.	
	No.		No.		No.		No.	
		Gross. Net.		Gross. Net.		Gross. Net.		Gross. Net.
1938 ..	..	.. ..	11	721 394	..	.. ..	11	721 394
1949 ..	2	9,673 5,427	9	726 383	..	.. ..	11	10,399 5,810
1950 ..	2	8,005 4,141	9	1,213 648	..	.. ..	11	9,218 4,789
1951 ..	2	13,515 7,522	9	5,435 2,843	..	.. ..	11	18,950 10,365
1952 ..	1	4,054 2,070	7	2,520 1,382	1	5 3	9	6,579 3,455
1953 ..	3	11,744 6,647	4	7,889 4,051	3	23 22	10	19,656 10,720

(a) Includes vessels with auxiliary motors.

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State on 31st December, 1953 :—

VESSELS ON STATE REGISTERS, 31st DECEMBER, 1953.

State or Territory.	Steam and Motor.		Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
			Propelled by Sail only.		Fitted with Auxiliary Power.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales	311	68,237	38	2,274	87	1,186	13	1,562	449	73,259
Victoria ..	179	160,591	49	595	51	1,483	40	16,069	319	178,738
Queensland ..	90	28,683	64	1,218	60	826	8	944	222	31,671
South Australia	82	28,325	15	307	39	2,089	39	6,172	175	36,893
Western Australia	76	6,814	211	3,140	53	1,304	4	351	344	11,609
Tasmania ..	41	6,417	44	1,458	85	2,194	2	559	172	10,628
Northern Territory	..	..	16	154	9	177	..	..	25	331
Australia ..	779	299,067	437	9,146	384	9,259	106	25,657	1,706	343,129

3. **World Shipping Tonnage.**—Issues of the Official Year Book prior to No. 39 contained tables, compiled from *Lloyd's Register of Shipping*, showing the number and gross tonnage of steam, motor and sailing vessels owned by the various maritime countries of the world. The tables are not repeated in this issue, but the following information is derived from the same source.

At 1st July, 1953, the total steamers, motorships and sailing vessels of 100 gross tons and upwards throughout the world amounted to 32,603 with a gross tonnage of 93,978,000. Of these totals, steamers numbered 17,864 for 64,237,000 gross tons, motorships 13,933 for 29,115,000 gross tons and sailing vessels and barges 806 for 626,000 gross tons. In addition, there were 3,210 oil tankers of 100 gross tons and upwards with a gross tonnage of 21,964,000. Australian steamers, motor-ships and sailing vessels, 364 for 579,000 gross tons, constituted 1.12 per cent. and 0.62 per cent. respectively of the total numbers and tonnage. There were no Australian oil tankers of 100 gross tons and upwards registered.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements: (a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and overseas countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the overseas vessels (b) some

explanation is necessary. Each State desires that its shipping statistics (which are prepared in this Bureau) should show in full its shipping communication with overseas countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an overseas country—say the United Kingdom—*via* another State, is recorded in the second State as from the United Kingdom *via* States, thus distinguishing the movement from a direct overseas entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from the United Kingdom *via* other States. On an inward voyage the *clearance* from the first State to the second State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movement, must for the individual States be recorded as “Overseas *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

ITINERARY OF AN OVERSEA VESSEL ON AUSTRALIAN COAST.

Particulars.	Recorded as—	
	For the State and for Australia.	For the States.
Inward Voyage—		
Enters Fremantle from United Kingdom	Overseas direct	Interstate direct
Clears Fremantle for Adelaide	.. ..	Overseas <i>via</i> States
Enters Adelaide from United Kingdom	.. ..	Interstate direct
<i>via</i> Fremantle	.. ..	Overseas <i>via</i> States
Clears Adelaide for Melbourne	.. ..	Interstate direct
Enters Melbourne from United Kingdom	.. ..	Overseas <i>via</i> States
<i>via</i> Adelaide	.. ..	Interstate direct
Clears Melbourne for Sydney	.. ..	Overseas <i>via</i> States
Enters Sydney from United Kingdom <i>via</i> Melbourne	.. ..	Interstate direct
Outward Voyage—		
Clears Sydney for United Kingdom <i>via</i> Melbourne	.. ..	Interstate direct
Enters Melbourne from Sydney	.. ..	Overseas <i>via</i> States
Clears Melbourne for United Kingdom <i>via</i> Adelaide	.. ..	Interstate direct
Enters Adelaide from Melbourne	.. ..	Overseas <i>via</i> States
Clears Adelaide for United Kingdom <i>via</i> Fremantle	.. ..	Interstate direct
Enters Fremantle from Adelaide	.. ..	Overseas <i>via</i> States
Clears Fremantle for United Kingdom	Overseas direct	Interstate direct

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as “Overseas direct” gives the overseas shipping for Australia as a whole; (b) the aggregate for all ships recorded in any State as “Overseas direct” plus those recorded as “Overseas *via* States” gives the total *overseas shipping* for that State; and (c) the aggregate for all ships recorded as “Overseas *via* States” may also be used, together with those recorded as “Interstate direct”, to furnish figures showing the total interstate movement of shipping.

It should be remembered, however, that all overseas vessels do not follow the same itinerary as the vessel in the table above.

2. **Interstate Movement.**—(i) *Interstate Direct.* The following table shows the number of entrances and the net tonnage of vessels recorded into each State from any other State (including overseas vessels on interstate direct voyages) during each of the years 1950–51 to 1952–53. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded.

INTERSTATE MOVEMENT OF SHIPPING : ENTRANCES OF VESSELS INTERSTATE DIRECT.

State or Territory.	Number.			Net Tons ('000).		
	1950-51.	1951-52.	1952-53.	1950-51.	1951-52.	1952-53.
New South Wales	1,122	1,189	1,469	3,391	3,516	4,141
Victoria	1,288	1,322	1,549	3,399	3,612	3,934
Queensland	395	413	494	993	1,034	1,162
South Australia	790	807	859	2,889	3,203	3,054
Western Australia	484	512	497	2,472	2,603	2,575
Tasmania	796	795	864	759	806	759
Northern Territory	20	27	29	30	44	40
Australia	4,895	5,065	5,761	13,933	14,818	15,665

From 1938-39 the total net tonnage of interstate shipping declined steadily each year until 1942-43, when it represented only 38 per cent. of the total for the pre-war year. It remained practically unchanged during the next three years, but increased by almost one-third in 1946-47. By 1952-53 the total had risen to 79 per cent. of the 1938-39 total.

(ii) *Oversea via States.* To ascertain the aggregate movement of shipping between the States, including the total interstate movement of oversea vessels, the figures in the following table, which show the number of entrances and clearances of vessels to and from oversea countries via other Australian States and the aggregate tonnage, must be added to those in the preceding table.

INTERSTATE MOVEMENT OF SHIPPING : ENTRANCES AND CLEARANCES OF VESSELS OVERSEA VIA OTHER AUSTRALIAN STATES, 1952-53.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances No. ..	494	585	233	315	39	97	1	1,764
'000 net tons ..	2,759	3,322	1,263	1,871	186	510	7	9,918
Clearances No. ..	474	441	172	287	36	103	..	1,513
'000 net tons ..	2,538	2,552	886	1,521	194	531	..	8,222

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyages.

(iii) *Total, Australia.* The following table shows the total interstate movement of shipping, including oversea vessels travelling oversea via States and interstate direct, for each of the years 1938-39 and 1948-49 to 1952-53 :—

INTERSTATE MOVEMENT OF SHIPPING : TOTAL, AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Entrances .. No. ..	9,603	6,213	6,588	6,723	6,694	7,525
'000 net tons ..	29,977	20,651	23,110	23,852	24,072	25,583
Clearances .. No. ..	9,669	6,212	6,710	6,754	6,652	7,481
'000 net tons ..	30,000	20,553	23,296	23,946	23,875	25,359

(iv) *Total, States.* The following table shows, for each State, the number of entrances and clearances of vessels from and for other States (including the interstate movement of oversea vessels) during the year 1952-53, together with the aggregate net tonnage.

INTERSTATE MOVEMENT OF SHIPPING : TOTAL, STATES, 1952-53.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	1,963	2,134	727	1,174	536	961	30	7,525
'000 net tons		6,900	7,256	2,425	4,925	2,761	1,269	47	25,583
Clearances	No.	2,062	2,090	654	1,167	482	997	29	7,481
'000 net tons		7,371	7,074	2,005	4,887	2,648	1,331	43	25,359

3. **Shipping Engaged Solely in Interstate Trade.**—The following table shows, for each State, the number of entrances direct from other States, of vessels engaged solely in interstate trade during the year 1952-53, together with the net tonnage.

SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE : ENTRANCES, 1952-53.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Australia.
Ships Entered	..	1,229	1,237	345	697	182	836	29	4,555
Net Tons	'000	3,067	2,117	617	2,062	689	630	40	9,222

4. **Interstate and Coastal Shipping Services.**—The following table shows particulars, so far as they are available, of all vessels engaged in the regular interstate or coastal services at the end of each of the years 1950 to 1953 compared with the year 1939 :—

INTERSTATE AND COASTAL SHIPPING SERVICES : AUSTRALIA.

Particulars.		1939.	1950.	1951.	1952.	1953.
Number of companies operating	..	34	31	32	31	31
Number of vessels	..	162	179	173	173	172
Tonnage { Gross	..	361,066	490,496	492,558	494,580	501,782
Net	..	199,585	272,801	272,003	273,824	277,294
Horse-power (Nominal)	..	39,096	57,500	47,027	47,126	49,159
Number of passengers for which licensed(a)	..	3,385	2,003	2,171	2,244	2,208
Complement of Crew	..	1,370	559	706	648	621
Masters and officers	..	565	650	629	652	650
Engineers	..	589	736	738	742	751
Other	..	4,365	4,985	4,907	4,884	4,886

(a) Excluding purely day-passenger accommodation.

NOTE.—This table excludes particulars of a small number of chartered vessels for which returns could not be obtained.

§ 6. Shipping Cargo.

1. **Oversea and Interstate Cargo.**—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in Australian ports for the years 1948-49 to 1952-53 compared with the year 1938-39. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

SHIPPING CARGO MOVEMENT : AUSTRALIA.

('000.)

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
1938-39	4,208	2,191	5,138	1,093	7,221	1,731
1948-49	5,849	2,572	5,423	1,366	6,230	1,173
1949-50	7,686	3,576	5,061	1,388	6,419	1,207
1950-51	9,084	3,989	5,405	1,295	6,723	1,326
1951-52	9,727	4,682	4,487	1,231	7,697	1,324
1952-53	7,733	1,929	6,045	1,452	8,447	1,275

(ii) *Principal Ports.* The following table shows the tonnage of *oversea* and interstate cargo discharged and shipped at principal ports during 1952-53.

CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1952-53.
(^{'000.})

Port.	Discharged.				Shipped.			
	Oversea.		Interstate.		Oversea.		Interstate.	
	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.
Sydney	1,712	731	489	339	700	387	337	369
Newcastle	413	..	1,789	..	315	2	2,531	..
Port Kembla	165	..	1,846	..	295	..	547	..
Other .. .. .	..	..	..	..	29	14	4	2
Total, New South Wales	2,290	731	4,124	339	1,339	403	3,419	371
Melbourne	2,112	609	2,051	189	630	504	393	262
Geelong	321	18	220	..	377	1	11	1
Portland	41	3	3	..	9	..	..	..
Total, Victoria	2,474	630	2,274	189	1,016	505	404	263
Brisbane	529	138	203	220	396	101	51	69
Cairns	51	4	24	18	145	4	106	22
Townsville	88	12	31	24	180	7	85	2
Other	57	1	26	21	296	12	392	5
Total, Queensland	725	155	284	283	1,017	124	634	98
Port Adelaide	726	234	1,134	203	543	137	196	205
Port Pirie	96	..	95	..	422	..	157	..
Walleroo	56	2	..	..	173	..	43	..
Whyalla	7	..	300	..	112	..	2,526	..
Other	60	..	48	..	304	..	40	..
Total, South Australia	945	236	1,577	203	1,554	137	2,962	205
Fremantle	913	114	250	250	714	76	37	55
Bunbury	40	..	1	..	133	24	5	43
Geraldton	60	..	..	..	144	50	17	..
Yampi .. .. .	..	..	2	..	..	..	554	..
Other	54	4	5	4	17	25	15	10
Total, Western Australia	1,067	118	258	254	1,008	175	628	108
Hobart	159	32	363	25	69	86	200	26
Devonport	21	..	15	21	10	4	41	22
Launceston	1	27	..	148	..	18	..	120
Other	19	..	68	30	32	..	154	62
Total, Tasmania	200	59	446	224	111	108	395	230
Darwin (Northern Territory)	32	..	32	..	..	..	5	..
AUSTRALIA	7,733	1,929	8,995	1,492	6,045	1,452	8,447	1,275

Corresponding figures for the year 1951-52 may be found in *Transport and Communication Bulletin* No. 43, p. 46.

2. Oversea Cargo by Nationality of Vessels.—The following table shows the total overseas cargo discharged and shipped combined, according to the nationality of the vessels, during the years 1950-51 to 1952-53 :—

**OVERSEA CARGO DISCHARGED AND SHIPPED : NATIONALITY OF VESSELS,
AUSTRALIA.**

('000.)

Vessels Registered at Ports in—	1950-51.		1951-52.		1952-53.	
	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.	Tons Wt.	Tons Meas.
British Countries—						
Australia	164	98	136	74	162	83
United Kingdom ..	9,128	3,590	7,879	3,678	7,294	2,286
Canada	8	46	10	8	45	..
New Zealand	77	35	131	231	334	231
Other British	341	169	282	136	232	87
Total British	9,718	3,988	8,438	4,127	8,067	2,687
Proportion of Total %	67.07	75.47	59.36	69.80	58.55	79.45
Foreign Countries—						
Denmark	344	70	324	65	298	20
France	211	38	222	56	226	29
Germany .. ..	..	..	51	44	35	..
Italy	167	77	311	184	299	43
Japan .. ..	..	..	15	..	291	4
Netherlands	456	160	687	198	822	138
Norway	1,517	409	1,972	555	1,681	121
Panama	(a)	(a)	977	34	684	37
Sweden	404	271	414	263	576	118
United States of America ..	303	161	371	246	347	151
Other Foreign	1,369	110	432	141	451	34
Total Foreign	4,771	1,296	5,776	1,786	5,710	695
Proportion of Total %	32.93	24.53	40.64	30.20	41.45	20.55
Grand Total	14,489	5,284	14,214	5,913	13,777	3,382

(a) Prior to 1st July, 1951, separate figures for vessels of Panamanian nationality were not available.

Owing to war conditions the proportion of cargo carried in British vessels decreased from 72.43 per cent. in 1938-39 to 41.37 in 1943-44, but increased to 77.51 per cent. in 1946-47. It has since declined, and in 1952-53 was 62.67 per cent.

§ 7. Control of Shipping.

1. War-time Control.—An account of the action taken by the Commonwealth Government to control and regulate shipping throughout Australian waters during the 1939-45 War was given in Official Year Book No. 36, pp. 121-130.

2. Post-war Control and Developments.—A brief account of the post-war control of shipping and the establishment of the Australian Stevedoring Industry Board and the Australian Shipping Board will be found in Official Year Book No. 39, pp. 147-8.

The Maritime Industry Commission established during the 1939-45 War under National Security legislation was abolished on 19th December, 1952. Permanent legislation to cover many of the matters formerly dealt with by the Commission was enacted in 1952 in the form of amendments to the Navigation Act 1912-1950 by Act No. 109 of 1952 (*see* page 150).

As at 31st December, 1953, the Australian Shipping Board operated 39 vessels totalling 143,707 gross tons, of which four vessels totalling 24,331 gross tons were operated on time charter from private owners. The Government-owned shipping, totalling 119,376 gross tons (of which two vessels totalling 4,601 gross tons were on charter to private companies or other shipping organizations), comprised thirteen "A" or River Class vessels of an average of 5,149 gross tons, three "B" Class vessels of an average of 3,936 gross tons, eight "D" Class vessels of an average of 2,336 gross tons, five "E" Class vessels of an average of 584 gross tons, all of which were built in Australian yards, plus four vessels, totalling 14,422 gross tons, which were built overseas.

In the international sphere, ratification is still being awaited from 21 ship-owning nations of a Convention establishing an Inter-Governmental Maritime Consultative Organization within the framework of the United Nations. The major objectives of this Organization are to provide machinery for co-operation among Governments with shipping engaged in international trade, and to encourage the removal by Governments of discriminatory action and unnecessary restrictions regarding such shipping.

This Organization is designed to replace the United Maritime Consultative Council which was established on a tentative basis after the expiry of the war-time United Maritime Authority and Combined Adjustment Board.

Up to 1st July, 1954, ratifications by fourteen countries had been lodged, and there is a possibility of the seven others ratifying in the near future, thus bringing the organization into force.

§ 8. Miscellaneous.

1. **Lighthouses.**—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars were available was published in *Transport and Communication Bulletin* No. 14.

2. **Distances by Sea.**—The distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia are shown in *Transport and Communication Bulletin* No. 44.

3. **Shipping Freight Rates.**—The *Quarterly Summary of Australian Statistics* shows a list of the ruling freight rates for general merchandise in respect of both oversea and interstate shipments. At 31st December, 1953, the rate for general merchandise from Australia to the United Kingdom and Continent was 155s. od. per ton weight or measurement while the rates for wheat (bagged) and wool (greasy) were respectively 95s. od. per ton weight and 2.76d. less 7 per cent. per lb. These rates, which are expressed in sterling, are subject to an adjustment of 25½ per cent. when freight is prepaid in Australia.

4. **Depth of Water at Main Ports.**—A table, compiled from information supplied by the Director of Navigation, showing the depth of water available and tides at principal ports of Australia at 1st January, 1954, is included in *Transport and Communication Bulletin* No. 44.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping casualties reported on or near the coast during the years 1949 to 1953 are shown in the table below. This information also was furnished by the Director of Navigation.

SHIPPING LOSSES AND CASUALTIES : AUSTRALIA.

Year.	Shipping Losses.			Shipping Casualties.		
	Vessels.	Net Tons.	Lives Lost.	Vessels.	Net Tons.	Lives Lost.
1949 ..	3	3,705	12	155	435,935	12
1950 ..	4	9,735	20	191	611,084	22
1951 ..	5	2,908	5	205	650,718	5
1952 ..	1	197	16	153	431,851	16
1953 ..	..	..	..	85	242,972	..

6. **Commonwealth Navigation and Shipping Legislation.**—By Section 51 (i) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws in respect of trade and commerce with other countries and among the States. By Section 98 the power in this particular respect is further defined as extending to navigation and shipping.

A review of the introduction and development of the Navigation Act 1912-1950 was given in Official Year Book No. 40, pp. 110-2. Amendments to the Principal Act were made by the Navigation Act 1952, the provisions of which covered the settlement of maritime industrial disputes, standards of accommodation to be provided on ships and the engagement and discipline of seamen.

Other shipping Acts under the Trade and Commerce power of the Commonwealth are the Sea Carriage of Goods Act 1924, the Seamen's Compensation Act 1911-1949, and the Seamen's War Pensions and Allowances Act 1940-1952.

7. **Ports and Harbours.**—A report on "The Turn-round of Ships in Australian Ports" was submitted to the Commonwealth Government by Henry Basten, C.M.G., on 4th January, 1952. The report deals with all factors affecting the turn-round of ships and congestion in Australian ports and the measures that might be taken to effect improvement on both short-term and long-term bases.

B. GOVERNMENT RAILWAYS.

1. **General.**—The policy of Government ownership and control of railways has been adopted in each State and at 30th June, 1953, 24,607 route-miles were owned by the State Governments and 2,201 route-miles by the Commonwealth Government. In the following tables details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line are shown in the *Transport and Communication Bulletin* issued by this Bureau.

In some States, there are comparatively small privately-owned railway systems offering passenger and freight services to the public. Details of these private railways were included in Official Year Book No. 39 and previous issues, but owing to their relative unimportance and the incomplete nature of the statistics available the series has been discontinued.

2. **Railway Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Official Year Books No. 6, p. 681 and No. 22, p. 259. The main ports on the mainland are connected by lines running approximately parallel to the coast and are the focal points of lines which radiate inland to the agricultural, mining and pastoral areas of the continent to a distance which reaches 600 miles at some points. However, Darwin in the Northern Territory is not connected by rail to any other port in Australia. A 3 ft. 6 in. gauge railway extends southward from Darwin to Birdum, a distance of 317 miles, and from Port Augusta in South Australia northwards to Alice Springs in Central Australia, a distance of 771 miles. The report by the late Sir Harold Clapp to the Commonwealth

Government, details of which appear in Official Year Book No. 37, p. 146, did not recommend the linking of the termini at Alice Springs and Birdum.* An all-weather road was built to cover the intervening distance and much goods traffic now passes along this road. The travelling times of trains on the main lines of Australia are being lessened and the haulage capacity increased by the introduction of diesel and diesel-electric locomotives. Eleven diesel-electric locomotives now operate all train services on the Trans-Australia Railway between Port Pirie and Kalgoorlie, and, in the near future, steam locomotive power on the Central and North Australia Railways will be replaced by diesel-electric power. The State railway systems also are making increasing use of diesel-electric locomotives, particularly to lessen the time taken on long-distance passenger and goods services.

3. **Standardization of Railway Gauges.**—A summary of the report and recommendations relating to the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge, made in March, 1945 at the request of the Commonwealth Government by the late Sir Harold Clapp, then Director-General of Land Transport, Commonwealth Department of Transport, together with an outline of the agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia regarding the standardization of railway gauges in their respective States is contained in Official Year Book No. 37 (Chapter V.—Transport and Communication, pp. 146–9). The agreement, which was signed in 1946, was ratified by the Governments of the Commonwealth, of Victoria and of South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia, and the necessary legislation was enacted in 1949 by each Government concerned. Action was also taken to invite the Victorian Government to discuss the subject of a separate agreement, but to date there has been no legislative action. The Commonwealth–South Australia Agreement provides for the same standardization work to be carried out in South Australia as would have been carried out had New South Wales ratified the original Commonwealth–Three States Agreement, and that over a period of years the Commonwealth should contribute 70 per cent. and South Australia be responsible for the remaining 30 per cent. of the estimated cost.

4. **Government Railways: Lines under Construction and Lines Authorized, 1952–53.**—

(i) *Lines under Construction.* In spite of the great extensions of State railways since 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States was to extend the existing lines inland in the form of light railways as settlement increased, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting was kept in view.

(a) *New South Wales.* Practically all work on construction projects was suspended early in 1952–53 owing to lack of funds. The work at Circular Quay to provide the connecting link between St. James and Wynyard stations was continued until October, 1952, while that on the eastern suburbs railway was suspended in August, 1952. The duplication and deviation of the main northern line between Braxton and Muswellbrook and the quadruplication of the Lidcombe to Penrith line were continued until September, 1952, small sections of each line being completed and brought into use.

(b) *Victoria.* The work on the duplication and electrification of sections of the Gippsland line continued throughout the year. Sections of line from Longwarry to Yarragon (18 miles) and from Nar Nar Goon to Tynong (3½ miles) were completed and brought into service. Earthworks for the remaining sections between Dandenong and Longwarry were nearing completion and track-laying was in progress between Pakenham and Nar Nar Goon. Some earthworks and retaining walls were completed in connexion with the duplication of the Ashburton line. Progress was made with the erection of the overhead wiring structures.

* This is, however, provided for in the Commonwealth–South Australia Agreement referred to in para. 3.

(c) *Queensland.* Duplication of small sections of suburban line was completed and the sections were placed in service during the year. Progress in the quadruplication of the Roma Street to Corinda suburban line was confined to earthworks and bridge widening. However, shortage of funds caused the suspension of work on this project and on the electrification of the Brisbane suburban railway. The Callide Coalfield Railway was completed during the year.

(d) *South Australia.* The 5 ft. 3 in. gauge line from Naracoorte to Mount Gambier was officially opened at Mount Gambier on 23rd June, 1953. Although broad gauge working was introduced immediately, a considerable amount of work still remained to be completed, both along the line and in the yards at Mount Gambier. A start was made on the earthworks for the conversion of the Mount Gambier-Millicent line to 5 ft. 3 in. gauge.

(e) *Other.* At 30th June, 1953, there was no railway construction work in progress in Western Australia or Tasmania or for the Commonwealth Government.

(ii) *Lines Authorized for Construction.* In the States of New South Wales, Victoria, Queensland, South Australia and Western Australia at 30th June, 1953 there were certain lines authorized for construction but not commenced. These lines were authorized many years ago, some as early as 1910 and none later than 1933. Particulars may be found in Official Year Book No. 36, p. 133. There have been no later authorizations.

5. *Grafton-South Brisbane (Uniform Gauge) Line.*—For particulars of the construction of the Grafton-South Brisbane (Uniform Gauge) Line completed in 1930, which constituted the first step towards uniform gauge railway communication between the capitals of the mainland States, see Official Year Books No. 31, p. 122 and No. 38, p. 165.

6. *Mileage Open for Traffic, all Lines.*—Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passengers or the public conveyance of goods.

The following table shows the route-mileage of Commonwealth and State lines open in each State at different periods since the inauguration of railways in Australia in 1854 up to the year 1952-53 :—

GOVERNMENT RAILWAYS : ROUTE-MILEAGE OPEN.
(Miles.)

At 30th June—	N.S.W. (a)	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(b) ..	14	2	..	7	..	..	..	..	23
1861(b) ..	73	114	..	56	..	..	..	..	243
1871(b) ..	358	276	218	133	..	45	..	..	1,030
1881(b) ..	996	1,247	800	832	92	45	..	..	4,012
1891 ..	2,182	2,763	2,195	1,666	198	351	145	..	9,500
1901 ..	2,846	3,237	2,801	1,736	1,355	457	145	..	12,577
1911 ..	3,762	3,523	3,868	1,935	2,376	470	145	..	16,079
1921 ..	5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1931 ..	6,247	4,514	6,529	3,898	4,634	665	317	5	26,809
1941 ..	6,368	4,518	6,567	3,809	4,835	642	490	5	27,234
1951 ..	6,354	4,445	6,560	3,805	4,682	613	490	5	26,954
1952 ..	6,354	4,453	6,560	3,805	4,567	613	490	5	26,847
1953 ..	6,354	4,419	6,560	3,805	4,562	613	490	5	26,808

(a) Includes route-mileage under the control of the Victorian Railways Department as follows—1931, 203 route-miles; 1941 and later years, 241 route-miles.

(b) At 31st December.

The next table shows for each State the length of Government lines open in relation to both population and area at 30th June, 1953.

GOVERNMENT RAILWAYS : ROUTE-MILEAGE OPEN AT 30th JUNE, 1953.
(Miles.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-mileage open	6,354	4,419	6,560	3,805	4,562	613	490	5	26,808
Per 1,000 of population ..	1.85	1.85	5.18	5.03	7.33	1.97	28.71	0.17	3.04
Per 1,000 square miles	20.53	50.28	9.78	10.01	4.67	23.38	0.94	5.32	9.01

7. *Classification of Lines according to Gauge, 1952-53.*—The next table shows the route-mileage of Government railways open in each State and Territory at 30th June, 1953, classified according to gauge.

GOVERNMENT RAILWAYS : GAUGES, AT 30th JUNE, 1953.
(Route-miles.)

Gauge.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5 ft. 3 in. ..	(a) 241	4,308	..	(b) 1,594	..	..	..	..	6,143
4 ft. 8½ in. ..	6,113	..	69	654	454	..	..	5	7,295
3 ft. 6 in. ..	..	..	6,461	1,557	4,108	613	490	..	13,229
2 ft. 6 in. ..	..	111	..	..	..	..	..	..	111
2 ft. 0 in. ..	..	..	30	..	..	..	..	..	30
Total ..	6,354	4,419	6,560	3,805	4,562	613	490	5	26,808

(a) Under the control of the Victorian Railways Department.
mixed 5 ft. 3 in. and 3 ft. 6 in. gauge.

(b) Includes 124 route-miles of

NOTE.—The table above includes 2,201 miles of Commonwealth Government railways as follows:—
4 ft. 8½ in. gauge—South Australia 654 miles, Western Australia 454 miles and Australian Capital Territory 5 miles; 3 ft. 6 in. gauge—South Australia 598 miles and Northern Territory 490 miles.

8. *Summary of Operations, 1952-53.*—In the following table a summary is shown of the working of Government railways open in Australia during the year ended 30th June, 1953:—

GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1952-53.

Particulars.	Commonwealth Railways.	State Railways.	Total.
Route-mileage open 30th June, 1953 .. miles	2,201	24,607	26,808
Gross revenue £'000	2,710	152,122	154,832
" " per train-mile pence	374.16	401.68	401.16
Working expenses £'000	(a) 2,728	158,826	161,554
" " per train-mile pence	376.63	419.38	418.58
Net revenue £'000	— 18	— 6,704	— 6,722
" " per train-mile pence	— 2.47	— 17.70	— 17.42
Train-miles run '000	1,738	90,891	92,629
Passenger-journeys '000	190	497,430	497,620
Goods, etc., carried '000 tons	660	43,723	44,383
Average number of employees(b)	2,526	133,393	135,919
" earnings per employee £	686	849	796

(a) Excludes amounts paid for Commissioner's salary (£3,500), Government contributions under the Superannuation Act (£44,394), Accident and Insurance Fund (£22,941) and proportion of salaries of Auditor-General's staff (£2,000).

(b) Excludes construction staff except in respect of Victoria.

NOTE.—Minus sign (—) denotes loss.

9. *Summary, States, 1952-53.*—The following table shows, for Government railways in Australia, particulars of the mileage open, cost of construction and equipment, passengers and goods carried and train-miles run during 1952-53.

GOVERNMENT RAILWAYS : SUMMARY, 1952-53.

System.	Mileage Open.(a)		Cost of Construction and Equipment during Year.	Passenger-journeys.	Goods and Livestock Carried.	Train-miles Run.(b)
	Route.	Track.				
	Miles.	Miles.	£'000.	'000.	'000 tons.	'000.
New South Wales ..	6,113	8,443	17,163	271,699	(c) 19,121	(d) 40,193
Victoria ..	(e) 4,660	(e) 6,065	6,756	162,857	9,192	17,690
Queensland ..	6,560	7,501	5,180	35,819	7,351	(c) 18,564
South Australia ..	2,553	3,163	3,305	17,565	4,543	7,199
Western Australia ..	4,108	4,685	6,049	6,339	2,619	5,255
Tasmania ..	613	707	1,118	3,151	897	1,990
Commonwealth ..	2,201	2,364	2,101	190	660	1,738
Australia ..	26,808	32,928	41,672	497,620	44,383	92,629

(a) At 30th June, 1953.

(b) Excludes assistant and light miles.

(c) Partly estimated.

(d) Estimated.

(e) Includes 241 miles in New South Wales.

10. **Gross Revenue.**—(i) *General.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and livestock; and (c) rents and miscellaneous items. State Government grants are excluded. Details of these grants made during 1952-53 are as follows:—£800,000 for the working of country development lines in New South Wales; £3,000 towards reduction in outer suburban fares and £1,798,278 to limit interest payments to 1 per cent. on loan liability in Victoria; £4,050,000 towards working expenses and £800,000 towards interest payments in South Australia; and £10,000 for sick leave funds in Tasmania.

(ii) *Coaching, Goods and Miscellaneous Receipts.* (a) *Summary.* In the following table the gross revenue is shown for the years 1950-51 to 1952-53, together with the revenue per average route-mile worked and per train-mile run:—

GOVERNMENT RAILWAYS : GROSS REVENUE.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
TOTAL GROSS REVENUE. (£'000.)								
1950-51 ..	49,448	18,651	19,772	7,315	6,968	1,337	2,153	105,644
1951-52 ..	68,910	24,186	23,357	9,457	8,885	1,798	2,925	139,518
1952-53 ..	72,676	31,864	25,985	11,891	7,667	2,039	2,710	154,832
GROSS REVENUE PER AVERAGE ROUTE-MILE WORKED. (£.)								
1950-51 ..	8,089	3,979	3,014	2,865	1,648	2,180	978	3,919
1951-52 ..	11,273	5,160	3,561	3,704	2,160	2,932	1,329	5,198
1952-53 ..	11,889	6,811	3,961	4,658	1,866	3,327	1,231	5,772
GROSS REVENUE PER TRAIN-MILE RUN. (Pence.)								
1950-51 ..	311.38	307.13	255.65	275.19	234.38	154.87	280.69	285.93
1951-52 ..	413.33	341.99	300.54	326.86	313.53	206.24	371.70	358.63
1952-53 ..	433.96	432.29	335.94	396.40	350.13	245.96	374.16	401.16

(a) Excludes Government grants, see para. 10 (i) above.

(b) *Distribution.* The following table shows the gross revenue for the year 1952-53 classified according to the main three sources of receipts and the proportion of the total receipts obtained from each source.

GOVERNMENT RAILWAYS: DISTRIBUTION OF GROSS REVENUE, 1952-53.

System.	Gross Revenue.			Proportion of Total.		
	Coaching.	Goods and Livestock.	Miscellaneous.	Coaching.	Goods and Livestock.	Miscellaneous.
	£'000.	£'000.	£'000.	%	%	%
New South Wales ..	17,664	48,728	6,284	24.30	67.05	8.65
Victoria ..	10,498	19,381	1,985	32.95	60.82	6.23
Queensland ..	4,196	21,007	782	16.15	80.84	3.01
South Australia ..	1,771	9,233	887	14.89	77.65	7.46
Western Australia ..	987	6,203	477	12.87	80.91	6.22
Tasmania ..	214	1,776	49	10.50	87.10	2.40
Commonwealth ..	690	1,798	222	25.46	66.35	8.19
Australia ..	36,020	108,126	10,686	23.27	69.83	6.90

NOTE.—Details of gross revenue classified according to coaching, goods and livestock and miscellaneous receipts for the years 1943-44 to 1952-53 are shown in *Transport and Communication Bulletin* No. 44.

11. *Working Expenses.*—(i) *General.* In order to make an adequate comparison of the working expenses as between the several States and Territories, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same systems. When traffic is light, the proportion of working expenses to revenue is naturally greater than when traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

Working expenses, wherever presented in the Railways section of this chapter, exclude interest, sinking fund, exchange and certain other payments (*see paras. 12 and 13 following*).

During the war years large amounts were set aside by the Railways as reserves, mainly to provide for depreciation and accrued leave, to be expended as circumstances permit. Particulars of these amounts, which were included in working expenses and which in the year 1942-43 aggregated nearly £10,000,000 and over the whole period about £30,000,000, were given in *Official Year Book* No. 38, page 175.

(ii) *Working Expenses.* The following table shows the total working expenses, the ratio of working expenses to gross revenue and working expenses per average route-mile worked and per train-mile run for the years 1950-51 to 1952-53:—

GOVERNMENT RAILWAYS: WORKING EXPENSES.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
							(a)	
TOTAL WORKING EXPENSES.								
(£'000.)								
1950-51 ..	49,168	20,811	19,427	9,992	8,932	2,009	2,434	112,773
1951-52 ..	64,020	29,612	24,646	13,505	11,016	2,567	2,808	148,174
1952-53 ..	66,452	34,008	27,979	15,013	12,510	2,864	2,728	161,554

GOVERNMENT RAILWAYS: WORKING EXPENSES—*continued*.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth. (a)	Australia.
RATIO OF WORKING EXPENSES TO GROSS REVENUE. (Per cent.).								
1950-51 ..	99.43	111.58	98.26	136.60	128.17	150.35	113.04	106.74
1951-52 ..	92.90	122.43	105.51	142.81	123.98	142.81	95.99	106.20
1952-53 ..	91.44	106.73	103.67	126.26	163.18	140.44	100.66	104.34
WORKING EXPENSES PER AVERAGE ROUTE-MILE WORKED. (£).								
1950-51 ..	8,043	4,440	2,961	3,914	2,112	3,278	1,106	4,184
1951-52 ..	10,473	6,318	3,757	5,290	2,678	4,188	1,276	5,521
1952-53 ..	10,871	7,270	4,265	5,881	3,045	4,672	1,239	6,023
WORKING EXPENSES PER TRAIN-MILE RUN. (Pence.)								
1950-51 ..	309.62	342.63	251.19	375.90	300.41	232.84	317.29	305.21
1951-52 ..	384.00	418.72	317.11	466.79	388.72	294.54	356.80	380.88
1952-53 ..	396.80	461.38	361.71	500.49	571.34	345.42	376.63	418.58

(a) See para. 8, note (a), page 153.

(iii) *Distribution*. The following table shows the total working expenses for the year 1952-53 classified according to the main four expenditure headings.

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES, 1952-53.
(£'000.)

Branch.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wth. (a)	Aust.
Maintenance of Way and Works	11,220	6,653	6,492	2,310	2,245	639	818	30,377
Rolling Stock	26,710	12,273	13,391	7,632	5,681	1,289	1,220	68,196
Transportation and Traffic	15,186	8,439	6,436	3,594	2,673	583	500	37,411
Other	13,336	6,643	1,660	1,477	1,911	353	190	25,570
Total	66,452	34,008	27,979	15,013	12,510	2,864	2,728	161,554

(a) See para. 8, note (a), page 153.

12. *Net Revenue*.—The following table shows for the years 1950-51 to 1952-53 the net revenue, i.e., the excess of gross revenue over working expenses, the amount of such net revenue per average route-mile worked and per train-mile run, the interest on railway loan expenditure and the profit or loss after paying interest :—

GOVERNMENT RAILWAYS: NET REVENUE, INTEREST, AND PROFIT OR LOSS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
TOTAL NET REVENUE. (£'000.)								
1950-51 ..	280	-2,159	344	-2,677	-1,963	-673	(a)-280	-7,128
1951-52 ..	4,890	-5,426	-1,288	-4,048	-2,131	-770	(a) 177	-8,656
1952-53 ..	6,224	-2,144	-1,993	-3,122	-4,844	-825	(a)- 18	-6,722

GOVERNMENT RAILWAYS: NET REVENUE, INTEREST, AND PROFIT OR LOSS—*continued.*

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
NET REVENUE PER AVERAGE ROUTE-MILE WORKED. (£.)								
1950-51 ..	46	— 461	53	—1,049	— 464	—1,098	(a) —128	—264
1951-52 ..	800	—1,158	—196	—1,586	— 518	—1,256	(a) 53	—323
1952-53 ..	1,018	— 459	—304	—1,223	—1,179	—1,345	(a) — 5	—251
NET REVENUE PER TRAIN-MILE RUN. (Pence.)								
1950-51 ..	1.76	—35.56	4.46	—100.71	— 66.03	—77.97	a—36.60	—19.29
1951-52 ..	29.33	—76.73	—16.57	—139.93	— 75.19	—88.30	a 14.90	—22.25
1952-53 ..	37.16	—29.09	—25.77	—104.09	—221.21	—99.46	a— 2.47	—17.42
INTEREST PAYMENTS. (£'000.)								
1950-51 ..	5,620	2,069	1,586	1,028	717	162	296(b)	11,560
1951-52 ..	6,122	2,041	1,669	1,065	716	196	290(b)	12,181
1952-53 ..	6,342	2,128	1,874	1,077	841	222	290(b)	12,856
PROFIT OR LOSS. (£'000.)								
1950-51 ..	—5,340	—4,228	—1,242	—3,705	—2,680	— 835	(a) —576	—18,688
1951-52 ..	—1,232	—7,467	—2,957	—5,113	—2,847	— 966	(a) —173	—20,837
1952-53 ..	— 118	—4,272	—3,867	—4,199	—5,685	—1,047	(a) —308	—19,578

(a) See para. 8, note (a), page 153. (b) Includes Commonwealth Government share of interest on Uniform Gauge Railway, £82,375.

NOTE.—Minus sign (—) denotes loss.

In the graphs accompanying this chapter the gross and net revenue and working expenses are shown from 1870 to 1953.

13. *Exchange.*—Exchange on interest payments abroad and certain other charges are not included in the table above. These items are not charged against the railways in Queensland and Western Australia and have been excluded for the purposes of comparison. In the remaining States the amounts paid on account of exchange during 1952-53 were:—New South Wales, £574,000; Victoria, £148,075; South Australia, £75,101; and Tasmania, £5,826.

14. *Traffic.*—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In recent years competition from road and air transport has become an important factor.

The following table shows particulars for the years 1950-51 to 1952-53 :—

GOVERNMENT RAILWAYS : TRAFFIC.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
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PASSENGER-JOURNEYS. ('000.)

1950-51 ..	268,567	141,313	34,118	17,177	11,543	3,182	186	476,086
1951-52 ..	268,168	165,131	35,003	18,269	10,536	3,186	191	500,484
1952-53 ..	271,699	162,857	35,819	17,565	6,339	3,151	190	497,620

PASSENGER-JOURNEYS PER AVERAGE ROUTE-MILE WORKED. (Number.)

1950-51 ..	43,934	30,150	5,201	6,728	2,730	5,191	85	17,636
1951-52 ..	43,868	35,232	5,336	7,156	2,562	5,197	87	18,647
1952-53 ..	44,446	34,813	5,460	6,880	1,543	5,140	86	18,550

GOODS AND LIVESTOCK CARRIED. ('000 Tons.)

1950-51 ..	(a) 18,324	7,539	7,096	3,794	3,033	861	591	41,238
1951-52 ..	19,817	9,204	6,741	4,351	3,063	889	694	44,759
1952-53 ..	19,121	9,192	7,351	4,543	2,619	897	660	44,383

GOODS, ETC., CARRIED PER AVERAGE ROUTE-MILE WORKED. (Tons.)

1950-51 ..	2,998	1,608	1,082	1,486	717	1,405	269	1,530
1951-52 ..	3,242	1,964	1,028	1,704	745	1,450	315	1,668
1952-53 ..	3,128	1,965	1,121	1,779	638	1,463	300	1,654

(a) Partly estimated.

(ii) *Metropolitan and Country Passenger Traffic and Revenue, 1952-53.* A further indication of the difference in passenger traffic conditions is obtained from the comparison of the volume of metropolitan and suburban and country traffic during 1952-53 shown below.

GOVERNMENT RAILWAYS : METROPOLITAN AND SUBURBAN AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1952-53.

System.	Passenger-journeys. ('000.)			Revenue. (£'000.)		
	Metro- politan and Suburban.	Country.	Total.	Metro- politan and Suburban.	Country.	Total.
New South Wales ..	(a)	(a)	271,699	(a)	(a)	(b)15,871
Victoria ..	154,997	7,860	162,857	5,622	3,749	9,371
Queensland ..	29,245	6,574	35,819	683	2,419	3,102
South Australia ..	16,074	1,491	17,565	520	839	1,359
Western Australia ..	5,471	868	6,339	155	543	698
Tasmania ..	2,356	795	3,151	47	126	173
Commonwealth ..	..	190	190	..	516	516
Australia ..	(a)	(a)	497,620	(a)	(a)	31,090

(a) Not available.

(b) Estimated.

(iii) *Goods Traffic.* (a) *Classification.* Some indication of the differing conditions of the traffic in each system may be gained by an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the number of tons of various commodities carried during 1952-53.

GOVERNMENT RAILWAYS : CLASSIFICATION OF COMMODITIES CARRIED,
1952-53.
(^{'000} Tons.)

System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live- stock.	All Other Com- modities.	Total.
New South Wales ..	(a)	(a)	(b) 1,074	(c) 186	(c) 1,244	16,617	19,121
Victoria ..	1,840	123	1,821	130	612	4,666	9,192
Queensland ..	(d) 1,518	(e) 682	(f) 2,703	69	784	1,595	7,351
South Australia ..	921	832	1,056	50	215	1,469	4,543
Western Australia ..	465	231	729	21	132	1,041	2,619
Tasmania ..	174	45	(f) 45	5	23	605	897
Commonwealth ..	421	8	7	4	68	152	660
Australia ..	(g)	(g)	(g)	465	3,078	26,145	44,383

(a) Included with "All Other Commodities". (b) Grain only. (c) Estimated.
(d) Excludes shale. (e) Includes shale. (f) Agricultural produce. (g) Not available.

(b) *Revenue.* The following table shows the revenue derived from goods and live-stock traffic during 1952-53 :—

GOVERNMENT RAILWAYS : REVENUE FROM GOODS AND LIVESTOCK TRAFFIC,
1952-53.
(£'000.)

System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live- stock.	All Other Com- modities.	Total.
New South Wales ..	8,658	(a)	(a)	(a)	3,738	36,332	48,728
Victoria ..	1,918	161	2,662	670	1,435	12,535	19,381
Queensland ..	(b) 2,239	(c) 1,589	(d) 4,056	895	2,549	9,679	21,007
South Australia ..	339	2,117	1,392	279	677	4,429	9,233
Western Australia ..	634	377	979	105	309	3,799	6,203
Tasmania ..	345	108	(d) 81	18	57	1,167	1,776
Commonwealth ..	633	18	11	24	211	901	1,798
Australia ..	14,766	(e)	(e)	(e)	8,976	68,842	108,126

(a) Included with revenue from "All Other Commodities". (b) Excludes revenue from shale.
(c) Includes revenue from shale. (d) Agricultural produce. (e) Not available.

(iv) *Passenger-mileage.* The following table shows particulars of passenger-mileage in respect of the Government railways in Australia for the years 1950-51 to 1952-53.

GOVERNMENT RAILWAYS : PASSENGER-MILEAGE SUMMARY.

Year ended 30th June—	Passenger Train-miles.	Total Passenger-miles.	Average Number of Passengers per Train-mile.	Average Mileage per Passenger-journey.	Passenger Earnings.				Density of Traffic (a).
					Gross.	Per Average Route-mile Worked.	Per Passenger-mile.	Per Passenger Train-mile.	
('000.)	('000.)		(Miles.)	(£'000.)	(£)	(d.)	(d.)		
NEW SOUTH WALES.									
1951	(b)	(b)	(b)	(b)	c 13,557	2,218	(b)	(b)	(b)
1952	(b)	(b)	(b)	(b)	c 15,474	2,531	(b)	(b)	(b)
1953	21,925	(b)	(b)	(b)	c 15,871	2,596	(h)	173.74	(b)

GOVERNMENT RAILWAYS : PASSENGER-MILEAGE SUMMARY—*continued.*

Year ended 30th June—	Passenger Train-miles.	Total Passenger-miles.	Average Number of Passengers per Train-mile.	Average Mileage per Passenger-journey.	Passenger Earnings.				Density of Traffic. (a)
					Gross.	Per Average Route-mile Worked.	Per Passenger-mile.	Per Passenger Train-mile.	
	('000.)	('000.)		(Miles.)	(£'000.)	(£)	(d.)	(d.)	
VICTORIA.									
1951	9,693	1,521,106	157	10.76	6,430	1,372	1.02	159.21	324,537
1952	11,196	1,780,854	159	10.78	8,116	1,732	1.09	173.98	380,037
1953	11,933	1,805,506	151	11.09	9,371	2,003	1.25	188.48	385,957
QUEENSLAND.(d)									
1951	6,753	(b)	(b)	(b)	2,971	458	(b)	105.59	(b)
1952	6,916	(b)	(b)	(b)	2,915	444	(b)	101.16	(b)
1953	7,087	(b)	(b)	(b)	2,971	453	(b)	100.63	(b)
SOUTH AUSTRALIA.									
1951	3,640	274,174	75	16.96	1,090	430	0.96	72.40	107,393
1952	3,951	281,364	71	15.40	1,279	501	1.09	77.72	110,029
1953	4,052	275,341	68	15.68	1,359	532	1.18	80.52	107,850
WESTERN AUSTRALIA.									
1951	2,528	173,227	69	15.01	831	197	1.15	78.89	40,971
1952	2,147	147,907	69	14.04	911	221	1.48	101.77	35,961
1953	1,584	109,574	69	17.28	698	170	1.53	105.70	26,673
TASMANIA.									
1951	949	38,200	40	12.00	168	274	1.05	42.49	62,316
1952	927	38,539	42	12.09	177	289	1.10	45.77	62,869
1953	887	36,039	41	11.44	173	282	1.15	46.67	58,792
COMMONWEALTH.(e)									
1951	533	60,700	114	326.18	411	187	1.63	185.07	27,578
1952	583	60,446	104	316.58	501	228	1.99	206.31	27,463
1953	641	62,885	98	330.71	516	234	1.97	192.94	28,571

(a) Total passenger-miles per average route-mile worked. (b) Not available. (c) Estimated.
 (d) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (e) Railways controlled by Commonwealth Government.

(v) *Ton-mileage.* Particulars of ton-mileage in respect of Government railways in Australia are shown in the following table for each of the years 1950-51 to 1952-53.

GOVERNMENT RAILWAYS : TON-MILEAGE SUMMARY.

Year ended 30th June—	Goods Train-miles.	Total Ton-miles.	Average Freight-paying Load per Train-mile.	Average Haul per Ton.	Goods and Livestock Earnings.				Density of Traffic. (a)
					Gross.	Per Average Route-mile Worked.	Per Ton-mile.	Per Goods Train-mile.	
	('000.)	('000.)	(Tons.)	(Miles.)	(£'000.)	(£)	(d.)	(d.)	
NEW SOUTH WALES.									
1951	(b)	2,783,470	(b)	152	28,351	4,638	2.45	(b)	455,336
1952	(b)	2,906,947	(b)	147	43,361	7,093	3.58	(b)	475,535
1953	14,364	2,800,366	195	146	48,728	7,971	4.18	814	458,100
VICTORIA.									
1951	4,882	1,057,051	217	140	9,992	2,132	2.27	491	225,528
1952	5,777	1,280,191	222	139	13,319	2,842	2.50	553	273,136
1953	5,757	1,262,454	219	137	19,381	4,143	3.68	808	269,870

GOVERNMENT RAILWAYS : TON-MILEAGE SUMMARY—continued.

Year ended 30th June—	Goods Train-miles.	Total Ton-miles.	Average Freight-paying Load per Train-mile.	Goods and Livestock Earnings.					Density of Traffic. (a)
				Average Haul per Ton.	Gross.	Per Average Route-mile Worked.	Per Ton-mile.	Per Goods Train-mile.	
(‘000.)	(‘000.)	(Tons.)	(Miles.)	(£’000.)	(£)	(d.)	(d.)		
QUEENSLAND.(c)									
1951	11,592	1,252,442	108	182	14,752	2,273	2.83	305	192,951
1952	11,506	1,265,664	110	196	17,887	2,756	3.39	373	194,988
1953	11,252	1,275,179	113	180	20,390	3,141	3.84	435	196,453
SOUTH AUSTRALIA.									
1951	2,739	510,122	186	135	5,305	2,078	2.50	465	199,813
1952	2,993	592,818	198	136	7,062	2,766	2.86	566	232,205
1953	3,148	613,771	195	135	9,233	3,617	3.61	704	260,412
WESTERN AUSTRALIA.									
1951	4,607	459,973	100	152	5,362	1,268	2.80	280	108,792
1952	4,654	469,748	101	153	7,150	1,739	3.65	369	114,210
1953	3,671	409,591	112	156	6,203	1,510	3.63	406	99,706
TASMANIA.									
1951	1,122	79,915	71	93	1,108	1,807	3.33	237	130,367
1952	1,164	88,696	76	100	1,539	2,510	4.16	317	144,692
1953	1,102	83,689	76	93	1,776	2,898	5.09	387	136,524
COMMONWEALTH.(d)									
1951	1,308	133,747	102	226	1,408	640	2.53	258	60,767
1952	1,306	151,248	116	218	2,009	913	3.19	369	68,718
1953	1,097	128,408	117	194	1,798	817	3.36	391	58,341

(a) Total ton-miles per average route-mile worked. (b) Not available. (c) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (d) Railways controlled by the Commonwealth Government.

15. Rolling Stock.—(i) *Systems, 1952-53.* The following table shows the number of rolling stock of Government railways at 30th June, 1953. Further details may be found in *Transport and Communication Bulletin* No. 44.

GOVERNMENT RAILWAYS : ROLLING STOCK AT 30TH JUNE, 1953.

System.	Locomotives.				Coaching Stock.(a)	Goods Stock.	Service Stock.
	Steam.	Diesel Electric.	Other.	Total.			
New South Wales ..	1,186	22	5	1,213	3,854	25,734	1,162
Victoria ..	590	28	18	636	2,441	22,435	1,035
Queensland ..	855	10	1	866	1,477	22,981	1,322
South Australia ..	357	11	..	368	724	8,490	511
Western Australia..	439	..	7	446	634	11,864	644
Tasmania ..	102	32	6	140	190	2,589	96
Commonwealth ..	145	13	..	158	182	1,607	460
Australia ..	3,674	116	37	3,827	(b)9,554	95,700	5,230

(a) Includes all brake vans. and South Australia.

(b) Includes 52 interstate coaching stock jointly owned by Victoria

(ii) *Australia, 1949 to 1953.* The following table shows the number of rolling stock of Government railways at 30th June for each of the years 1949 to 1953.

GOVERNMENT RAILWAYS : ROLLING STOCK.

At 30th June—	Locomotives.				Coaching Stock.(a)	Goods Stock.	Service Stock.
	Steam.	Diesel Electric.	Other.	Total.			
1949	3,512	4	24	3,540	9,183	85,139	5,123
1950	3,508	6	30	3,544	9,200	86,230	5,110
1951	3,598	18	28	3,644	9,240	89,397	5,220
1952	3,696	70	30	3,796	9,393	91,577	5,229
1953	3,668	113	37	3,818	9,579	95,714	5,230

(a) See notes to table above.

16. Accidents.—The following table shows particulars of the number of persons killed or injured through train accidents and the movement of rolling stock on the Government railways of Australia during 1952-53 :—

GOVERNMENT RAILWAYS : ACCIDENTS(a), 1952-53.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	C'wth.	Aust.
Persons Killed ..	63	59	19	15	21	6	..	183
Persons Injured ..	525	546	96	92	179	12	7	1,457

(a) Excludes accidents to railway employees.

17. Consumption of Coal, Oil and Petrol.—The following table shows the quantities and values of coal, oil and petrol consumed by the various Government Railway Departments during 1952-53 :—

GOVERNMENT RAILWAYS : COAL, OIL AND PETROL CONSUMED, 1952-53.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	C'wth.	Aust.
Coal—								
Locomotives .. '000 tons	1,388	379	705	269	282	48	39	3,110
£'000	4,723	2,783	1,594	1,615	1,031	107	303	12,156
Other purposes '000 tons	543	8	12	7	9	(a)	1	580
£'000	2,127	39	30	37	31	1	7	2,272
Oil—								
Lubrication .. '000 gals.	429	295	531	(b)	133	41	61	(b)
£'000	148	81	178	(b)	44	16	23	(b)
Diesel and Distillate								
'000 gals.	16,642	1,700	759	896	1,382	695	933	23,027
£'000	1,265	180	81	84	118	44	69	1,841
Furnace Oil .. '000 gals.	435	14,126	374	14,354	..	86	202	29,577
£'000	36	1,034	33	891	..	7	15	2,016
Other purposes '000 gals.	143	1,034	310	(b)	1,113	67	511	(b)
£'000	23	104	41	(b)	114	14	47	(b)
Petrol—								
Rail Cars .. '000 gals.	128	71	120	334	54	..	5	712
£'000	20	11	19	49	8	..	1	108

(a) 333 tons.

(b) Not available.

18. Staff Employed and Salaries and Wages Paid.—The following table shows details of the average staff employed and the salaries and wages paid by the Government railways of Australia during 1952-53. Corresponding figures for 1951-52 will be found in *Transport and Communication Bulletin* No. 43.

GOVERNMENT RAILWAYS : AVERAGE STAFF EMPLOYED, AND SALARIES AND WAGES PAID, 1952-53.

System.	Number of Operating Staff.			Number of Construction Staff. (a)			Total Salaries and Wages Paid.	Average Earnings Per Employee.
	Salaried.	Wages.	Total.	Salaried.	Wages.	Total.		
New South Wales	9,232	41,782	51,014	663	5,671	6,334	£'000.	£.
Victoria	(b) 5,075	b 23,165	b 28,240	(c)	(c)	(c)	46,693	814
Queensland	4,337	23,926	28,263	13	455	468	23,053	516
South Australia	1,964	8,959	10,923	11	1,371	1,382	22,145	771
Western Australia	2,013	10,292	12,305	2	22	24	10,079	819
Tasmania	347	2,301	2,648	21	187	208	9,301	756
Commonwealth	356	2,170	2,526	5	284	289	1,925	574
Australia	23,324	112,595	135,919	715	7,990	8,705	1,929	686
							115,125	796

(a) In Victoria, Queensland and Western Australia a considerable amount of construction work is carried out by private contractors and the staff engaged are therefore not under the control of the Railways Commissioners. (b) Includes number of construction staff. (c) Included with number of operating staff.

C. TRAMWAYS.

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the capital cities and in a number of the larger towns of Australia.

Since 1st April, 1947, when the last private company system to operate (the Kalgoorlie-Boulder electric tramway system in Western Australia) was taken over by the Eastern Goldfields Transport Board, all systems have been operated by governmental or municipal authorities. From 1941-42 all systems have been electric.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

In recent years there has been considerable replacement of electric tramway services by motor omnibus services. The tramway systems at Newcastle (New South Wales) and Kalgoorlie and Fremantle (Western Australia) were replaced by motor omnibus services on 11th June, 1950, 10th March, 1952 and 8th November, 1952 respectively. The Launceston municipal transport system has been converted to the use of trolley-buses and omnibuses. Tramcars ceased operating in Launceston on 13th December, 1952.

Particulars of trolley-bus services in New South Wales, South Australia, Western Australia and Tasmania are included with tramways. In Queensland they are included with Government and municipal omnibus services (see Division D. of this chapter).

(ii) *Total Mileage Open and Classification of Lines.* The following table shows, for each State, the total route-mileage of tramway lines open for general passenger traffic at 30th June, 1953, classified (a) according to the controlling authority; (b) according to gauge. Trolley-bus route-mileage also is shown.

ELECTRIC TRAMWAYS : ROUTE-MILEAGE OPEN AT 30th JUNE, 1953.
(Miles.)

Particulars—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
ACCORDING TO CONTROLLING AUTHORITY.							
Government	126	174	..	..	33	..	333
Municipal	..	..	67	96	..	(a) 48	(a) 211
Total	126	174	67	96	33	(a) 48	(a) 544
ACCORDING TO GAUGE.							
Tramways—							
5 ft. 3 in.	..	5	..	..	..	..	5
4 ft. 8½ in.	120	169	67	73	..	..	429
3 ft. 6 in.	..	..	..	..	15	(b)	(b) 15
Trolley-buses	6	..	..	23	18	(b) 7	(b) 54
Total	126	174	67	96	33	(a) 48	(a) 544

(a) Includes particulars of Hobart Municipal Council's electric tramway, trolley-bus and omnibus services. (b) Excludes Hobart.

2. **Summary of Operations, Australia.**—The following table gives a summary of the working of all electric tramway systems in Australia for the years 1948-49 to 1952-53:—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS, AUSTRALIA.(a)

Particulars.	Unit.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Average mileage open for traffic ..	route-mile	589	555	567	553	537
Tramcars(b) ..	track-mile	1,048	1,014	1,017	997	968
Cost of construction and equipment ..	..	3,376	3,248	3,085	2,984	2,814
during year ..	£'000.	(c)	(c)	1,205	2,075	911
Gross revenue(d) ..	..	12,239	11,785	13,610	15,121	15,968
Working expenses(e) ..	..	12,211	12,477	14,553	17,109	18,420
Net revenue ..	..	28	-692	-943	-1,988	-2,452
Interest ..	..	504	472	491	536	682
Ratio of working expenses to gross revenue ..	per cent.	99.77	105.87	106.93	113.15	115.36
Car-miles run ..	'000	81,530	72,708	71,746	67,923	65,895
Gross revenue per car-mile run ..	d.	36.03	38.90	45.33	53.43	58.16
Working expenses per car-mile run ..	d.	35.95	41.18	48.68	60.45	67.09
Net revenue per car-mile run ..	d.	0.08	-2.28	-3.15	-7.02	-8.93
Passenger-journeys ..	'000	875,922	754,483	749,138	685,724	647,417
Passenger-journeys per car-mile run ..	..	10.74	10.38	10.44	10.10	9.82
Average gross revenue per passenger-journey ..	d.	3.36	3.75	4.36	5.29	5.92
Persons employed at end of year(f) ..	..	919,015	917,561	16,566	18,309	16,051
Accidents ..	..	..	..	..	..	..
Persons killed ..	..	81	61	71	72	72
„ injured ..	..	5,518	4,942	5,409	5,448	3,255

(a) Includes particulars of Hobart Municipal Council Omnibus Service 1948-49 to 1952-53 and Launceston Municipal Council Omnibus Service 1951-52 and 1952-53. (b) Includes trolley-buses. (c) Not available. (d) Excludes Government grants. (e) Includes provision of reserves for depreciation, etc. (f) Includes motor omnibus employees, South Australia. (g) Includes motor omnibus employees, Western Australia. (h) Excludes 2,303 employees in New South Wales who cannot be distributed between tramways and omnibuses.

NOTE.—Minus sign (—) denotes loss.

3. **Traffic and Accidents.**—Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock are shown in the following table for each State during 1952-53:—

ELECTRIC TRAMWAYS : TRAFFIC AND ACCIDENTS, 1952-53.

State.	Average Mileage Open for Traffic.		Number of Tram-cars. (a)	Car-miles Run.	Pas-senger-journeys.	Average Number of Pas-senger-journeys per Car-mile.	Accidents.	
	Route-miles.	Track-miles.					Persons—	
							Killed.	Injured.
New South Wales ..	126	240	925	'000. (b)18,134	'000. 210,173	11.59	(c) 23	(c)1,205
Victoria ..	174	323	867	24,341	225,213	9.25	23	1,100
Queensland ..	67	124	422	9,839	107,891	10.97	8	645
South Australia ..	96	163	313	8,020	57,926	7.22	(d) 14	(d) 139
Western Australia ..	33	59	143	2,565	20,611	8.04	3	120
Tasmania(e) ..	41	59	144	2,996	25,603	8.55	1	46
Australia ..	537	968	2,814	65,895	647,417	9.82	72	3,255

(a) Includes trolley-buses. (b) Estimated. (c) Excludes accidents to employees. (d) Includes particulars for Government and Municipal Controlled Omnibus Services. (e) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services.

4. **State Details.**—(i) *General.* For details of the various systems operating in the several States see Official Year Book No. 37 and issues prior to No. 32.

(ii) *Summary of Operations.* The following table shows particulars of the working of electric tramways in each State of Australia for the years 1950-51 to 1952-53.

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS.

Year ended 30th June—	Mileage Open for Traffic at 30th June. (Route-miles.)	Cost of Construction and Equipment during year. (£'000.)	Gross Revenue. (a) (£'000.)	Working Expenses. (b) (£'000.)	Net Revenue. (£'000.)	Interest. (£'000.)	Ratio of Working Expenses to Gross Revenue. (Per cent.)	Car-miles Run. ('000.)	Passenger-journeys. ('000.)	Persons employed at end of year.
NEW SOUTH WALES.										
1951	134	201	5,010	5,892	-882	140	117.60	624,065	253,170 (d)	5,367
1952	130	935	5,185	7,093	-1,908	158	136.79	619,036	219,808 (d)	6,022
1953	126	151	5,245	7,285	-2,040	174	138.90	618,134	210,173 (e)	4,831
VICTORIA.										
1951	174	295	4,187	4,064	123	75	97.07	23,411	257,888	4,860
1952	174	286	4,909	4,872	37	88	99.25	23,736	235,678	5,572
1953	174	195	5,403	5,359	104	111	98.10	24,341	225,213	5,414
QUEENSLAND. (f)										
1951	67	240	1,675	1,627	48	105	97.17	9,350	108,359	2,475
1952	67	219	2,067	1,997	70	106	96.60	9,805	108,213	2,957
1953	67	96	2,171	2,137	34	107	98.42	9,839	107,891	2,397
SOUTH AUSTRALIA.										
1951	96 (g)	285	1,670 (h)	1,888	-218	122	113.07	9,203	68,737 (i)	2,405
1952	96 (g)	285	1,670 (h)	1,888	-218	122	113.07	9,203	68,737 (i)	2,405
1953	96 (g)	244	1,851 (h)	2,371	-520	170	128.10	8,020	57,926 (i)	2,290
WESTERN AUSTRALIA.										
1951	48	12	574	615	-41	24	107.05	3,438	34,443	820
1952	43	76	650	724	-74	32	111.46	3,229	27,116	724
1953	33	113	588	673	-85	33	114.37	2,565	20,611	537
TASMANIA.										
1951	(j) 48 (j)	172 (j)	494 (j)	467 (j)	27 (j)	25 (j)	94.51 (j)	2,279 (j)	26,541 (j)	639
1952	(j) 50 (k)	275 (k)	640 (k)	535 (k)	105 (k)	30 (k)	83.54 (k)	2,914 (k)	26,172 (k)	629
1953	(j) 48 (k)	112 (k)	650 (k)	595 (k)	55 (k)	33 (k)	91.61 (k)	2,996 (k)	25,603 (k)	582
AUSTRALIA. (l)										
1951	567	1,205	13,610	14,553	-943	491	106.93	71,746	749,138	16,566
1952	560	2,076	15,121	17,109	-1,988	536	113.15	67,923	685,724	18,309
1953	544	911	15,968	18,420	-2,452	628	115.36	65,895	647,417	16,051

(a) Excludes Government grants. (b) Includes provision of reserves for depreciation, etc.
(c) Estimated. (d) Excludes administrative staff not distributable between omnibus and tramway services.
(e) Excludes 1,722 administrative staff and 581 salaried staff who cannot be distributed between omnibus and tramway services. (f) Excludes trolley-bus services, particulars of which are included with omnibus services. (g) Includes capital expenditure on motor omnibus services.
(h) Excludes depreciation. (i) Includes motor omnibus employees of Adelaide Municipal Tramways Trust. (j) Includes particulars of Hobart Municipal Council Omnibus Service. (k) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services. (l) See notes (a) to (k).

D. MOTOR OMNIBUS SERVICES.

1. General.—Motor omnibus services have been in operation for some years in the capital cities and some of the larger towns of the States of Australia, and in the Australian Capital Territory.

Governmental and municipal authorities operate certain services and the others are run by private operators; in the States the former are run in conjunction with the existing electric tramway systems.

2. **Government and Municipal Services.**—(i) *Summary of Operations, 1952-53.* The following table gives a summary of the operations during the year ended 30th June, 1953 of omnibus systems controlled by governmental and municipal authorities.

MOTOR OMNIBUS SERVICES : GOVERNMENT AND MUNICIPAL, 1952-53.

Particulars.	N.S.W.	Vic.	Qld. (a)	S.A.	W.A.	Tas. (b)	A.C.T.	Aust.
Length of route .. miles	466	69	409	27	2,984	533	45	4,533
Omnibuses	1,166	344	272	111	222	45	65	2,225
Capital cost during year £'000	1,098	184	117	(c)	82	13	..	1,494
Gross revenue(d) .. £'000	5,392	1,489	805	265	1,045	199	125	9,320
Working expenses .. £'000	(e) 7,341	1,593	849	395	911	191	185	11,465
Omnibus-miles run .. '000	30,928	8,075	5,652	1,984	7,058	1,128	847	55,672
Passenger-journeys .. '000	207,611	61,045	32,483	8,645	24,949	1,729	(f)	336,462
Persons employed	(g) 5,315	1,383	584	(h)	(i) 161	58	162	(j) 7,663

(a) Includes particulars of trolley-bus services. (b) Excludes Hobart and Launceston Municipal Council Services. (c) Separate particulars for trams and omnibuses not available—total included with tramways (see p. 165). (d) Excludes Government grants. (e) Includes estimate of administrative and general charges. (f) Not available. (g) Excludes administrative staff not distributable between omnibus and tramway services. (h) Not available, employees interchangeable with electric tramway employees and included therewith (see p. 165). (i) Excludes 567 Government employees. (j) See notes (g) to (i).

(ii) *Summary of Operations, Australia.* The following table gives a summary of the working of motor omnibus services in Australia under governmental and municipal control during each of the five years ended 1952-53.

MOTOR OMNIBUS SERVICES : GOVERNMENT AND MUNICIPAL, AUSTRALIA.

Particulars.	Unit.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Length of route .. miles		3,268	3,208	3,994	4,458	4,533
Number of omnibuses		1,728	1,962	1,981	2,160	2,225
Capital cost during year(a) .. £'000		(b)	(b)	1,600	2,334	(c) 1,494
Gross revenue(a) £'000		5,433	6,307	7,572	8,542	9,320
Working expenses(a) £'000		5,872	6,743	8,234	10,298	11,465
Net revenue(a) £'000		-439	-436	-662	-1,756	-2,145
Ratio of working expenses to gross revenue(a) .. per cent.		108.09	106.91	108.74	120.56	123.01
Omnibus-miles run(a) '000		48,739	53,817	53,548	54,124	55,672
Gross revenue per omnibus-mile run(a) d.		26.75	28.12	33.94	37.87	40.18
Working expenses per omnibus-mile run(a) d.		28.91	30.06	36.90	45.66	49.43
Net revenue per omnibus-mile run(a) d.		-2.16	-1.94	-2.96	-7.79	-9.25
Passenger-journeys(a) '000		309,096	325,079	340,314	333,200	336,462
Passenger-journeys per omnibus-mile run(a)		6.33	6.04	6.36	6.16	(d) 6.14
Average gross revenue per passenger-journey(a) d.		4.22	4.66	5.34	6.15	(d) 6.65
Number of persons employed (a) (e)		7,077	7,721	7,720	8,174	7,663

(a) Excludes Hobart Municipal Council Service 1948-49 to 1952-53 and Launceston Municipal Council Service 1951-52 and 1952-53. (b) Not available. (c) Excludes South Australia. (d) Excludes Australian Capital Territory. (e) See relevant notes to table above.

NOTE.—Minus sign (—) denotes loss.

3. **Private Services.**—(i) *General.* Particulars of motor omnibus services under the control of private operators are recorded in the States of New South Wales, Victoria, South Australia and Western Australia only.

In New South Wales, particulars are compiled for the Metropolitan and Newcastle Transport districts only, and in Victoria for the Metropolitan district only, but in South Australia and in Western Australia particulars of all services throughout the State are included.

(ii) *Summary of Operations.* The following table shows the operations of motor omnibus services under the control of private operators in New South Wales, Victoria, South Australia and Western Australia during each of the years ended June, 1951 to 1953 :—

MOTOR OMNIBUS SERVICES : PRIVATE.

Year.	Number of Omnibuses.	Omnibus-miles Run. (¹ 000 miles.)	Passenger-journeys. (¹ 000).	Value of Plant and Equipment. (£ ¹ 000.)	Gross Revenue. (£ ¹ 000.)	Persons Employed.
NEW SOUTH WALES.(a)						
1950-51 ..	823	18,221	99,740	1,032	1,995	1,418
1951-52 ..	790	17,358	94,917	999	2,342	1,289
1952-53 ..	792	20,613	87,274	950	2,347	1,273
VICTORIA.(b)						
1950-51 ..	(c) 425	19,292	83,628	(d)	1,414	1,027
1951-52 ..	407	17,985	79,928	(d)	1,601	972
1952-53 ..	420	17,548	84,006	(e) 473	1,839	905
SOUTH AUSTRALIA.						
1950-51 ..	(b) 116	6,031	12,470	(d)	573	(d)
1951-52 ..	116	5,926	12,516	(d)	593	(d)
1952-53 ..	116	5,972	12,816	(d)	633	(d)
WESTERN AUSTRALIA.						
1950-51 ..	399	12,645	34,346	767	1,106	1,050
1951-52 ..	393	12,331	34,546	910	1,432	976
1952-53 ..	379	11,976	34,592	1,047	1,576	944

(a) Metropolitan and Newcastle Transport districts only.
 (c) Excludes omnibuses held in reserve.

(d) Not available.

(b) Metropolitan area only.
 (e) Vehicles only.

E. FERRY (PASSENGER) SERVICES.

1. *General.*—Ferry services to transport passengers are operated in Sydney and Newcastle, New South Wales, on the Swan River at Perth in Western Australia, and on the Derwent River at Hobart and in Devonport, Tasmania. Control is exercised both by Governmental authorities and by private operators. In Victoria and Queensland the services operated are not extensive, and there are no ferry services in South Australia.

2. *Summary of Operations.*—The operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1950-51 to 1952-53 are summarized in the following table. Particulars of passengers carried on vehicular ferries are not included.

FERRY (PASSENGER) SERVICES.

Year.			Number of Vessels.	Passenger Accom- modation.	Passenger- journeys. (‘000.)	Gross Revenue. (£.)	Persons Employed.
NEW SOUTH WALES—SYDNEY AND NEWCASTLE.							
1950-51	..	..	39	22,793	20,274	612,661	389
1951-52	..	..	37	22,179	20,654	667,405	495
1952-53	..	..	37	20,288	20,959	702,689	456
WESTERN AUSTRALIA—PERTH.							
1950-51	..	..	4	785	712	10,311	18
1951-52	..	..	4	785	670	11,472	16
1952-53	..	..	4	785	577	12,383	17
TASMANIA—HOBART AND DEVONPORT.							
1950-51	..	..	7	1,570	966	20,002	31
1951-52	..	..	6	1,537	944	23,556	27
1952-53	..	..	6	1,537	1,112	26,908	27

F. MOTOR VEHICLES.

1. **Motor Industry.**—Chapter XXIV.—Manufacturing Industry of this Year Book contains summarized information on the motor industry of Australia and includes therein some data on the imports of motor bodies and chassis. Chapter VII.—Trade contains further data on imports, including those of petroleum products.

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia. Particulars regarding methods of registration, licences, fees payable, etc., in each State and Territory at 30th June, 1952 were given in Official Year Book No. 40, pp. 135-8.

3. **Taxi-cabs and Other Hire Vehicles.**—In the capital cities of the States and in many of the provincial centres taxi-cabs and other vehicles ply for hire under licence granted by either the Commissioner of Police or the local government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years and in some States the railway and tramway systems run motor services complementary to their main services. There has been a considerable replacement also, during the last few years, of existing tramway services by trolley-bus and motor-bus services. (*See Divisions C. and D. of this chapter.*)

5. **Motor Vehicles on the Register, etc.**—(i) *Registrations and Revenue.* The following table shows particulars of the registration of motor vehicles, licences issued and revenue received for 1952-53 and a summary for Australia for each of the years 1938-39 and 1949-50 to 1952-53. A graph showing for all motor vehicles other than motor cycles the registrations in force at 30th June of each year from 1920 to 1953 will be found on p. 142.

MOTOR VEHICLES : REGISTRATIONS AND REVENUE.,

(Excluding Defence Service Vehicles.)

State or Territory. and Year.	Number of Motor Vehicles Registered at 30th June.(a)				Number of Drivers' and Riders' Licences in force at 30th June.	Gross Revenue derived from—			
	Motor Cars.(b)	Commercial Vehicles.(c)	Motor Cycles.	Total.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
						(£'000.)	(£'000.)	(£'000.)	(£'000.)

STATES AND TERRITORIES, 1952-53.

N. S. Wales	364,982	203,472	45,100	613,554	178	870,048	7,675	675	1,709	10,059
Victoria ..	376,123	130,172	33,533	539,828	226	645,962	4,474	323	878	5,675
Queensland	132,704	110,117	23,400	266,221	210	280,943	3,556	111	789	4,456
S. Australia	124,127	57,796	23,779	205,702	272	243,844	1,525	187	48	1,760
W. Aust.	69,917	56,463	15,565	141,945	228	159,539	1,019	63	144	1,226
Tasmania ..	35,431	19,391	5,723	60,545	195	72,306	484	36	140	660
Nor. Terr...	1,580	2,881	691	5,152	302	5,746	9	3	..	12
A.C.T.	4,375	2,033	539	6,947	234	9,982	37	5	1	43
Australia ..	1,109,239	582,325	148,330	1,839,894	208	2,288,370	18,779	1,403	3,709	23,891

SUMMARY, AUSTRALIA.

		(e)								
1938-39 ..	562,271	258,025	79,237	899,533	129	1,238,497	6,318	508	258	7,084
1949-50 ..	768,558	501,721	133,979	1,404,258	172	1,845,265	9,596	863	1,812	12,271
1950-51 ..	883,610	551,057	145,684	1,580,351	187	1,985,821	12,333	1,101	2,435	15,869
1951-52 ..	1,032,358	583,247	154,579	1,770,184	205	2,194,167	15,996	1,336	3,607	20,939
1952-53 ..	1,109,239	582,325	148,330	1,839,894	208	2,288,370	18,779	1,403	3,709	23,891

(a) Excludes trailers (100,713), road tractors, etc. (17,795), and dealers' plates (6,887). (b) Includes taxis and hire cars. (c) Includes lorries, vans, buses and utilities. (d) Includes 56,439 vehicles registered as primary producers' vehicles. (e) Includes primary producers' vehicles, Victoria.

(ii) *Relation to Population.* The table hereunder shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State and Territory at 31st December, 1921, and at 30th June for each of the years 1939 and 1949 to 1953.

MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

(Excluding Defence Service Vehicles.)

Date.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Anst.
31st Dec., 1921 ..	15	16	8	24	12	13	(a)	..	15
30th June, 1939 ..	107	125	118	137	133	96	218	174	118
" 1949 ..	122	149	149	174	148	127	223	149	140
" 1950 ..	135	168	164	191	164	135	223	173	155
" 1951 ..	150	181	181	209	179	151	234	199	170
" 1952 ..	160	212	187	228	194	163	249	214	187
" 1953 ..	165	212	192	240	203	176	261	216	192

(a) Not available.

6. *New Vehicles Registered.*—(i) *States and Territories, 1952-53.* The following table shows the number of new vehicles registered in each State and Territory during 1952-53. A graph showing the number of new motor vehicles (excluding motor cycles) registered during each of the years 1929 to 1953 will be found on p. 142.

NEW MOTOR VEHICLES REGISTERED, 1952-53.

(Excluding Defence Service Vehicles.)

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.
Motor cars ..	31,340	28,598	12,163	10,204	6,891	3,368	139	414	93,117
Commercial vehicles, etc. ..	18,717 (a)	12,011	9,243	5,447	4,976	1,724	247	225	52,590
Motor cycles ..	3,042	2,523	1,966	1,819	1,416	474	(b)	49	(c) 11,289
Total ..	53,099	43,132	23,372	17,470	13,283	5,566 (d)	386	688	156,996

(a) Includes vehicles registered as primary producers' vehicles. (b) Not available. (c) Excludes Northern Territory. (d) Excludes motor cycles.

(ii) *Australia*. Particulars of the number of new vehicles registered in Australia during the years 1938-39 and 1948-49 to 1952-53 are shown in the following table :—

NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(a)

(Excluding Defence Service Vehicles.)

Vehicles.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Motor cars ..	54,107	66,471	115,012	127,671	125,319	93,117
Commercial vehicles, etc.(b)	24,927	36,678	57,946	77,933	73,461	52,590
Motor cycles ..	7,370	22,226	26,782	27,151	22,155	c 11,289
Total ..	86,404	125,375	199,740	232,755	220,935	c 156,996

(a) Excludes Northern Territory for years prior to 1952-53. (b) Includes vehicles registered as primary producers' vehicles, Victoria. (c) Excludes motor cycles registered in the Northern Territory.

7. *World Motor Vehicle Statistics, 1953*.—Particulars of motor vehicle registrations throughout the world were included in issues of the *Official Year Book* prior to No. 39. This information was derived from the results of the World Motor Census, conducted by the *American Automobile* magazine. Detailed information is not repeated in this issue, but the following particulars from the same source show that there were 81,638,418 motor cars, trucks and omnibuses registered in various countries of the world at 1st January, 1954. This was an increase of 7.6 per cent. on the figure for the previous year, 75,886,942, and was the highest figure attained to that date. Of these vehicles, 54,942,888 or 67.3 per cent. of the world total were in the United States of America, and Australian registrations amounted to 2.1 per cent.

8. *Survey of Motor Vehicles, 1947-48*.—A survey of motor vehicles (excluding motor cycles) on the roads during 1947-48 was carried out by the Commonwealth Statistician in collaboration with the Government Statisticians and Road Transport authorities in the States. Results were published in a series of bulletins dealing with each State separately and with Australia as a whole, and summarized particulars were included in *Transport and Communication Bulletin* No. 40, 1948-49 published by this Bureau. Similar surveys, but of modified scope, have been carried out for later periods in respect of new vehicles only. The results have been published by this Bureau in the *Transport and Communication Bulletin* and, since July, 1951, in the *Monthly Bulletin of Registrations of New Motor Vehicles*. Information contained in the latter includes the make, type and horse-power of new motor vehicles registered in each State and Territory.

G. ROAD TRAFFIC ACCIDENTS.

1. *General*.—Prior to the year 1949–50 it was not possible to make proper comparisons between States of the number of accidents recorded, because of the differences in legislation regarding the reporting of accidents and the degree to which the legislation could be enforced. However, arrangements were made, in co-operation with the Australian Road Safety Council and the various police and transport authorities concerned, to obtain the numbers of road traffic accidents on a comparable basis from all States in respect of the year ended 30th June, 1950 and subsequent years. This has been achieved by restricting the statistics so that they relate only to those accidents which result in death or bodily injury to any person, or in damage in excess of £10 to property. It should be noted, however, that the comparability of the statistics between States even on this basis still depends on the degree to which accidents so defined are in fact recorded by the police. It is considered that there is little difference in the recording of accidents as between States for 1949–50 and subsequent years, except in the case of Western Australia, where statistics shown relate to all accidents which occurred in the metropolitan area and, in the remainder of the State, for periods prior to 1st January, 1953, only to those which involved fatal or “near-fatal” injury. Since that date statistics for Western Australia have been collected on a basis comparable with that for the other States.

For further particulars of traffic accidents see the *Transport and Communication Bulletin*.

2. *Total Accidents Reported, 1952–53*.—(i) *Summary*. The following table shows, for each State and the Australian Capital Territory during the year 1952–53, the total accidents reported to the police, the number of accidents involving casualties, and the number of persons killed or injured—totals and per 100,000 of mean population and per 10,000 motor vehicles registered.

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : ACCIDENTS RECORDED AND CASUALTIES, 1952–53.

State or Territory.	Total Accidents Reported. (a)	Accidents Involving Casualties. (b)	Persons Killed.			Persons Injured.(c)		
			Number.	Per 100,000 of Mean Population.	Per 10,000 Motor Vehicles Registered.	Number.	Per 100,000 of Mean Population.	Per 10,000 Motor Vehicles Registered.
N.S. Wales ..	24,382	9,944	663	19	11	12,459	364	203
Victoria ..	16,351	10,098	515	22	10	12,564	532	233
Queensland ..	14,916	5,748	301	24	11	7,152	573	269
South Australia ..	8,154	1,998	136	18	7	2,449	327	119
W. Australia(d)	7,510	2,688	182	30	13	3,373	551	238
Tasmania ..	3,664	1,028	56	18	9	1,246	403	206
Aust. Cap. Ter.	318	131	3	11	4	162	570	233
Total, 1952–53	75,295	31,635	1,856	21	10	39,405	451	215
Total, 1951–52	68,110	31,144	2,054	24	12	38,376	450	217

(a) Total accidents causing death or injury to persons or damage exceeding £10 to property. (b) Accidents involving persons killed, and persons injured to an extent requiring surgical or medical treatment. (c) Persons injured to an extent requiring surgical or medical treatment. (d) Includes, for the metropolitan area, all accidents causing death or injury to persons or damage exceeding £10 to property. For the remainder of the State, prior to 1st January, 1953, only those accidents causing fatal or “near-fatal” injuries are included. Since that date statistics have been collected on a basis comparable with that for the other States.

(ii) *Riders, Drivers, Pedestrians, etc., Killed or Injured*. The following table shows the number of persons killed and the number injured during 1952–53 in each State and the Australian Capital Territory, classified into riders, drivers, pedestrians, etc.

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGH-FARES : RIDERS, DRIVERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1952-53.

Riders, Drivers, Pedestrians, etc.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
PERSONS KILLED.								
Drivers of Motor Vehicles	121	86	59	22	23	8	..	319
Motor Cyclists ..	104	79	51	47	41	14	I	337
Pedal Cyclists ..	41	52	17	12	19	3	I	145
Passengers (all types) (a) ..	200	129	102	28	54	14	I	528
Pedestrians ..	196	165	67	26	45	17	..	516
Other Classes (b) ..	I	4	5	I	..	..	..	11
Not Stated ..	..	..	..	..	..	..	..	..
Total ..	663	515	301	136	182	56	3	1,856

PERSONS INJURED.(c)								
				(d)				
Drivers of Motor Vehicles	2,332	2,396	1,181	428	532	209	25	7,103
Motor Cyclists ..	1,937	1,722	1,591	664	777	264	32	6,987
Pedal Cyclists ..	962	1,442	949	336	423	156	36	4,304
Passengers (all types) (a) ..	4,518	4,212	2,451	719	1,154	353	48	13,485
Pedestrians ..	2,660	2,711	950	296	473	228	21	7,339
Other Classes (b) ..	39	81	30	6	13	6	..	175
Not Stated ..	11	..	..	..	I	..	..	12
Total ..	12,459	12,564	7,152	2,449	3,373	1,246	162	39,405

(a) Includes pillion riders. (b) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles. (c) Persons injured to an extent requiring surgical or medical treatment. (d) Includes all persons injured (i.e., requiring surgical or medical treatment) in the metropolitan area but in the remainder of the State, prior to 1st January, 1953, only those suffering "near-fatal" injuries. Since that date statistics have been collected on a basis comparable with that for the other States.

(iii) *Ages of Persons Killed or Injured.* The following table shows the age groups of persons killed or injured in traffic accidents in each State and the Australian Capital Territory during 1952-53 :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGH-FARES : AGES OF PERSONS KILLED OR INJURED, 1952-53.

Age Group (Years).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
PERSONS KILLED.								
Under 5 ..	30	18	10	4	10	2	..	74
5 and under 7 ..	15	8	3	I	3	..	..	30
7 " " 17 ..	41	34	19	9	17	6	..	126
17 " " 21 ..	85	48	33	17	21	9	..	213
21 " " 30 ..	143	113	74	43	39	10	I	423
30 " " 40 ..	67	59	37	15	16	8	..	202
40 " " 50 ..	76	56	40	9	18	9	I	209
50 " " 60 ..	59	62	29	15	15	4	..	184
60 and over ..	146	117	56	23	34	8	I	385
Not Stated ..	I	..	..	..	9	..	..	10
Total ..	663	515	301	136	182	56	3	1,856

PERSONS INJURED.(a)								
				(b)				
Under 5 ..	443	459	222	68	113	40	6	1,351
5 and under 7 ..	339	384	170	45	60	34	3	1,035
7 " " 17 ..	1,302	1,371	840	242	391	191	24	4,361
17 " " 21 ..	1,683	1,364	1,216	398	545	190	33	5,429
21 " " 30 ..	2,999	3,126	1,772	654	796	296	60	9,703
30 " " 40 ..	1,849	1,966	1,067	405	405	171	17	5,880
40 " " 50 ..	1,316	1,541	684	269	284	92	7	4,193
50 " " 60 ..	962	1,132	559	184	223	68	7	3,135
60 and over ..	1,178	1,121	552	184	229	75	4	3,143
Not Stated ..	388	100	70	..	327	89	I	975
Total ..	12,459	12,564	7,152	2,449	3,373	1,246	162	39,405

(a) Persons injured to an extent requiring surgical or medical treatment. (b) See note (d) to table above.

(iv) *Accidents Recorded and Casualties, classified according to Type of Vehicle, Road User, etc., Involved.* The following table shows, for the year 1952-53, the number of accidents in which each of several classes of vehicles, road users, etc., were involved. The accidents involving casualties and persons killed and injured are similarly classified.

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : ACCIDENTS RECORDED AND CASUALTIES, CLASSIFIED ACCORDING TO TYPE OF VEHICLE, ROAD USER, ETC., INVOLVED, AUSTRALIA, 1952-53.(a)

Particulars.	Motor Vehicle.	Motor Cycle.	Pedal Cycle.	Tram.	Animal and Animal-drawn Vehicle.	Pedestrian.	Fixed Object.	Other Vehicle.
Total Accidents Reported	68,970	11,340	4,811	2,033	2,528	7,395	7,043	383
Accidents Involving								
Casualties ..	26,004	8,556	4,505	932	677	7,359	1,852	177
Persons Killed ..	1,559	443	151	52	31	507	129	53
Persons Injured(c) ..	32,921	9,887	4,695	1,114	769	7,440	2,447	232

(a) It should be noted that, as accidents and casualties classified according to one type of road user, etc., may also be classified according to another, these totals cannot be added across to obtain grand totals. The table excludes 62 accidents reported for which no cause was stated, of which 38 involved casualties—4 persons killed and 40 persons injured. (b) Total accidents causing death or injury to persons or damage exceeding £10 to property. (c) Persons injured to an extent requiring surgical or medical treatment.

It will be seen, therefore, that motor vehicles were involved in 68,970 accidents, of which 26,004 involved casualties (1,559 persons killed and 32,921 persons injured). The 68,970 accidents in which motor vehicles were involved comprised 32,303 collisions with other motor vehicles, 6,974 with motor cycles, 3,408 with pedal cycles, 1,244 with trams, 2,004 with animals and animal-drawn vehicles, 6,026 with pedestrians, 6,352 with fixed objects, 301 with vehicles other than those mentioned, 9,696 instances of overturning or leaving the roadway, and 662 accidents to passengers only. The particulars of accidents in which motor cycles, pedal cycles, etc., were involved with motor vehicles are also included under their respective headings in the table above. Consequently, since the figures in each column refer to the *total* accidents in which the particular type of vehicle, etc., was involved, any aggregation across would result, through duplication, in considerable overstatement of the actual totals.

3. **Persons Killed or Injured in Road Traffic Accidents.**—The following table shows the numbers of persons killed or injured in road traffic accidents in each State and the Australian Capital Territory during the years 1938-39 and 1948-49 to 1952-53 :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED OR INJURED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.	Per 10,000 Motor Vehicles Registered.
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PERSONS KILLED.

1938-39	552	418	173	118	126	43	3	1,433	16
1948-49	564	426	169	119	90	53	3	1,424	12
1949-50	561	501	202	170	142	64	3	1,643	12
1950-51	699	581	218	197	167	57	7	1,926	12
1951-52	741	603	251	172	194	87	6	2,054	12
1952-53	663	515	301	136	182	56	3	1,856	10

PERSONS INJURED.(a)

1938-39	8,388	7,428	4,026	(b) 3,536	(c) 937	1,300	38	25,653	285
1948-49	9,253	8,225	4,017	2,025	(c) 747	952	91	25,310	207
1949-50	10,405	10,538	4,771	2,514	(d) 1,929	1,154	136	31,447	224
1950-51	11,817	11,364	5,512	2,332	(d) 2,686	1,212	172	35,095	223
1951-52	12,637	12,531	6,561	2,497	(d) 2,771	1,215	164	38,376	217
1952-53	12,459	12,564	7,152	2,449	(d) 3,373	1,246	162	39,405	215

(a) Persons injured to an extent requiring surgical or medical treatment. (b) Includes all persons injured whether surgical or medical treatment was required or not. (c) Includes persons injured and detained in hospital only. (d) Includes all persons injured (i.e., requiring surgical or medical treatment) in the metropolitan area but in the remainder of the State, prior to 1st January, 1953, only those suffering "near-fatal" injuries. Since that date statistics have been collected on a basis comparable with that for the other States.

H. AVIATION.

1. **Historical.**—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration appears in Official Year Book No. 16, pp. 334–5.

2. **Foundation and Administration of Civil Aviation.**—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. Official Year Book No. 38 and earlier issues contain information on the control of civil aviation by the Board (1936) and later (1939) by the Department of that name. The Acts defining the broad principles of operation of the administration of civil aviation and the Regulations amplifying them, and the principal functions of the administration are also described.

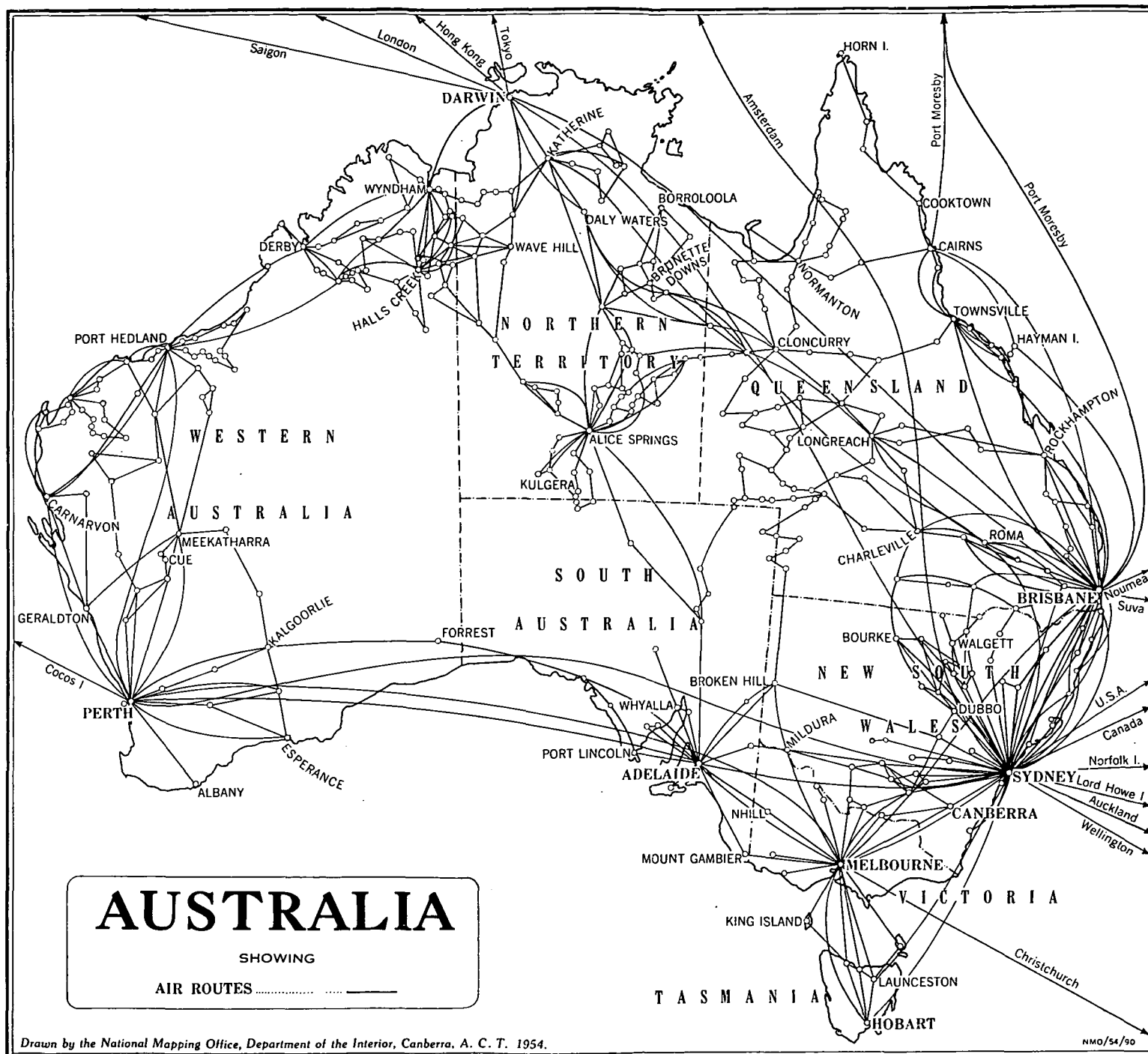
The Department was partially re-organized in June, 1954 to provide for the more effective distribution of duties and responsibilities among senior officers. This included the appointment of an additional Assistant Director-General to the executive staff to control all ground facilities. The number of Divisions was increased from six to nine—the three administrative Divisions (Air Transport and External Relations; Administration, Personnel and Establishments; and Finance and Stores) remained unchanged, while in the technical field the Division of Airports remained unchanged; the Division of Air Navigation became the Division of Flying Operations; the Division of Airways was divided into two—Division of Airways Operations and Division of Airways Engineering; and the status of two Branches—Aviation Medicine and Accident Investigation and Analysis—was raised to that of Divisions.

3. **International Activity.**—(i) *International Organizations.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council and the South Pacific Air Transport Council appeared in Official Year Book No. 37 and particulars of subsequent activity in the international field were included in issue No. 38. I.C.A.O. had a membership of 63 nations at 3rd June, 1954. Australia has continued her representation on the Council, a position which she has held since the organization was established in 1947. The Commonwealth was represented at the eighth I.C.A.O. Assembly meeting at Montreal in June, 1954. The eighth meeting of the South Pacific Air Transport Council was held at Melbourne in June and July, 1954. Further details will be found in Official Year Book No. 39 and earlier issues.

(ii) *International Air Services.* On 16th March, 1954, the British, Australian and New Zealand Governments jointly announced major changes in the organization of trans-Pacific and trans-Tasman airline operations. As a result, Qantas Empire Airways and British Overseas Airways Corporation continued in parallel partnership on the Kangaroo route between Australia and London and British Commonwealth Pacific Airlines' trans-Pacific services between Australia and North America were taken over by Q.E.A., on 15th May, 1954. When B.O.A.C.'s services are extended to San Francisco these Q.E.A. services will connect with them. Tasman Empire Airways Limited now connects with these world routes at both Sydney and Nadi (Fiji). Tasman Empire Airways—now owned by the Australian and New Zealand Governments as equal partners—operates the service between Australia and New Zealand and between Auckland and Nadi, the aircraft being based in New Zealand.

One result of these major changes has been that on a basis of route-mileage Q.E.A. has moved up in world ranking from ninth to fifth place. The company now operates services to the United Kingdom through the Middle East, to Japan via Hong Kong and Manila, to South Africa across the Indian Ocean, to North America, to the British Solomon Islands, and through Noumea to the New Hebrides. Their total route-miles as at 30th June, 1954 numbered 45,133 and stops are made in thirty overseas countries or dependencies.

Q.E.A. is now re-equipping these services with ten Super Constellation aircraft, the first of which went into operation on the trans-Pacific service on 15th May, 1954, followed by operation on the Sydney–London service on 2nd August, 1954. DC-6 aircraft with which B.C.P.A. had operated the Pacific service were meanwhile taken over by T.E.A.L.



to operate their first landplane service between Australia and New Zealand, a service that was inaugurated on 14th May, 1954. Elimination of the trans-Tasman flying-boat service, which was initiated in 1939 with Short Empire flying-boats (later replaced with Solent flying-boats), has meant that Wellington, New Zealand, which has no large land airport in proximity, has ceased to be a terminal. The services now link Sydney with both Auckland and Christchurch and Melbourne with Christchurch.

4. **Regular Air Services within Australia.**—As a result of negotiations conducted between major airline operators unprofitable duplication of services on some routes has been largely eliminated without detriment to the convenience of air travellers generally. Further negotiations between the major operators and the Government resulted in the transfer of certain services to other operators and the elimination of competition on intermediate routes.

In September, 1953 an increase of 2½ per cent. in fares on most trunk routes was authorized, and a further 5 per cent. increase was authorized in August, 1954.

5. **Air Ambulance Services.**—A brief statement of the foundation and objects of the Air Ambulance Services will be found in Official Year Book No. 32, pp. 145 and 146.

During the year 1952-53 the Air Ambulance and Flying Doctor Services continued to provide medical aid for the outback regions of Australia. The Commonwealth Department of Health operates the Northern Territory Aerial Medical Service with two Drover aircraft and one DH84A aircraft. The Flying Doctor Service of Australia, operating from Archerfield (one Beechcraft and one DH84A), Broken Hill (one DH84A and one Drover) and Port Hedland (one DH83) covers a wide area of inland Australia. The Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, maintains two aircraft (one DH84A and one Percival Proctor III at Sydney). The Federal Methodist Inland Mission (two DH82A aircraft) operates services from Meekatharra and Wiluna, Western Australia, and the Queensland Ambulance Transport Brigade operates a service from Cairns, Queensland, with an Auster J-5F aircraft.

6. **Training of Air Pilots.**—A brief statement of the pre-war policy of the Commonwealth Government regarding assistance to Aero Clubs was given in Official Year Book No. 32, p. 146.

Payment to the clubs, under a revised scheme for financial assistance from July, 1951, has been made as follows:—(i) a maintenance grant (for each aircraft-hour flown) at the following rates per hour subject to certain limitations—(a) at home base, £1 13s. 9d., (b) away from home base, £2 7s. 6d.; (ii) an issue bonus (for each pupil trained *ab initio* to "A" licence standard)—(a) at home base, £84, (b) away from home base, £107 10s.; (iii) a renewal bonus (for each licence renewed on club aircraft)—(a) at home base, £11, (b) away from home base, £15. In addition, the Commonwealth has accepted a contingent liability to contribute at the rate of 10s. per flying hour towards each club's replacement reserve. This amount is intended to supplement the club's reserve for the purchase of aircraft and spares specifically approved by the Department of Civil Aviation.

During the year 1953-54, 266 issue and 920 renewal courses were gained by the Assisted Flying Training Organization (non-profit aero clubs and commercial flying schools). Hours flown by the subsidized aero clubs totalled 45,877 and a total subsidy of £123,199 was earned by all training organizations, 17 of which were aero clubs. In addition to civil flying training, 11,200 hours were flown on training for the Royal Australian Air Force, 8,450 of which were carried out by the aero clubs.

7. **Gliding Clubs.**—For the year 1953-54 a total subsidy of £2,000 was distributed among the gliding associations in the various States. Of this amount, £1,500 was distributed among member clubs on an active membership basis, and £500 according to the number of gliding certificates issued.

8. **Aeronautical Telecommunications.**—During the year 1953-54 the aeronautical telecommunications system within Australia was modernized both in communications and radio navigation aids. The V.H.F. telephone communications services for aircraft, which were introduced in 1949, were developed to a degree where 85 per cent. of the air traffic on the east coast of Australia used this system. The increase in the volume and complexity of aeronautical radio traffic has accentuated the development and extension

of teletype and tape relay radio services along the major Australian routes and to important oversea terminals with which Australia has direct air communication. The old 33-megacycle range navigation aid was replaced by the modern Visual-Aural Radio Range system and its associated Distance Measuring Equipment. The problems of approach and landing in conditions of poor visibility were met by the preliminary installation of the Instrument Landing system, with high intensity lighting, at Sydney and Melbourne airports. Considerable work was done in the reconstruction of aeronautical communications centres at Sydney and Melbourne, and operating consoles were introduced to facilitate ground-air and point-to-point communication.

9. **Air Traffic Control.**—Creation of a new flight information region based on Cocos Island with consequential changes to the boundaries of adjacent regions was a major change in the operational organization of air control in 1952-53. These changes were reviewed at the Second South-East Asia-South Pacific Regional Air Navigational Meeting.

10. **Meteorological Aids to Civil Aviation.**—Professional meteorological officers of the Department of the Interior are on duty at many of Australia's aeradio stations. At the remainder, communications personnel make local weather observations and take barometer and thermometer readings for transmission to Area Meteorological Offices.

11. **Construction and Development of Airports.**—On the Australian mainland the Commonwealth now owns and controls 207 airports and there are 285 licensed aerodromes also under the operational control of the Department. Four water airports and 49 water alighting areas, 33 of which are provided by the Commonwealth, meet the needs of the flying-boat services. Progress with construction work at capital city airports during the year ended 30th June, 1954 was as follows :—

Sydney (Kingsford-Smith) Airport—Construction work on both runways (7,898 feet and 3,930 feet) together with associated engineering works was completed.

Melbourne Airport—Installation of a new air traffic control tower and two new hangars was almost completed.

Brisbane Airport—A new "B" class runway of 7,750 feet was being prepared to specifications which would meet the requirements of heavy oversea traffic. Brisbane is now an alternative international airport.

Adelaide Airport—Two runways (6,850 feet and 5,432 feet), an extensive taxiway system, hangars and ancillary buildings were completed. Temporary terminal buildings were provided to permit the use of the airport for regular airline operations pending the construction of the permanent building which is expected to be completed in 1956.

Hobart Airport—The task of laying a 5,800 foot runway together with taxiways and aprons at the Llanherne site was completed. Provision was made for temporary traffic facilities and the new terminal building is expected to be completed in 1956.

12. **Aircraft Parts and Materials.**—At 30th June, 1954 the number of firms and organizations approved by the Department of Civil Aviation to trade in the aircraft industry was 421. With the introduction of gas turbine engines and pressurized aircraft certain firms have been approved to undertake the specialized work of overhaul, repair and maintenance of these engines and of accessories. The major fuel and oil companies have been brought under a system of quality control.

13. **Aircraft Overhaul and Repair.**—Aircraft overhaul and repair is carried out in workshops approved by the Director-General of Civil Aviation. Components and accessories are now certified on release notes signed by approved members of the firms' inspection organization.

14. **Test and Examination of Aircraft Parts and Materials.**—In the past the Department adopted the practice of approving laboratories for this work, but these approvals have now been terminated in favour of test houses and laboratories registered by the Commonwealth Association of Testing Authorities. Certificates issued under registration by the Association are acceptable to any Commonwealth Government Department.

15. Statistical Summaries.—(i) *Registrations, Licences, Accidents, etc.* The following table provides a summary of the civil aviation registrations and licences in force in Australia at 30th June of each of the years 1948 to 1953.

CIVIL AVIATION : REGISTRATIONS, LICENCES, ACCIDENTS, ETC., AUSTRALIA.

Particulars.	At 30th June—					
	1948.	1949.	1950.	1951.	1952.	1953.
Registered Aircraft Owners ..	334	335	359	351	343	369
Registered Aircraft ..	670	748	779	838	786	821
Pilots' Licences—						
Private ..	614	756	872	1,065	1,444	1,677
Commercial ..	495	481	469	441	470	518
Student ..	1,114	1,169	1,778	1,840	2,644	2,639
1st Class Airline Transport ..	361	397	417	475	513	495
2nd " " " ..	35	27	30	35	35	45
3rd " " " ..	360	363	326	377	400	371
Navigators' Licences—						
Flight Navigator ..	84	118	126	139	155	163
Cadet ..	12	44	18	(a)	(a)	(a)
Radio Operators' Licences—						
1st Class Flight Radio Tele-						
graphy Operator ..	106	113	103	96	98	93
Flight Radio Telephony						
Operators—						
1st Class ..	590	715	701	754	825	850
2nd " ..	211	230	211	237	258	243
3rd " ..	6	27	38	33	41	70
Flight Engineers' Licences ..	16	47	40	39	53	58
Ground Engineers' Licences ..	1,660	(b)	1,684	1,643	1,720	1,790
Aerodromes—						
Government ..	133	142	183	184	189	186
Public ..	240	222	213	239	269	260
Emergency Grounds ..	49	43	(c)	(c)	(c)	(c)
Flying Boat Bases ..	5	5	5	5	11	11

(a) Category cancelled during 1950-51. (b) Not available. (c) Included with Public Aerodromes.

(ii) *Operations of Regular Internal Services.* The next table summarizes the flying activities of regular internal services operating within Australia during the years 1947-48 to 1952-53.

CIVIL AVIATION : OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA.

Particulars.	Year ended 30th June—					
	1948.	1949.	1950.	1951.	1952.	1953.
Hours flown ..	212,233	224,853	225,841	252,333	260,947	237,640
Miles ..	32,371	35,242	36,519	40,680	41,831	39,059
Paying Passengers ..	1,207,839	1,409,300	1,499,816	1,685,089	1,828,506	1,706,446
Paying Passenger-miles ..	503,494	566,038	590,429	669,087	721,573	667,321
Freight—						
Actual tons (a) ..	28,946	37,387	49,441	59,362	57,464	57,635
Ton-miles ..	13,350	17,069	22,258	27,102	26,684	27,167
Mail—						
Actual tons (a) ..	1,398	1,770	2,905	3,233	2,681	3,311
Ton-miles ..	755	884	1,400	1,493	1,285	1,166
Accidents—						
Persons Killed ..	13	42	61	13	25	4
Persons Injured ..	23	22	22	27	22	15

(a) Short tons (2,000 lb.).

(iii) *Operations of Australian and International Oversea Services.* The following table furnishes a summary of Australian and other overseas services operating between Australia and overseas countries, including Pacific islands, during the years 1947-48 to 1952-53. Particulars are not available in respect of certain services and the figures shown are therefore incomplete.

CIVIL AVIATION : OPERATIONS OF OVERSEA SERVICES.(a)

Particulars.	Year ended 30th June—					
	1948.	1949.	1950.	1951.	1952.	1953.
Route-miles	26,667	29,695	39,217	43,633	43,455	66,558
Hours flown	39,488	40,262	40,692	48,947	50,336	54,148
Miles	7,555	7,982	8,768	10,500	10,664	11,565
Paying Passengers	41,124	45,296	59,832	87,599	95,134	97,753
Paying Passenger-miles	122,678	144,869	165,077	241,817	265,756	275,206
Freight—						
Actual tons (b)	740	857	1,256	2,213	2,138	1,957
Ton-miles	2,946	3,145	4,481	6,960	6,716	7,401
Mail—						
Actual tons (b)	715	646	729	943	1,141	1,168
Ton-miles	3,817	3,731	3,867	5,367	6,162	6,122
Accidents—						
Persons Killed .. .. .	..	..	..	..	3	1
Persons Injured	4	..	..	2	..	..

(a) Incomplete.

(b) Short tons (2,000 lb.).

16. *Papua-New Guinea Activities.*—(i) *General.* Issues of the Official Year Book up to and including No. 34, 1941 showed particulars of the development of civil aviation in New Guinea and of the companies operating at the outbreak of war with Japan, while issues Nos. 35 to 37 carried the accompanying statistical summary of operations up to the end of September, 1941.

(ii) *Territory of Papua and New Guinea.* At 30th June, 1953 there were 118 fully operational aerodromes in the Territory of Papua and New Guinea and a further 25 in the course of development. Of these, 28 were controlled by the Department of Civil Aviation, and 35 by the Civil Administration and 48 were privately owned by missions and commercial interests. In addition, there were 2 water airports and 26 Government alighting areas.

Aerial activity within the Territory is intensive, and nine companies conduct regular services to the major aerodromes while charter flights can be arranged to almost any locality. Further information may be found in Chapter V.—The Territories of Australia, page 123.

During the year ended 30th June, 1953, there were six fatal accidents, in which six people were killed and fifteen injured.

I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

NOTE.—In all the tables in this Division returns for the Australian Capital Territory are included with those for New South Wales, while the South Australian returns include particulars for the Northern Territory.

§ 1. General.

1. *The Postmaster-General's Department.*—Under the provisions of the Post and Telegraph Act 1901, the Department was placed under the control of the Postmaster-General, being a responsible Minister. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy-Director of Posts and Telegraphs.

2. *Postal Facilities.*—(i) *Relation to Area and Population.* The following statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) and the number of inhabitants to each 100 square miles in each State and in Australia at 30th June, 1953. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account.

**POSTAL FACILITIES : RELATION TO AREA AND POPULATION,
AT 30th JUNE, 1953.**

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices (a) ..	2,550	2,386	1,289	877	640	519	8,261
Number of square miles of territory per office	122	37	520	1,030	1,525	51	360
Number of inhabitants per office ..	1,362	999	982	883	972	599	1,069
Number of inhabitants per 100 square miles	1,119	2,713	189	86	64	1,187	297

(a) Includes "official," "semi-official," and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices (exclusive of telephone offices) in each State at 30th June, 1953.

NUMBER OF POST OFFICES AT 30th JUNE, 1953.

Type of Office.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Official and Semi-official ..	499	301	207	164	146	50	1,367
Non-official	2,051	2,085	1,082	713	494	469	6,894
Total	2,550	2,386	1,289	877	640	519	8,261

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at 30th June, 1953 are given in the following table :—

NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT 30th JUNE, 1953.

Particulars.	Central Office.	N.S.W.	Vic.	Q'land.	S.A.	W. Aust.	Tas.	Aust.
Employees	953	31,762	23,148	12,473	7,604	5,387	2,973	84,300
Mail Contractors(a) ..	..	2,102	1,062	1,222	376	290	292	5,344

(a) Includes persons employed to drive vehicles.

Particulars of persons employed are shown in greater detail in *Transport and Communication Bulletin* No. 44.

3. **Gross Revenue, Branches—Postmaster-General's Department.**—The gross revenue (actual collections) in respect of each branch of the Department during the year 1952–53 is shown in the table hereunder :—

**POSTMASTER-GENERAL'S DEPARTMENT : GROSS REVENUE(a), 1952–53.
(£'000.)**

Sources.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postage	8,620	6,392	2,915	1,836	1,420	638	21,821
Money Order Commission and Poundage on Postal Notes	341	296	91	68	40	23	859
Private Boxes and Bags ..	59	38	31	20	13	8	169
Miscellaneous	716	542	259	132	128	47	1,824
Total, Postal	9,736	7,268	3,296	2,056	1,601	716	24,673
Telegraphs	1,710	1,240	727	409	349	112	4,547
Telephones	14,003	10,676	4,655	2,988	1,946	910	35,178
Grand Total	25,449	19,184	8,678	5,453	3,896	1,738	64,398

(a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes.

Corresponding figures for the year 1951–52 will be found in *Transport and Communication Bulletin* No. 43. For the years 1938–39, 1948–49, 1949–50, 1950–51 and 1951–52 the gross revenue for Australia was £17,350,000 £33,307,000, £38,348,000 £44,777,000 and £59,371,000 respectively.

Gross revenue for the year 1952-53 increased by 8.5 per cent. compared with that for the previous year. Revenue of the Postal and Telephone branches increased by 6.1 per cent. and 13.3 per cent. respectively, but Telegraph revenue decreased by 10.2 per cent.

The gross revenue in 1952-53 was 271.2 per cent. higher than in the last complete pre-war year, 1938-39, the corresponding percentage increases for the several branches being as follows:—Postal 232.4, Telegraph 231.4, and Telephone 337.5.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution, 1952-53.* The following table shows, as far as possible, the distribution of expenditure (actual payments) on various items in each State during the year ended 30th June, 1953, as shown by records kept for Treasury purposes. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

POSTMASTER-GENERAL'S DEPARTMENT: DISTRIBUTION OF EXPENDITURE, 1952-53.
(£'000.)

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Expenditure under control of Department—								
Salaries and payments in the nature of salary ..	315	12,205	8,512	4,740	2,886	1,910	1,132	31,700
General expenses ..	38	1,134	737	345	235	166	82	2,737
Stores and material ..	20	835	547	265	203	140	82	2,092
Mail services ..	(a) 2,908	1,168	590	658	298	206	98	5,926
Engineering services (other than Capital Works) ..	539	8,570	5,464	3,018	1,830	1,341	706	21,468
Other services ..	205	..	..	..	..	..	..	205
Total ..	4,025	23,912	15,850	9,026	5,452	3,763	2,100	64,128
Rent, repairs, maintenance, Proportion of audit expenses ..	..	420	262	147	84	55	15	983
Capital works and services (b)—	..	12	8	4	3	2	1	30
Telegraph, telephone and wireless ..	(c) 121	9,297	6,899	3,660	1,986	1,262	550	23,775
New buildings, etc. ..	..	1,658	1,340	689	312	380	273	4,652
Other expenditure, not allocated to States ..	(d) 4,776	..	..	..	..	..	..	4,776
Grand Total ..	8,922	35,299	24,359	13,526	7,837	5,462	2,939	98,344

(a) Expenditure on air-mail services, etc. (b) Includes expenditure from loan. (c) Includes advance to Overseas Telecommunications Commission, £100,000. (d) Particulars of apportionment to States not available. Includes superannuation contributions, £1,038,000; sinking fund payments, £2,371,000; interest on loans, £674,000; exchange, £675,000; transferred officers pensions and allowances, £5,000.

A similar table for the year 1951-52 will be found in *Transport and Communication Bulletin* No. 43, p. 57.

(ii) *Totals.* Actual payments made for each of the years 1938-39 and 1948-49 to 1952-53, respectively, were:—£18,874,000, £53,544,000, £64,304,000, £89,700,000, £93,109,000 and £98,344,000. Total expenditure increased by 5.6 per cent. during 1952-53.

5. **Profit or Loss, Postmaster-General's Department.**—(i) *States, 1952-53.* The foregoing statements of gross revenue and expenditure represent actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States, after providing for working expenses (including superannuation, pensions and depreciation) and interest charges including exchange, were as follows.

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, 1952-53.
(£'000.)

Branch.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postal ..	- 1,231	10	- 731	- 109	- 198	- 158	- 2,417
Telegraph ..	- 650	- 228	- 371	- 108	- 58	- 38	- 1,453
Telephone ..	1,382	1,956	- 186	- 48	72	- 244	2,932
All Branches ..	- 499	1,738	- 1,288	- 265	- 184	- 440	- 938

NOTE.—Minus sign (—) indicates loss.

(ii) *Branches.* The following statement shows particulars of the operating results of each branch for the years 1938-39 and 1948-49 to 1952-53.

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, BRANCHES.
(£'000.)

Year.	Postal.	Telegraph.	Telephone.	All Branches.
1938-39	2,105	52	1,392	(a) 3,625
1948-49	- 297	- 1,080	- 346	- 1,723
1949-50	- 1,154	- 722	721	- 1,155
1950-51	- 1,813	- 818	- 26	- 2,657
1951-52	2,107	- 900	- 544	663
1952-53	- 2,417	- 1,453	2,932	- 938

(a) Includes £76,000 profit on operations of Wireless Branch.

NOTE.—Minus sign (—) indicates loss.

6. Fixed Assets.—(i) *Details, 1952-53.* The following statement shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1952 to 30th June, 1953 :—

POSTMASTER-GENERAL'S DEPARTMENT : FIXED ASSETS.
(£'000.)

Particulars.	Net Value, 1st July, 1952.	Capital Expendi- ture, 1952-53.	Gross Value, 30th June, 1953.	Deprecia- tion, etc., 1952-53. (a)	Net Value, 30th June, 1953.
Telephone service plant (excluding trunk lines) ..	134,705	21,491	156,196	2,011	154,185
Joint trunk and telegraph plant (aerial wires, conduits, and cables) ..	25,094	2,782	27,876	183	27,693
Telegraph service plant ..	1,633	215	1,848	25	1,823
Postal service plant ..	861	78	939	2	937
Sites, buildings, furniture and office equipment ..	23,852	4,698	28,550	391	28,159
Miscellaneous plant ..	8,604	1,827	10,431	247	10,184
Total ..	194,749	31,091	225,840	2,859	222,981

(a) Includes dismantled assets, depreciation written off, and assets transferred.

(ii) *Net Value.* The net value of the fixed assets of the Postmaster-General's Department at 30th June, 1939 and 1949 to 1953, respectively, was :—£65,135,000, £115,956,000, £134,933,000, £162,046,000, £194,749,000 and £222,981,000.

§ 2. Posts.

1. Postal Matter Dealt With.—(i) *States, 1952-53.* The following table shows a summary of the postal matter dealt with in each State during the year 1952-53. Mail matter posted in Australia for delivery therein is necessarily handled at least twice, but only the number of distinct articles handled is included in the following table.

POSTAL MATTER DEALT WITH(a) : STATES, 1952-53.
(⁰⁰⁰.)

State	Letters. (b)	Papers and Packets. (c)	Parcels. (d)	Regis- tered Articles. (e)	Letters. (b)	Papers and Packets. (c)	Parcels. (d)	Regis- tered Articles. (e)
	Posted for delivery within Australia.				Posted for delivery Overseas.			
New South Wales ..	430,377	89,660	5,807	6,650	12,959	7,177	415	511
Victoria ..	338,884	52,254	3,744	4,073	5,843	2,761	250	101
Queensland ..	145,353	26,133	2,666	1,995	4,509	735	99	67
South Australia ..	95,878	10,536	1,224	1,025	3,127	601	96	54
Western Australia ..	82,166	19,502	1,128	783	2,670	934	92	58
Tasmania ..	55,821	7,065	228	531	477	20	40	76
Australia ..	1,148,479	205,150	14,797	15,057	29,585	12,228	992	867
	Received from Overseas.				Total postal matter dealt with.			
New South Wales ..	31,548	16,188	234	656	474,884	113,025	6,456	7,817
Victoria ..	8,247	6,834	147	173	352,974	61,849	4,141	4,347
Queensland ..	3,852	3,540	53	29	153,714	30,408	2,818	2,091
South Australia ..	3,000	3,773	38	30	102,005	14,910	1,358	1,109
Western Australia ..	2,739	4,730	38	59	87,575	25,166	1,258	900
Tasmania ..	1,235	1,920	14	39	57,533	9,005	282	646
Australia ..	50,621	36,985	524	986	1,228,685	254,363	16,313	16,910

(a) See explanation in para. 1. (i) above. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

Comparable figures of the number of articles dealt with during 1951-52 may be found in *Transport and Communication Bulletin* No 43, pp. 58-61.

(ii) *Australia*. The next table shows the total postal matter dealt with in Australia during each of the years 1948-49 to 1952-53 in comparison with the year 1938-39.

TOTAL POSTAL MATTER DEALT WITH : AUSTRALIA.

Year.	Letters, Postcards and Letter-cards.		Newspapers and Packets.		Parcels.(a)		Registered Articles other than Parcels.	
	Total (⁰⁰⁰ .)	Per 1,000 of Popula- tion.	Total (⁰⁰⁰ .)	Per 1,000 of Popula- tion.	Total (⁰⁰⁰ .)	Per 1,000 of Popula- tion.	Total (⁰⁰⁰ .)	Per 1,000 of Popula- tion.
1938-39(b)	903,090	130,245	165,362	23,849	9,585	1,382	8,371	1,207
1948-49 ..	1,094,617	140,356	238,939	30,639	21,200	2,718	20,705	2,655
1949-50 ..	1,178,837	146,446	247,134	30,700	21,340	2,651	19,165	2,381
1950-51 ..	1,228,285	147,784	257,384	30,968	20,714	2,492	19,400	2,334
1951-52 ..	1,197,990	140,288	249,678	29,238	16,670	1,952	17,948	2,102
1952-53 ..	1,228,685	140,463	254,363	29,079	16,313	1,865	16,970	1,933

(a) Includes registered, cash on delivery and duty parcels. (b) Packets were included with letters.

2. **Cash on Delivery Parcels Post.**—(i) *General*. The Postal Department undertakes, upon prepayment of a prescribed commission, to deliver registered articles sent by parcel post within Australia, or between Lord Howe Island, Norfolk Island, Nauru, Territory of Papua and New Guinea, or Fiji and Australia, to recover from the addressee on delivery a sum of money specified by the sender, and to remit the sum to the sender. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, and of traders and others who do not wish their goods to be delivered except on payment.

(ii) *States, 1952-53*. The next table shows particulars regarding the cash on delivery parcels posted in each State for the year 1952-53.

CASH ON DELIVERY PARCELS POST : STATES, 1952-53.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Parcels posted ⁰⁰⁰	332	140	223	58	81	3	837
Value .. £ ⁰⁰⁰	1,167	448	695	174	163	9	2,656
Revenue(a) £ ⁰⁰⁰	87	36	59	19	19	1	221

(a) From commission and postage.

(iii) *Australia.* In the following table particulars of cash on delivery parcels posted in Australia are shown for the years 1948-49 to 1952-53 in comparison with the year 1938-39.

CASH ON DELIVERY PARCELS POST : AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Parcels posted .. '000	633	1,079	1,106	1,155	899	837
Value .. £'000	783	2,361	2,697	2,933	2,876	2,656
Revenue(a) .. £'000	86	157	188	212	236	221

(a) From commission and postage.

3. **Total Cost of Carriage of Mails.**—During 1952-53 the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows:—Inland mails—Road £1,929,748, Railway £830,518, Air £735,223; Coastwise mails—£33,509; Oversea mails—Sea £403,384, Air £1,924,390; Grand Total—£5,856,772.

4. **Transactions of the Dead Letter Offices.**—During the year 1952-53 there were, in the several States of Australia, 1,764,000 letters returned to writers or delivered, 252,000 destroyed in accordance with the Act, and 166,000 returned to other countries as unclaimed—a total of 2,182,000. Corresponding particulars for packets were—379,000, 224,000, 29,000 and 632,000. There were 2,814,000 articles handled in all.

5. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by Sections 74-79 of the Post and Telegraph Act 1901-1949. The maximum amount for which a single money order payable within Australia may be obtained is £40, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent to any person in the sterling area is £8 per month but varying conditions apply for remittance to countries outside the sterling area. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *States, 1952-53.* Particulars regarding the business transactions in each State for 1952-53 are shown hereunder:—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1952-53.

(£'000.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
Money Orders—							
Issued	25,635	12,680	6,567	3,417	2,934	1,855	53,088
Paid	26,214	12,936	6,201	3,210	2,840	1,674	53,075
Net Commission Received	172	90	53	26	24	13	378
Postal Notes—							
Issued	4,537	4,428	984	958	522	229	11,658
Poundage Received ..	172	205	38	43	21	10	489

(iii) *Australia, 1938-39 and 1948-49 to 1952-53.* The next table shows the number and value of money orders and postal notes issued and paid in Australia in each of the years 1948-49 to 1952-53 compared with 1938-39.

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, AUSTRALIA.

Year.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	'000.	£'000.	'000.	£'000.	'000.	£'000.	'000.	£'000.
1938-39 ..	3,239	18,349	3,254	18,548	21,942	7,926	21,966	7,934
1948-49 ..	4,194	33,012	4,215	33,262	28,059	11,266	27,810	11,246
1949-50 ..	4,586	37,014	4,626	37,503	30,181	12,206	29,998	12,130
1950-51 ..	5,166	44,110	5,135	43,990	29,440	12,746	29,297	12,680
1951-52 ..	5,404	49,495	5,362	49,439	26,476	11,608	26,590	11,675
1952-53 ..	5,666	53,088	5,578	53,075	26,793	11,658	26,658	11,614

(iv) *Classification of Money Orders Issued and Paid.* Of the total money orders issued in Australia during 1952-53, 5,446,000 valued at £52,296,000 were payable in Australia, 10,000 (£29,000) in New Zealand, 161,000 (£545,000) in the United Kingdom and 49,000 (£218,000) in other countries. Of the total money orders paid in Australia during 1952-53, 5,441,000 (£52,322,000) were issued in Australia, 34,000 (£87,000) in New Zealand, 65,000 (£353,000) in the United Kingdom and 38,000 (£313,000) in other countries.

Money orders payable or issued in foreign countries, which have been sent from or to Australia through the General Post Office in London, are included in those payable or issued in the United Kingdom.

(v) *Postal Notes Paid.* The following table shows the number and value of postal notes paid in each State during 1952-53. Particulars regarding the number and value of postal notes issued and paid in each of the last five years have been given in the previous table.

POSTAL NOTES PAID : STATE OF ISSUE, 1952-53.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Same State '000	7,874	3,964	1,552	920	737	401	15,448
Value £'000	3,904	2,006	746	463	360	164	7,643
Other States '000	1,326	775	750	126	363	7,870	11,210
Value £'000	561	347	352	66	91	2,554	3,971
Total '000	9,200	4,739	2,302	1,046	1,100	8,271	26,658
Value £'000	4,465	2,353	1,098	529	451	2,718	11,614

§ 3. Telegraphs.

1. *General.*—A review of the development of telegraph services in Australia up to 1921 appears in Official Year Book No. 15, p. 625, and subsequent developments of importance have been dealt with in later issues. During the past few years substantial improvements in both the speed and grade of telegraph services throughout Australia have been effected, the entire system being subjected to intensive reorganization. The external circulation system of the Australian telegraph service has been considerably modified, and direct communication has been established between cities and towns which formerly were served through intermediate repeating centres.

Telephone subscribers may telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the system means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year ended 30th June, 1953 was about 7 million or approximately 30 per cent. of the total lodgments.

A radiogram service is provided to certain isolated places throughout Australia and a number of privately-operated wireless transceiver stations have been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. Stations sponsored by the Flying Doctor Service of Australia can communicate by wireless with base stations.

The picturegram service between Melbourne and Sydney, which was established in 1929, but which was suspended during 1942, was restored and extended to Brisbane and Adelaide in 1949, to Perth in 1950 and to Hobart and Newcastle in 1951. The equipment installed at these points also permits the direct transmission and reception of overseas photo-telegrams. Portable picture-transmitting apparatus has been provided for use at country centres in New South Wales and Victoria and was first used for the opening of the 19th Federal Parliament at Canberra on 21st February, 1950.

As from 20th May, 1953, the Department authorized the connexion of privately-owned picturegram equipment to the public telephone trunk line network for the transmission of pictures. The new facilities are provided subject to certain restrictions where Departmental picturegram services operate and to payment of appropriate charges to cover the use of trunk line channels and equipment. Pictures from overseas may now be routed direct to private receivers.

Teleprinter services (i.e., typewriting over electrical circuits), affording the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles, and printergram services, connecting any business premises with the local telegraph office for the transmission and reception of telegrams, are available.

The number of printergram services, that is, leased teleprinter channels between the premises of subscribers and chief telegraph offices, rose from 90 to 103. Messages transmitted over these services totalled 3.4 million.

2. **Telegraph and Telephone Mileages.**—At 30th June, 1953 the combined single-wire mileages for both telegraph and telephone purposes were :—aerial, underground and submarine cables—exchange 4,771,000 miles, trunk telephone and telegraph 177,000 miles ; aerial wires—telephone, trunk and/or telegraph purposes 497,000 miles, exchange and non-exchange service lines 655,000 miles. The mileages of conduits and pole routes were 22,000 duct miles and 111,000 miles respectively. The mileages in each State at 30th June, 1953 may be found in *Transport and Communication Bulletin* No. 44.

3. **Telegraph Offices.**—(i) *States.* The numbers of telegraph offices, including railway telegraph offices, in the various States at 30th June, 1953 were :—New South Wales, 3,248 ; Victoria, 2,390 ; Queensland, 1,746 ; South Australia, 941 ; Western Australia, 996 ; Tasmania, 563.

(ii) *Australia.* The numbers of telegraph offices in Australia at 30th June of each of the years 1939 and 1949 to 1953 respectively were :—9,389, 9,550, 9,700, 9,764, 9,830 and 9,884.

4. **Telegrams Dispatched within Australia.**—(i) *States.* The following table shows, for each State in 1952-53, the number of telegrams dispatched to places within the Commonwealth and to adjacent islands and to ships at sea, according to the class of message transmitted :—

TELEGRAMS DISPATCHED, 1952-53.

('000.)

State.	Paid and Collect.						Unpaid.			Total Telegrams.
	Ordinary.	Urgent.	Press.	Letter-gram.	Radio-gram.	Total.	Service.	Meteorological.	Total.	
N. S. Wales ..	7,269	421	69	24	50	7,833	294	542	836	8,669
Victoria ..	4,634	178	26	18	4	4,860	146	242	388	5,248
Queensland ..	3,366	127	37	12	49	3,591	174	293	467	4,058
South Australia ..	1,602	64	35	13	40	1,754	53	546	599	2,353
Western Australia ..	1,732	50	21	16	53	1,872	69	441	510	2,382
Tasmania ..	521	20	8	7	1	557	32	108	140	697
Australia ..	19,124	860	196	90	197	20,467	768	2,172	2,940	23,407

Corresponding figures for the year 1951-52 may be found in *Transport and Communication Bulletin* No. 43, p. 65.

(ii) *Australia.* Telegrams dispatched to destinations within Australia and to adjacent islands and to ships at sea, for each of the years 1938-39 and 1948-49 to 1952-53 respectively, numbered:—17,252,000, 35,647,000, 35,486,000, 34,467,000, 27,080,000 and 23,407,000.

The volume of telegraph business in 1945-46 was more than double that in the year 1938-39, but there was little change between 1945-46 and 1949-50. Figures for the year 1952-53 showed a decrease of 34 per cent. on those recorded for 1949-50.

§ 4. Telephones.

1. **General.**—Particulars of the total mileage of lines used exclusively for telephone purposes are not available, but are combined with all other line mileage. Particulars of the total single wire mileage used for telephone, trunk and/or telegraph purposes are shown in § 3 on page 187.

During 1952-53 the total number of telephones added to the post office system was 82,912, compared with 91,384 in 1951-52. With an average at 1st January, 1953, of 158 telephones per 1,000 of population, Australia continues to hold a high place amongst the countries of the world in respect of telephone density.

Eight carrier-wave telephone systems were installed during 1952-53 on trunk line routes serving capital cities and important provincial centres. The number of carrier systems now in service totals 713, representing a channel mileage of 394,783.

Twenty-four automatic exchanges were brought into operation in metropolitan areas during the year, together with 2 country and 112 rural automatic exchanges. At 30th June, 1953 there were 222 automatic exchanges in the metropolitan area and 553 in country districts to which 902,218 telephones were connected, representing 65 per cent. of the total number in use in Australia.

TELEPHONES.

I

2. **Summary for States.**—Particulars relating to the telephone service in each State at 30th June, 1953 compared with 30th June, 1939 are shown in the following table:—

TELEPHONE SERVICES : SUMMARY.

(Number.)

Particulars.	At 30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Exchanges	1939	2,010	1,680	1,053	579	653	358	6,333
	1953	2,261	1,730	1,288	663	731	387	7,060
Telephone Offices (including Exchanges)	1939	3,040	2,358	1,517	829	907	509	9,160
	1953	3,320	2,483	1,787	991	973	541	10,095
Lines connected .. '000	1939	190	151	62	45	26	14	488
	1953	370	312	132	87	55	29	985
Instruments connected '000	1939	257	208	82	61	36	18	662
	1953	527	442	178	121	77	39	1,384
(i) Subscribers' instru- ments .. '000	1939	250	204	79	59	34	17	643
	1953	515	432	172	117	74	38	1,348
(ii) Public telephones .. '000	1939	4.2	2.6	1.8	1.0	0.9	0.6	11.1
	1953	6.5	4.4	2.8	1.6	1.2	0.8	17.3
(iii) Other local instru- ments .. '000	1939	2.5	2.0	1.2	0.9	0.5	0.4	7.5
	1953	5.5	5.3	2.8	2.1	1.5	0.8	18.0
Instruments per 1,000 of population	1939	93	111	81	100	76	76	95
	1953	153	185	140	156	124	127	157

Of the total telephones (1,384,000) in service on 30th June, 1953, 513,000 or 37 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks.

3. **Subscribers' Lines and Calling Rates.**—The next table shows the number of subscribers' lines and the daily calling rates at central, suburban and country telephone exchanges in the several States for 1952-53:—

TELEPHONES : SUBSCRIBERS' LINES AND DAILY CALLING RATES, 1952-53.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.	
	Sub- scribers' Lines Connected.	Average Outward Calls Daily per Line.	Sub- scribers' Lines Connected.	Average Outward Calls Daily per Line.	Sub- scribers' Lines Connected.	Average Outward Calls Daily per Line.
New South Wales ..	30,360	9.62	190,680	3.41	129,576	1.77
Victoria	20,424	8.76	171,673	3.51	106,713	1.29
Queensland	9,650	11.16	52,076	2.87	61,643	1.86
South Australia ..	8,197	8.08	41,482	2.44	31,431	1.16
Western Australia ..	9,165	7.44	24,073	2.98	18,163	1.28
Tasmania	5,507	4.40	4,752	2.34	16,952	1.65

A comparison of the average daily calling rates for each class of exchange shows that Queensland registered the greatest number of calls per line at both central and country exchanges, and Victoria at suburban exchanges.

Similar information for the year 1951-52 may be found in *Transport and Communication Bulletin* No. 43, p. 70.

4. **Effective Paid Local Calls.**—The numbers of effective paid local calls from subscribers' and public telephones in the various States during the year ended 30th June, 1953 appear hereunder.

TELEPHONES : NUMBER OF EFFECTIVE PAID LOCAL CALLS, 1953.
(Million.)

Calls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Subscribers'	360	267	102	63	50	20	862
From public telephones	51	31	12	9	6	2	111
Total	411	298	114	72	56	22	973

In 1938-39 subscribers' calls numbered 551,511,000, calls from public telephones 44,683,000, and total local calls 596,194,000.

5. **Trunk Line Calls and Revenue.**—In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the year 1952-53 compared with 1938-39.

TELEPHONES : TRUNK LINE CALLS AND REVENUE.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Total Calls ('000)—							
1938-39 ..	14,401	11,198	7,306	4,166	2,311	1,770	41,152
1952-53 ..	25,725	21,647	12,522	7,257	4,227	3,593	74,971
Total Revenue (£'000)—							
1938-39 ..	739	529	413	197	126	74	2,078
1952-53 ..	3,894	2,926	1,888	1,100	632	390	10,830
Average Revenue per Call (pence)—							
1938-39 ..	12.32	11.34	13.56	11.34	13.09	9.98	12.12
1952-53 ..	36.28	32.45	36.18	36.36	35.89	26.03	34.67

The number of trunk line calls during 1952-53 increased by more than 5.5 million, or 8 per cent., compared with the figures for the previous year, whilst the average revenue per call decreased by 0.9 per cent.

6. **Oversea Telephone Services.**—During the year 1951-52 radio-telephone services were established or re-opened between Australia and Brazil, Iceland and Noumea, and in 1952-53 between Australia and Israel, bringing the number of countries with which radio-telephone communication is available to 66. Service is also provided to certain trans-Atlantic liners, ships off the Australian coast, H.M.A. ships, and H.M.N.Z. ships when cruising in Australian waters.

The amount of traffic handled over the radio-telephone services showed a small increase in 1951-52 but decreased slightly in 1952-53. During 1952-53 (1951-52 figures in parentheses) the number of calls connected was 38,691 (40,881), comprising 19,929 (20,683) originating in Australia and 18,762 (20,198) incoming calls.

7. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in tables in § 1 (see pp. 181-3.)

8. **World Telephone Statistics, 1953.**—Information derived, in the main, from statistics compiled by the American Telephone and Telegraph Company shows that at 1st January, 1953 there were more than 84 million telephones in use throughout the world. The United States of America, with over 48 million, possessed by far the greatest proportion of these (57 per cent.). The United States of America also had the highest

recorded number of instruments per 100 of population (viz., 30). Figures for other leading countries were as follows :—Sweden 26, Canada 23, Switzerland 21, New Zealand 21, Denmark 18. At June, 1953 the number of telephones in Australia per 100 persons was 16.

§ 5. Cable and Radio Communication.

1. **First Cable Communication with the Old World.**—In earlier issues of the Official Year Book will be found a detailed account of the connexion of Australia with the Old World by means of submarine cables. (See No. 6, p. 770.)

2. **General Cable Service.**—Descriptions of the various cable services between Australia and other countries were given in Official Year Book No. 22, pp. 335-6.

3. **Merging of Cable and Wireless Interests.**—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 which examined the situation that had arisen as the result of the competition of the beam wireless with the cable services, Imperial and International Communications Limited (since renamed Cable and Wireless Ltd.) was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. For further developments, leading eventually to the establishment of the Overseas Telecommunications Commission, see Official Year Book No. 37, pp. 220-4.

4. **Oversea Cable and Radio Traffic.**—(i) *States.* The number of telegrams received from and dispatched overseas in each State during 1952-53 is shown hereunder :—

INTERNATIONAL TELEGRAMS, 1952-53.

('000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Number received ..	607	381	59	55	67	18	1,187
„ dispatched	579	398	68	67	75	20	1,207
Total ..	1,186	779	127	122	142	38	2,394

(ii) *Australia.* (a) *Number of Telegrams.* The following table shows the number of international telegrams received from and dispatched overseas during the years 1938-39 and 1948-49 to 1952-53 :—

INTERNATIONAL TELEGRAMS : AUSTRALIA.

('000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number received ..	716	1,123	1,233	1,322	1,357	1,187
„ dispatched ..	746	1,123	1,242	1,395	1,329	1,207
Total ..	1,462	2,246	2,475	2,717	2,686	2,394

(b) *Number of Words, 1952-53.* The following statement shows particulars of the international business, originating and terminating in Australia, transacted over the cable and wireless services during the year ended 30th June, 1953.

INTERNATIONAL TELEGRAMS, AUSTRALIA, 1952-53.(a)
(‘000 Words.)

Class of Telegram.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary	4,435	6,067	10,502	3,748	4,942	8,690
Greetings	1,226	708	1,934	1,117	785	1,902
Government	642	1,183	1,825	1,197	1,538	2,735
Press	2,495	4,019	6,514	9,003	3,241	12,244
Letter	5,446	7,466	12,912	4,929	6,235	11,164
Other .. ..	..	49	49	..	180	180
Total	14,244	19,492	33,736	19,994	16,921	36,915

(a) International business, originating and terminating in Australia, transacted over the cable and wireless services.

Words transmitted to "Other places" included 2,723,565 to the United States of America and 5,938,518 to New Zealand and the Pacific Islands. Words received from "Other places" included 2,663,171 from the United States of America and 3,838,903 from New Zealand and the Pacific Islands.

5. **Coast Stations.**—There are 34 wireless stations established at points around the Australian coast and 8 about the coast of Papua and New Guinea. During 1952-53 these stations handled 510,268 messages (397,133 paying, 8,433 free traffic and 104,702 weather) with a total of 7,691,328 paying words. For further information see *Transport and Communication Bulletin* No. 44.

6. **Radio-communication Stations Authorized.**—(i) *States and Territories, 30th June, 1953.* The following table shows particulars of the different classes of radio-communication stations authorized at 30th June, 1953 in each State and Territory of the Commonwealth. Figures relate to radio-communication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners' licences are shown in § 6, paras. 3 and 4, following.

RADIO-COMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1953.

State or Territory for which Authorized.	Transmitting and Receiving.							Receiving Only.			Grand Total.
	Ama- teur.	Aero- nauti- cal.(a)	Coast. (b)	Land. (c)	Mobile (Gene- ral). (d)	Miscel- laneous.	Total.	Land. (c)	Mobile (Gene- ral). (d)	Total.	
N.S.W. ..	1,024	11	3	441	1,375	30	2,884	78	44	122	3,006
Vic. ..	959	5	6	289	1,305	18	2,582	210	90	300	2,882
Q'land ..	304	19	7	420	536	8	1,294	62	20	82	1,376
S. Aust. .	330	7	3	164	482	4	990	3	6	9	999
W. Aust. .	185	19	7	307	197	7	722	34	5	39	761
Tas. ..	109	7	7	61	121	4	309	1	..	1	310
Nor. Terr.	14	6	1	162	12	..	195	2	..	2	197
A.C.T. ..	15	1	..	11	67	1	95	..	..	..	95
Total, Aust.	2,940	75	34	1,855	4,095	72	9,071	390	165	555	9,626
Territories	37	9	8	252	49	..	355	..	..	..	355
Grand Total	2,977	84	42	2,107	4,144	72	9,426	390	165	555	10,146

(a) Ground stations (aeradio stations) for communication with aircraft stations. (b) Ground stations for communication with ship stations. (c) Stations established at fixed locations on land for the conduct of point-to-point services and for communication with mobile stations. (d) Stations installed in motor vehicles and small harbour vessels not falling within the definition of ship stations or aircraft stations, and stations comprising small portable apparatus used for various purposes. (e) Includes 230 aircraft stations, 755 ship stations and 247 "other" stations which cannot be classified according to States, etc.

(ii) *Australia and Papua-New Guinea, 30th June, 1949 to 1953.* The following table shows the total number of radio-communication stations authorized in Australia and Papua-New Guinea at 30th June of the years 1949 to 1953.

RADIO-COMMUNICATION STATIONS AUTHORIZED: AUSTRALIA AND PAPUA-NEW GUINEA.

At 30th June--	Transmitting and Receiving.								Miscel- lan- eous.	Receiving Only.		Grand Total.
	Ama- teur.	Aero- nauti- cal. (a)	Coast. (b)	Land. (c)	Mobile.(d)					Land. (c)	Mobile (Gene- ral). (d)	
					Gene- ral.	Ship.	Air- craft.	Other.				
1949 ..	2,713	69	28	1,325	1,717	520	205	..	47	330	323	7,277
1950 ..	2,826	68	29	1,517	2,011	617	226	139	49	375	311	8,168
1951 ..	2,897	70	33	1,747	2,361	656	218	146	60	371	207	8,766
1952 ..	2,937	70	39	1,835	3,063	708	230	177	66	387	181	9,693
1953 ..	2,977	84	42	2,107	4,144	755	230	247	72	390	165	11,213

See notes to previous table.

§ 6. Broadcasting and Television.

1. **General.**—Broadcasting services in Australia operate under the Broadcasting Act 1942-1954 and comprise the National Broadcasting Service and the Commercial Broadcasting Service. The following table shows the number of broadcasting stations in operation at 30th June, 1954 :—

BROADCASTING STATIONS, 30th JUNE, 1954.

Type of Station.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Papua-New Guinea.	Total.
National—										
Medium Fre-										
quency ..	12	4	12	5	5	3	2	2	1	46
Short-wave ..	1	3	2	..	2	..	..	..	1	9
Commercial ..	36	20	20	8	13	8	..	1	..	106

2. **The Australian Broadcasting Control Board.**—The Board, which was constituted on 15th March, 1949 under the above Act, operates under the Ministerial jurisdiction of the Postmaster-General, and its principal functions, as set out in Section 6K of the Act, are to ensure :—(a) the provision of services by broadcasting stations, television stations and facsimile stations, and services of a like kind, in accordance with plans from time to time prepared by the Board and approved by the Minister ; (b) that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate ; and (c) that adequate and comprehensive programmes are provided by such stations to serve the best interests of the general public.

In addition, the Board may exercise such other functions as are prescribed by regulation in relation to broadcasting stations, television stations and facsimile stations.

In the exercise of its functions in respect of programmes, the Board is required—(a) to consult the Australian Broadcasting Commission and representatives of licensees of commercial broadcasting stations in relation respectively to the programmes of the national and commercial broadcasting services ; and (b) in particular to—(i) ensure reasonable variety of programmes ; (ii) ensure that divine worship or other matter of a religious nature is broadcast for adequate periods and at appropriate times, and that no matter which is not of a religious nature is broadcast by a station during any period during which divine worship or other matter of a religious nature is broadcast by that station ; (iii) ensure that facilities are provided on an equitable basis for the broadcasting of political or controversial matter ; (iv) determine the extent to which advertisements may be broadcast in the programme of any commercial broadcasting station ; and (v) fix the hours of service of broadcasting stations, television stations and facsimile stations.

The Board is empowered to make recommendations to the Minister as to the exercise by him of any power under Division 1 of Part III. of the Act, which prescribes the conditions under which licences are granted to commercial broadcasting stations.

The Board also has power, subject to the directions of the Minister—(a) to determine the situation and operating power of any broadcasting station, television station or facsimile station; (b) to determine the frequency of each broadcasting station, television station or facsimile station, within bands of frequencies notified to the Board by the Postmaster-General as being available for such stations; (c) after consultation with the Commission to determine the conditions upon which a commercial broadcasting station may broadcast a programme of the National Broadcasting Service; and (d) to regulate the establishment of networks of broadcasting stations and the making of agreements or arrangements by licensees of commercial broadcasting stations for the provision of programmes or the broadcasting of advertisements.

Subject to the approval of the Minister and of the Treasurer, the Board may provide financial and other assistance to commercial broadcasting stations for the purpose of ensuring that programmes of adequate extent, standard and variety are provided in the areas served by these stations.

The Board also has certain powers in connexion with the general control of the broadcasting service, particularly in relation to the operations and programmes of commercial stations.

Section 6B of the Act provides that the Board shall consist of three members appointed by the Governor-General, one of whom shall be chairman. No person shall be appointed as a member of the Board who—(a) has any financial interest, whether direct or indirect, in any company which is the licensee of a commercial broadcasting station or manufactures or deals in equipment for the transmission or reception of broadcasting, television or facsimile programmes; (b) is a member of the governing body of any company or other association of persons which is the licensee of a commercial broadcasting station; or (c) is the licensee of a commercial broadcasting station.

3. The National Broadcasting Service.—(i) *General.* The programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission and the technical facilities for the transmission of such programmes by the Postmaster-General's Department.

(ii) *The Australian Broadcasting Commission.* The Commission comprises seven Commissioners, one of whom is an officer of the Department of the Treasury and one an officer of the Postmaster-General's Department.

Under the provisions of the Act the Commission "shall provide and shall broadcast from the national broadcasting stations adequate and comprehensive programmes and shall take in the interests of the community all such measures as, in the opinion of the Commission, are conducive to the full development of suitable broadcasting programmes."

The Commission prepares estimates of its receipts and expenditure for each financial year and submits these estimates to the Minister. Appropriations are made by Parliament for the purposes of the Commission and these, together with all other moneys received by the Commission, are paid into an account in the Commonwealth Bank of Australia. From this account all costs, charges, expenses, etc., incurred by the Commission in the exercise of its powers and functions under the Act are defrayed. For particulars of the financial operations of the Commission see Chapter XVII.—Public Finance.

(iii) *Technical Facilities.* At 30th June, 1954, the National Broadcasting Service comprised 55 transmitting stations as follows:—

Medium-wave Stations—

2CN and 2CY Canberra, 2BL and 2FC Sydney, 2CO Corowa, 2CR Cumnock, 2KP Smithtown, 2LG Lithgow, 2NA and 2NC Newcastle, 2NB Broken Hill, 2NE Grafton, 2NU Manilla, 2TR Taree, 3AR and 3LO Melbourne, 3GI Sale, 3WV Dooen, 4QG and 4QR Brisbane, 4AT Atherton, 4GM Gympie, 4QA Mackay, 4QB Pinalba, 4QL Longreach, 4QN Townsville, 4QS Dalby, 4QY Cairns, 4RK Rockhampton, 4SO Southport, 5AN and 5CL Adelaide, 5CK Crystal Brook, 5LN Port Lincoln, 5WM Woomera, 5AL Alice Springs, 5DR Darwin, 6WF and 6WN Perth, 6GF Kalgoorlie, 6GN Geraldton 6WA Wagin, 7ZL and 7ZR Hobart, 7NT Kelso, 9PA Port Moresby, Papua.

Short-wave Stations—

VLI Sydney, New South Wales, VLG, VLH and VLR Lyndhurst, Victoria, VLQ and VLM Brisbane, Queensland, VLW and VLX Perth, Western Australia, VLT Port Moresby, Papua.

The medium-wave transmitters operate in the medium frequency broadcast band 540 to 1,600 kilocycles per second. From the short-wave stations, using frequencies within the band 3 to 30 megacycles per second, service is given to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and Northern and Central Queensland and in New Guinea and adjacent islands.

Programmes for country stations are normally relayed from the control studio of the nearest capital city, high quality programme transmission lines being used for the purpose. A number of programme channels are utilized to link national broadcasting stations in the capital cities of Australia, and frequently this system is extended to connect both the national and commercial broadcasting stations.

At present 32 of the medium-wave stations are situated outside the capital cities and additional country stations are to be constructed. When these additions have been made the medium-wave and short-wave stations together will provide for clear reception of the programmes of the National Broadcasting Service in practically every part of Australia.

(iv) *Programme Facilities.*—(a) *General.* The programmes of the Australian Broadcasting Commission cover a wide range of activities which are indicated briefly in the following paragraphs. The proportion of broadcasting time allocated to the various types of programme during 1952–53 was as follows:—Classical Music, 22.3 per cent.; Light Music, 17.1 per cent.; Variety, 16.0 per cent.; Drama and Features, 4.3 per cent.; Youth Education, 3.6 per cent.; Children's Session, 2.0 per cent.; Talks, 7.3 per cent.; Parliament, 3.6 per cent.; Religion, 3.5 per cent.; News, 7.6 per cent.; Sport, 5.9 per cent.; Rural Broadcasts, 1.6 per cent.; Non-departmental, 5.2 per cent.

(b) *Music.* The A.B.C. is to-day the biggest concert-giving organization in the Commonwealth, and the immense growth of interest in music in this country is illustrated by the fact that Australian listeners in increasing numbers now welcome the opportunity of hearing fine music on the air and in the concert hall and have magnificently supported the presentation of orchestral concerts and of recitals by the best musicians from their own country and from overseas. In 1936 small regular orchestras were formed by the A.B.C. in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart, and from these foundations have grown our present orchestras. Those in Sydney and Melbourne measure up to first-class orchestras overseas, whilst those in the other capital cities are showing rapid improvement and are now the equal of those in many places of comparable size in Europe or America. Until 1946 the cost of these orchestras was met solely by the A.B.C., but since then State Governments and major municipal bodies in all States have agreed to contribute towards the expense.

The close co-operation between a broadcasting organization, city authorities and State Governments to establish and maintain symphony orchestras is unique in the world.

In 1954, the A.B.C. organized 525 public orchestral concerts (including 136 free concerts for school children and 48 free concerts for adults) and 173 public recitals by famous artists throughout the Commonwealth. Of these concerts, 217 were given outside the capital cities, including 70 free orchestral concerts for school children.

The policy of the A.B.C. so far as individual artists are concerned has always been to develop local talent and at the same time give its audiences the opportunity of hearing famous international musicians.

(c) *Drama and Features.* Drama programmes are designed to give listeners opportunities, which they might not otherwise have, of hearing the great plays of all nations as well as adaptations of the best modern stage plays and also those written specially for broadcasting. The main regular drama programmes are broadcast on Saturday and Monday evenings, and special series of longer plays are also given at various times during the year.

In recent years the technique of the feature programme has also been developed in this country. The feature is a form of entertainment which is unique to radio, consisting of specially written programmes designed to present information in an interesting way, and it may deal with a very wide variety of subjects ranging from history and current events to science and the arts. A number of Australian writers have become interested in this form of entertainment and about 97 per cent. of the features broadcast are written by Australians. Local writers also contribute a large proportion of the plays broadcast and every effort is made to assist and encourage their work.

(d) *Youth Education.* The A.B.C. provides a regular series of broadcasts to schools as an addition to normal class-room education. The total number of listening schools at the end of 1954 was 7,989 or about 80 per cent. of all schools, State and private, throughout the Commonwealth. Many of the school broadcasts are presented in dramatized form, as this method makes the material more vivid and interesting to the young listener. For the very young children, the Commission broadcasts every week-day the "Kindergarten of the Air", a type of broadcast which originated in Australia. (See also Chapter XI.—Education, on this subject.)

(e) *Talks.* The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs and on general topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. The most complete of these built-up programmes is the documentary, in which radio goes into the field to analyse or to describe, using the actual sounds and voices recorded on location.

Controversial topics are covered in two sessions—the weekly discussion broadcast, in which the main conflicting points of view on a current topic are discussed by competent authorities, and the "Nation's Forum of the Air", using the debating technique with questions in person from the studio audience and telephoned from listeners. Another outstanding session is "News Review", containing at least five comments on the news of the day recorded over landline from all States of the Commonwealth and, in the case of significant world events, from overseas by radio-telephone.

(f) *Rural Broadcasts.* The Rural Broadcasts Department was commenced in 1945 to serve the needs of country listeners. It has proved to be of great value to men and women on the land throughout Australia, by giving them the latest market reports and information on general conditions, and by keeping them informed on rural development overseas. The interstate market report is the only Australia-wide market service available to the Australian rural population. Programmes are exchanged with radio organizations in England, Canada, the United States of America and elsewhere, and several visits to Australia by well-known farm radio personalities have also been arranged. The department has encouraged the work of Junior Farmers' Clubs in Australia, and has sponsored competitions for members in connexion with the Royal Agricultural Shows in Sydney and Melbourne.

(g) *News.* On 1st June, 1947, the Australian Broadcasting Commission's independent News Service came into full operation. Since that date the Commission has collected the news for its bulletins independently of the press and it now has, in addition to a large staff throughout Australia, a London news room for the selection and transmission of overseas news secured from the great news agencies. Nine national news bulletins are broadcast daily, and are followed by State bulletins of news of State interest. In addition, two or more regional bulletins are broadcast by local stations in country areas on most days of the week, and for remote country districts special bulletins are broadcast on short-wave. For overseas listeners 19 bulletins daily are broadcast through the Radio Australia transmitters. These bulletins, which are given in English, French, Malay and Thai, are directed to every continent, but concentrate on the Pacific and Asian areas. The A.B.C. also rebroadcasts for Australian listeners, by arrangement with the British Broadcasting Corporation, two B.B.C. news bulletins each day.

(h) *Other Activities.* The broadcasting of the proceedings of Federal Parliament commenced as a regular service in July, 1946, and Australian listeners are now able to hear debates from the House of Representatives and from the Senate. At present these broadcasts are confined to one of the two transmitters in each capital city, but it is hoped that eventually country listeners will also be able to hear them.

The National Children's Session, presented seven days a week, is composed of over 30 programme items, including stories, music, games, and items about art, literature and natural history. There is a children's newsreel and a Brain's Trust, discussing, through children, more than 100 topics each year. The Argonauts' Club is an important part of the session and encourages children between the ages of 7 and 17 in self-expression and the appreciation of cultural subjects, but the provision of entertainment suitable for children is the main purpose of the session.

In co-operation with the various religious denominations, the A.B.C. broadcasts several religious sessions each week-day in addition to those given on Sundays. These

religious broadcasts include relays of normal church services and a variety of special programmes of talks and sacred music. The modern trend towards the use of religious drama is also followed.

The variety and sporting programmes of the A.B.C. provide the lighter side of the service. In its variety sessions the A.B.C. does everything possible to assist local artists in order to increase the amount of first-class talent in this country, and encouragement is also given to Australian composers of light music. The A.B.C. dance bands in Sydney and Melbourne are regarded as being two of the most outstanding bands in Australia.

The coverage of sport at home and abroad by the A.B.C. is comprehensive. On Saturday afternoons the sporting pencil provides listeners with the progress results and scores, and also descriptions from half a dozen or more fields of sport. Events of international interest such as Test Matches, the Davis Cup, etc., are covered by simultaneous descriptions from A.B.C. commentators. In covering events overseas, the A.B.C. is indebted to the British Broadcasting Corporation for its collaboration in Great Britain, and to the New Zealand Broadcasting Service for events in New Zealand.

4. **The Commercial Broadcasting Service.**—Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Australian Broadcasting Control Board. The maximum initial period of a licence is three years, and renewals are granted for a period of one year. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 per annum in respect of the first period for which the licence is granted and, in the case of a renewal, £25 plus one-half of one per cent. of the gross earnings from the operations of the station if it has made a profit in the preceding year. Licensees of these stations rely for their income on revenue received from the broadcasting of advertisements and other publicity. At 30th June, 1954, there were 106 commercial broadcasting stations in operation. A table showing the call sign, location, frequency and aerial power of each of these stations may be found in *Transport and Communication Bulletin* No. 45.

5. **Overseas Broadcasting Service.**—There are three short-wave stations at Shepparton Victoria (VLA, VLB, VLC) for use only in the overseas service known as "Radio Australia". As in the case of the National Broadcasting Service, these stations are maintained by the Postmaster-General's Department and their programmes are arranged by the A.B.C. During certain periods station VLG Lyndhurst, a unit of the National Broadcasting Service, is also used for the purpose of overseas transmissions. The programmes, which give news and information about Australia, presented objectively, as well as entertainment, are directed mainly to South-East Asia and the Pacific. Twenty-two of the regular transmissions are in foreign languages. The overseas audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

6. **Television.**—(i) *General.* Under the Television Act 1953, the Postmaster-General may establish National television stations or may grant licences for commercial television stations after taking into consideration any recommendations which have been made by the Australian Broadcasting Control Board.

(ii) *Royal Commission on Television, 1953.* The question of the introduction of television services in Australia was the subject of an investigation during 1953 by a Royal Commission. The principal recommendations of the Royal Commission were that—

- (a) Television should be introduced on a gradual basis.
- (b) The first national television station should be erected in Sydney and the second in Melbourne, and expansion to other State capital cities and to other centres of population should proceed as soon as finances become available.
- (c) The authority for providing the programmes for the National Television Service should be the Australian Broadcasting Commission.
- (d) Initially, licences should be issued for two commercial television stations in both Sydney and Melbourne.
- (e) Before any licence is granted a public hearing should be conducted by the Australian Broadcasting Control Board.

7. **Broadcast Listeners' Licences.**—(i) *General.* Broadcast listeners' licences are issued at Post Offices in accordance with Section 96 of the Broadcasting Act 1942–1954. A single licence authorizes every broadcast receiver which is :—(a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and/or ordinarily kept at that address ; (b) installed in a vehicle which is ordinarily in the possession of the holder, or of a member of his family, and is ordinarily kept at that address while not in use.

The fee for a broadcast listener's licence or a renewal thereof is :—Zone 1, £2 ; Zone 2, £1 8s. Zone 1 is the area within approximately 250 miles of specified broadcasting stations and Zone 2 is the remainder of the Commonwealth.

A licence may be granted at one-quarter of the ordinary fee to any person who is in receipt of a pension under Part III. or Part IV. of the Social Services Act 1947–1954 or a service pension, or a pension in respect of total and permanent incapacity, under the Repatriation Act 1920–1954 ; and who lives alone or with any person whose income does not exceed the maximum amount of income and pension allowed under Part III. or Part IV. of the Social Services Act 1947–1954 or Section 87 of the Repatriation Act 1920–1954.

Licences are granted free of charge to blind persons over 16 years of age and also to schools.

(ii) *Licences in Force.* The following table shows the number of broadcast listeners' licences in force at 30th June, 1925, 1930, 1935, 1940, 1945 and 1950 to 1954 :—

BROADCAST LISTENERS' LICENCES IN FORCE.

At 30th June—	N.S.W.(a)	Vic.	Qld.	S.A.(b)	W.A.	Tas.	Aust.
1925	34,857	20,290	1,267	3,331	3,562	567	63,874
1930	111,253	140,072	23,335	25,729	5,755	6,048	312,192
1935	279,166	237,247	67,546	76,515	41,257	20,121	721,852
1940	458,256	348,264	151,152	124,928	87,790	42,191	1,212,581
1945(c)	548,074	394,315	180,089	146,611	98,210	47,930	1,415,229
1950(c)	683,271	505,078	260,033	195,261	133,199	64,369	1,841,211
1951(c)	679,232	522,502	270,587	204,695	139,669	68,149	1,884,834
1952	741,355	520,364	279,852	208,691	141,950	68,832	1,961,044
1953	742,002	533,329	282,338	212,104	145,141	70,741	1,985,655
1954	769,478	545,148	287,683	220,065	148,192	71,047	2,041,613

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Excludes licences for receivers in excess of one. These licences were introduced in July, 1942 and were abolished on 31st December, 1951.

Of the 2,041,613 broadcast listeners' licences in force at 30th June, 1954, 1,094,735 or 53.62 per cent. were held by persons situated in metropolitan areas and 946,878 or 46.38 per cent. by persons in country areas. Of the latter, only 11,789 were in respect of Zone 2.

8. **Radio-inductive Interference.**—In each State of the Commonwealth, the Post-master-General's Department maintains a staff of experts with suitable equipment and transport, for the purpose of investigating complaints of radio-inductive interference to the reception of broadcast programmes and to defence and civil radio-communication services.

During the year 1953–54 11,769 sources of trouble were eliminated as a result of Departmental efforts and 31 by other action. More than 3,600 suppressors were fitted to offending appliances as recommended by investigating officers, who carried out 34,016 inspections in metropolitan and country areas.

9. **Prosecutions under the Broadcasting Act.**—Persons convicted during the year ended 30th June, 1954, for operating unlicensed broadcast receivers numbers 3,644. Fines and costs amounting to £14,657 were imposed.

CHAPTER VII.

TRADE.

§ 1. Introductory.

Constitutional Powers.—By the Commonwealth of Australia Constitution Act, Section 51 (i.), the power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament. Under Section 86 of the Constitution the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1st January, 1901. Other references to trade and commerce are contained in Sections 87 to 95 of the Constitution (*see* Official Year Book No. 39, pp. 15 and 21–22).

§ 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—The Acts affecting overseas trade at present in force are :—The Customs Act 1901–1953; Customs Tariff 1933–1954; Customs Tariff (Canadian Preference) 1931 and Customs Tariff (Canadian Preference) 1934–1954; Customs Tariff (Industries Preservation) Act 1921–1936; Customs Tariff (New Zealand Preference) 1933–1954; Customs Tariff (Papua and New Guinea Preference) 1936–1950; Customs Tariff (Southern Rhodesian Preference) 1941–1948; Customs Tariff (Primage Duties) 1934–1950; Trading with the Enemy Act 1939–1952.

The Customs Acts represent the administrative or machinery Acts under which the Department of Trade and Customs operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duties operative from time to time.

2. **The Customs Tariff.**—(i) *General.* The first Commonwealth Customs Tariff was introduced by Resolution on 8th October, 1901, from which date uniform duties came into effect throughout Australia. The tariff has since been extensively amended. The Act at present in operation is the Customs Tariff 1933–1954.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to imports from certain countries of the British Commonwealth. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

Australia has three classes of tariff—the British Preferential Tariff, the Intermediate Tariff and the General Tariff.

(ii) *British Preference.* British Preferential Tariff rates of duty apply to goods the produce or manufacture of the United Kingdom, provided such goods comply with the laws and statutory regulations for the time being in force affecting the grant of

preference, and that the goods have been shipped in the United Kingdom to Australia and have not been transhipped, or, if transhipped, it is proved to the satisfaction of the Collector of Customs that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. For the purpose of the preferential tariff the following goods are deemed by Section 151A of the Customs Act 1901-1953 to be the produce or manufacture of the United Kingdom, provided the final process of their production or manufacture was performed in that country :—

- (a) Goods which are wholly produced or wholly manufactured in the United Kingdom from materials in one or more of the following classes—
 - (i) Materials wholly produced or wholly manufactured in the United Kingdom or in Australia ;
 - (ii) Imported unmanufactured raw materials ;
 - (iii) Imported manufactured raw materials as determined by the Minister.
- (b) Goods, of the factory or works cost of which not less than seventy-five per cent. is represented—
 - (i) by labour or material of the United Kingdom ; or
 - (ii) by labour or material of the United Kingdom and labour or material of Australia.
- (c) Goods of a class or kind not commercially produced or manufactured in Australia and of the factory or works cost of which not less than twenty-five per cent. (or fifty per cent. if the Minister so determines) is represented—
 - (i) by labour or material of the United Kingdom ; or
 - (ii) by labour or material of the United Kingdom and labour or material of Australia.

The British Preferential Tariff has also been extended by separate Trade Agreements to Canada and New Zealand and by tariff legislation to the Territory of Papua-New Guinea and the above-mentioned preference conditions apply *mutatis mutandis* to each of those countries. In relation to specified goods, the British Preferential Tariff also applies to Ceylon and to most of the British non-self-governing colonies, protectorates and trust territories.

(iii) *Intermediate Tariff.* The Intermediate Tariff has been a feature of the Australian Tariff for a considerable number of years, although its effective application dates only from 1st January, 1937, consequent upon the conclusion of trade agreements with Belgium, Czechoslovakia and France in 1936. The countries to which the Intermediate Tariff applies include those countries with which Australia has concluded trade agreements (including tariff negotiations pursuant to the General Agreement on Tariffs and Trade). The Intermediate Tariff has also been extended to some countries to which Australia has no formal obligation to accord most-favoured-nation tariff treatment. The countries to which the Intermediate Tariff applies are specified by Customs Proclamation.

(iv) *General Tariff.* The General Tariff applies to goods other than those to which the British Preferential Tariff or Intermediate Tariff or special rates under trade agreements apply.

3. **Primage Duties.**—In addition to the duties imposed by the Customs Tariff, ad valorem primage duties at rates of 4 per cent., 5 per cent. or 10 per cent. are charged on specified goods under the Customs Tariff (Primage Duties) 1934-1950. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji and the Territory of Papua-New Guinea are exempt from primage duty.

4. **Tariff Board.**—The Tariff Board Act 1921-1953 provides for the appointment of a Tariff Board consisting of seven members, two of whom shall be administrative officers of the Department of Trade and Customs. Members of the Board are appointed for terms of not less than one year nor more than five years. The purpose of the Tariff

Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bounties; any proposal for the application of the British Preferential Tariff to any part of the British Dominions or any foreign country; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters:—the classification of goods under items of the Tariff that provide for admission under By-laws; the determination of the value of goods for duty; the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the Tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–1936 shall be taken in public on oath.

5. *Industries Preservation.*—The Customs Tariff (Industries Preservation) Act 1921–1936 provides that, after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry. In the case of goods sold for export to Australia at a price less than the fair market value for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and the fair market value, or the difference between the price at which the goods were sold and a reasonable price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the normal rate of freight the dumping freight duty shall be—on goods carried free—the amount payable as freight at the normal rate; and in the case of any other goods—an amount equal to the difference between the freight paid and the freight which would have been payable at the normal rate.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which the special rates of duty under this Act shall thereupon be charged and collected.

6. *Trade Descriptions.*—The Commerce (Trade Descriptions) Act 1905–1950 gives power to require the application of a proper trade description on certain prescribed goods imported into or exported from the Commonwealth. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and relating to specified export commodities.

7. *Import Controls.*—(i) *Customs (Import Licensing) Regulations.* The Customs (Import Licensing) Regulations were first promulgated in December, 1939, and were made pursuant to the Customs Act 1901–1936, Sections 52 (g) and 56. These regulations provide, *inter alia*, that the importation into the Commonwealth of any goods shall be prohibited, unless:—

- (a) a licence to import the goods is in force and the terms and conditions (if any) to which the licence is subject are complied with; or
- (b) the goods are excepted from the application of the regulations.

The regulations were at first applied only to imports from non-sterling sources with the object of conserving non-sterling exchange and enabling priority in shipping space to be given to essential imports. However, with a subsequent decline in Australia's sterling balances in London and changes in the general war situation the restrictions were extended to cover a wide range of imports from sterling countries in December, 1941. The position remained basically the same during the remainder of the war and in the immediate post-war period.

As Australia's external financial position improved, the restrictions were progressively relaxed until, by November, 1950, imports from most countries had been exempted from the application of the regulations and, with minor exceptions, the restrictions applied only to imports from the Dollar Area and Japan. This position obtained until March, 1952.

During the financial year 1951-52, following a fall in the price of wool and a large increase in the volume of imports (the product, in turn, of the wool boom of 1950-51), Australia incurred a substantial deficit on current account. Oversea reserves fell rapidly in the latter part of 1951 and early 1952, endangering Australia's external financial position to such a degree that it became necessary on 8th March, 1952 to apply the Customs (Import Licensing) Regulations to imports from all sources, with the exception of goods originating in Papua, New Guinea and Norfolk Island. By March, 1953 Australia's balance of payments had shown sufficient improvement to justify a general relaxation in the quantitative restrictions applying to goods from sources other than the Dollar Area and Japan and further progressive relaxations have been made since that date.

Applications for licences for Japanese goods are dealt with on a case by case basis within the general framework of the licensing controls. Restrictions on imports from the Dollar Area have been maintained in varying degrees since their imposition in December, 1939 and, in general, the issue of licences for the importation of goods from the Dollar Area is restricted to goods of a high degree of essentiality, unavailable in adequate quantities from other countries. The goods imported from the Dollar Area are mainly capital goods, raw materials, semi-manufactures and other producer goods. All applications for licences are treated on the merits of each individual case.

(ii) *Customs (Prohibited Imports) Regulations.* In addition to the Import Licensing Regulations which are imposed for balance of payments reasons, Section 52 of the Customs Act provides for the prohibition of the importation of specified types of commodities and also provides for the making of regulations prohibiting the importation of other types of commodities.

Prohibition by regulation may be exercised by—(a) prohibiting the importation of goods completely; (b) prohibiting the importation of goods except with the consent of the Minister; (c) prohibiting the importation of goods except subject to conditions. Lists of products subject to prohibition are set out in the Customs (Prohibited Imports) Regulations. Commodities the importation of which has been prohibited under the regulations include dangerous drugs, firearms, undesirable publications and articles deleterious to public health.

8. *Export Control.*—(i) *Commodity Control.* Section 112 of the Customs Act provides that the Governor-General may by regulation prohibit the exportation of goods from Australia and that this power may be exercised by—(a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to export control are listed in the Customs (Prohibited Exports) Regulations.

(ii) *Monetary Control—Banking Act 1945-1953.* As an integral part of the framework of Exchange Control, a control over goods exported from Australia is maintained under the provisions of Part III. of the Banking (Foreign Exchange) Regulations to ensure that the full proceeds of such goods are received into the Australian banking system and

that these proceeds are received in the currency and in the manner prescribed by the Commonwealth Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations to control the movement out of Australia of capital in the form of securities, gold and currency.

Provision is made in the regulations for the grant of export licences subject to such terms and conditions as are imposed. On the receipt in Australia by the Commonwealth Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Commonwealth Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions, exports by private individuals are controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bona fide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds £A50, or where jewellery and other articles of high intrinsic worth either exceed £A1,000 in value or have not been the personal property of the passenger for at least twelve months.

9. *Trade Agreements.*—(i) *The United Kingdom.* The United Kingdom and Australia Trade Agreement (Ottawa Agreement) was signed on and had effect from 20th August, 1932, although the Australian tariff changes which were necessary in order to implement the preference formula in the agreement did not operate until 14th October, 1932. Broadly speaking, Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities and in return Australia incurred obligations in respect of tariff levels and the grant of preference to United Kingdom goods.

(ii) *Canada.* The existing trade agreement between Canada and Australia came into force on 3rd August, 1931. The basis of the agreement is, generally, the mutual accord of British Preferential Tariff treatment. Exceptions to this general rule are specified in the schedules to the agreement.

The Customs Tariff (Canadian Preference) 1931 and the Customs Tariff (Canadian Preference) 1934-1954 give effect to the agreement so far as Australia is concerned.

(iii) *New Zealand.* The existing trade agreement between Australia and New Zealand came into force on 1st December, 1933. The basis of the agreement is, generally, the mutual accord of British Preferential Tariff treatment. The exceptions to this general rule are listed in the schedules to the agreement.

The Customs Tariff (New Zealand Preference) 1933-1954 gives legislative effect to the provisions of the agreement.

(iv) *The Rhodesias and Nyasaland.* A trade agreement between Australia and Southern Rhodesia came into effect on 9th April, 1941. Australia's principal undertaking to Southern Rhodesia was to grant an exclusive tariff preference on tobacco leaf. Southern Rhodesia accorded preferential tariff treatment on a broad range of Australia's export commodities. Australia's grant of preferential tariff treatment to Northern Rhodesia and Nyasaland is based on Article 15 of the United Kingdom and Australia Trade Agreement. The three territories are provisionally applying the General Agreement on Tariffs and Trade.

The Constitution of the Federation of Rhodesia and Nyasaland grants exclusive power over tariffs and trade agreements to the Federal Government. However, no federal tariff had been published by mid-1954. The separate tariffs and international agreements of the three constituent territories were still in force at that date.

(v) *Other Countries.* Australia has entered into bilateral trade agreements with the Union of South Africa, Belgium, Brazil, Czechoslovakia, France, Greece and Switzerland. Summaries of the texts of these agreements have been given in previous issues of the Official Year Book.

(vi) *The General Agreement on Tariffs and Trade (G.A.T.T.)*. The General Agreement on Tariffs and Trade is an international trade agreement which has been in operation since 1st January, 1948. Australia was an original signatory of the Protocol of Provisional Application, by which Parts I. and III. of the Agreement are being provisionally applied. Part II. is being applied to the fullest extent not inconsistent with existing legislation at the date of signature of the Protocol.

There are now 34 contracting parties to the Agreement, comprising most of the world's larger trading nations.

Many of the Articles in Part II. of the General Agreement are similar to articles which were included in the Havana Charter for an International Trade Organization. Had the Charter come into force, Part II. of the General Agreement, containing general commercial policy provisions to prevent the circumvention of tariff concessions by other measures, would have been suspended.

Three series of tariff negotiations have been conducted under the provisions of the General Agreement. As a result of these negotiations, Australia has obtained tariff concessions on almost all the principal products of which she is an actual or potential exporter to the individual countries concerned. These concessions were a result both of direct negotiation by Australia and of negotiation by other countries—in the latter case, the benefits occur through the operation under the Agreement of the most-favoured-nation principle.

The contracting parties periodically hold plenary sessions to deal with questions arising out of the administration of the Agreement. The ninth session was held at Geneva in October, 1954.

§ 3. Imperial Preference in the United Kingdom.

1. *Preferential Tariff of the United Kingdom*.—Prior to 1919 the United Kingdom levied duties on a limited number of items for revenue purposes and did not extend preferential treatment to any of the Empire countries. The majority of imported goods entered the United Kingdom free of duty and, in fact, there was no scope for preferential treatment. In 1919, however, the range of revenue duties was extended and preferential rates of duty were established on some eighteen items. Of these, the preferential rate on twelve items was to be equivalent to five-sixths of the full rate, on four to two-thirds of the full rate and on another (wine) to 50–70 per cent. of the full rate. The items so affected of interest to Australia at that time were currants, dried and preserved fruit, sugar, molasses and wine.

The extension of preferential treatment was conditional on the goods being consigned from, and grown, produced or manufactured in, the British Empire. In the case of manufactured articles, preference applied only where a prescribed proportion of their value was the result of labour within the British Empire. The conditions have been embodied in all subsequent preference arrangements in substantially the same form.

During the period from 1919 to 1932 it became increasingly obvious that the United Kingdom, for economic reasons, was being forced to depart from the free trade principles which had conditioned trade during the years preceding the 1914–18 War. Every time a new duty was introduced, provision was made for further preferential treatment to Empire products, although, in a great many cases, the preferences were of little or no significance to Australia, because the new duties were on products which were neither grown nor manufactured in Australia. The Safeguarding of Industries Act 1921 provided for the imposition of duties on imports of key industry goods from foreign countries with free entry or preferential rates on similar goods from Empire countries. The purpose of these duties was to provide protection to vital United Kingdom industries in order to encourage their growth without fear of foreign competition. Similarly the Dyestuff Import Regulation of the previous year allowed the unrestricted import of dyestuffs of Empire origin, whereas imports of foreign dyestuffs were subjected to licensing restrictions. In 1925 preferences were accorded or increased on sugar (for ten years), tobacco, dried fruit, wine and several other items. In succeeding years Key Industries Duties were imposed on a further range of industrial goods and in 1927 screening quotas for British films and in 1928 further sugar concessions were introduced.

By 1931, therefore, the United Kingdom imposed duties on a fairly wide range of goods, provision being made in all cases for preferential treatment to Empire goods. The important preferences for Australia which emerged from these enactments were those on sugar, dried fruits, wine and jams and jellies. Even at this time, however, the United Kingdom adhered to the principles of free trade and by far the greater part of imports was free of duty.

In order to counteract the flood of dumping which followed the collapse of world trade in 1929-30 the United Kingdom introduced emergency tariff legislation in 1931. Ad valorem duties were imposed on almost all goods imported into the United Kingdom with the exception of certain raw materials, goods from Empire countries being exempt from these duties. These temporary measures were embodied in the Import Duties Act of March, 1932, by the enactment of which the United Kingdom finally abandoned free trade as a policy. This Act provided for the free entry for Empire goods pending the conclusion of some permanent agreement. The Ottawa Agreements Act of November, 1932 emerged from the Imperial Economic Conference held in Ottawa and embodied agreements concluded between the United Kingdom and the Dominions, Newfoundland and Southern Rhodesia. For the purpose of considering the present preferences enjoyed by Australia in the United Kingdom, it is expedient to regard the Import Duties Act and the Ottawa Agreements Act as complementary.

The Import Duties Act provided for the imposition of a general ad valorem duty of 10 per cent. on all imports with certain exceptions (i.e., those on the Free List and those already dutiable under previous enactments). Additional duties could be imposed and items on the Free List subjected to duty, and in fact the range of items subject to duties under this Act has been extended from time to time since its enactment.

The freedom of Empire goods from these duties was guaranteed under the Ottawa Agreements Act, which also provided for the imposition of new duties on imports from foreign, but not Empire, countries of a number of products of special interest to the Empire countries concerned. Whilst free entry was guaranteed to Empire producers on a wide range of products, the margins of preference thereby applicable were not bound, and the duties could be varied up or down by the United Kingdom Government without the consent of Empire countries. On a selected range of items, however, which are specified in the schedules to the Ottawa Agreements Act, the duties may not be varied by the United Kingdom without the consent of the other party to the respective agreement.

Since 30th October, 1947, Canada and the United Kingdom have, by an exchange of letters, recognized the rights of their respective Governments to reduce or eliminate the preferences they accord one another without prior consultation or consent.

2. The Australia-United Kingdom Trade Agreement.—This Agreement is a unit of the Ottawa Agreements and through it preferences in the United Kingdom were established on a number of export items of considerable importance to Australia. The preferences accorded are summarized as follows, the rates being shown in sterling currency:—

- (a) Continued free entry was guaranteed for three years for Australian eggs, poultry, butter, cheese and other milk products. (This freedom of entry still continues.) Similar foreign goods were subjected to duty, thus giving Australia a preference of 1s. to 1s. 9d. per 120 eggs; 10 per cent. ad val. on poultry; 15s. per cwt. on butter; 15 per cent. ad val. on cheese; 5s. per cwt. on sweetened whole condensed milk; and 6s. per cwt. on unsweetened whole condensed milk and milk powder and other unsweetened preserved milk.
- (b) Preferences were created on the following products by imposing a duty on like foreign articles whilst guaranteeing free entry to Australian produce: wheat (2s. per quarter); apples and pears (4s. 6d. per cwt.); canned apples (3s. 6d. per cwt.); other canned fruit (15 per cent. ad val.); certain dried fruit, raisins, etc. (10s. 6d. per cwt.); honey (7s. per cwt.); oranges (3s. 6d. per cwt. in season); raw grapefruit (5s. per cwt. in season); and grapes (1½d. per lb. in season).

- (c) The preferential margins on the commodities mentioned in (a) and (b) above were not to be reduced without the consent of the Australian Government and this provision also applied to the 10 per cent. preference on leather, tallow, canned meats, barley, wheat flour, macaroni, dried peas, casein, eucalyptus oil, meat extracts and essences, copra, sugar of milk, sausage casings, wattle bark, asbestos and certain dried fruits.
- (d) The Agreement also provided for a preference of 2d. per lb. on unwrought copper, but this was never implemented as Empire producers could not demonstrate their ability to continue offering their copper on first sale to the United Kingdom at prices not exceeding the world price, which was a condition of the preference. A similar condition applied to wheat, zinc and lead. In the case of zinc and lead the duty was changed at an early stage in the life of the Agreement from an ad valorem rate of 10 per cent. to a specific rate.
- (e) Australia, although not securing in the Agreement with the United Kingdom a commitment on the amount and duration of the preference margin applying to a number of commodities of some importance to Australia (e.g., rice), had its interests safeguarded by the fact that such items were usually covered by the United Kingdom's agreement with another Empire country. Such benefits were generalized to Australia.
- (f) The United Kingdom agreed to regulate meat imports and stated that its policy was to give the Dominions an expanding share of United Kingdom meat imports.
- (g) Preferential tariff advantages were also obtained in the British non-self-governing colonies and protectorates.

The preferences operating before, and not increased by, the Ottawa Agreement were continued. Thus the preferential margins on heavy wines, sugar, the sugar content of goods containing added sweetening matter, currants, etc., remained in operation.

3. **Developments since the Ottawa Agreement.**—The Australia-United Kingdom Agreement operated with virtually no alteration until the beginning of 1939. Since then three major factors have been responsible for altering its terms or significance :—

- (a) *The United Kingdom-United States of America Trade Agreement, 1938.* This Agreement became effective from 1st January, 1939, and, to enable the United Kingdom to secure concessions from the United States of America, Australia agreed to the following reductions in the preferences which her products were enjoying in the United Kingdom :—

Wheat (preference eliminated); apples and pears (1s. 6d. per cwt. in Northern Hemisphere season); honey (2s. per cwt.); canned apples (1s. 3d. per cwt.); canned grapefruit (preference eliminated). The ad valorem duty of 15 per cent. was replaced by specific duties of 5s. 6d. per cwt. on canned fruit salad, 5s. per cwt. on canned pineapples and 4s. per cwt. on canned loganberries.

- (b) *Long-term Contracts with the United Kingdom.* During and since the war Australia has made contracts under which the United Kingdom is obligated to purchase the whole or a substantial part of the exportable surplus of several important Australian products normally entitled to preferential treatment. Meat, sugar, dried fruit, apples, butter, cheese, eggs and copra are notable examples. Under these contracts the tariff preferences have not been significant, but they are expected to become more important with the return of trader-to-trader marketing arrangements.

- (c) *The General Agreement on Tariffs and Trade.* Australia has participated in the three rounds of tariff negotiations under this agreement held at Geneva, 1947, Annecy, 1949, and Torquay, 1950-51. In order to reach agreements with the various countries participating in these tariff negotiations, Australia consented to a number of reductions in preference

margins guaranteed to her under the Ottawa Agreements, in return for more favourable tariff treatment in some twenty-seven countries with which agreements have been made. The reductions are summarized below :—

Apples (margin eliminated during Northern Hemisphere season); raisins (2s. per cwt.); canned peaches, pears and apricots (3 per cent. ad val.); non-tropical canned fruit salad (margin eliminated); dried apricots (2s. 6d. per cwt.); dried prunes, apples, peaches and nectarines (margin eliminated); honey (nil to 1s. 6d. per cwt. according to value for duty). The preference margin was also modified on a number of items in which Australia was interested but on which her consent to reduction was not required under the Ottawa Agreement. Examples are fruit pulp, pig iron, rice, hard soap, glue, gelatine and size. The preference on heavy wine was increased from 4s. per gallon to 10s. per gallon.

§ 4. Trade Commissioner Service.

Empire and foreign countries have deemed it necessary in their trade interests to establish generous overseas representation and have for many years maintained extensive overseas trade services.

Prior to 1929, Australian representation abroad was limited to the High Commissioner's Office in London, with a subsidiary agent in Paris, and the Office of the Commissioner-General for Australia in New York. Apart from the facilities afforded by those offices, the only form of overseas trade representation available to Australia was that of the British Overseas Trade Service, a service whose activities are naturally more particularly devoted to the development of United Kingdom rather than Dominion trade.

The growing importance of Australia's trade with Canada led to the appointment in 1929 of an Australian Trade Commissioner in that country. The part played by that official in the subsequent negotiations of the Trade Agreement with Canada, in the cultivation of close and cordial relations with the Canadian authorities, and in general in focussing interest on Australia and Australian products, amply demonstrated the value of such appointments both to the Commonwealth Government and the Australian trading community.

The Trade Commissioners Act 1933 provided for the establishment of an Australian Government Trade Commissioner Service and by the beginning of the 1939-45 War posts had been established at Wellington, Batavia (now Djakarta), Shanghai, Tokyo, Cairo, Bombay, New York and Calcutta. The Trade Commissioner Service was further expanded in 1946 and there are now 22 Trade Commissioner posts in 19 countries.

The general advantages to be derived from the appointment of Trade Commissioners may be briefly stated as follows :—(a) fostering of goodwill, (b) correction and avoidance of misunderstandings, and (c) dissemination of knowledge concerning the respective countries. Particular facilities which they are able to afford to the trading community are (a) information as to present and prospective demand for goods, (b) information as to foreign and local competition, (c) advice as to best selling methods, (d) reports as to the standing of foreign buyers, (e) specification of articles in demand, (f) dealing with trade inquiries, (g) advice and assistance to commercial visitors regarding trade matters, (h) settlement of difficulties between exporters in Australia and buyers abroad, and (i) furnishing of information as to foreign import requirements, customs duties, trade regulations, etc.

In addition to the foregoing particular trading functions, it is the duty of a Trade Commissioner to watch and advise the Government regarding any developments in his Territory affecting not only trade and commerce, but any other matters of concern to his home Government.

Trade Commissioners are drawn either from the commercial world or from the ranks of the Public Service, as circumstances dictate. In the more important posts it is customary for the Trade Commissioner to be provided with an Assistant Trade Commissioner, who is selected to undergo training in the service and qualify at a later stage for appointment as a Trade Commissioner. The staffing arrangements are in this

way designed to enable the Government to avail itself of the best procurable executives of either the Public Service or the commercial world and at the same time to build up a first class personnel to carry out a vigorous policy of expansion in connexion with Australia's overseas trade.

The overseas trade representation is shown in Chapter XXIX.—Miscellaneous.

§ 5. Method of Recording Imports and Exports.

1. **Source of Statistics.**—Overseas trade statistics are compiled from documents obtained under the Customs Act and supplied to this Bureau by the Department of Trade and Customs.

2. **Customs Area.**—The Customs Area, to which all overseas trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales (including the Australian Capital Territory), Victoria, Queensland, South Australia, Western Australia and Tasmania, and the Northern Territory. Non-contiguous territories are treated as outside countries, and trade transactions between Australia and these non-contiguous territories are part of the overseas trade of Australia. Such transactions are shown separately, i.e., the trade of Australia with each particular country is separately recorded and tabulated.

3. **The Trade System.**—There are two generally accepted systems of recording overseas trade statistics, namely, (a) special trade and (b) general trade, and statistics of both are published by the Bureau, although greater emphasis is placed on general trade. Special exports can be readily identified in the general export tabulations, while special imports are obtained from separate tabulations. The United Nations Statistical Office defines the two systems as follows:—

(a) *Special Trade.* Special imports are the combined total of imports directly for domestic consumption and withdrawals from bonded warehouses or free zones for domestic consumption, transformation or repair. Special exports comprise exports of national merchandise, namely goods wholly or partly produced or manufactured in the country, together with exports of nationalized goods. (Nationalized goods are goods which, having been included in special imports, are then exported).

(b) *General Trade.* General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. Direct transit trade and trans-shipment under bond are excluded. General exports are the combined total of national exports and re-exports of imported merchandise including withdrawals from bonded warehouse or free zone for re-export.

Except for those appearing in § 16, para. 2, the tables which follow refer to general trade.

4. **Statistical Classification of Imports and Exports.**—Statistics of overseas imports and exports from which the summary tables in this issue of the Official Year Book have been extracted were compiled according to the revised classification which came into operation on 1st July, 1945. This classification is designed to allow for the inclusion of items which become significant with varying trade conditions, and in 1953–54 provided for 2,676 separate import items and 1,462 export items.

5. **The Trade Year.**—From 1st July, 1914 the statistics relating to overseas trade have been shown according to the financial year (July to June). Prior to that date the figures related to the calendar year. A table is included in § 17 showing the total value of imports and exports in the calendar years 1939 and 1950 to 1954 inclusive.

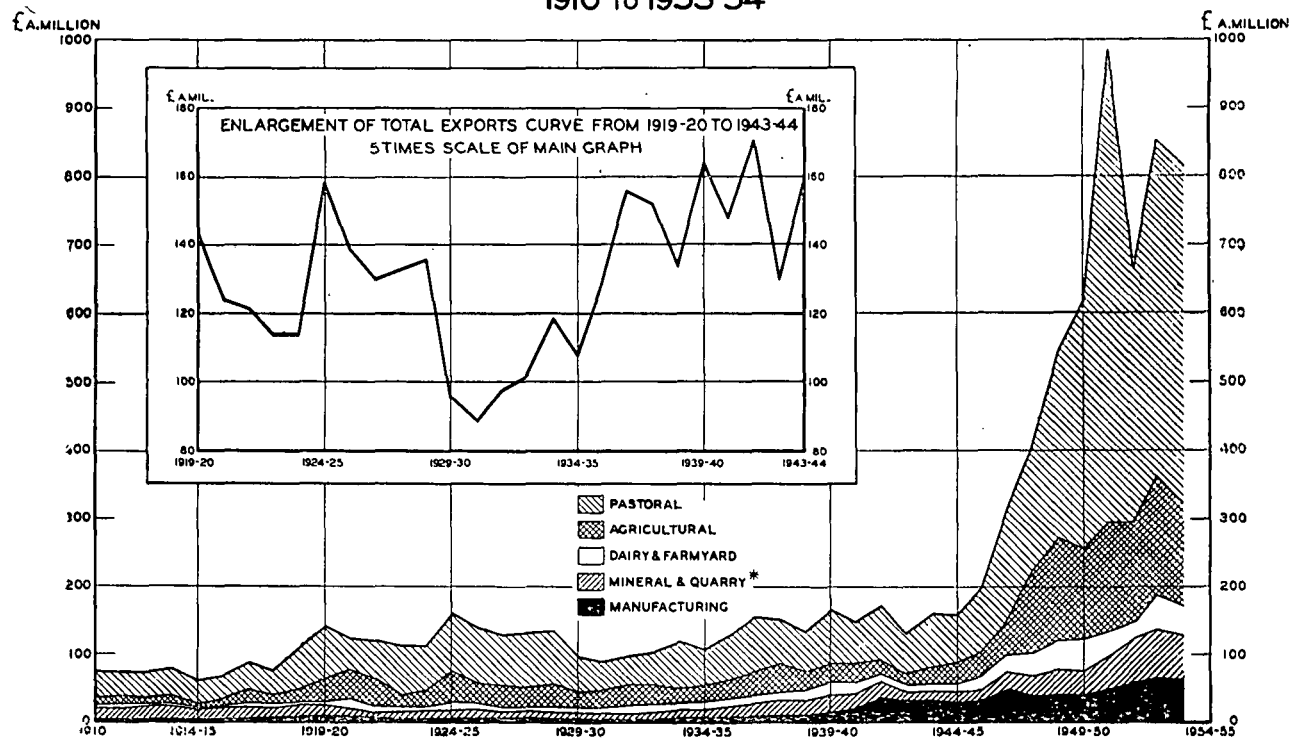
6. **Valuation.**—(i) *Imports.* The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged ad valorem. By Act No. 54 of 1947, which operated from 15th November, 1947, the Customs Act was amended to provide that the value for duty of goods imported into Australia should be the f.o.b. value in Australian currency instead of the British currency f.o.b. value plus 10 per cent.

Section 154 (1) of the Customs Act 1901–1953 provides that “when any duty is imposed according to value, the value for duty shall be the sum of the following:—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
- (ii) the current domestic value of the goods, whichever is the higher; and

EXPORTS OF AUSTRALIAN PRODUCTS ACCORDING TO INDUSTRIES

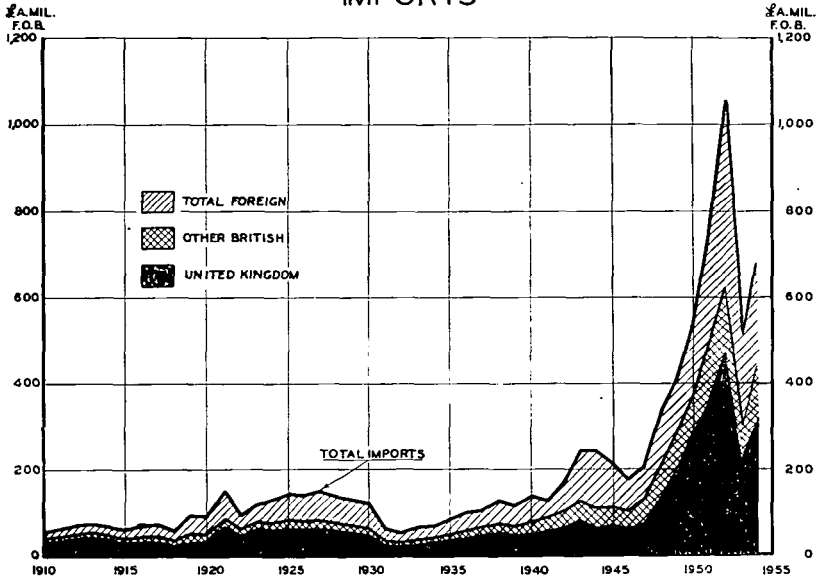
1910 to 1953-54



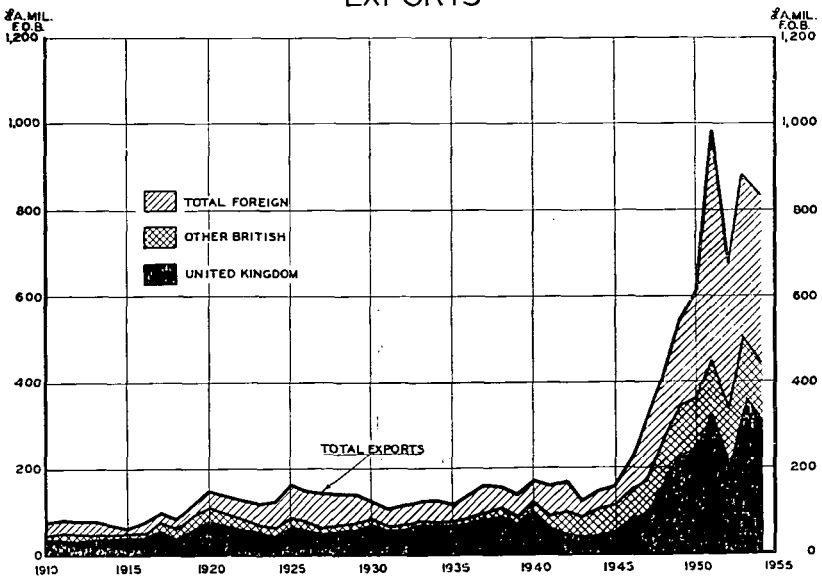
* Australian production of gold substituted for exports of gold each year (see page 227).

OVERSEA TRADE : AUSTRALIA, 1910 to 1954

IMPORTS



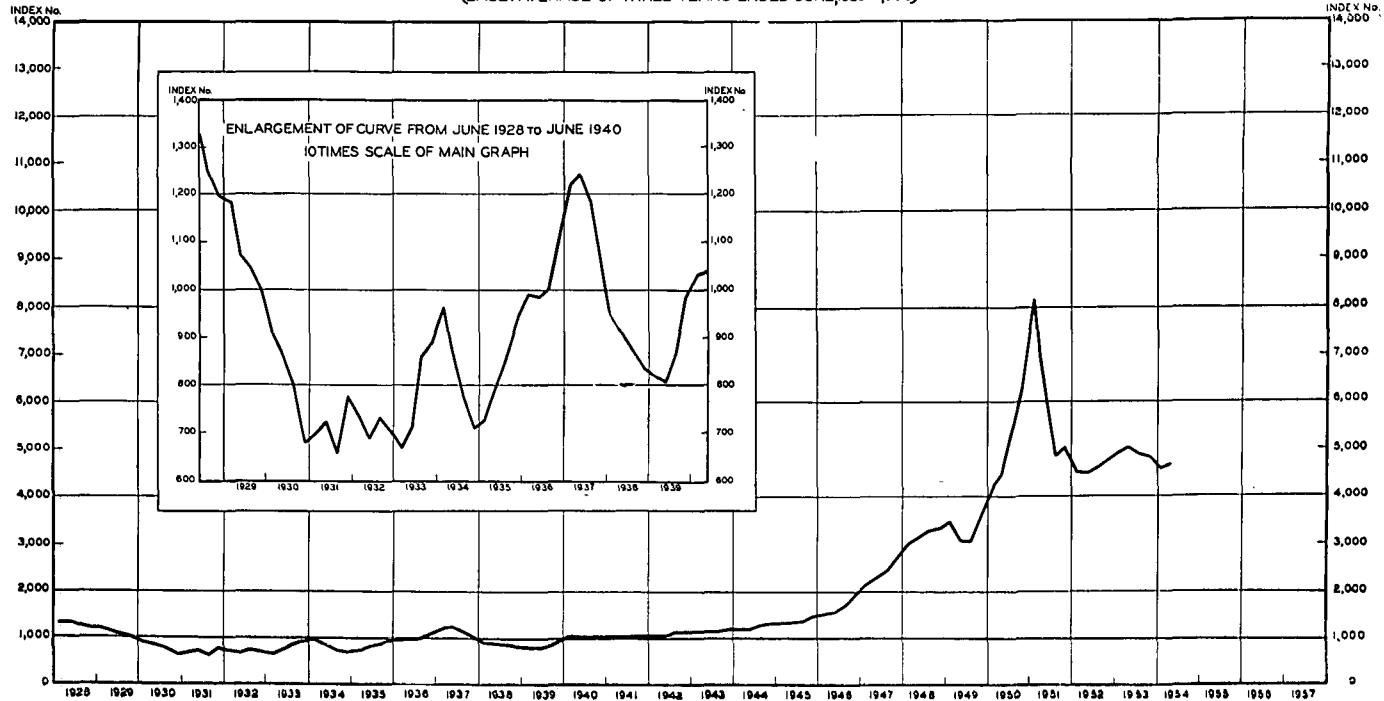
EXPORTS



EXPORT PRICE INDEX NUMBERS : AUSTRALIA, 1928 TO 1954

SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS

(BASE: AVERAGE OF THREE YEARS ENDED JUNE, 1939 = 1,000)



- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export."

"Current domestic value" is defined as "the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country." All import values shown throughout this and other chapters of this issue of the Official Year Book are therefore uniform f.o.b. values at port of shipment in Australian currency.

(ii) *Exports*. Since 1st July, 1937, the following revised definitions of f.o.b. values have been adopted for exports generally:—

- (1) Goods sold to overseas buyers before export—the f.o.b. port of shipment equivalent of the price at which the goods were sold (e.g., as regards wool, the actual price paid by the overseas buyer plus the cost of all services incurred by him in placing the wool on board ship).
- (2) Goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were despatched for sale (as regards wool, the f.o.b. port of shipment equivalent of the current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received).

Exporters are required to show all values in terms of Australian currency, and to include cost of containers.

An account of the bases of valuation in operation prior to 1st July, 1937 was given on page 469 of Official Year Book No. 39.

7. *Inclusions and Exclusions*.—(i) *Ships' Stores*. Prior to 1906, goods shipped in Australian ports on overseas vessels as ships' stores were included as exports. From 1906, ships' stores have been specially recorded as such, and omitted from the tabulation of exports. A table showing the value of these stores (including bunker coal and oil) shipped each year since 1949–50 is shown in § 12, page 225.

(ii) *Outside Packages*. Outside packages (containers, crates, etc.) have always been included as a separate item in the tabulation of imports, but apart from those received from the United Kingdom a classification according to country of origin has been available only since 1950–51. For exports, however, the value recorded for each item includes the value of the outside package.

(iii) *Trade on Government Account*. Imports and exports on Government account are treated as normal transactions and are an integral part of overseas trade transactions.

(iv) *Currency*. Notes and coins of base metal are included in the overseas trade statistics at their commodity value only.

(v) *Gold Content of Ores and Concentrates*. The value of ores and concentrates imported and exported includes the value of the gold content. The latter is not recorded separately for purposes of inclusion in imports and exports of gold.

(vi) *Personal Effects*. Migrants' effects are included in imports and exports.

8. *Countries to which Trade is Credited*.—From 1st January, 1905, in addition to the record of the countries whence goods directly arrived in Australia, a record of the countries of their origin was kept, as it was considered that classification of imports according to country of origin was of greater interest and value than classification according to country of shipment. Up to and including the year 1920–21, imports continued to be classified both according to country of shipment and according to country of origin, but the former tabulation was discontinued as from the year 1921–22.

9. *Pre-Federation Records*.—In the years preceding Federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following tables for years prior to Federation have been carefully compiled and may be taken as representative of the overseas trade of Australia as a whole. On the introduction of the Customs Act 1901 the methods of recording values were made uniform throughout the States.

§ 6. Total Oversea Trade.

1. **Including Gold.**—The following table shows the total trade (including gold) of Australia with overseas countries from 1901 to 1953-54. To save space, the period 1901 to 1945-46 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for individual years were published in earlier issues of the Official Year Book, but it should be borne in mind that the figures for imports in issues prior to No. 37 are in British currency.

In this chapter the values in all tables of imports and exports are shown in Australian currency f.o.b. at port of shipment.

TOTAL OVERSEA TRADE : AUSTRALIA.

(INCLUDING GOLD.)

Period.(a)	Value (£'000.).			Excess of Exports (+) or Imports (-) (£'000.).	Value per Head of Population (£.).		
	Imports.	Exports.	Total.		Imports.	Exports.	Total.
1901 to 1905 ..	35,689	51,237	86,926	+ 15,548	9.1	13.1	22.2
1906 „ 1910 ..	46,825	(b) 69,336	116,161	+ 22,511	11.0	16.3	27.3
1911 „ 1915-16 ..	66,737	74,504	141,241	+ 7,767	13.8	15.4	29.2
1916-17 to 1920-21	91,577	115,066	206,643	+ 23,489	17.4	21.9	39.3
1921-22 to 1925-26	124,404	134,545	258,949	+ 10,141	21.1	22.9	44.0
1926-27 to 1930-31	119,337	131,382	250,719	+ 12,045	18.6	20.5	39.1
1931-32 to 1935-36	73,798	120,958	194,756	+ 47,160	11.1	18.1	29.2
1936-37 to 1940-41	123,553	157,610	281,163	+ 34,057	17.8	22.7	40.5
1941-42 to 1945-46	211,514	163,955	375,469	- 47,559	29.1	22.4	51.5
1946-47.. ..	209,485	309,029	518,514	+ 99,544	27.9	41.1	69.0
1947-48.. ..	339,746	409,954	749,700	+ 70,208	44.1	53.2	97.3
1948-49.. ..	415,194	542,673	957,867	+ 127,479	53.2	69.6	122.8
1949-50.. ..	538,069	613,697	1,151,766	+ 75,628	66.8	76.3	143.1
1950-51.. ..	743,871	981,796	1,725,667	+ 237,925	89.5	118.1	207.6
1951-52.. ..	1,053,423	675,008	1,728,431	- 378,415	123.4	79.0	202.4
1952-53.. ..	514,109	871,272	1,385,381	+ 357,163	58.8	99.6	158.4
1953-54.. ..	681,539	828,297	1,509,836	+ 146,758	76.4	92.9	169.3

(a) The figures shown for the years 1901 to 1945-46 represent the annual averages for the periods covered. The trade for the individual years will be found in Official Year Book No. 39 and earlier issues, but it should be noted that in issues prior to No. 37 imports are shown in British currency. From 1914-15 onwards the particulars relate to financial years. (b) Prior to 1906, ships' stores were included in exports. For value of such goods shipped on overseas vessels during each of the years 1949-50 to 1953-54 see later table, § 12.

In issues of the Official Year Book prior to No. 23 fluctuations in the value of the overseas trade of Australia for earlier years were treated in some detail. The enhanced prices ruling for commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports in the years following the 1914-18 War and these factors should be taken into consideration in making comparisons with earlier years. In the three years ended 1928-29 imports fell while exports were well maintained, but in 1929-30 both imports and exports declined substantially. The full effects of the economic depression are reflected in the greatly diminished trade figures for the period 1931-32 to 1935-36 and some years thereafter. The lowest level was recorded in 1931-32 when the total trade amounted to £137,538,000.

The outbreak of war in the Pacific in 1941 resulted in a substantial increase in the value of imports during the years 1941-42 to 1945-46. Since the end of the war the annual values of imports and exports have increased considerably, largely because of higher prices.

2. **Excluding Gold.**—The fluctuations in recent years in merchandise trade (including silver as merchandise) are shown more clearly in the following table, from which all gold movements have been excluded:—

TOTAL OVERSEA TRADE : AUSTRALIA.
(EXCLUDING GOLD.)

Year.	Value (£'000.).			Value per Head of Population (£.).		
	Imports Excluding Gold.	Exports Excluding Gold.	Total Trade Excluding Gold.	Imports.	Exports.	Total Trade.
1938-39.. ..	113,298	122,543	235,841	16.3	17.7	34.0
1949-50.. ..	536,146	613,695	1,149,841	66.6	76.2	142.8
1950-51.. ..	741,412	981,796	1,723,208	89.2	118.1	207.3
1951-52.. ..	1,050,164	668,019	1,718,183	123.0	78.2	201.2
1952-53.. ..	510,513	850,874	1,361,387	58.4	97.3	155.7
1953-54.. ..	678,580	814,528	1,493,108	76.1	91.4	167.5

§ 7. Direction of Oversea Trade.

1. **Imports and Exports according to Countries.**—(i) *Values.* The following table shows the value of Australian imports and exports during each of the years 1951-52 to 1953-54, according to country of origin or destination respectively.

COUNTRIES OF ORIGIN OR DESTINATION OF AUSTRALIAN IMPORTS AND EXPORTS : VALUES.

(EXCLUDING GOLD.)
(£'000.)

Country.	-Imports.			Exports.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
British Countries—						
United Kingdom	465,705	214,702	331,697	208,072	347,431	295,925
Australian Territories ..	5,042	5,358	4,712	9,742	10,193	12,180
Canada	23,559	19,546	18,742	9,177	8,712	11,037
Ceylon	11,173	9,786	13,490	10,630	14,687	11,847
India	47,825	14,646	18,475	16,911	17,148	14,293
Malaya, Federation of ..	18,632	5,798	8,721	8,532	9,344	9,143
New Zealand	6,559	3,592	6,387	37,321	28,676	33,459
Singapore	8,764	5,858	8,529	11,810	12,794	11,288
Other British Countries ..	32,497	26,369	31,817	31,065	38,233	32,233
Total, British Countries	619,756	305,655	442,598	343,260	487,218	431,405
Foreign Countries—						
Arabian States	21,332	23,278	27,925	1,306	1,774	1,737
Belgium and Luxemburg ..	27,528	5,506	7,063	24,940	32,141	32,663
France	22,390	9,253	11,793	53,609	70,084	71,038
Germany, Federal Republic of	32,718	13,582	21,365	20,389	22,366	27,096
Indonesia	25,530	21,544	21,972	3,967	5,064	6,585
Italy	27,712	5,225	11,182	37,998	44,706	51,326
Japan	43,582	4,692	6,545	48,514	83,958	55,689
Netherlands	14,975	5,954	9,618	11,126	6,356	5,578
Sweden	27,537	6,786	10,230	6,086	2,888	3,601
United States of America ..	109,141	85,168	73,254	77,215	57,829	55,505
Other Foreign Countries ..	77,667	23,282	34,412	39,609	36,490	72,305
Total, Foreign Countries	430,112	204,270	235,359	324,759	363,656	383,123
Origin not Disclosed	296	588	630	..	..	..
Total	1,050,164	510,513	678,579	668,019	850,874	814,528

(ii) *Proportions.* In view of the fluctuations in the total values of imports and exports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the trade of Australia. A better idea of the proportions of imports supplied by the various countries and of their relative importance as markets for Australian produce may be obtained from the following table of percentages.

COUNTRIES OF ORIGIN OR DESTINATION OF AUSTRALIAN IMPORTS AND EXPORTS : PROPORTIONS.

(EXCLUDING GOLD.)

(Per Cent. of Total.)

Country.	Imports.			Exports.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
British Countries—						
United Kingdom ..	44.35	42.06	48.88	31.15	40.83	36.33
Australian Territories ..	0.48	1.05	0.69	1.40	1.20	1.50
Canada ..	2.24	3.83	2.76	1.37	1.02	1.36
Ceylon ..	1.06	1.92	1.99	1.59	1.73	1.45
India ..	4.55	2.87	2.72	2.53	2.02	1.75
Malaya, Federation of ..	1.78	1.14	1.29	1.28	1.10	1.12
New Zealand ..	0.62	0.70	0.94	5.58	3.37	4.11
Singapore ..	0.83	1.15	1.26	1.77	1.50	1.39
Other British Countries ..	3.10	5.16	4.69	4.65	4.48	3.96
Total, British Countries	59.01	59.88	65.22	51.38	57.25	52.97
Foreign Countries—						
Arabian States ..	2.03	4.56	4.12	0.20	0.21	0.21
Belgium and Luxemburg ..	2.62	1.08	1.04	3.73	3.78	4.01
France ..	2.13	1.81	1.74	8.03	8.24	8.72
Germany, Federal Republic of ..	3.12	2.66	3.14	3.05	2.63	3.33
Indonesia ..	2.43	4.22	3.24	0.60	0.60	0.81
Italy ..	2.64	1.02	1.65	5.69	5.25	6.30
Japan ..	4.15	0.92	0.96	7.26	9.87	6.84
Netherlands ..	1.43	1.17	1.42	1.70	0.75	0.68
Sweden ..	2.62	1.33	1.51	0.91	0.34	0.44
United States of America ..	10.39	16.68	10.80	11.56	6.80	6.81
Other Foreign Countries ..	7.40	4.55	5.07	5.89	4.28	8.88
Total, Foreign Countries	40.96	40.00	34.69	48.62	42.75	47.03
Origin not Disclosed ..	0.03	0.12	0.09	..	..	..
Total ..	100.00	100.00	100.00	100.00	100.00	100.00

Imports from the United Kingdom were 48.88 per cent. of the total value of imports during 1953-54, compared with 40.67 per cent. during 1938-39. Imports from the United States of America were, for the same periods, 10.80 per cent. and 14.74 per cent. respectively. Exports to the United Kingdom were 36.33 per cent. and to all British countries 52.97 per cent. of the total in 1953-54 compared with 54.45 per cent. and 69.51 per cent. respectively during 1938-39.

§ 8. Trade with the United Kingdom.

1. *Statistical Classes.*—The following table shows, according to statistical classes, the values of imports into Australia of United Kingdom origin and of exports from Australia to the United Kingdom during each of the years 1951-52 to 1953-54.

TRADE WITH THE UNITED KINGDOM : CLASSES.
(£'000.)

Class.	Imports.			Exports.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
I. Animal foodstuffs, etc. . .	1,780	512	1,257	31,277	81,630	71,086
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . .	2,164	622	1,000	45,181	76,548	69,746
III. Alcoholic liquors, etc. . .	1,676	1,157	1,118	253	348	460
IV. Tobacco, etc. . .	6,949	2,859	4,386	1	2	..
V. Live animals . . .	217	135	167	5	4	14
VI. Animal substances, etc. . .	393	149	446	92,091	145,285	120,535
VII. Vegetable substances, etc. . .	3,658	2,336	4,795	162	72	65
VIII. Apparel, textiles, etc. . .	109,268	26,517	66,681	234	183	168
IX. Oils, fats and waxes . . .	1,837	2,255	6,153	533	1,049	1,799
X. Pigments, paints and varnishes . . .	1,322	432	1,199	2	5	3
XI. Rocks, minerals, etc. . .	309	234	336	8,237	10,074	3,466
XII. Metals, metal manufactures and machinery . . .	226,149	132,181	174,939	24,364	25,014	22,175
XIII. Rubber and leather, etc. . .	12,182	1,823	2,935	683	1,550	1,655
XIV. Wood and wicker, etc. . .	647	147	361	377	708	541
XV. Earthenware, etc. . .	10,994	3,526	8,604	25	5	3
XVI. Paper and stationery . . .	22,359	11,330	19,102	212	229	199
XVII. Jewellery, etc. . .	3,939	589	2,507	132	29	36
XVIII. Optical, surgical and scientific instruments . . .	6,683	3,132	5,872	174	175	263
XIX. Drugs, fertilizers, chemicals . .	13,834	5,517	10,954	787	676	500
XX. Miscellaneous (a) . . .	38,978	19,146	18,868	1,163	1,595	1,011
XXI. Gold and silver; bronze specie . . .	367	103	21	2,266	14,076	7,002
Total . . .	465,705	214,702	331,701	208,159	359,257	300,730

(a) Includes arms, ammunition and explosives.

2. Imports of Principal Articles.—The following table shows the value of the principal articles imported into Australia from the United Kingdom during each of the years 1951-52 to 1953-54.

IMPORTS OF PRINCIPAL ARTICLES OF UNITED KINGDOM ORIGIN : AUSTRALIA.
(£'000.)

Article.	1951-52.	1952-53.	1953-54.	Article.	1951-52.	1952-53.	1953-54.
Arms and ammunition, military, naval and air force stores . . .	9,995	3,790	3,495	Optical, surgical and scientific instruments . .	6,683	3,132	5,872
Apparel . . .	15,190	1,822	6,179	Paper, printing . . .	9,331	3,741	8,017
Carpets and carpeting . . .	10,991	1,067	6,823	Piece-goods—			
Cigarettes . . .	6,576	2,764	4,296	Cotton and linen . . .	33,618	8,837	22,465
Crockery . . .	4,302	1,061	3,803	Silk and rayon . . .	15,087	3,407	8,157
Cutlery and platedware . .	2,760	974	2,072	All other piece-goods . .	10,105	2,313	4,381
Drugs, fertilizers and chemicals . . .	13,834	5,517	10,954	Prefabricated houses and buildings . . .	9,220	6,620	2,067
Electrical cable and wire, covered . . .	3,033	3,407	1,868	Rubber and rubber manufactures . . .	11,275	1,574	2,507
Electrical machinery and appliances . . .	26,240	18,315	18,778	Sewing silks, cottons, etc. . .	2,650	1,162	2,355
Glass and glassware . . .	3,293	1,010	2,497	Stationery and paper manufactures . . .	7,066	5,325	7,459
Iron and steel—				Tools of trade . . .	3,602	1,054	2,335
Plate and sheet . . .	9,669	11,260	9,327	Vehicles and parts, other than motor vehicles . .	10,644	7,554	10,993
Other . . .	7,615	6,701	5,744	Yarns—			
Limeleums . . .	4,079	901	3,615	Cotton . . .	5,073	1,400	3,098
Machines and machinery (except dynamo electrical)—				Rayon . . .	4,543	4,089	6,034
Agricultural . . .	3,893	2,313	2,822	Other . . .	656	480	604
Metal-working . . .	4,487	5,978	5,940	All other articles(a) . .	83,367	37,537	63,664
Motive power . . .	26,169	18,482	25,911				
Other . . .	38,857	22,696	28,390				
Motor vehicles, chassis, bodies and parts . . .	61,802	18,419	39,269	Total Imports . . .	465,705	214,702	331,701

(a) Includes outside packages.

3. Exports of Principal Articles of Australian Produce.—The following table shows the quantities and values of the principal articles of Australian produce exported to the United Kingdom during each of the years 1951-52 to 1953-54.

PRINCIPAL ARTICLES EXPORTED TO THE UNITED KINGDOM : AUSTRALIA.

Article.	Unit of Quantity.	Quantity.			Value (£'000.).		
		1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
Barley	ton	139,964	144,316	176,066	5,390	4,886	3,904
Butter	"	4,490	32,149	29,054	1,456	12,235	11,295
Cheese	"	13,232	17,644	17,935	2,625	3,832	3,692
Eggs in shell	'000 doz.	11,247	18,268	9,907	1,841	3,758	2,075
Flour	ton	86,100	124,948	58,624	3,744	5,579	2,442
Fruit, dried	"	23,200	50,229	45,774	2,885	5,034	4,712
" fresh	'000 bus.	3,083	4,725	4,278	4,147	6,916	5,699
" preserved in airtight containers	ton	25,521	53,612	76,409	3,143	7,636	12,174
Gold	'000 fine oz.	5	712	298	87	11,725	4,773
Hides and skins .. .. .	"	..	..	..	2,731	2,777	2,596
Lead bullion	ton	23,775	48,887	34,103	4,950	7,955	4,393
" pig	"	63,015	54,090	108,137	12,221	6,284	11,692
Leather .. .. .	"	..	..	..	656	1,532	1,605
Meats—							
Beef and veal	ton	39,126	96,913	160,906	5,906	20,193	30,736
Lamb	"	5,765	33,461	15,913	720	4,988	2,494
Mutton	"	447	31,873	17,669	37	2,375	1,292
Pork	"	517	504	89	115	111	25
Milk and cream	'000 lb.	15,006	52,421	38,225	708	3,949	2,102
Silver bullion	'000 fine oz.	5,488	5,954	5,772	2,155	2,244	2,188
Sugar (cane)	ton	68,734	358,479	534,746	2,733	16,783	23,751
Tallow (unrefined)	"	2,881	1,775	11,638	251	116	725
Timber, undressed	'000 super ft.	4,849	8,289	5,424	258	566	351
Wheat	ton	480,313	588,106	308,582	15,053	18,571	9,575
Wine	'000 gals.	553	688	936	248	341	453
Wool	'000 lb.	259,753	387,231	315,493	89,068	142,278	117,704
Zinc bars, etc.	ton	27,012	32,157	15,264	5,723	4,744	1,461
All other articles .. .. .	"	..	..	..	38,156	60,073	35,006
Total Exports (Australian Produce) .. .. .	..	..	..	..	207,007	357,483	298,915

4. Imports from the United Kingdom and Competing Countries.—Since 1908, permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of Customs Duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on previous pages in this chapter.

In an investigation into the relative position occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have therefore been omitted from the computation following.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan and the United States of America. These countries have been selected as the principal competitors in normal times with the United Kingdom for the trade of Australia under the specified headings. Totals for the years 1951-52 to 1953-54 are shown in the following table.

IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS.
(£'000.)

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	1951-52	1,780	39	191	51	562	6,621
	1952-53	511	..	85	31	451	3,100
	1953-54	1,257	7	130	358	148	5,853
Spirituos and alcoholic liquors	1951-52	1,676	305	42	..	1	2,355
	1952-53	1,157	23	2	..	1	1,215
	1953-54	1,118	116	7	..	1	1,328
Manufactured fibres, textiles and apparel	1951-52	109,268	4,765	3,632	9,044	2,277	203,569
	1952-53	26,517	1,280	1,097	771	336	48,243
	1953-54	66,681	3,963	2,929	4,735	669	113,805
Metals, metal manufactures and machinery	1951-52	226,149	11,664	17,698	26,163	56,161	393,379
	1952-53	132,181	3,107	9,065	1,956	53,895	225,932
	1953-54	174,940	2,977	10,664	191	39,577	252,101
Rubber and leather and manufactures thereof, and substitutes therefor	1951-52	12,182	439	311	16	919	35,083
	1952-53	1,823	76	26	..	770	8,975
	1953-54	2,935	94	87	1	565	12,226
Earthenware, cement, china, glass and stoneware	1951-52	10,994	457	480	1,770	438	19,667
	1952-53	3,526	115	149	399	336	6,011
	1953-54	8,603	171	337	228	410	12,101
Paper and stationery	1951-52	22,359	617	2,213	1,164	2,481	68,759
	1952-53	11,330	72	156	3	1,057	22,431
	1953-54	19,102	77	529	8	1,048	34,096
Sporting material, toys fancy goods, jewellery, and timepieces.	1951-52	3,939	238	1,225	37	26	9,281
	1952-53	588	47	279	4	16	2,391
	1953-54	2,506	132	1,356	122	24	7,688
Drugs, fertilizers and chemicals	1951-52	13,834	1,413	2,667	922	2,517	28,999
	1952-53	5,517	415	790	67	1,248	12,749
	1953-54	10,954	851	2,416	128	1,443	21,254
Total. above-mentioned imports	1951-52	402,181	19,937	28,459	39,167	65,382	767,713
	1952-53	183,150	5,135	11,649	3,231	58,112	331,107
	1953-54	288,096	8,388	18,455	5,771	43,885	460,452
Total imports (less bullion and specie)	1951-52	465,338	22,390	33,240	43,582	109,141	1,049,751
	1952-53	214,599	9,253	13,916	4,692	85,166	510,342
	1953-54	331,680	11,793	21,731	6,544	73,253	678,520

(a) Includes outside packages.

The principal classes of competitive imports are metals; metal manufactures and machinery (value £252,101,000 in 1953-54) and manufactured fibres, textiles and apparel (value £113,805,000 in 1953-54). The value of goods included in these two groups represented 79.5 per cent. of the total value of competitive commodities during 1953-54. In 1953-54 the United Kingdom supplied 62.6 per cent. of the total value of competitive goods.

§ 9. Trade with Eastern Countries.

1. Merchandise Trade according to Countries.—The values of imports into Australia from Eastern countries during the years 1951-52 to 1953-54 are shown in the following table. The principal commodities imported in 1953-54 according to countries of origin were:—Ceylon—tea, £12,208,000; India—bags and sacks, £6,053,000, cotton and linen piece-goods, £4,456,000, hessian, £2,444,000, cotton fibres, £971,000; Malaya—crude rubber, £6,973,000; Singapore—petroleum spirit, £4,692,000, residual and solar oil, £3,090,000; Indonesia—petroleum spirit, £8,642,000, residual and solar oil, £4,819,000, kerosene, £3,926,000, crude rubber, £434,000; Japan—cotton and linen piece-goods, £3,798,000.

MERCHANDISE TRADE WITH EASTERN COUNTRIES : AUSTRALIA.
(£'000.)

Country.	Imports.			Exports.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
British Countries—						
Borneo	6,903	5,998	8,439	904	778	960
Ceylon	11,173	9,786	13,490	10,630	14,687	11,447
Hong Kong	2,255	521	1,717	3,800	4,855	4,955
India	47,825	14,646	18,475	16,911	17,148	14,293
Malaya, Federation of	18,632	5,798	8,721	8,532	9,344	9,143
Pakistan	1,774	2,268	3,706	845	4,524	3,287
Singapore	8,764	5,858	8,529	11,810	12,794	11,288
Foreign Countries—						
Bhutan and Nepal	2	..	..	..	..	1
Burma	32	9	18	1,001	920	1,689
China	3,082	1,408	1,983	283	681	2,192
Chinese Dependency—						
Manchuria	32	..	1	..	..	..
Formosa	51	54	137	50	740	444
French Associated States and Dependencies—						
India (French)	8	..	..	9	26	16
Laos .. .. .	..	1	..	20	526	598
Vietnam	19	..	1	11	19	34
Indonesia	25,530	21,544	21,972	3,967	5,064	6,585
Japan	43,582	4,692	6,545	48,514	83,958	55,689
Korea	3	4	3	315	4,219	2,586
Philippines	101	53	82	444	501	1,039
Portuguese Dependencies—						
India (Portuguese) .. .. .	..	..	..	128	92	212
Macao .. .. .	..	..	2	7	16	2
Timor	114	18	29	37	35	34
Thailand	72	37	35	1,076	1,224	1,243
Total	(a) 169,954	(a) 72,695	(a) 93,885	109,294	162,151	127,737

(a) Includes outside packages.

The balance of trade with Eastern countries shows an excess of imports into Australia during the year 1951-52, and an excess of exports during the years 1952-53 and 1953-54.

2. **Exports of Principal Articles.**—The following table shows the value of exports of Australian and other produce from Australia to Eastern countries for each of the years 1951-52 to 1953-54. The countries concerned in this trade are Borneo (British), Ceylon, Hong Kong, India, Federation of Malaya, Pakistan, Singapore, Burma, China and the Chinese dependencies of Kwantung and Manchuria, Formosa, the French Associated States : Cambodia, Laos and Vietnam, and French dependencies in India, Republic of Indonesia, Japan, Korea, Philippines Republic, the Portuguese dependencies in India, Macao and Timor, and Thailand.

TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.
(£'000.)

Article.	1951-52.	1952-53.	1953-54.	Article.	1951-52.	1952-53.	1953-54.
Army stores	3,924	3,508	2,052	Machines and machinery ..	1,746	1,455	2,267
Butter	1,779	2,819	2,354	Meats—			
Cheese	631	921	825	Bacon and hams	509	435	419
Fruit—				Other	3,343	3,277	3,024
Dried or preserved	532	244	294	Milk and cream	5,869	6,307	6,215
Fresh	1,259	1,207	1,196	Wool	42,506	63,089	47,317
Grain and cereals—				Zinc bars, blocks, etc. ..	1,230	1,292	2,242
Flour (wheaten), plain white	20,228	25,975	22,707	Other merchandise	10,067	19,287	16,904
Wheat	6,981	15,832	8,058	Total Merchandise	109,294	162,151	127,738
Other (prepared and un-				Gold and silver; bronze			
prepared)	6,245	14,153	9,667	specie	19	..	5,624
Infants' and invalids' foods	1,792	1,722	1,340	Total Exports	109,313	162,151	133,362
Leather	653	628	657				

§ 10. Oversea Trade at Principal Ports.

The following table shows the value of overseas imports and exports at the principal ports of Australia during the year 1953-54, together with the totals for each State.

OVERSEA TRADE AT PRINCIPAL PORTS, 1953-54.

(£'000.)

Port.	Imports.	Exports.	Port.	Imports.	Exports.
NEW SOUTH WALES.			SOUTH AUSTRALIA.		
Sydney	268,223	227,031	Port Adelaide, including		
Newcastle, including Port Stephens	9,239	29,320	Adelaide	48,000	75,892
Port Kembla	3,075	6,045	Port Pirie	2,254	23,350
Other..		579	Port Lincoln	742	4,580
Total	280,537	263,175	Walleroo	447	2,585
			Other..	29	3,842
			Total	51,472	110,249
VICTORIA.			WESTERN AUSTRALIA.		
Melbourne	223,313	193,075	Fremantle, including Perth	41,122	58,932
Geelong	13,678	7,920	Bunbury	278	3,666
Portland	588	2,586	Geraldton	463	2,138
Other..	104		Albany	372	1,010
Total	237,683	203,581	Other..	290	2,678
			Total	42,525	68,424
QUEENSLAND.			TASMANIA.		
Brisbane	48,384	111,148	Hobart	7,944	10,572
Townsville	3,126	19,043	Launceston	3,058	4,779
Calross	2,325	8,738	Burnie	1,399	1,710
Mackay	245	8,735	Devonport	648	672
Rockhampton	279	5,472	Total	13,049	17,733
Bowen	5	5,451			
Gladstone	1,224	3,300	NORTHERN TERRITORY.		
Maryborough	21	3,196	Darwin	642	30
Other..	22	22	Grand Total	681,539	828,297
Total	55,631	165,105			

§ 11. Classified Summary of Australian Oversea Trade.

1. Statistical Classes.—(i) *Imports and Exports.* The following table shows, according to statistical classes, the value of Australian imports and exports during each of the years 1951-52 to 1953-54.

OVERSEA TRADE : CLASSES.

Class.	Imports (£'000.)			Exports (£'000.)		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
I. Animal foodstuffs, etc.	6,724	3,122	5,853	60,745	117,344	102,660
II. Vegetable foodstuffs; non-alcoholic beverages, etc.	24,978	18,478	25,735	149,103	180,591	155,152
III. Alcoholic liquors, etc.	2,355	1,215	1,328	1,394	1,518	1,657
IV. Tobacco, etc.	18,826	15,507	17,809	344	263	281
V. Live animals	616	458	774	742	742	700
VI. Animal substances, etc.	4,817	1,946	4,437	342,162	424,602	431,609
VII. Vegetable substances, etc.	30,260	16,794	23,590	1,760	1,282	1,563
VIII. Apparel, textiles, etc.	203,569	48,243	113,805	3,977	1,610	2,069
IX. Oils, fats and waxes	87,460	74,272	83,422	4,283	5,273	5,689
X. Pigments, paints and varnishes	3,485	1,184	3,431	1,072	689	846
XI. Rocks, minerals, etc.	5,650	6,378	6,931	21,463	22,267	16,236
XII. Metals, metal manufactures and machinery	393,379	225,092	252,101	52,217	61,368	66,128
XIII. Rubber and leather, etc.	35,083	8,975	12,226	2,075	2,364	3,249
XIV. Wood and wicker, etc.	28,029	6,232	11,875	2,367	4,080	3,283
XV. Earthenware, etc.	19,667	6,011	12,101	1,111	710	1,008
XVI. Paper and stationery	68,759	22,431	34,096	2,119	1,938	2,169
XVII. Jewellery, etc.	9,281	2,391	7,688	752	497	558
XVIII. Optical, surgical and scientific instruments	10,416	5,577	9,640	1,735	1,310	1,691
XIX. Drugs, fertilizers, chemicals	28,999	12,749	21,254	5,678	5,069	4,018
XX. Miscellaneous (a)	67,380	32,387	31,528	10,109	14,481	11,065
XXI. Gold and silver; bronze specie	3,672	3,767	3,019	9,768	22,774	16,466
Total	1,053,423	514,109	681,539	675,008	871,272	828,297

(a) Includes arms, ammunition and explosives.

(ii) *Exports—Australian Produce and Re-exports.* In the following table the exports from Australia of (a) Australian produce and (b) re-exports are shown according to statistical classes.

EXPORTS FROM AUSTRALIA : AUSTRALIAN PRODUCE AND RE-EXPORTS.
(£'000.)

Class.	Australian Produce.			Re-exports.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
I. Animal foodstuffs, etc. . .	60,689	117,268	102,601	56	76	59
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . .	148,700	180,224	154,887	403	367	265
III. Alcoholic liquors, etc. . .	1,339	1,457	1,633	55	61	24
IV. Tobacco, etc. . .	293	226	269	51	37	12
V. Live animals . . .	692	703	661	82	39	39
VI. Animals substances, etc. . .	342,007	424,479	431,321	155	123	288
VII. Vegetable substances, etc. . .	1,722	1,239	1,508	38	43	55
VIII. Apparel, textiles, etc. . .	3,392	1,288	2,003	585	322	266
IX. Oils, fats and waxes . . .	3,595	4,439	5,207	688	834	482
X. Pigments, paints and varnishes . . .	1,067	685	842	5	4	4
XI. Rocks, minerals, etc. . .	21,417	22,077	16,174	46	190	62
XII. Metals, metal manufactures and machinery . . .	49,506	57,858	61,889	2,711	3,510	4,239
XIII. Rubber and leather, etc. . .	2,035	2,820	3,198	40	44	51
XIV. Wood and wicker, etc. . .	2,314	3,997	3,199	53	83	84
XV. Earthenware, etc. . .	994	676	983	117	34	25
XVI. Paper and stationery . . .	2,043	1,833	2,087	76	105	82
XVII. Jewellery, etc. . .	596	364	439	156	133	119
XVIII. Optical, surgical and scientific instruments . . .	1,347	964	1,187	388	346	504
XIX. Drugs, fertilizers, chemicals . . .	5,471	4,840	3,750	207	229	268
XX. Miscellaneous (a) . . .	8,124	13,197	9,762	1,985	1,284	1,303
XXI. Gold and silver; bronze specie . . .	9,716	22,657	16,422	52	117	44
Total . . .	667,059	863,291	820,022	7,949	7,981	8,275

(a) Includes arms, ammunition and explosives.

2. *Imports of Principal Articles.*—The next table shows the quantity, where available and the value of the principal articles imported into Australia during each of the years 1951-52 to 1953-54.

PRINCIPAL ARTICLES IMPORTED : AUSTRALIA.

Article.	Unit of Quantity.	Quantity.			Value (£'000).		
		1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
Apparel—							
Blouses, skirts, costumes, etc. . .					1,896	122	550
Gloves . . .	doz. prs.	331,863	103,239	396,031	1,383	464	1,464
Hats and caps . . .					932	407	973
Men's and boys' outer clothing . . .					2,645	171	495
Socks and stockings . . .	doz. prs.	949,676	49,988	365,935	2,480	150	925
Trimmings and ornaments . . .					5,032	1,506	4,933
Other apparel and attire . . .					5,755	703	2,060
Arms and explosives, military stores, etc. . .					16,912	4,983	4,694
Bags and sacks . . .					28,074	6,730	6,086
Carpets and carpeting . . .					11,604	1,199	7,251
Crockery . . .					4,483	1,114	4,046
Drugs, fertilizers and chemicals . . .					28,999	12,749	21,254
Electrical machinery and appliances . . .					31,750	23,128	24,225
Fibres . . .					18,635	9,648	12,365
Glass and glassware . . .					6,709	2,116	4,726
Iron and steel—							
Pipes and tubes . . .	cwt.	1,141,812	509,992	493,979	5,720	2,319	2,862
Plate and sheet . . .	cwt.	8,314,346	3,975,080	2,909,901	41,545	19,033	13,486
Other . . .					26,107	9,716	5,148
Machines and machinery (except dynamo electrical)—							
Agricultural . . .					5,680	3,833	4,325
Metal-working . . .					9,062	9,060	8,204
Motive power . . .					48,665	33,585	41,062
Other . . .					62,756	42,984	46,414

PRINCIPAL ARTICLES IMPORTED: AUSTRALIA—continued.

Article.	Unit of Quantity.	Quantity.			Value (£'000).		
		1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
Motor vehicles, chassis, bodies and parts .. .. .	..	..	..	..	84,876	30,354	53,957
Oils—							
Linsced	'000 gal.	4,599	1,487	3,567	4,002	818	1,585
Petroleum and shale—							
Kerosene	'000 gal.	118,400	126,946	136,729	5,856	6,459	6,941
Lubricating (mineral)	'000 gal.	48,978	24,746	26,994	9,189	4,096	3,436
Petroleum and shale spirit	'000 gal.	637,188	635,451	689,164	36,959	37,033	39,938
Residual and solar	'000 gal.	511,406	424,505	472,023	17,840	15,173	16,854
Paper, printing .. .. .	..	..	..	..	26,677	8,531	13,104
Piece-goods—							
Canvas and duck	yds.	11,089	4,379	7,631	3,884	1,294	1,263
Cotton and linen .. .. .	..	..	..	..	63,572	13,478	40,481
Silk and rayon .. .. .	..	..	..	..	26,978	6,974	15,182
Woolen and containing wool .. .. .	..	..	..	..	3,298	300	1,299
All other piece-goods .. .. .	..	..	..	..	14,082	3,389	6,412
Plastic materials	'000 cwt.	184	90	240	4,446	2,094	5,148
Prefabricated houses and buildings .. .. .	..	..	..	..	14,563	11,185	4,476
Rubber and rubber manufactures .. .. .	..	..	..	..	33,976	8,651	11,663
Stationery and paper manufactures .. .. .	..	..	..	..	8,564	6,334	9,064
Tea	'000 lb.	54,358	58,808	58,533	11,758	11,663	13,647
Timber, undressed, including logs a	'000 sup. ft.	331,293	114,134	244,595	16,046	4,739	9,572
Yarns—							
Cotton	'000 lb.	10,861	2,574	6,369	6,496	1,434	3,143
Rayon	'000 lb.	17,222	12,617	24,377	8,121	5,687	10,236
Woolen	'000 lb.	119	66	119	218	105	221
Other	'000 lb.	1,568	1,511	1,802	655	469	496
All other articles .. .. .	..	..	..	..	284,513	148,126	195,873
Total Imports .. .. .	..	..	..	..	1,053,423	544,109	681,539

(a) Excludes undressed timber not measured in super. feet.

3. Exports of Principal Articles of Australian Produce.—The following table shows the quantities and values of the principal articles of Australian produce exported during each of the years 1951-52 to 1953-54.

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE.

Article.	Unit of Quantity.	Quantity.			Value (£'000).		
		1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
Arms, ammunition, military, naval and air force stores .. .. .	..	..	..	..	4,612	5,467	3,927
Barley	ton	269,232	496,403	601,536	11,154	19,245	14,870
Butter .. .. .	..	11,347	49,298	39,301	4,593	20,075	16,052
Cheese .. .. .	..	17,998	23,663	22,749	4,064	5,851	5,329
Drugs, fertilizers and chemicals .. .. .	..	..	..	..	5,470	4,840	3,750
Flour	ton	704,479	776,446	679,704	33,018	37,417	29,682
Fruit—							
Dried .. .. .	..	43,789	72,268	65,314	5,660	8,028	7,393
Fresh	'000 bus.	4,587	6,157	6,596	6,869	9,497	9,384
Preserved in airtight containers	ton	49,307	63,956	88,937	6,500	9,298	14,184
Gold	'000 fine oz.	..	417	1,244	..	..	..
Hides and skins .. .. .	..	..	..	..	17,114	20,118	19,422
Lead, pig	ton	106,816	141,999	170,207	20,720	17,168	18,550
Machines and machinery (except dynamo electrical) .. .. .	..	..	..	..	6,891	5,943	6,744
Meats—							
Beef and veal	ton	42,802	85,847	141,433	5,451	14,103	22,021
Lamb .. .. .	..	11,271	38,424	19,688	1,621	5,971	3,297
Mutton .. .. .	..	2,637	36,060	24,817	297	2,790	1,964
Pork .. .. .	..	1,740	1,542	1,232	485	472	462
Milk and cream	'000 lb.	99,711	150,302	119,599	7,609	11,060	9,675
Ores and concentrates	ton	309,886	356,978	427,684	19,959	19,605	13,037
Sugar (cane) .. .. .	..	167,431	459,354	706,796	6,896	21,654	31,592
Wheat .. .. .	..	1,685,382	1,593,963	965,338	55,287	51,970	30,957
Wool (a)	'000 lb.	1,003,189	1,174,469	1,168,189	323,428	402,905	410,420
All other articles .. .. .	..	..	..	..	112,372	148,617	133,573
Total Exports (Australian Produce) .. .. .	..	..	..	..	667,059	863,291	820,022

(a) Quantity in terms of greasy wool.

4. **Imports of Merchandise, Specie and Bullion.**—The table hereunder shows the value of imports into Australia during each of the years 1949-50 to 1953-54, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of "free" and "dutiable" goods.

IMPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£'000.)

Year.	Merchandise.			Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.	Total Merchandise.		
1949-50 ..	239,145	296,979	536,124	1,945	538,069
1950-51 ..	366,229	375,149	741,378	2,493	743,871
1951-52 ..	554,959	494,792	1,049,751	3,672	1,053,423
1952-53 ..	301,870	208,472	510,342	3,767	514,109
1953-54 ..	317,781	360,740	678,521	3,018	681,539

5. **Exports of Merchandise, Specie and Bullion.**—The next table shows the recorded value of exports from Australia during each of the years 1949-50 to 1953-54, grouped under the headings—Merchandise, and Specie and Bullion, showing the exports of Australian produce and re-exports separately :—

EXPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£'000.)

Year.	Merchandise.			Specie and Bullion.			Total.
	Australian Produce.	Re-exports.	Total.	Australian Produce.	Re-exports.	Total.	
1949-50 ..	606,442	5,211	611,653	2,020	24	2,044	613,697
1950-51 ..	972,933	6,163	979,096	2,682	18	2,700	981,796
1951-52 ..	657,344	7,896	665,240	9,716	52	9,768	675,008
1952-53 ..	840,634	7,864	848,498	22,657	117	22,774	871,272
1953-54 ..	803,600	8,231	811,831	16,422	44	16,466	828,297

6. **Imports in Tariff Divisions.**—Imports into Australia classified in accordance with the sixteen divisions of the Customs Tariff, for each of the years 1944-45 to 1953-54, will be found in *Oversea Trade Bulletin*, 1953-54, page 569.

7. **Imports and Net Customs Revenue.**—The percentage of net Customs revenue, omitting primage, collected on the total value of all merchandise imported in each of the years 1949-50 to 1953-54 was as follows :—1949-50, 13.4 per cent. ; 1950-51, 11.3 per cent. ; 1951-52, 10.0 per cent. ; 1952-53, 12.6 per cent. ; and 1953-54, 11.3 per cent. Primage duty was in force during these years and if this is added to net Customs revenue the percentages become :—1949-50, 14.5 per cent. ; 1950-51, 12.4 per cent. ; 1951-52, 10.9 per cent. ; 1952-53, 13.8 per cent. ; and 1953-54, 14.3 per cent. The percentages of net Customs revenue, omitting primage, on the total value of dutiable goods only were :—1949-50, 24.6 per cent. ; 1950-51, 22.4 per cent. ; 1951-52, 21.1 per cent. ; 1952-53, 31.0 per cent. ; and 1953-54, 24.0 per cent. The calculations are based on Australian currency values and on the assumption that the value of clearances approximated to the value of imports during the same period.

§ 12. Ships' Stores.

Prior to 1906, goods shipped in Australian ports on board overseas vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1949-50 to 1953-54, with fuel oils separate, is shown in the following table:—

VALUE OF STORES SHIPPED ON OVERSEA VESSELS : AUSTRALIA.
(£'000.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Fuel Oils	3,169	4,635	5,532	6,460	5,674
All Stores (including Fuel Oils)	7,581	9,358	10,478	11,696	10,266

In addition to fuel oils, the principal items of ships' stores supplied to overseas vessels in 1953-54 were:—Meats, £1,407,553; Fruit and Vegetables, £490,237; Oils, other than fuel, £245,782; Butter, £174,478; Eggs, £165,843; Fish, £137,473; Bunker Coal, £129,977; Milk and Cream, £127,038; Ale, Porter, Beer, etc., £113,901; Rice, £101,413.

§ 13. Movement of Specie and Bullion.

1. Imports and Exports.—The following table shows the values of gold and silver specie and bullion and of bronze specie imported into and exported from Australia during the years 1951-52 to 1953-54.

IMPORTS AND EXPORTS, SPECIE AND BULLION : AUSTRALIA.
(£.)

Item.	Imports.			Exports.		
	1951-52.	1952-53.	1953-54.	1951-52.	1952-53.	1953-54.
Gold—Specie .. .. .	..	..	3,537	..	..	..
Bullion	3,259,400	3,595,970	2,955,517	6,989,188	20,397,933	13,769,222
Total ..	3,259,400	3,595,970	2,959,054	6,989,188	20,397,933	13,769,222
Silver—Specie	299,532	118,205	29,353	603,547	114,429	103,416
Bullion	44,047	36,017	29,929	2,174,267	2,245,606	2,592,377
Total ..	343,579	154,222	59,282	2,777,814	2,360,035	2,695,793
Bronze—Specie	69,313	16,785	217	1,086	16,384	903
Total— Australian Pro- duce ..	..	..	..	9,715,869	22,657,249	16,422,354
Re-exports ..	..	..	..	52,219	117,103	43,564
Grand Total	3,672,292	3,766,977	3,018,553	9,768,088	22,774,352	16,465,918

2. Imports and Exports by Countries.—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1953-54 :—

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES : AUSTRALIA, 1953-54.
(£.)

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
Australia (re-imported) ..	10,904	10	10,914	..	..	..
United Kingdom ..	20,527	62	20,589	9,167	6,993,192	7,002,359
Australian Territories—						
Nauru .. ..	..	..	..	765	..	765
New Guinea .. ..	..	1,543,671	1,543,671	66,375	..	66,375
Norfolk Island	140	..	140	200	..	200
Papua .. ..	..	2,125	2,125	16,275	..	16,275
Ceylon .. ..	..	..	..	..	400,140	400,140
Hong Kong .. ..	..	..	..	..	2,817,888	2,817,888
New Zealand	508	470,129	470,637	4,058	14,435	18,493
Pacific Islands (British)—						
Fiji .. ..	..	969,444	969,444	..	701	701
Gilbert and Ellice Islands .. ..	..	..	..	200	..	200
New Hebrides .. ..	..	..	..	2,600	..	2,600
Solomon Islands .. ..	..	..	..	2,670	..	2,670
Tonga .. ..	..	..	..	1,250	..	1,250
Total, British Countries	32,079	2,985,441	3,017,520	103,560	10,226,356	10,329,916
Austria	433	..	433	..	..	..
France .. ..	..	5	5	..	3,362,691	3,362,691
Portuguese Possessions—						
Macao .. ..	..	..	..	..	1,926,436	1,926,436
Thailand .. ..	..	..	..	..	479,777	479,777
Switzerland	10	..	10	..	336,596	336,596
United States of America ..	585	..	585	759	29,743	30,502
Total, Foreign Countries	1,028	5	1,033	759	6,135,243	6,136,002
Grand Total ..	33,107	2,985,446	3,018,553	104,319	16,361,599	16,465,918

§ 14. Exports according to Industries.

1. Classification.—The following table provides an analysis of the exports of Australian produce, according to the main classes of industry in which the goods were produced, for the years 1952-53 and 1953-54 in comparison with those for the year 1938-39. The index numbers based on the year 1913 show the variations in the total recorded value only of exports in each industrial group, and have not been adjusted either for price changes or in accordance with the variation of the Australian £ in relation to sterling.

A graph showing the value of exports of Australian produce according to industrial groups from 1910 onward is published on page 209 of this chapter.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN :
VALUE.

Industrial Group.	1938-39.		1952-53.		1953-54.	
	£'000.	Index No.(a)	£'000.	Index No.(a)	£'000.	Index No.(a)
Agriculture	26,361	247	176,516	1,653	153,415	1,437
Pastoral	59,115	141	489,321	1,163	490,102	1,165
Dairy and Farmyard	15,640	406	50,347	1,306	43,317	1,124
Mines and Quarries(b)	23,984	109	69,960	319	62,880	287
Fisheries	288	68	2,526	594	2,690	633
Forestry	1,056	95	3,807	344	3,054	276
Total, Primary Produce	126,444	158	792,477	990	755,458	944
Manufacturing	8,650	375	67,474	2,927	67,182	2,915
Total	135,094	164	859,951	1,044	822,640	999

(a) Base of each group : 1913 = 100.
of gold each year.

(b) Australian production of gold substituted for exports

2. **Relative Importance of Industrial Groups.**—In the previous table the value of commodities in each industrial group of exports of Australian produce is that recorded at the date of shipment from Australia, with the exception that the value of the production of gold in Australia in each year has been substituted in the Mines and Quarries group for actual shipments of gold in each year. This has been done to eliminate the exports of gold for monetary purposes. In order of importance the pastoral group occupied the highest place, representing 59.6 per cent. of the total exports in 1953-54, compared with 56.9 per cent. in 1952-53 and 43.7 per cent. in 1938-39.

Exports of agricultural produce rank next in importance. In 1953-54 they represented 18.6 per cent. of total exports. Corresponding percentages for 1952-53 and 1938-39 were 20.5 and 19.5 respectively.

According to value, exports of dairy and farmyard produce decreased from 11.6 per cent. in 1938-39 to 5.9 per cent. in 1952-53 and to 5.3 per cent. in 1953-54. Exports of mine and quarry products in 1938-39 represented 17.7 per cent. of the total but in 1952-53 and 1953-54 the percentages were only 8.1 and 7.6 respectively. The manufacturing group of exports, which represented 6.4 per cent. in 1938-39, had increased to 15.7 per cent. in 1945-46. In 1952-53 this group represented 7.8 per cent. and in 1953-54 8.2 per cent.

§ 15. Australian Index of Export Prices.

1. **General.**—Over the past fifty years the exports of Australia have become increasingly diversified, but, although the proportion of highly manufactured exports has increased, it is still small in relation to total exports. Most of these exports still consist of basic products, such as wool, wheat, butter, etc.

2. **Historical.**—An annual index of export prices has been published by this Bureau since its inception.

The first index was compiled annually for the years 1901 to 1916-17. The method of computation was to select all those articles of export which were recorded by units of quantity, and to apply to the quantities of these export commodities actually exported during any year the average price per unit ruling in the year 1901 (adopted as the base year). The total value so obtained was divided into the total actual (recorded) value of these exports for that year. The quotient (multiplied by 1,000) thus obtained was the export price index number for that year.

The method was changed in 1918. A weight for all principal exports was calculated on the average quantities of exports for the nineteen and a half years from 1st January, 1897 to 30th June, 1916. To these weights were applied the "average unit export values" of each export in successive years, and a weighted aggregative index of "price" variations was derived. It was published for the years 1897 to 1929-30, and particulars of this index were last published in Official Year Book No. 24, 1931, on page 147.

After the 1914-18 War, however, the relative importance of different exports changed considerably. In addition, the pattern of exports had become liable to vary considerably from year to year.

3. **Present Indexes.**—For the reasons just mentioned, two new series of monthly export price indexes—one using fixed weights, the other changing weights—were published in 1937, computed back to 1928. These are the only export price indexes now published.

The data on which both series are based differ from those utilized in the old series of annual index numbers. The most important change was the use of actual (or calculated) export parities, based on actual price quotations, in place of the "unit-values" declared at the Customs.

The old index took no account of gold exports. The omission is natural and reasonable for countries which produce little or no gold. For gold-producing countries, although some exports of gold would be irrelevant (e.g., the Australian shipments of gold reserves during the depression), the exports of newly-produced gold should be taken into account. In the new series, therefore, gold is included, but the weight given to it is not the quantity exported but the quantity produced.

The two series are compiled monthly, and both relate to commodities which normally constitute about 80 per cent. of the total value of exports of merchandise and silver and gold production.

4. **Monthly Index (Fixed Weights).**—(i) *General.* This is a weighted aggregative index of price variations. It was computed back to 1928, with that year taken as base. It is now usually published on the base—average of three years ended June, 1939 = 100.

The purpose of this index is to provide comparisons, over a limited number of years, of the level of prices of those commodities normally exported from Australia, making no allowance for any benefit or disadvantage accruing from variations during the period in the relative proportions of the different kinds of exports.

(ii) *Weights.* The original weights (used for the period 1928 to 1936) were, in round figures, the average annual exports (production, in the case of gold) during the five years 1928-29 to 1932-33.

From July, 1936 the weights were revised, and are now based on the average annual exports (production, in the case of gold) during the three years 1933-34 to 1935-36. The break of continuity has been bridged by the usual method of splicing. Consideration is being given to adopting weights for a post-war period.

The weight adopted for wheat takes into account the wheat equivalent of flour exported, the weight allotted to greasy wool takes account of the greasy equivalent of scoured wool, tops, and wool on skins, whilst for some metals allowance is made for the metallic content of ores and concentrates exported.

The twenty items, together with the units of quantity and the weights or "quantity multipliers", are given in the following table.

EXPORT PRICE INDEX : COMMODITIES AND WEIGHTING SYSTEM.
(FROM 1ST JULY, 1936.)

Item.	Unit of Quantity.	"Quantity Multipliers".	Percentage Distribution of Aggregative Value.			
			Base Period 1936-37 to 1938-39.		Year 1951-52.	
			Excluding Gold.	Including Gold.	Excluding Gold.	Including Gold.
Wool	lb.	975,000,000	49.05	45.63	55.89	54.37
Wheat (a) ..	bushel	101,000,000	18.34	17.06	16.16	15.72
Butter	cwt.	2,140,000	12.21	11.36	7.19	6.99
Metals—						
Silver	oz.	7,300,000	0.68	0.64	0.52	0.50
	(standard)					
Copper	ton	3,600	0.20	0.20	0.21	0.20
Tin	"	1,300	0.31	0.28	0.27	0.26
Zinc	"	99,000	2.05	1.90	3.96	3.86
Lead	"	208,500	4.10	3.81	7.07	6.88
Meats—						
Beef	lb.	182,000,000	2.56	2.38	1.74	1.69
Lamb	"	138,000,000	3.56	3.31	1.56	1.52
Mutton	"	44,000,000	0.58	0.54	0.23	0.22
Pork	"	16,000,000	0.43	0.40	0.26	0.25
Sugar	ton	305,000	2.58	2.40	2.43	2.37
Dried Fruits—						
Sultanas	"	38,200	1.45	1.35	0.86	0.84
Lexias	"	3,000	0.12	0.11	0.07	0.07
Currants	"	13,400	0.37	0.35	0.25	0.24
Tallow	cwt.	600,000	0.69	0.64	0.63	0.61
Hides—						
Cattle	lb.	28,000,000	0.64	0.59	0.63	0.62
Calf	"	1,800,000	0.08	0.07	0.07	0.07
Gold	fine oz.	937,000	..	6.98	..	2.72
			100.00	100.00	100.00	100.00

(a) Includes "wheat equivalent" of flour.

The percentage distributions of the "Aggregative Values" shown in the foregoing table are of importance, firstly, as showing their variations from time to time as the result of differential price movements as between the various commodities, and secondly, as regards the effect on the indexes as a whole of the percentage price variations in each commodity.

(iii) *Prices.* The adoption of current market prices (as distinct from the former average unit export values) in the present indexes permitted the use of standards for each commodity. All export parities are calculated from price quotations from the most reliable and representative sources available. In most cases, the prices used are those at which current sales are being effected. In recent years, however, great difficulty has been experienced in obtaining appropriate current market price data for some commodities. It has become impossible to adhere to a common principle. Actual (or calculated) export parities currently prevailing, priced at f.o.b. Australian ports, are still used whenever possible. However, since dual or multiple price systems have become operative for some exports, the prices used in the index for wheat (from July, 1945 to September, 1951) and for certain metals represent average actual realizations for current *shipments*. From October, 1951 to July, 1953, the prices used for wheat are the estimated average realizations after weighting prices of quota and non-quota wheat. Prices adopted for months since August, 1953 are derived from available information of current sales. Notes on earlier prices used for wheat were given on pages 508 and 509 of Official Year Book No. 38. Current market prices used for the main commodities are:—

(a) the price for wool is a weighted average (based on clean scoured prices) of representative types at Sydney auctions, expressed in terms of pence per lb., greasy:

(b) where contracts exist between the Australian and the United Kingdom Governments for certain commodities and when most of the exports of such items are sold at these rates, contract prices are used (current examples are meats and butter); and

(c) for those metals which are at present not actually exported, Australian export parities are estimated on the basis of the prices ruling in London.

(iv) *Index Numbers.* The following table shows export price index numbers for Australia for individual commodities, groups of commodities, and all groups combined for each financial year from 1936-37 to 1953-54 and monthly for the year 1953-54.

EXPORT PRICE INDEXES : AUSTRALIA.

SIMPLE AGGREGATIVE INDEX ; FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section : Average of three years ended June, 1939 = 100.)

Period.	Wool.	Wheat. (a)	Butter.	Metals. (b)	Meats. (c)	Sugar.	Dried Fruits. (d)	Tallow.	Hides. (e)	Gold. (f)	All Groups.	
											Ex- cluding Gold.	In- cluding Gold.
Percentage Dis- tribution of Base Aggregate— (g) (h)	45.63 49.05	17.06 18.34	11.36 12.21	6.83 7.34	6.63 7.13	2.40 2.58	1.81 1.94	0.64 0.69	0.66 0.72	6.98	100.00	100.00
1936-37 ..	122	123	92	120	98	104	103	122	113	99	116	115
1937-38 ..	99	111	107	96	106	92	103	100	100	98	102	102
1938-39 ..	79	66	101	84	96	104	94	78	87	103	82	83
1939-40 ..	98	82	108	92	102	126	94	76	120	118	96	98
1940-41 ..	101	102	110	95	103	137	95	82	98	121	103	104
1941-42 ..	101	105	110	101	109	137	106	114	133	120	105	106
1942-43 ..	117	106	114	100	112	152	112	119	145	119	114	114
1943-44 ..	117	116	114	113	113	159	121	123	151	119	117	117
1944-45 ..	117	154	147	129	122	172	128	151	147	120	130	130
1945-46 ..	117	213	147	196	123	213	137	161	152	122	148	146
1946-47 ..	173	305	173	308	139	264	152	361	334	122	209	203
1947-48 ..	287	420	193	372	146	320	157	436	364	122	296	283
1948-49 ..	365	413	233	478	171	343	162	499	421	122	348	332
1949-50 ..	473	400	250	421	196	369	176	400	479	164	399	383
1950-51 ..	999	432	271	689	209	410	226	356	752	176	690	654
1951-52 ..	564	436	291	811	263	464	302	451	486	184	495	473
1952-53 ..	616	445	313	504	314	501	297	358	369	186	505	483
1953-54 ..	615	(i) 411	325	450	338	479	287	321	336	179	(i) 496	(i) 474
1953-54—												
July ..	(j) 641	454	325	446	331	500	290	244	319	183	516	493
August ..	(j) 634	446	325	450	331	500	290	251	321	182	511	488
September ..	626	443	325	438	331	500	290	260	336	182	506	484
October ..	634	428	325	450	340	500	290	269	374	181	509	486
November ..	634	414	325	458	340	500	290	301	383	176	508	485
December ..	611	413	325	442	340	500	290	341	377	177	495	473
January ..	603	411	325	427	340	461	290	369	377	176	489	468
February ..	581	402	325	423	340	461	290	368	353	177	476	455
March ..	581	399	325	440	340	461	(i) 281	355	327	176	(i) 476	(i) 456
April ..	(j) 596	381	325	467	340	461	(i) 281	364	300	176	(i) 482	(i) 461
May ..	618	372	325	474	340	461	(i) 281	369	281	178	(i) 492	(i) 470
June ..	622	(i) 369	325	484	340	448	(i) 281	359	278	178	(i) 494	(i) 472

(a) See notes above in para. 4 (iii), p. 229.

(b) Non-ferrous—silver, copper, tin, zinc, lead.

(c) Beef, lamb,

mutton, pork.

(d) Sultanas, lexis, currants.

(e) Cattle hides, calf skins.

(f) Where Australian gold

has been sold on the overseas premium markets such price has been used in the index.

(g) For "All Groups (including

Gold)"—applicable from 1936-37.

(h) For "All Groups (excluding Gold)"—applicable from 1936-37.

(i) Preliminary.

(j) Nominal.

Reference to the group indexes in the table above shows the great fluctuations and the wide dispersion of prices of export commodities in recent years. In particular, very great movements upwards and downwards have occurred in the price of wool. Since wool is a predominant export and comprises 46 per cent. of the Base Aggregate of the index fluctuations in wool prices obscure the movements affecting the other components in the All Groups index. For purposes of comparison wool and "other groups" are shown separately below.

RECENT TRENDS—EXPORT PRICE INDEX: WOOL AND "OTHER GROUPS".

(Base of each section: Average of three years ended June, 1939 = 100.)

Period.	1947-48.			1948-49.			1949-50.			1950-51.		
	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.
July ..	(a) 196	255	228	(a) 351	316	332	(a) 339	277	305	(a) 592	333	451
August ..	241	258	251	(a) 351	313	330	(a) 347	284	313	864	340	579
September ..	249	261	255	355	308	329	339	292	314	890	355	599
October ..	260	262	261	328	314	320	392	305	345	890	360	602
November ..	275	268	271	366	313	337	419	305	357	965	366	639
December ..	(a) 275	274	275	400	308	350	456	307	375	973	366	643
January ..	313	286	298	400	310	351	562	310	425	1,252	368	771
February ..	328	291	308	411	305	353	536	315	416	1,339	369	811
March ..	(a) 302	296	299	(a) 411	304	353	524	316	411	1,437	377	860
April ..	313	300	306	332	294	311	(a) 554	324	429	1,094	384	708
May ..	332	305	317	336	291	311	611	328	457	973	385	653
June ..	362	309	333	339	288	311	592	331	450	717	383	535
Average of Year	287	280	283	365	305	332	473	308	383	999	365	654

Period.	1951-52.			1952-53.			1953-54.		
	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.	Wool.	Other Groups.	All Groups.
July ..	(a) 717	400	544	(a) 566	381	465	(a) 641	369	493
August ..	551	400	468	(a) 566	380	465	(a) 634	367	488
September ..	498	400	445	551	379	457	626	365	484
October ..	686	403	532	588	370	469	634	363	486
November ..	603	398	492	588	368	469	634	360	485
December ..	581	403	484	618	376	486	611	358	473
January ..	566	402	477	626	376	486	603	354	468
February ..	520	402	456	626	371	487	581	350	455
March ..	460	400	427	656	369	500	581	(b) 351	(b) 456
April ..	475	397	432	671	363	503	(a) 506	(b) 348	(b) 461
May ..	543	385	457	701	361	516	618	(b) 346	(b) 470
June ..	566	376	463	641	363	490	622	(b) 346	(b) 472
Average of Year	564	397	473	616	371	483	615	(b) 356	(b) 474

(a) Nominal.

(b) Preliminary.

5. **Monthly Index (Changing Weights).**—This series was designed for shorter period comparisons—from one or more months of the current year to the corresponding months of the previous year. The fixed weights index numbers indicate satisfactorily the general trend of export prices, but take no account of the relative quantities actually sold at the different prices ruling during each month. The impact of the price movements on current sales is indicated more directly by the index numbers in the following table. In computing these, the "quantity multipliers" are the quantities actually exported in the months (or periods) to which the index numbers relate.

For any given month, the procedure is to multiply the price of each commodity in that month, and its price in the corresponding month of the previous year, by the quantity exported during the given month. A comparison of the resulting aggregates gives one possible measure of the change in prices over the period; i.e., the change assuming that the proportions of the different kinds of exports whose prices are to be measured were the same as their proportions in the given month. Another possible measure is given by assuming that the proportions of the different kinds of exports in the given month had been the same as their proportions in the corresponding month of the previous year. Accordingly the first step in the procedure is repeated, substituting the quantities exported during the corresponding month of the previous year.

The index numbers so obtained have been proved over a period of years to lie very close together. As it is convenient for practical reasons to have one single figure rather than two close alternatives the two index numbers are multiplied together and the square root of the product extracted. This is taken to be the index number for the month, the prices of the corresponding month of the previous year being taken as base.

The index numbers for two or more months of one year, as compared with the corresponding period of the previous year, are computed in very much the same way. The process involves merely the cumulative addition of the aggregates computed for the individual months, and extraction of the index numbers as explained above.

Index numbers computed on this basis are shown in the following table for the years 1952-53 and 1953-54:—

MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS) : AUSTRALIA.

(Base : Weighted Average Price Level in corresponding months of preceding year = 100.)

Month.	Month stated compared with same month of preceding year.				Period of trade year ending in month stated compared with same period of preceding year.			
	1952-53.		1953-54.		1952-53.		1953-54.	
	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.	Ex-cluding Wool.	In-cluding Wool.
July	93	84	98	108	93	84	98	108
August .. .	96	98	98	104	94	89	98	106
September ..	95	102	95	105	95	93	97	106
October .. .	93	38	99	105	94	91	98	106
November ..	93	96	99	105	94	92	98	106
December ..	98	105	97	98	95	95	98	104
January .. .	96	106	94	96	95	96	97	103
February ..	94	112	94	93	95	98	97	102
March .. .	92	126	94	98	95	102	97	100
April .. .	93	123	95	90	94	104	97	99
May .. .	97	117	93	90	95	105	96	98
June .. .	97	108	93	96	95	105	96	98

Monthly export price index numbers are issued in the mimeographed publication *Monthly Index of Australian Export Prices*, in the *Monthly Review of Business Statistics* and in the *Quarterly Summary of Australian Statistics*.

§ 16. External Trade of Australia and other Countries.

1. **Essentials of Comparison.**—Direct comparison of the external trade of any two countries is possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance and charges may be added thereto. Again, the values of imports and exports in one may be declared by merchants, whereas in another they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would result from the different methods of converting the moneys of foreign countries, i.e., from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. This class of trade represents a much greater proportion of the trade of Switzerland and Belgium than that of other countries. France and the United Kingdom also re-export largely, whereas in Canada, Australia and New Zealand the same class of trade represents a comparatively small proportion of the total trade.

2. **"Special Trade" of Various Countries.**—In the following table the figures, which represent Australian currency values, relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately the

extent of the external trade which otherwise would not be manifest. The countries listed below are not necessarily all the important trading countries of the world, but those important countries for which comparable statistics are available.

**IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS
(MERCHANDISE ONLY): VARIOUS COUNTRIES, 1952.**

Country.	Trade (£A. Million).			Trade per Head of Population (£A.).		
	Imports. c.i.f.	Exports. f.o.b.	Total.	Imports.	Exports.	Total
United States of America ..	a 4,723.5	6,567.1	11,290.6	30.1	41.8	71.9
United Kingdom ..	4,177.2	3,233.8	7,411.0	82.8	64.1	146.9
Canada ..	a 1,846.9	1,996.3	3,843.2	128.0	138.3	266.3
France ..	1,981.1	1,738.5	3,719.6	46.5	40.8	87.3
Germany, Federal Republic of ..	b 1,734.8	1,810.4	3,545.2	35.8	37.3	73.1
Belgium-Luxemburg ..	1,095.1	1,095.5	2,190.6	125.8	125.8	251.6
Netherlands ..	997.6	946.5	1,944.1	96.1	91.2	187.3
Italy ..	1,037.0	619.9	1,656.9	22.1	13.2	35.3
Australia ..	(a) 748.4	741.9	1,490.3	86.5	85.8	172.3
Sweden ..	773.7	698.9	1,472.6	108.6	98.1	206.7
Switzerland ..	534.4	487.5	1,021.9	111.0	101.2	212.2
Indonesia ..	436.7	433.1	869.8	5.6	5.5	11.1
Denmark ..	430.4	380.4	810.8	99.3	87.8	187.1
Norway ..	390.9	253.1	644.0	117.5	76.1	193.6
Austria ..	294.3	227.6	521.9	42.4	32.8	75.2
Egypt ..	273.0	187.2	460.2	12.7	8.7	21.4
Turkey ..	249.2	162.7	411.9	11.3	7.4	18.7
Spain ..	231.0	180.1	411.1	8.2	6.4	14.6
Chile ..	165.5	203.6	369.1	27.9	34.3	62.2
Greece ..	155.2	53.7	208.9	20.0	6.9	26.9

(a) Imports recorded f.o.b.

(b) Includes gold bullion and crude gold.

§ 17. Oversea Trade in Calendar Years.

For the purpose of comparison with countries which record oversea trade in calendar years the following table has been compiled to show Australian imports and exports for each of the calendar years 1939 and 1950 to 1954 :—

**OVERSEA TRADE IN CALENDAR YEARS: AUSTRALIA.
(£'000.)**

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
1939 ..	109,334	123,728	3,726	20,122	113,060	143,850
1950 ..	629,398	742,107	2,497	2,352	631,895	744,459
1951 ..	940,300	906,769	1,768	3,069	942,068	909,838
1952 ..	767,846	751,099	4,916	20,920	772,762	772,019
1953 ..	577,059	880,058	2,619	20,165	579,678	900,223
1954 (a) ..	751,000	751,000	3,800	12,000	754,800	763,000

(a) Subject to revision.

§ 18. Excise.

Although excise goods have no immediate bearing on oversea trade, the rates of excise duty are in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Trade and Customs, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of Customs and Excise Revenue are shown in Chapter XVII.—Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1952-53 and 1953-54.

**QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY
WAS PAID : AUSTRALIA.**

Article.	1952-53.	1953-54.	Article.	1952-53.	1953-54.
	proof gals.	proof gals.		lb.	lb.
Spirits—			Cigars—		
Brandy	290,885	376,291	Hand-made ..	43,737	41,099
Gin	270,020	327,674	Machine-made ..	95,719	105,801
Whisky	321,819	344,392			
Rum	471,908	544,526	Total Cigars ..	139,456	146,900
Liqueurs	31,697	50,641	Cigarettes—		
Other	39	53	Hand-made ..	..	..
			Machine-made ..	13,755,595	17,769,856
Total Spirits (Potable) ..	1,386,368	1,643,577	Total Cigarettes	13,755,595	17,769,856
Spirits for—					
Fortifying Wine ..	2,057,368	2,049,135		60 papers or tubes.	60 papers or tubes.
Industrial or Scientific purposes ..	163,684	198,742	Cigarette Tubes and Papers	139,777,846	147,009,600
Making Vinegar ..	83,955	108,120			
Manufacture of—				tons.	tons.
Essences	86,940	104,876	Coal	16,571,112	17,367,524
Scents and Toilet Preparations ..	40,539	65,324			
				gross of boxes.	gross of boxes.
	gals.	gals.	Matches	2,941,002	3,334,542
Amylic Alcohol and Fusel Oil	43	12			
Beer	183,751,230	198,330,340		gals.	gals.
			Petrol	108,038,224	156,838,024
	lb.	lb.			
Tobacco	22,318,703	22,546,529	Playing Cards ..	doz. packs. 80,278	doz. packs. 106,084

§ 19. The Australian Balance of Payments.

1. **General.**—Estimates of the Australian balance of payments are of particular importance as an aid to the analysis of Australian economic conditions in view of the marked effect which fluctuations in international commerce tend to exercise on the level of activity in the Australian economy.

Comprehensive estimates of Australia's balance of payments will be found in *The Australian Balance of Payments* 1928-29 to 1951-52, which contains a full explanation of the principles on which the estimates are based and the techniques employed in their compilation. Continuous investigations are conducted with a view to improving the methods of estimation employed, and further revisions to current estimates may be necessary as more refined techniques are adopted in the future.

The estimates included on this occasion are substantially revised in comparison with those presented in Year Book No. 40. Estimates of the movements in international reserves have been revised following the publication by the Commonwealth Bank of

Australia of a new series of net gold and foreign exchange holdings of Australian official and banking institutions. In addition, estimates have been revised for several items for which improved methods of calculation are now possible. Further details of these revisions and changes in the estimates will be found in the mimeographed publication "The Australian Balance of Payments 1949-50 to 1953-54" issued by this Bureau.

2. Australia's Balance of Payments on Current Account, 1951-52 to 1953-54.—The table on page below presents estimates of Australia's balance of payments on current account from 1951-52 to 1953-54.

In the immediate post-war years, the balance of payments on current account, after a deficit of £47 million in 1946-47, improved to a small favourable balance of £4 million in 1947-48 and this was increased to £32 million in 1948-49. There was a deficit of £43 million, however, in 1949-50.

In 1950-51 an increase of £382 million in exports more than offset an increase of £204 million in imports and there was a favourable trade balance of £233 million. After allowing for an increased unfavourable invisible balance, a favourable current account balance of £104 million was recorded for the year.

A sharp adverse movement of £687 million to a net unfavourable balance of £583 million occurred between 1950-51 and 1951-52 in Australia's balance of payments on current account. This was almost entirely due to the decrease in the value of exports and the increase in the value of imports (including freight charges) between the two years.

AUSTRALIA: BALANCE OF PAYMENTS ON CURRENT ACCOUNT. (£A. million.)

	1951-52.	1952-53.	1953-54 (Preliminary).
CREDITS.			
1. Exports f.o.b.	664.2	846.2	816.0
2. Gold Production	(a) 14.2	(a) 16.4	(a) 17.0
3. Transportation—			
(a) Freight Earnings of Australian Ships	2.5	2.6	2.5
(b) Port Expenditure of Oversea Ships	46.1	46.8	54.0
4. Foreign Travel	48.6	49.4	56.5
5. Income from Investment	3.4	4.3	2.5
6. Government Transactions	9.0	14.9	18.0
7. Miscellaneous	7.6	8.8	7.0
8. Donations and Reparations—	8.4	6.7	10.0
(a) Immigrants' Funds and Household Effects	19.4	12.3	11.5
(b) Other	3.3	4.2	4.5
	22.7	16.5	16.0
9. TOTAL CREDITS	778.1	963.2	943.0
DEBITS.			
10. Imports f.o.b.	1,051.5	511.2	682.0
11. Transportation and Marine Insurance—			
(a) Freight on Imports	145.4	77.3	80.0
(b) Other Transportation	8.9	10.2	10.8
(c) Marine Insurance Premiums and Claims (net) (b)	4.3	0.7	1.0
	158.6	88.2	91.8
12. Foreign Travel	14.4	18.4	16.0
13. Income from Investment—			
(a) Public Authority Interest	18.4	18.5	18.4
(b) I.B.R.D. and I.M.F. Interest and Charges	0.7	1.7	2.6
(c) Direct Investment	17.5	23.8	31.2
(d) Portfolio Investment	7.5	8.1	7.3
(e) Undistributed Income	24.3	19.0	20.0(c)
	68.4	71.1	79.5
14. Government Transactions—			
(a) Defence Expenditure	10.3	25.2	12.5
(b) Expenditure in New Guinea and Papua	5.3	4.2	5.0
(c) Other	15.4	13.1	11.9
	31.0	42.5	29.4
15. Miscellaneous	17.9	16.3	22.6
16. Donations and Reparations—			
(a) Personal Remittances	8.7	12.4	13.3
(b) U.N.K.R.A., U.N.I.C.E.F., etc., and Colombo Plan	4.0	3.5	2.5
(c) Other	6.1	8.3	7.9
	18.8	24.2	23.7
17. TOTAL DEBITS	1,360.6	771.9	945.0
BALANCE ON CURRENT ACCOUNT	-582.5	191.3	-2.0

(a) Includes gold sold on the premium market valued at the price obtained. (b) Total marine insurance premiums payable on Australian imports (whether payable in Australia or overseas) were £3.8 million in 1949-50, £4.7 million in 1950-51, £6.6 million in 1951-52, £2.6 million in 1952-53 and £3.4 million in 1953-54. (c) Provisional estimate only.

The unfavourable balance on current account in the first half of 1951-52 was £314 million and, after further deterioration in January and February, the Commonwealth Government re-introduced import licensing for goods from all sources early in March, 1952.

Australia's current account balance improved by £774 million between 1951-52 and 1952-53 to a net favourable balance of £191 million. Of this total improvement, £722 million was due to an improved trade balance. The most important movement in other items between the two years was a decrease of £68 million in freight on imports.

There was an approximate balance on current account in 1953-54. The change compared with the previous year was due mainly to a fall of £201 million in the favourable trade balance. A decrease of £30 million in exports was caused principally by a fall of £29 million in exports of wheat and flour. Following the progressive relaxation of import restrictions the value of Australian imports increased by about one-third between 1952-53 and 1953-54 (from £511 million to £682 million).

Invisible credits rose by £10 million to £127 million between 1952-53 and 1953-54. Most of this movement was due to an increase of £7 million in expenditure in Australian ports by oversea ships.

The total of invisible debits varied very little between 1952-53 and 1953-54. Investment income payable overseas and "miscellaneous" remittances increased by £8 million and £6 million respectively and defence expenditure overseas fell by £13 million. Movements in other invisible debits between the two years were of minor importance.

The Commonwealth Statistician's Index of Export Prices (excluding gold) which stood at 495 (wool 564) in 1951-52 rose slightly to 505 (wool 616) in 1952-53 but fell back to 496 (wool 615) in 1953-54. A comparison of these movements in the overall index with the changes in the value of exports over these three years indicates that there was a substantial increase in the quantum of exports between 1951-52 and 1952-53 but little change between 1952-53 and 1953-54.

The Index of Australian Import Prices prepared by the Commonwealth Bank of Australia recorded a steady increase in post-war years up to 1951-52, but fell by 8 per cent. between 1951-52 and 1952-53. A further slight fall of about 1 per cent. occurred in 1953-54.

3. Australia's Balance of Payments on Capital Account, 1951-52 to 1953-54.—The table on page 237 sets out estimates of Australia's balance of payments on capital account from 1951-52 to 1953-54.

The balance of payments on capital account records the net changes over specified periods in Australia's international assets and liabilities. In theory, the balance of payments on current account and the balance of payments on capital account together constitute a complete system of accounts, on the double-entry principle, recording Australia's international economic transactions, and the favourable (unfavourable) balance on current account should coincide with the net increase (decrease) in assets shown in capital account.

In practice, because of various imperfections in the estimates, it is necessary to introduce a "balancing item" (see item 23, table on page 237) in the capital account in order to make that account balance at the same figure as the current account.

The most important component of this balancing item is thought to be miscellaneous capital account transactions which cannot yet be accurately measured. These are believed to consist mainly of various types of private capital movements, including the effects of any changes in methods of payment for imports and exports. In addition to these unidentified capital movements the balancing item reflects errors in estimating the balance on current account and other items in the capital account.

AUSTRALIA : BALANCE OF PAYMENTS ON CAPITAL ACCOUNT.

(£A. million.)

	1951-52.	1952-53.	1953-54 (Preliminary)
INCREASE IN ASSETS.			
1. Direct Investment Overseas—			
(a) Branches—			
(i) Unremitted Profits	0.9	{ - 0.5 - 0.7	(b) 0.5 (a)
(ii) Other			
(b) Subsidiaries—			
(i) Undistributed Profits	(a)	1.5	(b) 1.5
(ii) Other	- 1.9	2.8	(a)
2. Portfolio Investment Overseas	- 1.5	- 0.3	- 1.0
3. Private Investment in Foreign Government Securities ..	- 0.2	- 0.1	- 0.1
4. Wool Credits to Czechoslovakia			
5. Investment in Joint Organization, etc.	- 31.3	- 1.0	
6. Subscription to I.M.F. and I.B.R.D.			
7. Other Official Transactions	5.7	- 5.7	1.1
8. Monetary Gold Holdings	6.4	- 0.2	
9. Foreign Exchange Holdings	- 437.7	188.9	9.5
10. TOTAL INCREASE IN ASSETS	- 459.5	185.7	11.5
INCREASE IN LIABILITIES.			
11. Public Authority Debt—			
(a) Commonwealth—Long-term	- 0.6	- 0.6	- 3.6
(b) Commonwealth—Short-term	- 0.3	- 0.3	- 0.3
(c) States—Long-term	- 1.0	- 1.3	- 6.1
(d) States—Short-term			- 0.1
(e) Local Authorities	- 0.7	- 0.4	- 0.4
12. Discount and Cash Bonuses on the Conversion of Public Debt		0.3	
13. Dollars received from I.B.R.D.	23.9	17.9	21.5
14. Dollars received from I.M.F. (net)		13.4	- 10.7
15. Other transactions with I.M.F. and I.B.R.D.			
16. Australian Currency Holdings of Foreign Banks and Governments	- 35.9	- 7.3	- 0.6
17. Joint Organization Investments, etc., in Australia ..	- 31.8	- 2.2	
18. Direct Investment in Australian Companies—			
(a) Branches—			
(i) Unremitted Profits	4.3		(b) 4.0
(ii) Other	6.3	- 2.3	
(b) Subsidiaries—			
(i) Undistributed Profits	20.0	19.0	(b) 16.0
(ii) Other	45.5	- 3.9	(a)
19. Portfolio Investment in Australian Companies	6.5	2.3	(a)
20. Investment in Public Authority Securities domiciled in Australia	(a)	- 5.5	(a)
21. Net Oversea Remittances of Life Offices operating in Australia	- 0.6	- 4.3	(a)
22. Adjusting Item for New Guinea and Papua transactions ..	0.4	2.1	- 1.9
23. Balancing Item	87.0	- 32.5	- 4.3
24. TOTAL INCREASE IN LIABILITIES	123.0	- 5.6	13.5
25. NET INCREASE IN ASSETS	- 582.5	191.3	- 2.0

(a) Not available—included in balancing item.

(b) Provisional estimate only.

NOTE.—Minus sign (—) denotes decrease.

The individual items in the table may be conveniently examined in groups.

Items 5 and 17 record transactions on capital account between Australia and the Joint Organization (Wool). The assets item consists of the share of Joint Organization profits on the sale of Australian wool accruing to Australia each year (less any disbursements of profits to Australia) and the liabilities item is the change in Joint Organization investments in Australia each year.

Item 11 shows the repayments from 1951-52 to 1953-54 of public authority debt domiciled overseas. Small repayments in 1951-52 and 1952-53 were mainly due to sinking fund operations but in 1953-54 there was a substantial net reduction of £10.5 million in the level of this debt. This net reduction consisted of the redemption of \$30 million (£13.4 million) of securities domiciled in New York, a reduction of £2.9 million of other debt from sinking fund operations, and an increase of £5.8 million following the negotiation of a loan from Switzerland.

Item 13 records drawings of \$54 million in 1951-52, \$40 million in 1952-53 and \$48 million in 1953-54 under loans made to Australia by the International Bank for Reconstruction and Development.

Item 14 shows the changes in Australia's liability in respect of purchases of dollars from the International Monetary Fund. In 1949-50 \$20 million (£8.9 million) were purchased from the Fund and a second purchase of \$30 million (£13.4 million) was made in 1952-53. In 1953-54 repayment of these purchases was commenced with instalments totalling \$24 million (£10.7 million).

Australia's international reserves (*see* items 8 and 9 in table on page 237) fell by £431 million during 1951-52. An increase of £189 million was recorded in 1952-53, followed by a small increase of £10 million in 1953-54 which brought the level of reserves at the end of June, 1954 to £570.7 million.

Item 16 records changes in the holdings of Australian currency by foreign banks and governments. These funds fell by £36 million in 1951-52 and by £7 million in 1952-53. There was little change in the level of these holdings in 1953-54.

Items 1 (a) (ii), 1 (b) (ii), 2, 3, 18 (a) (ii), 18 (b) (ii), 19, 20, 21 and 23 may be conveniently grouped for examination as "private capital movements and balancing items". As mentioned above the "balancing item" is believed to consist predominantly of various types of private capital movements which cannot be identified from available statistics.

The transactions included in this group resulted in a net inflow of funds of £147 million in 1951-52. In 1952-53 an outflow of £48 million was recorded—the first in the post-war period. However, this outflow was due to some extent to delayed payments for part of the record total of imports which arrived in 1951-52.

In 1953-54 this group of transactions resulted in a small apparent outflow of £3 million—a slightly greater outflow in the first half of the financial year being offset by a small inflow in the second half.

Other items in capital account are of minor importance.

4. Australia's Balance of Payments on Current Account—Various Countries and Monetary Arcas, 1951-52 to 1953-54.—The overall improvement in Australia's balance of payments between 1951-52 and 1952-53 was £774 million and the table below shows that this favourable movement affected all the countries and monetary areas shown, with the exception of "other" dollar area countries. Of the total improvement, £470 million was in respect of sterling area countries, £19 million in respect of dollar area countries, £165 million in respect of non-sterling member countries of the Organization for European Economic Co-operation and £117 million in respect of "other" non-sterling countries. The balance on current account with the United Kingdom improved by £404 million. The value of exports to non-dollar countries (especially to the United Kingdom) increased, but the major part of the improvement resulted from the fall in the value of imports following the re-introduction of import licensing in March, 1952. As licensing of dollar imports had never been abandoned, the changes in the balances with dollar countries were naturally smaller.

Australia's balance of payments on current account deteriorated by £193 million between 1952-53 and 1953-54. This unfavourable movement affected all the countries and monetary areas shown in the table, with the exception of the United States of America and "other" dollar area countries. The current balance with sterling area countries deteriorated by £182 million, including an unfavourable movement of £163 million in the current balance with the United Kingdom. The unfavourable current balance with dollar area countries decreased by £10 million, though there was a small increase in the unfavourable current balance with Canada. The current balances with non-sterling O.E.E.C. countries and with "other" non-sterling countries deteriorated by £17 million and £5 million respectively. These changes in 1953-54 again reflected mainly the substantial increases in the value of imports from non-dollar countries, following the progressive easing of import licensing.

AUSTRALIA: BALANCE OF PAYMENTS ON CURRENT ACCOUNT, VARIOUS COUNTRIES AND MONETARY AREAS.

(Minus (—) denotes debit ; other items are credits.)

(£A. million.)

—	Gold Production.	Sterling Area.		Dollar Area.			Other Non-Sterling.		Total.
		United Kingdom.	Other.	U.S.A.	Canada.	Other.	O.E.E.C.	Other. (a)	
1951-52.									
Exports, f.o.b.	..	208.6	125.6	77.4	9.2	2.6	166.4	74.4	664.2
Imports, f.o.b.	..	466.6	145.7	109.6	23.6	1.5	189.2	115.3	1,051.5
Invisibles (net)	14.2	— 82.7	— 33.6	— 41.7	— 8.3	— 0.6	— 17.3	— 25.2	— 195.2
Balance on Current Account	14.2	— 340.7	— 53.7	— 73.9	— 22.7	0.5	— 40.1	— 66.1	— 582.5
		— 394.4		— 96.1			— 106.2		
1952-53.									
Exports, f.o.b.	..	347.2	130.5	57.9	8.7	2.2	191.6	108.1	846.2
Imports, f.o.b.	..	— 215.2	— 88.0	— 85.4	— 19.5	— 2.2	— 59.2	— 41.7	— 511.2
Invisibles (net)	16.4	— 68.7	— 30.3	— 32.7	— 5.6	— 0.2	— 7.4	— 15.2	— 143.7
Balance on Current Account	16.4	63.3	12.2	— 60.2	— 16.4	— 0.2	125.0	51.2	191.3
		75.5		— 76.8			176.2		
1953-54.									
Exports, f.o.b.	..	296.6	127.4	55.7	11.1	5.0	209.1	111.1	816.0
Imports, f.o.b.	..	— 331.5	— 110.5	— 76.6	— 18.8	— 1.1	— 90.8	— 52.7	— 682.0
Invisibles (net)	17.0	— 65.0	— 23.2	— 31.4	— 11.0	0.6	— 10.5	— 12.5	— 136.0
Balance on Current Account	17.0	— 99.9	— 6.3	— 52.3	— 18.7	4.5	107.8	45.9	— 2.0
		— 106.2		— 66.5			153.7		

(a) Includes international bodies.

5. Australia's Balance of Payments with the Dollar Area, 1951-52 to 1953-54.—The estimates of the balance of payments with the dollar area included in the previous table are on a purely geographic basis, no attempt having been made to classify transactions according to the currency in which payment was made. The more detailed estimates

shown in the table on page 241 make this classification in respect of dollar currency transactions. The table includes the trade statistics and invisible items included in the former table, but in addition includes in "Other items (net)" (see item 16 in table on page 241) several items which make allowance for the fact that not all Australian transactions with the dollar area involve dollar receipts or payments and that some dollar receipts and payments are involved in Australian transactions with countries outside the dollar area, and with international bodies.

Principal among these transactions are receipts of dollars for exports to non-dollar countries (e.g., sales of gold on premium markets); interest payments to sterling area holders of Australian dollar bonds (included in total dollar interest payments in item 13); dollar payments to international bodies; and the difference between the estimated dollar component of Australia's imports of petroleum products from all sources and the estimated c.i.f. value of her direct imports of petroleum products from the dollar area. The statistics in the table are presented in terms of United States dollars.

In 1951-52 Australia's unfavourable balance on current account with dollar area countries was \$193 million. An improvement to an unfavourable balance of \$126 million followed in 1952-53 but in 1953-54 the current account deficit increased to \$141 million.

A number of factors contributed to the improvement in the dollar area balance of payments between 1951-52 and 1952-53. There was an improvement in the trade balance of \$16 million and an improvement of \$51 million in the unfavourable invisible balance, due partly to a fall of \$26 million in freight on imports (largely on petroleum) and partly to an improvement of \$24 million in "Other items (net)", which was chiefly attributable to increased receipt of dollars for gold sold on the premium market. In addition, private capital inflow from the dollar area (see items 21 and 22 in the table on page 241), which was only \$5 million in 1951-52, rose to \$35 million in 1952-53. In the result, Australia's dollar deficit, which was \$164 million in 1951-52, fell to \$66 million in 1952-53.

An improvement of \$31 million in the trade balance between 1952-53 and 1953-54 was due mainly to reduced imports from dollar area countries in the latter year.

The unfavourable invisible balance with the dollar area increased however, by \$46 million between the two years. Contributing factors were an increase of \$19 million in profits and dividends remitted to the dollar area in 1953-54 (due mainly to unusually large remittances of income to parent companies in the dollar area by a small number of Australian subsidiary companies) and a decrease of \$34 million in "Other items (net)". This latter movement was principally due to the decline in Australian gold sales on the premium market and to an increased difference between the c.i.f. value of direct imports of petroleum from the dollar area and the estimated dollar component of all Australian petroleum imports.

On investment account, \$32 million of securities domiciled in New York were redeemed in 1953-54, compared with comparatively small sinking fund redemptions in 1952-53, and private capital inflow fell to \$17 million compared with \$35 million in 1952-53.

The balance on investment account was *plus* \$7 million in 1953-54 and this, combined with an unfavourable current account balance of \$141 million, left Australia with a dollar deficit of \$134 million in 1953-54—\$68 million greater than in 1952-53.

The final section of the table shows how Australia's dollar deficit was financed in each year. After taking into account dollars received from international financial institutions and movements in Australia's dollar balances, Australia's transactions with the Sterling Area Dollar Pool showed an estimated improvement of \$121 million between 1951-52 and 1952-53, followed, however, by an estimated deterioration of \$84 million in 1953-54.

AUSTRALIA: BALANCE OF PAYMENTS WITH THE DOLLAR AREA (UNITED STATES DOLLARS).

(Credit Items +, Debit Items -.)

	1951-52.	1952-53.	1953-54.
	United States \$million.	United States \$million.	United States \$million.
CURRENT ACCOUNT.			
Merchandise Trade.			
1. Merchandise exports, f.o.b., to United States of America and Canada	+ 194	+ 149	+ 150
2. Merchandise imports, f.o.b., from United States of America and Canada	- 298	- 235	- 214
3. Trade balance with United States of America and Canada	- 104	- 86	- 64
4. Trade balance with other American account countries	+ 2	..	+ 9
5. TRADE BALANCE WITH THE DOLLAR AREA	- 102	- 86	- 55
Other Current Transactions.			
6. Freight on imports	-60.4	-34.0	-28.0
7. Other transportation	- 1.1	- 2.0	- 2.0
8. Expenditure by Australian travellers	- 2.7	- 3.0	- 2.7
9. Expenses of Australian companies in North America	- 3.3	- 2.2	- 3.6
10. Film remittances	- 5.8	- 4.5	- 5.2
11. Profits and dividends remitted	- 7.4	- 7.2	-23.8
12. Undistributed income accruing to companies incorporated in dollar area	-27.1	-28.2	(a) -22.4
13. Public authority interest payments	- 8.0	- 8.0	- 7.6
14. Other miscellaneous debits	-10.0	-11.5	-13.0
15. Miscellaneous credits	+12.3	+14.3	+16.6
16. Other items (net)	+22.4	+46.4	+ 7.5
17. INVISIBLE BALANCE WITH THE DOLLAR AREA	- 91	- 40	- 86
18. BALANCE ON CURRENT ACCOUNT (5 + 17)	- 193	- 126	- 141
INVESTMENT ACCOUNT.			
19. Increase in debt of public authorities	- 3	- 3	- 3 ²
20. Undistributed income (see item 12)	+ 27	+ 28	(a) + 22
21. Identified private capital inflow	+ 41	- 26	+ 17
22. Balancing item	- 36	+ 61	..
23. BALANCE ON INVESTMENT ACCOUNT	+ 29	+ 60	+ 7
24. DOLLAR SURPLUS OR DEFICIT (18 + 23)	- 164	- 66	- 134
DOLLAR FINANCING.			
25. Dollar purchases from I.M.F. (net)	..	+ 30	- 24
26. Dollar loans from I.B.R.D.	+ 54	+ 40	+ 48
27. Gold sales to United Kingdom	..	..	..
28. Estimated dollar drawings from (+) or contributions to (-) Sterling Area Dollar Pool	+ 133	+ 12	+ 96
29. Movement in Australian dollar balances (increase -)	- 23	- 16	+ 14
30. TOTAL	+ 164	+ 66	+ 134

(a) Provisional estimate only.

§ 20. Interstate Trade.

Prior to the federation of the Australian Colonies (now States), each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (Section 93). On the expiry of the "book-keeping" period, these records were discontinued as from 13th September, 1910, and the latest published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States.

At the Conference of Statisticians held in January, 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities.

The Government Statist for South Australia publishes some figures for that State, made up from the records of Western Australia and Tasmania and from various other sources. Since February, 1940 statistics in some detail have been collected by the Government Statistician of Queensland. The statistics of interstate trade for New South Wales and Victoria are very meagre. The Melbourne Harbour Trust publishes, in its annual report, the quantities of various commodities of interstate trade loaded and discharged in the Port of Melbourne. The trade with individual States is not disclosed.

CHAPTER VIII.

LABOUR, WAGES AND PRICES.

NOTE.—Reference is made in this chapter to retail and wholesale price indexes. For particulars of the Export Price Index, see Chapter VII., page 227, and of the Farm Production Price Index, see Chapter XXIX., § 2.

A. RETAIL PRICES AND PRICE INDEXES.

§ 1. General.

The information on retail prices and price indexes presented in this chapter is extracted from the annual *Labour Report* of the Commonwealth Bureau of Census and Statistics. For a full explanation of methods adopted and an analysis of problems involved see the detailed reference in Chapter I. of *Labour Report* No. 42, 1953.

Retail prices of an extensive range of commodities and services in common demand have been ascertained at frequent and regular intervals since 1923 for each of the six capital cities and for 27 of the more important towns of Australia. Comparable information is available for the month of November in each year 1914 to 1922 for each of the six capital cities. The list of items priced for index purposes is published in the annual *Labour Report*.

Retail prices of food and groceries and average rentals of houses for earlier years extending back to 1901 were collected by this Bureau, and in some cases have been recorded by the Statisticians of various States as far back as 1864.

§ 2. Previous Retail Price Indexes.

1. General.—Four series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1954. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were:—

- (i) *The "A" Series Index* (covering food, groceries and house rents) was first compiled in 1912 with the year 1911 as base=1,000. It was discontinued in June, 1938.
- (ii) *The "B" Series Index* (covering food, groceries and rent of 4 and 5 roomed houses) was first compiled in 1925 and continued until December Quarter, 1953. It was the food and rent constituent of the "C" Series Index and was designed to replace the "A" Series Index for general statistical purposes.
- (iii) *The "C" Series Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking and some other miscellaneous items) was first compiled in 1921 and published at quarterly intervals from June Quarter, 1922. It was used by the Commonwealth Court of Conciliation and Arbitration for purposes of quarterly wage adjustments from May, 1934 to August, 1953. Some State tribunals use or consider it in their proceedings. Its publication in mimeograph each quarter will be continued for the present in the customary form and on its customary basis. For general statistical purposes it has been replaced by the Interim Retail Price Index (1952-53 base year) described at length in a Statistical Bulletin published on 24th March, 1954, and briefly in the following section of this chapter.
- (iv) *The "D" Series Index* derived by combining the "A" and "C" Series Indexes was used by the Commonwealth Court of Conciliation and Arbitration from May, 1933 to May, 1934 and then discontinued.

Of the four retail price indexes described above, only the "C" Series is now compiled. The new Interim Index will continue in its present form until the components of certain groups are finalized.

2. The "Court" Index.—In 1937 the Commonwealth Court of Conciliation and Arbitration introduced a "Court" Index for the purpose of its system of making automatic quarterly adjustments to the basic wage within its jurisdiction. By decision of the Court the "Court" Index ceased to be issued by the Industrial Registrar as at December Quarter, 1953. "Court" Index numbers were an arithmetical conversion of the "C" Series Index.

§ 3. The Interim Retail Price Index (1952-53 Base Year).

1. Origin of the Interim Retail Price Index (1952-53 Base Year).—The list of component items and the weighting pattern of the "C" Series Retail Price Index were first adopted in 1922 but were reviewed by Conference of Statisticians in 1936. (*See Labour Report No. 41*, 1952, page 33, paragraph 2.)

From the outbreak of war in 1939 to late in 1948 periodic policy changes in regard to various war-time controls (including rationing) caused recurrent changes in consumption and the pattern of expenditure. This rendered it impracticable either to produce a new index or to revise the old one on any basis that would render the index more representative, than it already was, of the changing pattern.

When commodity rationing had virtually ceased in the latter part of 1948, action was taken by the Statistician to collect price data of about 100 additional items and to gather information as to current consumption and expenditure patterns. By the middle of 1949 a considerable number of new price series was coming into being and the body of data available as to expenditure and consumption (in the post-rationing period) was beginning to indicate something of the new weighting pattern likely to be appropriate for post-war review of the components and construction of the "C" Series Index.

There supervened in the next two years conditions which caused wide price dispersion, a very rapid rise in prices and a new sequence of changes in consumption and the pattern of wage earner expenditure. Under these conditions it was not possible to devise any new weighting pattern for the years 1949-50, 1950-51 and 1951-52 likely to be better suited to the index or more continuously representative of conditions then current than was the existing "C" Series Index on the 1936 revision. Conference of Statisticians therefore deferred revision of the weighting system and component items of the "C" Series Index until it was advised by the Acting Commonwealth Statistician in June, 1953 (a) that although the aggregate "C" Series Index (as verified by supplementary indexes) was still reasonably reliable for current use, some of the component groups (more particularly food and miscellaneous) were not satisfactory individually; and (b) that the time had arrived either to produce a new index or to reconstruct the "C" Series Index extensively.

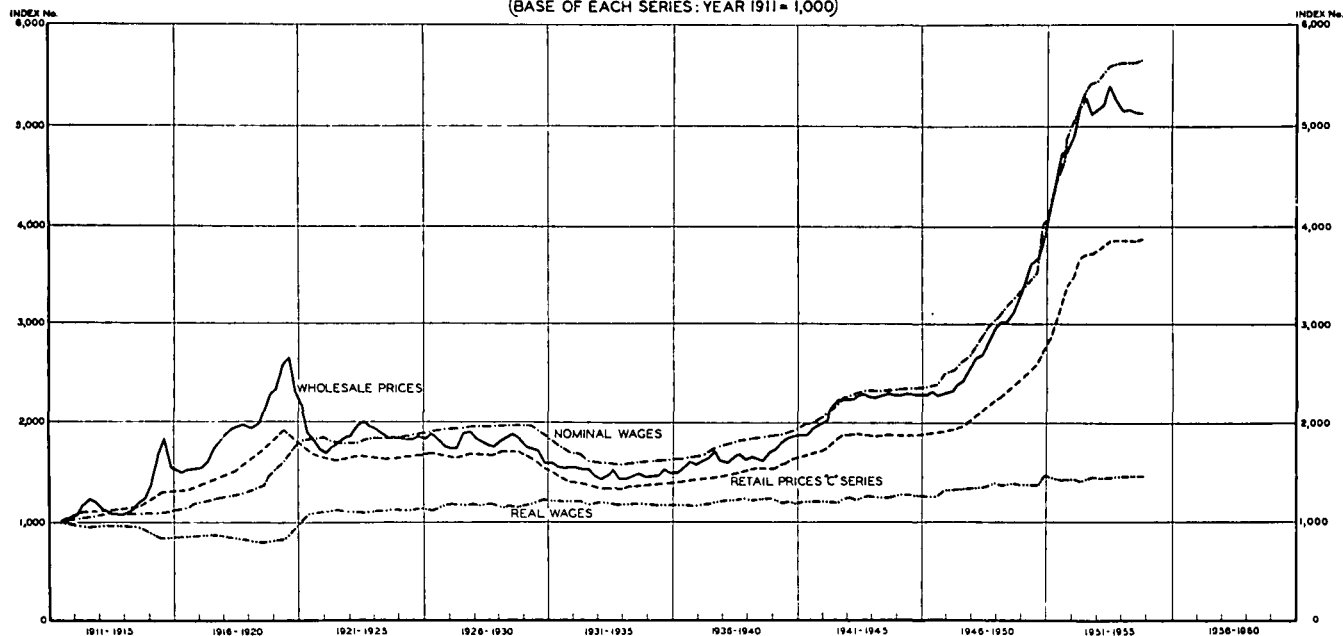
The Interim Retail Price Index has been compiled pursuant to Resolution 13 of the Conference of Statisticians in June, 1953, reading:—

"13. Retail Price Indexes—

- (a) That in view of the persistence of recurrent changes in the pattern of consumer expenditure in the post-war period, it is undesirable to make a general revision of the list of items and weighting system of the "C" Series Retail Price Index at present, unless industrial tribunals expressly desire some revision for special purposes.
- (b) That an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern of consumer usage and expenditure.
- (c) That, having regard to the complexities of the problem and the limit of staff resources available, such interim index relate only to each capital city and to the six capital cities combined.
- (d) That attention be drawn again to the statement already published that the "C" Series Retail Price Index cannot measure changes in relative retail price levels as between capital cities consistently with its main purpose of measuring periodic changes in retail price levels for each city.

WHOLESALE AND RETAIL PRICES; NOMINAL, AND EFFECTIVE OR REAL WAGES - INDEX NUMBERS AUSTRALIA, 1911 to 1954

(BASE OF EACH SERIES: YEAR 1911 = 1,000)



EXPLANATION.—The index numbers in the graph above are for the Six Capital Cities as a whole, with the exception of those for Wholesale Prices up to the fourth quarter of 1927, which are for Melbourne. The wholesale prices graph shows the trend of prices according to the "old" Melbourne Index up to the fourth quarter of 1927, but thereafter, this index having been "spliced" with the Basic Materials and Foodstuffs Index, the curve line moves in accordance with the variations of the latter. The price quotations for this index are, in the main, obtained from Melbourne sources, but their movements may be taken as representative of fluctuations in most Australian markets. For the period 1911-1914 the "C" Series index numbers are taken back from the true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of All Houses). Real wages are computed on the basis of the "C" Series Retail Price Index.

- (e) That the problem of measuring comparative retail price levels as between cities at any point of time differs in principle from the problem of measuring periodic variations in price level in an individual city".

The Interim Retail Price Index (1952-53 base year) is used as the current retail price index in statistical publications of the Commonwealth Statistician for general statistical purposes. It relates to Six Capital Cities of Australia only because it is not practicable with existing staff resources to collect price data for the greatly enlarged list of items for 28 other cities and towns. These will continue to be covered as to the less extensive list of items used for the "C" Series Index.

In respect of any divergency in trends shown by the new index as compared with the old, the following comment is paraphrased from comment made in the course of the Statistician's memoranda to the Commonwealth Court of Conciliation and Arbitration in 1949: It is to be expected that the new index will for a period show much the same trend as does the "C" Series Index. If there is any appreciable difference in trend, it is certain that the new index would be the more accurate reflex of price movements relevant under current conditions.

2. **Definition of the Interim Retail Price Index.**—This index provides the interim results of researches designed to measure retail price variations (with 1952-53 = 100 as base year) on the basis of:—

- (a) a current pattern of wage earner expenditure using recent consumption weights for foods and recent expenditure weights for combining groups of items into the aggregate index;
- (b) a wider range of commodities and services than that covered by any existing price index in order to provide greater representativeness; and
- (c) individual city weights for such items as electricity, gas and fares.

The components and weighting of the Interim Retail Price Index will be reviewed in the light of data derived from the Census of Retail Sales (1952-53) as to consumer expenditure on various kinds of goods, estimates of consumer expenditure on services relevant to construction of a retail price index of this type and data as to rents and housing derived from the Census of 30th June, 1954. It is proposed to cast the index into final form as soon as possible.

3. **Differences between the Structure of the Interim Retail Price Index and the "C" Series Retail Price Index.**—The main differences between the structure of the Interim Retail Price Index and that of the "C" Series Retail Price Index are (a) the group weights and item weights of the Interim Index relate broadly to the consumption pattern 1950-53, while those of the "C" Series Index relate to pre-war years; and (b) the Interim Index includes a large number of items not included in the "C" Series Index.

A full list of the items used in the Interim Index is shown in Appendix III. of the Statistical Bulletin of 24th March, 1954, and in Section IV. of the Appendix to *Labour Report* No. 42, 1953. The changes in structure of each group of items as adopted for the Interim Retail Price Index are summarized below:—

(i) **Food Group.**—The weights of some of the main items (eg., milk, eggs, meat, potatoes and flour) in the Interim Index are substantially different from those of the "C" Series Index. Twenty-four new items extend the group coverage over a wider field. The total number of items in the Food Group of the Interim Index is 60 as compared with 38 in the "C" Series Index. The principal new items are lamb, packaged breakfast foods, biscuits, ice cream, processed cheese, honey, sandwich spreads, coffee, cocoa, soft drinks and certain types of confectionery.

(ii) **Clothing and Drapery Group.**—In the Interim Index, seventeen new items have been added to the Clothing and Drapery Group, and 25 items each formerly represented

by one type of article are now each represented by two or more types. Consequential adjustments have been made in weights of individual items. The principal new items added to this group are :—sports coat, sports trousers, cardigan (and other types of knitted wear), overalls, piece-goods (rayon, cotton and woollen) and knitting wool.

(iii) *Rent Group*.—Only minor changes have been made in the Rent Group. Available data indicate (a) that, in general, very few new houses have been built by private owners for renting in the post-war years; (b) that in some cities considerable numbers of new Government houses have been built for renting or occupancy on a quasi-rental basis; and (c) that there has been a substantial increase in the numbers of owner-occupied houses, including new instalment-purchase or quasi-instalment-purchase houses under governmental and private housing schemes. In recent years the difficulty of obtaining data suitable for the housing component of a price index has therefore intensified. The facts will be reviewed in the light of data obtained at the Census of 30th June, 1954 and further study given to the hitherto intractable problems associated with measuring at quarterly intervals "housing price" variations in a form suitable for use in a retail price index in respect of owner-occupied houses, instalment-purchase houses, and houses occupied under the various types of governmental housing schemes.

(iv) *Other Groups*.—Six new sub-groups are included in the Interim Index, comprising 75 items as compared with 32 in the "C" Series Index. The principal new items are garden tools, floor coverings, shaving cream, toilet soap, etc., patent medicines, baby foods, haircuts, dry cleaning, shoe repairs, postage, etc. Necessary adjustments have been made to bring the group weight into conformity with recent expenditure and consumption patterns. The weight of this group is much greater than it was in the "C" Series Index.

(v) *Group Weights*.—The group weights in the new Interim Index have been brought into general conformity with the estimated group distribution of wage earner household expenditure in recent years over the field covered. In some cases the weights are putative weights assessed on available data and are subject to some revision.

In the year 1952–53 the ratio of the individual group "aggregate expenditure" to the "aggregate expenditure" of the whole index for the Six Capital Cities combined was as follows :—

Group.	"C" Series Retail Price Index.	Interim Retail Price Index.
	Per cent.	Per cent.
Food	41.0	37.1
Clothing and Drapery ..	33.0	26.8
Rent	11.3	9.0
Other Groups ..	14.7	4.6 Fuel and Light
		4.6 Household Sundries
		2.5 Certain Repairs and Services
		3.0 Cinema, Radio, Newspapers
		6.6 Rail, Tram and Bus Fares
		5.8 Tobacco and Cigarettes
	100.0	100.0

In the Interim Index common weights are adopted for all groups and items in the index for each city except in respect of fares, gas, electricity and some minor items. The resultant indexes show price variations for each city on a basis appropriate to that city. They are not constructed to provide a precise measure of the relative "cost of living", comparing one city with another. For that reason the Interim Index for each city in the base year 1952–53 is 100.

4. Comparison of Trends of the Interim Retail Price Index with Trends of the "C" Series Retail Price Index.—The following table shows for each of the years 1950-51 to 1953-54 and for each quarter from September Quarter, 1952 to December Quarter, 1954 the Interim Index for the Six Capital Cities combined, with the year 1952-53 as base = 100 in comparison with the "C" Series Index recomputed to the same base :—

Period.	Six Capital Cities (Weighted Average—Base : Year 1952-53 = 100).	
	"C" Series Index.	Interim Index.
Year ended June—		
1951	74.8	74.9
1952	91.7	91.4
1953	100.0	100.0
1954	102.8	102.5
Quarter ended—		
1952—September	99.0	98.8
December	99.2	99.3
1953—March	100.3	100.4
June	101.4	101.6
September	102.7	102.4
December	102.9	102.2
1954—March	102.9	102.7
June	102.8	102.7
September	102.6	102.7
December	103.2	103.2

The figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted merely to avoid the distortion that would occur in rounding off the figures to the nearest whole number. For instance, if the Interim Indexes for each quarter of 1953 were rounded off to 100, 102, 102 and 102 respectively, they would suggest a rise of 2 per cent. in June Quarter, 1953 and no change in September Quarter, 1953. The figures for the Interim Index as presented in the table indicate a rise of the order of 1 per cent. in June Quarter, 1953 and 1 per cent. in September Quarter, 1953. Price indexes cannot measure aggregate price variations with an accuracy of the order of one-tenth of 1 per cent.

The Interim Index shows that the aggregate "C" Series Index continued to be representative and reasonably reliable within its definition in respect of the average of the Six Capital Cities. The divergence appearing in the movements of the two indexes is not as yet of a major character and may be transient. With changing conditions significant divergences may occur between the movements shown by a retail price index (such as the "C" Series Index) constructed on pre war weights and a comparatively limited range of major items and a retail price index (such as the Interim Index) constructed on 1950-53 weights and a broader list of items. The two indexes represent, respectively, two distinct approaches to the measurement of retail price variations in recent years.

For general statistical purposes there is as yet no significant divergence between the movements of the two indexes, if due regard is paid to the fact that a composite price index is necessarily an approximate summary which combines into one aggregate price variations of many items.

Any more rigid use of the index for specific purposes is the responsibility of the bodies or persons using the indexes.

§ 4. Tabular Statements of Retail Price Index Numbers.

1. **General.**—Information on retail price movements is published as follows :—

(i) *Monthly.* The *Monthly Review of Business Statistics* contains annual, quarterly and monthly index numbers to the latest available date.

(ii) *Quarterly.* Statements are issued about three weeks after the end of each quarter relating to the Interim and the "C" Series Retail Price Indexes respectively for that quarter and immediately preceding quarters. The *Quarterly Summary of Australian Statistics* contains annual, quarterly and monthly index numbers to the latest available date. This publication also contains certain average prices of items of food and groceries for the last available quarter.

(iii) *Annual.* The *Labour Report* contains index numbers for past years, and the monthly and quarterly results for recent years. Certain average prices for the latest year of items of food and groceries are also published in this report.

2. **The "C" Series Retail Price Index.**—A table of "C" Series index numbers for the weighted average of the six capital cities combined, together with index numbers for each of the four main groups of items in the "C" Series Index for each year 1914 to 1954 is shown on page 253. Detailed tables were last published in *Labour Report* No. 41, 1952, pp. 19-31.

3. **The Interim Retail Price Index.**—On this and the following page are published :—

(i) the Interim Retail Price index numbers for each of the years ended June, from 1951 to 1954, and for each quarter during the period September Quarter, 1952 to December Quarter, 1954, for the weighted average of the six capital cities combined, showing also separate indexes for each of the four groups of items (page 250);

(ii) the Interim Retail Price index numbers for each of the years ended June from 1951 to 1954, and for each quarter during the period December Quarter, 1953 to December Quarter, 1954, for each capital city and for the six capital cities combined, and showing also separate indexes for each of the four groups of items (page 251).

INTERIM RETAIL PRICE INDEX—GROUP INDEXES.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base : Year 1952-53 = 100.)

Period.	Food.	Clothing and Drapery.	Rent.(a)	Other Items.	All Groups.
Year ended June—					
1951.. ..	67.9	78.1	90.3	76.3	74.9
1952.. ..	89.4	93.8	92.6	91.3	91.4
1953.. ..	100.0	100.0	100.0	100.0	100.0
1954.. ..	103.7	101.6	105.0	100.9	102.5
Quarter ended—					
1952—September	99.8	98.0	97.0	98.7	98.8
December	98.5	99.6	99.0	100.0	99.3
1953—March ..	100.0	100.4	101.4	100.6	100.4
June ..	101.7	102.0	102.6	100.7	101.6
September	103.9	101.5	103.3	101.0	102.4
December	103.4	101.6	103.9	100.5	102.2
1954—March ..	104.0	101.8	104.9	101.2	102.7
June ..	103.7	101.5	107.7	100.9	102.7
September	103.0	101.6	108.9	101.2	102.7
December	103.7	102.3	109.3	101.2	103.2

(a) See note (b) on page 253.

INTERIM RETAIL PRICE INDEX NUMBERS.

(Base of each Index ; Year 1952-53=100.)

NOTE.—The index numbers hereunder are designed to measure aggregate variations in retail prices of specified groups of items for specified cities individually. They measure variations from time to time and not differences in price level as between cities nor comparative costs of groups of items.

City.	Year ended June, 1951.	Year ended June, 1952.	Year ended June, 1953.	Year ended June, 1954.	1953.		1954.			Dec. Qtr.
					Dec. Qtr.	Mar. Qtr.	June Qtr.	Sept. Qtr.		
GROUP I.—FOOD.										
Sydney	66.1	89.9	100.0	102.4	101.9	102.9	101.8	101.6	102.8	
Melbourne .. .	69.2	89.1	100.0	104.6	104.7	104.4	104.3	102.7	103.4	
Brisbane .. .	69.2	90.1	100.0	104.1	104.0	105.5	104.0	102.3	103.3	
Adelaide .. .	69.2	90.5	100.0	103.5	103.1	103.4	104.2	105.1	104.9	
Perth .. .	69.3	87.0	100.0	106.3	103.8	106.8	109.4	109.6	108.0	
Hobart .. .	66.4	86.8	100.0	107.7	109.0	106.6	106.6	106.1	105.0	
Six Capitals (a) ..	67.9	89.4	100.0	103.7	103.4	104.0	103.7	103.0	103.7	

GROUP II.—CLOTHING AND DRAPERY.									
Sydney ..	78.6	93.6	100.0	101.7	101.6	101.9	101.8	101.8	102.6
Melbourne ..	77.6	93.4	100.0	101.3	101.3	101.5	101.1	101.2	101.9
Brisbane ..	78.7	94.6	100.0	101.7	101.7	101.8	101.9	102.0	102.8
Adelaide ..	77.0	93.9	100.0	102.2	102.4	102.3	101.8	101.9	102.7
Perth ..	78.8	95.5	100.0	100.9	101.0	101.0	100.6	100.7	101.5
Hobart ..	78.9	94.7	100.0	102.6	102.8	102.8	102.6	102.6	103.0
Six Capitals (a)	78.1	93.8	100.0	101.6	101.6	101.8	101.5	101.6	102.3

GROUP III.—RENT(b) (4 AND 5 ROOMED HOUSES).									
Sydney ..	86.6	87.7	100.0	107.7	107.2	108.7	108.8	109.3	109.5
Melbourne ..	99.4	99.6	100.0	100.8	100.6	101.0	101.3	101.5	101.8
Brisbane ..	93.7	97.7	100.0	102.9	102.5	103.6	103.7	104.4	105.1
Adelaide ..	82.8	86.0	100.0	102.7	102.4	102.9	103.3	103.8	104.5
Perth ..	82.1	94.4	100.0	110.8	101.9	103.1	136.7	147.3	148.3
Hobart ..	85.1	91.4	100.0	108.8	108.8	109.3	109.4	109.4	109.5
Six Capitals(a)	90.3	92.6	100.0	105.0	103.9	104.9	107.7	108.9	109.3

GROUP IV.—OTHER ITEMS.(c)									
Sydney ..	78.3	93.6	100.0	100.5	99.9	100.8	100.7	101.0	101.0
Melbourne ..	73.5	88.7	100.0	100.9	100.4	101.2	100.9	101.1	100.9
Brisbane ..	78.5	92.7	100.0	103.0	103.6	103.5	103.5	104.0	104.3
Adelaide ..	76.9	90.2	100.0	99.3	98.8	99.4	98.7	99.1	99.3
Perth ..	74.6	89.6	100.0	100.8	101.1	100.4	100.5	101.2	101.4
Hobart ..	72.7	89.0	100.0	108.2	109.2	109.8	104.6	104.0	105.0
Six Capitals(a)	76.3	91.3	100.0	100.9	100.5	101.2	100.9	101.2	101.2

ALL GROUPS.

Sydney ..	74.6	91.7	100.0	102.2	101.8	102.6	102.2	102.2	102.9
Melbourne ..	75.2	91.0	100.0	102.4	102.2	102.4	102.3	101.8	102.2
Brisbane ..	76.4	92.7	100.0	103.0	103.1	103.8	103.3	102.8	103.6
Adelaide ..	74.7	90.9	100.0	102.0	101.7	102.0	102.0	102.5	102.8
Perth ..	74.5	90.7	100.0	103.9	102.2	103.3	107.6	109.0	108.7
Hobart ..	73.1	89.9	100.0	106.6	107.4	106.7	105.3	105.1	104.9
Six Capitals(a)	74.9	91.4	100.0	102.5	102.2	102.7	102.7	102.7	103.2

(a) Weighted average. (b) See note (b) on page 253. (c) A group of items under the following headings—Electricity, Gas, and Firewood ; Household Sundries ; Services ; Cinema Admission, Radio Licence, and Newspapers ; Fares ; and Tobacco and Cigarettes.

§ 5. The "C" Series Retail Price Index : 1914-1954.

1. **Construction.**—Full particulars relating to the construction, items, weights and method of tabulation of the "C" Series Retail Price Index were last published in *Labour Report* No. 41, 1952 (see pp. 10-18). Tabular statements of index numbers were shown on pp. 19-27 and historical particulars of the index, and its relation to automatic basic wage variations prior to 12th September, 1953, on pp. 32-40.

2. **Significant Dates.**—The following table furnishes index numbers for the Six Capital Cities as a whole for certain significant dates since November, 1914—the earliest date for which this index is available.

"C" SERIES RETAIL PRICE INDEX NUMBERS.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

1914, November	..	..	687	(Beginning of War I.)
1918, November	..	..	905	(End of War I.)
1920, November	..	..	1,166	(Post-War peak)
1922, November	..	..	975	(Post-War trough)
1929, Year	..	..	1,033	(Pre-Depression peak)
1933, Year	..	..	804	(Depression trough)
1939, September Quarter	..	..	916	(Pre-War II.)
1943, March Quarter	..	..	1,123	(Pre-Price Stabilization)
1943, June Quarter	..	..	1,143	(War II. peak)
1945, September Quarter	..	..	1,126	(End of War II.)
1948, September Quarter	..	..	1,311	
1950, September Quarter	..	..	1,572	
1952, September Quarter	..	..	2,238	
1953, September Quarter	..	..	2,321	
1954, December Quarter	..	..	2,333	

The index rose by approximately 32 per cent. during the first world war, and by a further 29 per cent. in the two post-war years (November, 1918 to November, 1920). From November, 1920 to November, 1922, there was a fall of 16 per cent. and the index remained relatively stable until the onset of the depression in 1929. During the four years of the depression 1929 to 1933 the index fell by 22 per cent., rising thereafter steadily until 1939 when it was nearly 14 per cent. above the level of 1933, and approximately at the level it had occupied at the date of the Armistice of 1918. Between the outbreak of war (September, 1939) and March, 1943 (pre-price stabilization) the index rose by approximately 23 per cent. to a level slightly below that reached at the height of the post-war boom in 1920. Compared with the March Quarter, 1943, the index number at the close of the war was practically unchanged.

Immediately after the outbreak of the war price control was established by the Government under Regulations dated 28th September, 1939, and a national policy of price stabilization was applied as from 12th April, 1943, backed by more stringent price control and price subsidies. The retail price level, as measured by the index, remained relatively steady throughout 1944 and 1945 at the level of March, 1943. This stabilized level was approximately 23 per cent. above that of 1939 and 63 per cent. above the level prevailing at the beginning of the first world war in 1914. After June Quarter, 1946, war-time controls, subsidies, etc., were progressively modified and by early 1949 had been virtually eliminated. In the latter part of 1950 export prices (especially for wool) rose very substantially and have remained relatively very high. In December, 1950, the Commonwealth Court of Conciliation and Arbitration raised the basic wage by approximately 14 per cent. Concurrently, public works expenditure and private investment rose to very high levels.

This retail price index rose by 16 per cent. in the three years following the end of the 1939-45 War (i.e., to September Quarter, 1948) and by 77 per cent. in the next five years to September Quarter, 1953 and remained relatively stable at that level until December Quarter, 1954.

3. "C" Series Retail Price Index, Six Capital Cities, 1914 to 1954.—The movement in the various groups of the index and in the index as a whole for each year for which it has been compiled is shown in the following table for the six capital cities combined:—

**"C" SERIES RETAIL PRICE INDEX AND ITS "GROUP" INDEX NUMBERS(a)
FOR THE SIX CAPITAL CITIES COMBINED.**

(Base of Each Group; Weighted Average of Six Capital Cities, 1923-27=1,000.)

Period.	Food and Groceries.	Rent (4 and 5 Roomed Houses).(b)	Clothing.	Miscell- aneous.	Total "C" Series Index.
1914 (c)	641	649	754	749	687
1915 (c)	842	659	792	786	782
1916 (c)	812	665	881	862	795
1917 (c)	836	685	992	882	847
1918 (c)	861	722	1,097	972	905
1919 (c)	1,026	768	1,238	1,036	1,022
1920 (c)	1,209	851	1,305	1,194	1,166
1921 (c)	950	877	1,246	1,010	1,013
1922 (c)	945	929	1,052	999	975
1923 ..	1,009	950	1,045	999	1,003
1924 ..	969	988	1,003	1,004	987
1925 ..	993	1,008	991	993	997
1926 ..	1,023	1,026	986	998	1,011
1927 ..	1,000	1,030	975	1,008	1,002
1928 ..	985	1,066	997	1,010	1,009
1929 ..	1,044	1,073	996	1,007	1,033
1930 ..	941	1,047	951	999	975
1931 ..	826	901	853	973	873
1932 ..	796	817	804	958	830
1933 ..	751	804	787	950	804
1934 ..	783	810	785	944	817
1935 ..	806	839	783	946	832
1936 ..	825	879	792	947	850
1937 ..	851	912	811	960	873
1938 ..	886	942	829	961	897
1939 ..	927	965	841	962	920
1940 ..	939	973	956	998	957
1941 ..	947	976	1,118	1,060	1,008
1942 ..	1,031	976	1,308	1,112	1,091
1943 ..	1,037	975	1,440	1,160	1,131
1944 ..	1,026	976	1,435	1,165	1,126
1945 ..	1,034	975	1,425	1,161	1,126
1946 ..	1,036	976	1,505	1,167	1,145
1947 ..	1,100	977	1,566	1,199	1,188
1948 ..	1,256	979	1,744	1,257	1,295
1949 ..	1,394	982	1,997	1,338	1,415
1950 ..	1,566	987	2,286	1,435	1,560
1951 ..	2,041	1,009	2,749	1,679	1,883
1952 ..	2,526	1,057	3,096	1,958	2,196
1953 ..	2,641	1,138	3,223	2,053	2,302
1954 ..	2,671	1,192	3,218	2,062	2,326
1953—March Quarter	2,572	1,122	3,200	2,048	2,268
June ..	2,605	1,136	3,245	2,051	2,293
September ..	2,686	1,144	3,228	2,054	2,321
December ..	2,702	1,151	3,217	2,060	2,327
1954—March Quarter	2,683	1,162	3,228	2,070	2,327
June ..	2,670	1,191	3,212	2,061	2,324
September ..	2,654	1,205	3,210	2,058	2,321
December ..	2,677	1,209	3,222	2,060	2,333

(a) "Group" index numbers in the above table cannot be compared with each other in order to show the relative cost of Food and Groceries, Housing, Clothing or Miscellaneous requirements, since each "Group" has its own Base = 1,000, viz., the weighted average cost for the six capital cities as a whole during the five-yearly period 1923-27.

(b) Rent.—The rent index numbers shown in the tables in this publication measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. They are "price" indexes in the strict sense, i.e., they are designed to measure only the "price" element in rent fluctuations. Rentals of new tenanted houses completed since the end of the war are not taken into account.

(c) November.

§ 6. International Comparisons.

The following table shows the increases in retail prices in recent years in Australia and certain other countries.

RETAIL PRICE INDEX NUMBERS.

(FOOD, RENT, CLOTHING, MISCELLANEOUS HOUSEHOLD EXPENDITURE.)

(Base : September Quarter, 1939=100.)

Period.	Australia.	United Kingdom.	Canada.	New Zealand.	Union of South Africa.	United States of America.
1939—					(a)	
September Quarter	100	100	100	100	100	100
1940—Year	105	119	105	104	104	100
1941— "	110	128	111	108	109	105
1942— "	119	129	116	111	118	116
1943— "	124	128	117	114	126	123
1944— "	123	129	118	(b) 116	130	125
1945— "	123	131	119	118	133	127
1946— "	125	131	123	118	135	138
1947— "	130	(c) 102	134	122	141	158
1948— "	141	108	154	132	149	170
1949— "	154	111	160	(d) 134	154	168
1950— "	170	114	165	142	160	171
1951— "	206	124	183	157	172	185
1952— "	240	136	186	170	187	189
1953— "	251	140	184	178	194	190
1954— "	254	143	185	185	197	191
1954—March Quarter	254	140	184	183	194	191
June "	254	142	184	186	196	191
Sept. "	253	143	186	186	197	191
Dec. "	255	145	186	186	200	190

(a) Food, Rent and Miscellaneous Expenditure. (b) War-time Index linked to former series.
 (c) New series (Base: 17th June, 1947 = 100), commencing from September Quarter, 1947.
 (d) Consumers' Retail Price Index from March Quarter, 1949, onwards. Index numbers for earlier periods (shown for purposes of comparison) are obtained by linking the movement in the Retail Price Index (base 1926-30) with the new index.

B. WHOLESALE PRICES AND PRICE INDEXES.

§ 1. General.

Two indexes of wholesale prices have been compiled by the Commonwealth Bureau of Census and Statistics. These are:—

- (i) The Melbourne Wholesale Price Index ;
- (ii) The Wholesale Price (Basic Materials and Foodstuffs) Index.

Particulars of the Melbourne Wholesale Price Index, which is now obsolescent, are given in § 3 commencing on page 256 of this chapter.

After reviewing the regimen and weighting of this index the 1930 Conference of Statisticians resolved that a new index of wholesale prices of basic materials and foodstuffs should be compiled. This index—the Wholesale Price (Basic Materials and Foodstuffs) Index—which extends back to the year 1928 and is compiled monthly, is a special purpose index and one of a series of Wholesale Price Indexes designed for special purposes.

§ 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

1. **Price Quotations.**—The prices used in the index have in the main been obtained directly from manufacturers and merchants, and, with a few important exceptions, from Melbourne sources. Apart from locally produced building materials and one or two minor commodities, however, the price movements may be taken as representative of variations in wholesale prices of basic materials in most Australian markets.

Commodities in the index are priced in their primary or basic form wherever possible and in respect of imported materials as nearly as may be at the point where they first make effective impact on the local price structure. Thus the price of imported goods is not taken at the time of import, but rather on an ex-bond (or into factory) basis.

Broadly, where home-consumption prices exist for local products, they have been used in this index. During the year 1950-51 wool for local manufacture was subsidized, and the home-consumption price for wool was used to calculate the index numbers shown in the table in paragraph 4.

2. **Commodities and Grouping.**—For purposes of this index "basic" materials (as opposed to certain of the Foodstuffs) are commodities in the primary or basic forms in which they first enter into productive processes carried out in Australia. The regimen comprises 80 commodities, divided into seven main groups. Each group is sub-divided into goods which are mainly imported, and goods which are mainly home-produced. The percentage of the "aggregate expenditure" in 1950 contributed by each group is shown in the following table:—

				Percentage Value-Weight, 1950.		
Group.				Principally Imported.	Principally Home Produced.	Total.
Metals and Coal	..	..	..	0.05	15.51	15.56
Oils, Fats and Waxes	..	..	..	10.90	0.24	11.14
Textiles	..	..	..	1.10	5.11	6.21
Chemicals	..	..	..	1.18	2.77	3.95
Rubber and Hides	..	..	..	1.17	0.68	1.85
Building Materials	..	..	..	5.07	4.31	9.38
Foodstuffs and Tobacco	..	..	..	12.31	39.60	51.91
All Groups	..	..	..	31.78	68.22	100.00

A full list of the commodities in the regimen, showing the quantity-multipliers (weights) for each commodity and the percentage of the total aggregate value in 1950 contributed by each commodity and group, is set out on page 395 of Official Year Book No. 38.

3. **Method of Construction.**—The index is constructed on the simple aggregative fixed-weights formula. The weights (quantity-multipliers) are based on estimates of the average annual consumption of the commodities in Australia during the period 1928-29 to 1934-35 inclusive. Changes in usage, changes of category as between "imported" and "home-produced" as affecting some commodities, and changes in the industrial structure have affected the validity of some of the weights in the index. These and other problems (e.g., dual prices for some commodities) are being examined with a view to revision of the regimen, its grouping and weighting, when conditions are more stable.

4. **Index Numbers.**—Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are given in the following table. Current index numbers, on the base: Average of three years ended June, 1939 = 100, are published in the *Monthly Review of Business Statistics*, and a table showing index numbers computed to the base 1928 = 100 will be found in *Labour Report* No. 42, 1953.

WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS.

(Base of Each Group : Average 3 years ended June, 1939 = 100.)

Period.	Basic Materials.							Food-stuffs and Tobacco.	Basic Materials and Foodstuffs.		
	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Total.		Goods principally Imported. (a)	Goods principally Home Produced.	Total All Groups.
1928-29	127	106	129	121	115	95	114	107	91	118	110
1929-30	126	111	99	116	87	94	107	110	94	118	111
1930-31	116	117	80	117	73	96	105	91	100	99	99
1931-32	108	113	77	119	74	95	101	86	100	92	95
1932-33	104	109	75	110	69	95	98	80	97	87	90
1933-34	103	84	102	111	80	94	92	84	89	89	90
1934-35	97	90	78	102	77	93	89	87	92	80	90
1935-36	92	95	100	99	88	93	90	92	95	92	93
1936-37	96	99	118	99	111	99	99	97	99	98	98
1937-38	101	101	100	100	97	104	102	100	102	100	101
1938-39	103	100	82	101	92	97	99	103	99	102	101
1939-40	105	115	104	107	116	108	109	101	111	103	105
1940-41	107	137	111	124	126	128	122	107	133	106	114
1941-42	117	151	118	137	135	135	133	117	153	112	124
1942-43	129	167	147	142	138	163	149	128	176	121	137
1943-44	131	170	150	143	140	174	153	129	182	122	140
1944-45	131	168	152	143	140	175	152	131	182	123	141
1945-46	130	156	152	142	140	177	149	135	178	126	141
1946-47	132	145	191	140	131	180	149	138	177	129	143
1947-48	146	161	283	148	126	190	166	153	192	145	159
1948-49	185	173	342	159	130	198	188	175	201	173	181
1949-50	214	184	434	187	143	225	214	198	223	198	205
1950-51	256	196	641	242	202	268	264	232	256	242	246
1951-52	343	220	577	314	298	370	321	281	288	305	300
1952-53	392	234	607	350	224	404	350	294	292	331	320
1953-54	388	222	566	323	191	363	332	313	271	343	321
1953-54—											
July ..	391	225	583	329	198	365	336	315	275	346	325
Aug. ..	389	226	581	329	198	365	335	316	275	360	335
Sept. ..	389	226	576	329	199	364	335	331	276	357	333
Oct. ..	389	226	576	327	198	364	334	325	273	353	329
Nov. ..	388	223	574	327	197	365	333	311	270	342	329
Dec. ..	388	223	561	327	192	365	332	304	269	337	317
Jan. ..	384	223	564	327	190	365	331	305	271	336	317
Feb. ..	384	221	546	317	187	365	328	306	269	336	316
Mar. ..	389	222	545	317	183	365	330	304	269	335	316
Apr. ..	390	217	553	316	186	359	328	306	266	337	316
May ..	390	217	563	316	184	359	329	306	266	338	316
June ..	384	218	569	316	182	358	327	308	267	337	316

(a) Represents only such imported commodities as are included in the wholesale price index. This index does not measure changes in price of imports generally.

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

§ 3. Melbourne Wholesale Price Index.

1. General.—An index of Melbourne wholesale prices was first computed in 1912. It relates chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that date. Neither the component items of the regimen nor the weighting have been varied. Consequently, the index is outmoded for current use and is a measure of variations in wholesale prices based on the weighting originally determined. It has some historic significance as a measure of changes in the prices of its component items combined in the proportions in which they were in common use about the year 1910. It is now published only on an annual basis and is mainly used as an approximate indication of long-term trends since the year 1861, for which it was first compiled. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pp. 43-45.

2. **Index Numbers.**—Index numbers for each group of commodities as well as for all groups combined are shown in the following table :—

MELBOURNE WHOLESALE PRICE INDEX NUMBERS.

(Base of each Group : Year 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Wool, Cotton, Leather, etc.	III. Agri- cultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Ma- terials.	VIII. Chem- icals.	All Groups.
1861..	1,438	1,381	1,581	1,008	1,963	..	1,070	2,030	1,538
1871..	1,006	1,257	1,236	864	1,586	..	1,044	1,409	1,229
1881..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891..	895	847	1,024	995	1,032	888	780	1,194	945
1901..	1,061	774	928	1,020	1,048	1,345	841	917	974
1911..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1921..	2,173	1,361	1,767	2,000	1,977	2,158	2,733	2,303	1,903
1931..	1,826	1,040	1,121	1,308	1,794	1,512	2,025	2,166	1,429
1941..	1,960	1,402	1,721	1,554	1,883	1,776	3,138	2,527	1,796
1949..	3,502	3,966	2,876	2,309	2,558	3,356	4,611	3,221	3,191
1950..	3,992	5,464	3,153	2,459	2,829	4,616	(a)5,567	3,263	3,816
1951..	5,080	7,943	4,512	2,930	2,850	6,438	(a)7,074	3,294	5,098
1952..	6,181	7,365	5,018	4,024	3,455	6,289	(a)8,338	3,723	5,647
1953..	6,529	6,950	4,958	4,533	3,767	6,303	(a)8,519	4,691	5,619

(a) The regimen and weighting of the original Building Materials group of this index have become unreal. The movement shown here for this group between 1940 and 1953 has been calculated in accordance with the movement occurring in the Building Materials group of the Basic Materials and Foodstuffs Index.

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

C. CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR.

1. **General.**—An account of the measures taken by the Commonwealth Government to control prices from September, 1939 (immediately after the outbreak of war), until 29th May, 1948 (the date of the Prices Referendum), was given in Official Year Book No. 37, pp. 458-464.

2. **Transfer of Price Control to the States.**—Consequent upon the rejection of the proposal embodied in the Prices Referendum held on 29th May, 1948, that permanent power to control rents and prices (including charges) be conferred on the Commonwealth Government, responsibility for price fixation was assumed by the State Governments and steps were taken to pass State Prices Acts. These acts were proclaimed to operate simultaneously on 20th September, 1948. Except in the case of Queensland, each Act was to remain in force for a specific period, but the period varied from State to State.

On 20th September, 1948, each State Government issued declarations covering uniform lists of goods and services, which were brought under price control. Existing Commonwealth Prices Regulation Orders continued to apply to these goods and services until specially varied in accordance with the terms of the State legislation. At the same time, the Commonwealth Government issued an identical list of declared items to operate in the Australian Capital Territory and other Territories of the Commonwealth.

In the operation of State price control, the State Prices Commissioners collaborated closely. Conferences of Commissioners were held at intervals of approximately two months. Thus a large degree of uniformity was attained in controlling and decontrolling items and in the fixation of margins and prices of major items.

In each State the number of commodities and services subject to control has been progressively reduced, and in some States price control has been terminated, viz., Western Australia, 31st December, 1953; Tasmania, 31st October, 1954; Victoria, 31st December, 1954; and the Australian Capital Territory, 10th February, 1955.

3. **Price Stabilization.**—Expenditure by the Commonwealth Government on Price Stabilization Subsidies reached a peak in 1947-48 and since then the Commonwealth Government has progressively reduced the range of commodities eligible for subsidy.

In addition to those subsidies which had been an integral part of the Price Stabilization Plan, the Commonwealth Government paid bounties and subsidies for assistance to primary production, and these payments also had a stabilizing influence on prices.

For particulars of expenditure by the Commonwealth Government on Price Stabilization and other Subsidies and Bounties, see Chapter XVII.—Public Finance.

D. WAGES.

§ 1. Arbitration and Wages Boards Acts and Associated Legislation.

1. **General.**—Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and conditions of labour were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report* and issues of the Official Year Book prior to No. 38.

2. **Commonwealth.**—Under placitum (xxxv) of section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". The Parliament has made such a law, namely, the Conciliation and Arbitration Act.

This Act defines "an industrial dispute" as a "dispute (including a threatened, impending or probable dispute) as to industrial matters, which extends beyond the limits of any one State and a situation which is likely to give rise to a dispute as to industrial matters which so extends". Such disputes are dealt with, in part, by a Court constituted under the Act, and otherwise by Conciliation Commissioners appointed under the Act. At the present time, the Court comprises a Chief Judge and six other Judges, whilst there is a Chief Conciliation Commissioner and nine other Conciliation Commissioners.

The Court deals with industrial disputes insofar as they concern the standard hours of work in an industry, the basic wage for both adult males and adult females and questions relating to long service leave with pay, but all other matters in dispute are dealt with by a Conciliation Commissioner. There is, however, provision for a Conciliation Commissioner to refer any dispute or any part of a dispute to the Court for determination, but a Conciliation Commissioner is only entitled to so refer a matter if he is of the opinion, and if the Chief Judge concurs in that opinion, that the matter is one of such importance that, in the public interest, it should be dealt with by the Court.

In addition to the functions outlined above, the Act empowers the Court to make orders concerning the interpretation, and relating to the enforcement, of orders and awards. The Act also makes provision for the registration of associations of employees and employers, and certain powers in connexion therewith are, by the Act, given to the Court.

Although, in certain circumstances, there is a right of approach to the High Court with respect to decisions of the Court, the circumstances are very limited, and, for practical purposes, it can be said that decisions given by the Court are final. Decisions given by a Conciliation Commissioner, however, may be made the subject of appeal to the Court of Conciliation and Arbitration provided the party desiring to appeal can satisfy the Chief Judge, by way of application for leave to appeal, that the order or award the subject of the application deals with a matter of such importance that leave to appeal should, in the public interest, be granted.

Whilst many of the minor powers of the Court may be exercised by a Court constituted by one Judge, in all major matters, e.g., questions relating to the basic wage, standard hours of work, long service leave, applications concerning registered organizations and also appeals from orders or awards made by Conciliation Commissioners, the Court must be constituted by at least three Judges one of whom may be the Chief Judge.

Prior to 1947, there was no division of work as between the Court and Conciliation Commissioners, a dispute being dealt with by either one or other part of the Tribunal, with the exception that questions relating to the basic wage and standard hours could only be dealt with by at least three Judges of the Court sitting together. There was also, at that time, a right of appeal to the Court against a decision of a Conciliation Commissioner. The amending Act of 1947 brought about the division of work between the two parts of the Tribunal, and, at the same time, made decisions of Conciliation Commissioners final. However, a further amending Act passed in 1952 altered the position regarding finality of decisions of Conciliation Commissioners, and provided a right of appeal, in the circumstances set out above, to the Court against any such decision.

3. *States*.—In each State, Industrial Tribunals have been established to regulate and arbitrate in industrial matters. The chief of these are the Industrial Commission of New South Wales, the Industrial Courts of Queensland and South Australia, and the Western Australian Court of Arbitration, together with Wages Boards for specific industries or occupations which operate in Victoria, South Australia and Tasmania. Further details concerning the functions and powers of these authorities may be found in *Labour Report* No. 42.

§ 2. Rates of Wage and Hours of Labour.

1. *General*.—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by this Bureau in the early part of 1913. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts, and are therefore the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In cases where no award, determination, or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, as most of the industries and occupations are now covered by awards, determinations, or industrial agreements. The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts should not be regarded as actual current averages, but as an index of changes expressed in money and hour terms.

The index numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000). In the case of females, however, it has not been possible to secure information for the years prior to 1914, and the index numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914 as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given each year in the Appendix to the *Labour Report*.

2. *Weekly Rates of Wage, 1939 and 1949 to 1953*.—(i) *General*. The average rate of wage for each industrial group is computed by taking the arithmetic average of the rates of wage payable for all classified occupations within that group. These averages are weighted to give the average for the States and for Australia.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified :—

WEEKLY WAGE RATES : ADULT MALES, STATES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	870	894	615	562	477	466	3,884

RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939 ..	96 7	93 6	97 5	88 11	100 6	89 5	95 3
" " 1949 ..	171 11	168 11	167 10	165 3	171 6	165 4	169 8
" " 1950 ..	209 6	204 5	199 10	200 6	208 3	199 7	205 6
" " 1951 ..	255 0	245 5	240 10	241 8	251 4	247 3	248 7
" " 1952 ..	284 8	274 5	267 9	274 6	284 7	276 2	278 2
" " 1953 ..	296 8	282 6	273 10	278 9	292 5	296 11	287 7

INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

31st December, 1939 ..	1,885	1,825	1,900	1,735	1,962	1,745	1,858
" " 1949 ..	3,355	3,296	3,275	3,225	3,346	3,227	3,310
" " 1950 ..	4,088	3,980	3,900	3,911	4,064	3,805	4,009
" " 1951 ..	4,075	4,780	4,600	4,715	4,904	4,825	4,850
" " 1952 ..	5,555	5,354	5,224	5,356	5,553	5,388	5,428
" " 1953 ..	5,788	5,513	5,342	5,439	5,705	5,794	5,611

(a) The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts shown should not be regarded as actual current averages but as an index of changes expressed in money and hour terms. (b) As at 31st December, 1953.

(iii) *Adult Males—Industrial Groups.* The following table shows for Australia the average weekly rates of wage and index numbers in each industrial group and for all groups at the dates specified.

WEEKLY WAGE RATES : ADULT MALES, INDUSTRIAL GROUPS.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.(a)

Industrial Group.	31st Dec., 1939.	31st Dec., 1948.	31st Dec., 1949.	31st Dec., 1950.	31st Dec., 1951.	31st Dec., 1952.	31st Dec., 1953.
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RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
I. Wood, Furniture, etc. ..	100 1	155 6	166 7	199 8	238 8	270 2	276 11
II. Engineering, etc. ..	99 3	155 10	166 1	198 2	237 1	267 10	274 2
III. Food, Drink, etc. ..	95 9	151 6	166 2	199 11	239 3	271 5	279 5
IV. Clothing, Textiles, etc.	93 2	153 7	164 2	202 10	242 10	273 6	278 10
V. Books, Printing, etc.	114 3	177 2	194 7	228 9	274 5	305 5	313 11
VI. Other Manufacturing	95 8	153 11	165 1	199 0	238 10	270 2	276 10
VII. Building ..	106 5	171 9	183 0	215 11	259 0	293 11	301 3
VIII. Mining, etc. ..	109 1	163 5	175 7	211 0	249 2	281 8	288 2
IX. Railways, etc. ..	96 6	156 1	167 3	199 2	238 0	269 4	278 3
X. Other Land Transport	92 10	145 8	160 0	192 7	233 2	263 11	270 3
XI. Shipping, etc.(b) ..	98 6	182 0	192 4	230 2	271 11	303 1	308 9
XII. Agricultural, etc.(b) ..	84 0	158 1	174 7	222 2	279 1	300 11	319 8
XIII. Domestic, etc.(b) ..	89 11	141 5	154 9	186 8	224 8	255 8	262 5
XIV. Miscellaneous ..	92 10	148 3	162 0	192 9	232 0	262 10	270 1
All Industrial Groups ..	95 3	156 4	169 8	205 6	248 7	278 2	287 7

WEEKLY WAGE RATES: ADULT MALES, INDUSTRIAL GROUPS.—*continued.*

Industrial Group.	31st Dec., 1939.	31st Dec., 1948.	31st Dec., 1949.	31st Dec., 1950.	31st Dec., 1951.	31st Dec., 1952.	31st Dec., 1953.
INDEX NUMBERS.							
(Base : Weighted Average Wage for All Groups in 1911 (51s. 3d.) = 1,000.)							
I. Wood, Furniture, etc. ..	1,953	3,034	3,250	3,896	4,656	5,272	5,403
II. Engineering, etc. ..	1,936	3,041	3,241	3,867	4,626	5,226	5,349
III. Food, Drink, etc. ..	1,886	2,956	3,243	3,901	4,668	5,296	5,452
IV. Clothing, Textiles, etc. ..	1,817	2,997	3,204	3,957	4,738	5,337	5,441
V. Books, Printing, etc. ..	2,229	3,457	3,796	4,463	5,355	5,959	6,124
VI. Other Manufacturing ..	1,867	3,003	3,221	3,883	4,631	5,272	5,401
VII. Building ..	2,076	3,352	3,570	4,212	5,054	5,735	5,878
VIII. Mining, etc. ..	2,142	3,189	3,426	4,118	4,861	5,495	5,622
IX. Railways, etc. ..	1,884	3,045	3,263	3,887	4,643	5,256	5,429
X. Other Land Transport ..	1,812	2,843	3,123	3,757	4,550	5,150	5,274
XI. Shipping, etc.(b) ..	1,922	3,551	3,753	4,491	5,306	5,914	6,025
XII. Agricultural, etc.(b) ..	1,639	3,085	3,407	4,335	5,445	5,871	6,237
XIII. Domestic, etc.(b) ..	1,755	2,759	3,020	3,643	4,384	4,989	5,121
XIV. Miscellaneous ..	1,811	2,893	3,161	3,761	4,527	5,128	5,269
All Industrial Groups ..	1,858	3,050	3,310	4,009	4,850	5,428	5,611

(a) See note (a) to table on page 260.

(b) Includes the value of keep, where supplied.

NOTE.—The index numbers in the table above are comparable throughout.

(iv) *Adult Females—States.* The following table shows the weighted average nominal weekly rates of wage payable to adult female workers for a full week's work, in each State and Australia at the dates specified.

WEEKLY WAGE RATES : ADULT FEMALES, STATES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	84	87	38	47	24	32	312

RATES OF WAGE.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1930 ..	53 3	51 9	55 2	49 7	55 8	50 8	52 8
" " 1949 ..	108 1	112 4	108 5	101 0	105 5	106 4	109 1
" " 1950 ..	139 11	142 11	135 11	142 1	132 3	137 2	140 5
" " 1951 ..	171 1	172 10	161 7	171 4	163 2	168 7	170 4
" " 1952 ..	193 11	196 2	184 4	195 8	186 0	191 2	193 5
" " 1953 ..	198 5	200 10	188 7	199 6	190 5	196 4	197 11

INDEX NUMBERS.

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

	1,960	1,906	2,031	1,826	2,049	1,866	1,938
31st December, 1939 ..	1,960	1,906	2,031	1,826	2,049	1,866	1,938
" " 1949 ..	3,979	4,134	3,990	3,716	3,880	3,915	4,015
" " 1950 ..	5,510	5,259	5,003	5,229	4,866	5,050	5,160
" " 1951 ..	6,206	6,362	5,948	6,305	6,007	6,204	6,268
" " 1952 ..	7,138	7,220	6,784	7,202	6,846	7,037	7,120
" " 1953 ..	7,302	7,392	6,940	7,342	7,007	7,226	7,285

(a) See note (a) to table on page 260.

(b) As at 31st December, 1953.

It should be noted that the base of these index numbers is 1914 and not 1911 as in the foregoing tables for adult males. This is because there is no tabulation for adult female rates prior to 1914.

(v) *Adult Females—Industrial Groups.* The following table shows the weighted average weekly rates of wage payable in Australia to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined.

WEEKLY WAGE RATES : ADULT FEMALES, INDUSTRIAL GROUPS.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP.(a)

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Textiles, etc.	I., II., V., and VI. All Other Manufacturing.	XIII. Domestic, etc.(b)	XIV. Miscellaneous.	All Groups.
	RATES OF WAGE.					
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939 ..	48 9	50 9	51 11	54 5	56 8	52 8
" " 1949 ..	105 5	109 5	111 11	97 5	119 1	109 1
" " 1950 ..	135 9	139 2	147 1	132 1	149 9	140 5
" " 1951 ..	164 2	169 6	177 1	160 10	179 10	170 4
" " 1952 ..	186 8	192 5	200 9	183 6	203 10	193 5
" " 1953 ..	191 3	196 6	201 3	188 7	210 2	197 11
INDEX NUMBERS.						
(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)						
31st December, 1939 ..	1,795	1,869	1,910	2,003	2,085	1,938
" " 1949 ..	3,879	4,026	4,118	3,586	4,384	4,015
" " 1950 ..	4,996	5,121	5,412	4,861	5,512	5,169
" " 1951 ..	6,043	6,238	6,517	5,919	6,618	6,268
" " 1952 ..	6,869	7,081	7,389	6,755	7,501	7,120
" " 1953 ..	7,039	7,232	7,407	6,941	7,735	7,285

(a) See note (a) to table on page 260.

(b) Includes the value of keep where supplied.

3. *Hourly Wage Rates 1939 and 1949 to 1953.*—(i) *General.* The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc., for a full week's work, excluding overtime. The number of hours constituting a full week's work differs, however, in some instances between various trades and occupations in each State, and between the same trades and occupations in the several States. To secure what may be for some purposes a better comparison, the results in the preceding paragraphs are reduced to a common basis, namely, the rate of wage per hour. The particulars of weighted average nominal hourly rates of wage given in the following tables relate to all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). Some of the occupations included in these groups are of a casual or seasonal nature, and in a number of cases the hours of labour are not regulated either by awards or determinations of industrial tribunals or by legislation. Thus the necessary particulars for the computation of average working hours and hourly rates of wage are not available.

(ii) *Adult Males—States.* The following table shows the weighted average nominal hourly rates of wage payable to adult male workers in each State at the dates specified. Index numbers are also given for each State with the average for Australia at 30th April, 1914 as base (= 1,000).

HOURLY WAGE RATES(a) : ADULT MALES, STATES.

WEIGHTED AVERAGE NOMINAL HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939	2 3½	2 1½	2 3½	1 11½	2 4	2 0	2 2½
" " 1949	4 3	4 2½	4 0½	4 0½	4 3½	4 1	4 2½
" " 1950	5 1½	5 0½	4 8½	4 9½	5 1½	4 11	5 0
" " 1951	6 2½	5 11½	5 6½	5 9	6 2½	5 11	6 0
" " 1952	6 11½	6 8½	6 4½	6 7½	7 0½	6 8½	6 9½
" " 1953	7 1½	6 11½	6 6½	6 8½	7 3	7 0½	6 11½

INDEX NUMBERS.

(Base : Weighted Average for Australia (13.96d.), 30th April, 1914 = 1,000).

31st December, 1939	1,963	1,834	1,979	1,692	2,001	1,717	1,903
" " 1949	3,654	3,607	3,463	3,484	3,691	3,515	3,599
" " 1950	4,393	4,318	4,047	4,142	4,430	4,230	4,301
" " 1951	5,318	5,142	4,756	4,948	5,319	5,079	5,153
" " 1952	5,985	5,785	5,464	5,697	6,066	5,782	5,833
" " 1953	6,128	5,959	5,599	5,787	6,239	6,042	5,986

(a) Weighted average hourly rates of wage for all industrial groups except Groups XI. (Shipping, etc.), and XII. (Pastoral, Agricultural, etc.). Working hours have not been generally regulated by industrial tribunals for some of the occupations classified in Industrial Groups XI. and XII. See also note (a) to table on page 260.

(iii) *Adult Females—States.* The following table shows the weighted average nominal hourly rates of wage payable to adult female workers in each State at the dates specified. Index numbers are also given for each State with the average for Australia at 30th April, 1914 as base (= 1,000).

HOURLY WAGE RATES(a) : ADULT FEMALES, STATES.

WEIGHTED AVERAGE NOMINAL HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939	1 2½	1 2	1 3	1 1	1 2½	1 1½	1 2½
" " 1949	2 8½	2 9½	2 8½	2 6½	2 7½	2 8	2 8½
" " 1950	3 6	3 6½	3 4½	3 6½	3 3½	3 5½	3 6½
" " 1951	4 3½	4 3½	4 0½	4 3½	4 1	4 2½	4 3
" " 1952	4 10½	4 10½	4 7½	4 10½	4 7½	4 9½	4 10
" " 1953	4 11½	5 0½	4 8½	4 11½	4 9	4 11	4 11½

INDEX NUMBERS.

(Base : Weighted Average for Australia (6.64d.), 30th April, 1914 = 1,000.)

31st December, 1939	2,193	2,107	2,267	1,952	2,217	2,032	2,145
" " 1949	4,884	5,074	4,898	4,562	4,762	4,806	4,929
" " 1950	6,322	6,455	6,142	6,419	5,973	6,199	6,345
" " 1951	7,729	7,810	7,301	7,741	7,373	7,616	7,694
" " 1952	8,762	8,863	8,328	8,840	8,404	8,639	8,739
" " 1953	8,964	9,074	8,520	9,012	8,601	8,870	8,943

(a) See note (a) to table on page 260.

4. **Weekly Hours of Labour, 1939 and 1949 to 1953.**—(i) *General.* The number of hours constituting a full week's work (excluding overtime) differs in some instances between various trades and occupations in each State and between the same trades and occupations in the several States. The particulars of weekly hours of labour given in the following tables relate to all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). Some of the occupations included in these groups are of a casual or seasonal nature, and in a number of cases the hours of labour are not regulated either by awards or determinations of industrial tribunals or by legislation. Thus the necessary particulars for the computation of average working hours for these groups are not available.

(ii) *Adult Males—States.* The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult male workers in each State and Australia at 31st December, 1939 and 1949 to 1953. Index numbers are given for each State with the weighted average hours of labour for Australia at 30th April, 1914, as base (= 1,000).

WEEKLY HOURS OF LABOUR (EXCLUDING OVERTIME)(a) : ADULT MALES, STATES.

WEIGHTED AVERAGE NOMINAL HOURS OF LABOUR (EXCLUDING OVERTIME) WORKED DURING A FULL WORKING WEEK AND INDEX NUMBERS OF HOURS OF LABOUR.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
WEEKLY HOURS OF LABOUR.							
31st December, 1939 ..	43.92	44.61	43.46	45.83	44.33	45.33	44.29
" " 1949 ..	39.99	39.99	40.00	40.00	39.54	40.00	39.96
" " 1950 ..	39.99	39.99	40.00	40.00	39.54	40.00	39.96
" " 1951 ..	39.99	39.98	40.00	40.00	39.51	40.00	39.95
" " 1952 ..	39.99	39.98	40.00	40.00	39.51	40.00	39.95
" " 1953 ..	39.99	39.98	40.00	40.00	39.51	40.00	39.95

INDEX NUMBERS.

(Base : Weighted Average for Australia (48.93), 30th April, 1914 = 1,000).

31st December, 1939 ..	898	912	888	937	906	926	905
" " 1949 ..	817	817	817	817	808	817	817
" " 1950 ..	817	817	817	817	808	817	817
" " 1951 ..	817	817	817	817	807	817	816
" " 1952 ..	817	817	817	817	807	817	816
" " 1953 ..	817	817	817	817	807	817	816

(a) Weighted average working hours per week for all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). Working hours have not been generally regulated by industrial tribunals for some of the occupations classified in Industrial Groups XI. and XII. See also note (a) to table on page 260.

(iii) *Adult Females—States.* The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult female workers in each State and Australia at 31st December, 1939 and 1949 to 1953. Index numbers are given for each State with the weighted average hours of labour for Australia at 30th April, 1914, as base (= 1,000).

WEEKLY HOURS OF LABOUR (EXCLUDING OVERTIME)(a) : ADULT FEMALES, STATES.

WEIGHTED AVERAGE NOMINAL HOURS OF LABOUR (EXCLUDING OVERTIME) WORKED DURING A FULL WORKING WEEK AND INDEX NUMBERS OF HOURS OF LABOUR.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
WEEKLY HOURS OF LABOUR.							
31st December, 1939 ..	43.88	44.42	44.01	45.96	45.38	45.10	44.36
" " 1949 ..	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1950 ..	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1951 ..	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1952 ..	40.00	40.00	40.00	40.00	40.00	40.00	40.00
" " 1953 ..	40.00	40.00	40.00	40.00	40.00	40.00	40.00

INDEX NUMBERS.

(Base : Weighted Average for Australia (49 08). 30th April, 1914 = 1,000).

31st December, 1939 ..	894	905	897	936	925	919	904
" " 1949 ..	814	814	814	814	814	814	814
" " 1950 ..	814	814	814	814	814	814	814
" " 1951 ..	814	814	814	814	814	814	814
" " 1952 ..	814	814	814	814	814	814	814
" " 1953 ..	814	814	814	814	814	814	814

(a) See note (a) to table on page 260.

5. Nominal and Effective Wages.—(i) *General.* Index numbers of wage rates are said to be *nominal* when they represent changes in the wage rates themselves but are described as *effective* or *real* when they represent changes in equivalent purchasing power, that is, the purchasing power of the corresponding wages in terms of some definite composite unit or regimen the cost of which can be ascertained at different times. The relation between *nominal* and *effective* or *real* wages was discussed at some length in *Labour Report* No. 6, and was also referred to in *Labour Report* No. 11.

Prior to 1936 it was the practice of this Bureau to compute effective wage index numbers by dividing the nominal wage index numbers by the corresponding retail price index numbers for food, groceries and rent of all houses ("A" series). While wage rates were generally varied on the basis of the "A" series index numbers there was a good deal to be said for this procedure. When the Commonwealth Court abandoned the "A" series, the merits of the "C" series for "deflating" nominal wage rates were strengthened and real wages to the end of 1937 were measured in terms of their purchasing power over both regimens. Since 1938 when computation of the "A" series was discontinued, real wages have been measured in terms of their purchasing power over the "C" series only. The "C" series covers food, groceries, rent of four and five-roomed houses, clothing and miscellaneous household requirements.

(ii) *Nominal Weekly Wage Index Numbers—Adult Males, States, 1911 to 1953.* The following table shows for the period 1911 to 1953 the weighted average nominal weekly rates of wage payable for adult males in each State, the weighted average rate for Australia in 1911 being taken as the base (= 1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities. The index numbers for 1911 are based on rates current at the end of December, annual averages not being available. For 1914 and subsequent years, however, the index numbers are based on the average rates current at the end of the four quarters of each year.

NOMINAL WAGE(a) INDEX NUMBERS : ADULT MALES.

(Base : Weighted Average Nominal Wage(a) for Australia, 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1941.	1949.	1950.	1951.	1952.	1953.
N.S. Wales ..	1,003	1,093	1,862	2,012	1,851	1,874	2,024	3,259	3,649	4,588	5,367	5,699
Victoria ..	985	1,062	1,803	1,964	1,683	1,808	1,984	3,200	3,584	4,458	5,156	5,451
Queensland ..	997	1,035	1,879	1,976	1,769	1,885	1,981	3,146	3,548	4,377	5,113	5,280
South Australia ..	1,013	1,061	1,697	1,891	1,580	1,725	1,897	3,150	3,503	4,376	5,124	5,384
W. Australia ..	1,152	1,223	1,832	1,960	1,745	1,956	2,106	3,226	3,638	4,557	5,325	5,647
Tasmania ..	799	1,027	1,745	1,840	1,625	1,738	1,895	3,149	3,472	4,441	5,176	5,718
Australia ..	1,000	1,081	1,826	1,972	1,752	1,846	1,997	3,210	3,596	4,495	5,241	5,539

(a) For a full week's work (excluding overtime).

(iii) *Effective or Real Wage Index Numbers—Adult Males, States, 1911 to 1953.* In obtaining the effective wage index numbers in the following table, the nominal wage index numbers shown above have been divided by the corresponding retail price index numbers for the capital city and multiplied by 1,000. Since the "C" series index numbers were not compiled for periods prior to November, 1914, it has been assumed that fluctuations between 1911 (the base of the table) and 1914 in the "C" series would have been similar to the fluctuations observed in the "A" series. A table showing effective or real wage index numbers from 1901 to 1937 measured in terms of purchasing power over the "A" series regimen appeared in earlier issues of the Official Year Book (see No. 37, page 473).

EFFECTIVE OR REAL WAGE(a) INDEX NUMBERS : ADULT MALES.

Measured in terms of purchasing power over the "C" series regimen.

(Base : Weighted Average Real Wage(a) in Australia in 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1941.	1949.	1950.	1951.	1952.	1953.
N.S. Wales	925	1,073	1,130	1,210	1,207	1,187	1,365	1,380	1,430	1,426	1,450
Victoria	954	1,084	1,164	1,200	1,180	1,187	1,363	1,381	1,429	1,432	1,438
Queensland	1,022	1,227	1,290	1,316	1,306	1,210	1,407	1,453	1,498	1,494	1,490
South Australia	914	1,034	1,090	1,137	1,147	1,158	1,362	1,388	1,439	1,430	1,445
W. Australia	1,043	1,096	1,152	1,189	1,308	1,279	1,370	1,426	1,477	1,479	1,483
Tasmania	902	984	1,108	1,120	1,153	1,142	1,338	1,371	1,438	1,432	1,436
Australia ..	1,000	948	1,087	1,151	1,210	1,211	1,194	1,367	1,389	1,439	1,438	1,450

(a) For a full week's work (excluding overtime).

In the table above, the effective wage index numbers are computed to the one base, that of Australia for 1911. As the index numbers are comparable in all respects, comparisons may be made as to the increase or decrease in the effective wage index number for any State over any period of years.

(iv) *Effective or Real Wage Index Numbers—Adult Males, Australia, 1901 to 1950.* In earlier issues of the Official Year Book (see No. 39, page 410) a table was included showing similar index numbers for Australia as a whole under both the "A" and "C" series at intervals from 1901 to 1950.

§ 3. Average Weekly Wage Earnings.

1. *Average Weekly Total Wages Paid and Average Earnings, All Industries.*—The following figures are derived from employment and wages recorded on Pay-roll Tax returns (which cover approximately 80 per cent. of the total employment for Australia) and from estimates of the unrecorded balance. The figures relate to civilian wages and salaries only, pay and allowances of members of the armed forces being excluded.

AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS.

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
AVERAGE WEEKLY TOTAL WAGES PAID. (£'000.)							
1945-46 ..	4,966	3,378	1,563	947	689	344	11,887
1946-47 ..	5,838	3,958	1,770	1,150	827	409	13,952
1947-48 ..	6,976	4,719	2,069	1,369	954	492	16,579
1948-49 ..	8,133	5,540	2,503	1,644	1,120	580	19,520
1949-50 ..	9,018	6,370	2,838	1,894	1,315	672	22,107
1950-51 ..	11,385	7,916	3,501	2,389	1,639	817	27,647
1951-52 ..	14,364	9,816	4,319	3,018	2,108	1,059	34,684
1952-53 ..	15,090	10,490	4,750	3,311	2,344	1,178	37,163
1953-54 ..	16,043	11,305	5,065	3,561	2,586	1,280	39,840

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT.(c)
(£.)

1945-46 ..	6.57	6.59	5.95	5.89	6.04	5.67	6.37
1946-47 ..	6.81	6.86	6.00	6.19	6.18	5.94	6.59
1947-48 ..	7.73	7.80	6.58	7.02	6.87	6.72	7.44
1948-49 ..	8.73	8.84	7.63	8.03	7.75	7.56	8.44
1949-50 ..	9.50	9.78	8.34	8.83	8.65	8.49	9.26
1950-51 ..	11.46	11.70	9.82	10.58	10.23	9.99	11.09
1951-52 ..	14.24	14.20	11.93	13.13	12.80	12.59	13.65
1952-53 ..	15.50	15.46	13.32	14.58	14.13	13.97	14.95
1953-54 ..	16.15	16.27	14.05	15.30	15.04	14.92	15.69

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State, and because the average ratio of female to male earnings may vary between States, precise comparisons between average earnings in different States cannot be made on the basis of the figures above.

2. Average Weekly Wage Earnings Index Numbers.—The following table shows, for "All Industries" and for "Manufacturing", the movement in average weekly wage earnings from 1945-46 to the June Quarter, 1954. The "All Industries" index is based on Pay-roll Tax returns and other data. The index for manufacturing industries for the years 1945-46 to 1952-53 is based on the average earnings of male wage and salary earners employed in factories as disclosed by annual factory returns (see Chapter XXIV.—Manufacturing Industry, § 8, para. 2 (14)); figures subsequent to June, 1953 are preliminary estimates based on Pay-roll Tax returns.

The index numbers show for "All Industries" and "Manufacturing" the movement in average earnings over a period of time. They do not, however, give, at any point of time, a comparison of actual earnings in the two groups. The base of each series is the year 1945-46 = 1,000 and both series have been seasonally adjusted.

AVERAGE WEEKLY WAGE EARNINGS(a) INDEX NUMBERS : AUSTRALIA.

SEASONALLY ADJUSTED.

(Base of each Series : Year 1945-46 = 1,000.)

Year.	All Industries.(b)	Manufacturing.	Quarter.	All Industries.(b)	Manufacturing.
1945-46 ..	1,000	1,000	1951-52—March Qtr.	2,183	2,264
1946-47 ..	1,037	1,056	June ..	2,249	2,310
1947-48 ..	1,164	1,206	1952-53—Sept. ..	2,305	2,362
1948-49 ..	1,322	1,365	Dec. ..	2,354	2,383
1949-50 ..	1,451	1,505	March ..	2,362	2,405
			June ..	2,377	2,427
1950-51 ..	1,742	1,810	1953-54—Sept. ..	2,445	2,458
1951-52 ..	2,145	2,213	Dec. ..	2,436	2,456
1952-53 ..	2,350	2,394	March ..	2,491	2,531
1953-54 ..	2,462	2,490	June ..	2,477	2,513

(a) Including salaries. (b) Average earnings per male unit employed. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings.

§ 4. Basic Wages in Australia.

1. **General.**—The concept of a “basic” or “living” wage is common to rates of wage determined by industrial authorities in Australia. Initially the concept was interpreted as the “minimum” or “basic” wage necessary to maintain an average employee and his family in a reasonable state of comfort. However, it is now generally accepted “that the dominant factor in fixing the basic wage is the economic or productivity factor and that the basic wage must be the highest that industry as a whole can pay”.*

Under the Commonwealth Conciliation and Arbitration Act the Commonwealth Court of Conciliation and Arbitration may, for the purpose of preventing or settling an industrial dispute extending beyond the limits of any State, make an order or award “altering the basic wage (that is to say, that wage, or that part of a wage, which is just and reasonable for an adult male [female], without regard to any circumstance pertaining to the work upon which, or the industry in which, he [she] is employed) or the principles upon which it is computed”. In practice, the Court holds general basic wage inquiries from time to time and its findings are then applied to industrial awards within its jurisdiction. In New South Wales and South Australia, in general, the State industrial authorities are required to adopt the relevant basic wage prescribed by the Commonwealth Court of Conciliation and Arbitration. In Victoria and Tasmania, where the Wages Boards systems operate, no provision is included in the industrial Acts for the declaration of a basic wage, although, in fact, the Wages Boards have generally adopted basic wages based on those of the Commonwealth Court. In Queensland and Western Australia the determination of a basic wage is a function of the respective State Arbitration or Industrial Courts and (subject to State law) they have regard to rates determined by the Commonwealth Court.

In addition to the basic wage, “secondary” wage payments, including margins for skill, loadings and other special considerations peculiar to the occupations or industry are determined by these authorities. The basic wage, together with the “secondary” wage, where prescribed, make up the “minimum” wage for a particular occupation. The term “minimum wage” as distinct from the basic wage is used currently to express the lowest rate payable for a particular occupation or industry.

2. **The Commonwealth Basic Wage.**—(i) *Early Judgments.* The principle of a living or basic wage was propounded as far back as 1890 but it was not until 1907 that a wage, as such, was declared by a Court in Australia. The declaration was made by way of an order in terms of Section 2 (d) of the Excise Tariff 1906 in the matter of an application by H. V. McKay that the remuneration of labour employed by him at the Sunshine Harvester Works, Victoria, was “fair and reasonable”. Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, defined the standard of “a fair and reasonable” minimum wage for unskilled labourers as that standard appropriate to “the normal needs of the average employee, regarded as a human being living in a civilized community”.† The rate declared was 7s. per day or £2 2s. per week for Melbourne, the amount considered reasonable for “a family of about five”.

The “Harvester” standard was adopted by the Commonwealth Court of Conciliation and Arbitration for incorporation in its awards, and practically the same rates continued until 1913, when the Court took cognizance of retail price index numbers, covering food and groceries and rent of all houses (“A” series) for the 30 more important towns of Australia, which had been published by the Commonwealth Statistician for the first time in the preceding year. The basic wage rates for towns were thereafter varied with regard to variations in the respective retail price index numbers. Court practice was to equate the retail price index number 875 for Melbourne for the year 1907 to the “Harvester” rate of 42s. per week (or the base of the index (1,000) to 48s. per week).

* 44 C.A.R., p. 57.

† 2 C.A.R., p. 3.

At intervals thereafter as awards came before it for review, the Court usually revised the basic wage rate of the award in proportion to variations in the retail price index. In some country towns certain "loadings" were added by the Court to wage rates so derived to offset the effect of lower housing standards, and consequently of house rents, on the index numbers for these towns.

Over the period of its operation, the adequacy or otherwise of the "Harvester" standard was the subject of much discussion, the author of the judgment himself urging on several occasions the need for its review. During the period of rapidly rising prices towards the end of the 1914-18 War strong criticism developed that this system did not adequately maintain the "Harvester" equivalent. A Royal Commission was appointed in 1919 to inquire as to what it would actually cost a man, wife and three children under fourteen years of age to live in a reasonable standard of comfort, and as to how the basic wage might be automatically adjusted to maintain purchasing power. The Commission's Report was presented in 1920. An application by the Unions to have the amounts arrived at by the inquiry declared as the basic wage was not accepted by the Court because they were considerably in advance of existing rates and grave doubts were expressed by members of the Court as to the ability of industry to pay such rates. Further details of the recommendations of the Commission were given in *Labour Report* No. 40, p. 106.

The system of making automatic quarterly adjustments of the basic wage in direct ratio to variations in the retail price index ("A" Series) was first introduced in 1921. The practice then adopted was to calculate the adjustments to the basic wage quarterly on the index number for the preceding quarter. Previously, adjustments had been made sporadically in relation to retail price indexes for the previous calendar year or the year ended with the preceding quarter. The practice adopted by the Commonwealth Court in 1921 of making automatic quarterly adjustments on a sliding scale continued until the Court's judgment of 12th September, 1953.

In 1922 an amount known as the "Powers' 3s." was added by the Court as a general "loading" to the weekly basic wage for the purpose of maintaining during a period of rising prices the full equivalent of the "Harvester" standard. This loading continued until 1934.

(ii) *Basic Wage Inquiries, 1930-31, 1932, 1933.* No change was made in the method of fixation and adjustment of the basic wage until the onset of depression, which began to be felt severely during 1930. Applications were then made to the Court for some greater measure of reduction of wages than that which resulted from the automatic adjustments due to falling retail prices. The Court held a general inquiry, and, while declining to make any change in the existing method of calculating the basic wage, reduced all wage rates under its jurisdiction by 10 per cent. from 1st February, 1931. The Court refused in June, 1932, applications by employee organizations for the cancellation of the 10 per cent. reduction of wage rates. In May, 1933 the Court again refused to cancel the 10 per cent. reduction in wage rates, but decided that the existing method of adjustment of the basic wage in accordance with the "A" Series retail price index number had resulted in some instances in a reduction of more than 10 per cent. In order to rectify this the Court adopted the "D" Series of retail price index numbers for future quarterly adjustments of the basic wage.

Particulars of the 1930-31 and the 1932 Inquiries may be found in *Labour Report* No. 22, pp. 45-48 and of the 1933 Inquiry in *Labour Report* No. 23, pp. 45-46.

(iii) *Basic Wage Inquiry, 1934.* A summary of the judgment delivered on 17th April, 1934, is shown in Official Year Book No. 29, page 545. Until this judgment the "Harvester" standard, adjusted to retail price variations, continued to be the theoretical basis of the wage of the Commonwealth Court. The new rate for the six capital cities was in effect the same as that previously paid under the "A" Series, without the "Powers' 3s." and without the 10 per cent. reduction which then ceased to operate.

Automatic quarterly adjustment of the basic wage was transferred from the "A" and the "D" Series to the "C" Series Retail Price Index. The base of the index (1,000) was taken by the Court as equal to 81s. per week. This gave rates as declared on this occasion for the capital cities on the basis of their respective index numbers ranging from 61s. for Brisbane to 67s. for Sydney and Hobart, the average wage for the six capital cities being 65s.

(iv) *Basic Wage Inquiry, 1937.* In May, 1937, the Commonwealth Court heard an application by the combined unions for an increase in the basic wage. The unions asked that the equivalent of the base (1,000) of the "C" Series Index be increased from 81s. to 93s. which on index numbers then current would have represented an average increase of about 10s. per week. The chief features of the judgment delivered on 23rd June, were :—

(a) Amounts were added to the basic wage not as an integral, and therefore adjustable, part of that wage, but as "loadings" additional to the rates payable under the 1934 judgment, which were referred to in the judgment as the "needs" portion of the total resultant basic wages. These loadings, commonly referred to as "Prosperity" loadings, ranged, for capital cities, from 4s. to 6s., that for the "Six Capitals" being 5s.

(b) The basis of the adjustment of the "needs" portion of the wage in accordance with the variations shown by retail price index numbers was transferred from the "C" series to a special "Court" series based upon the "C" series (see page 244).

(c) Female and junior rates were left for adjustment by individual Judges when dealing with specific awards.

The main parts of the judgment are reprinted in Official Year Book No. 30, pp. 564-75 and in *Labour Report* No. 28, pp. 77-87.

(v) *Basic Wage Inquiry, 1940.* On 5th August, 1940 the Full Court commenced the hearing of an application by the combined unions for an increase in the existing basic wage by raising the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series was based) from 81s. to 100s. per week, and the incorporation of the existing "Prosperity" loadings in the new rate mentioned. In its judgment of 7th February, 1941, the Court unanimously refused to grant any increase, mainly owing to the uncertainty of the economic outlook under existing war conditions (see (vi) following). The application was stood over for further consideration.

The Chief Judge stated : "The Court has always conceded that the 'needs' of an average family should be kept in mind in fixing a basic wage. But it has never, as the result of its own inquiry, specifically declared what is an average family, or what is the cost of a regimen of food, clothing, shelter and miscellaneous items necessary to maintain it in frugal comfort, or that a basic wage should give effect to any such finding. In the end economic possibilities have always been the determining factor what should be sought is the independent ascertainment and prescription of the highest basic wage that can be sustained by the total of industry in all its primary, secondary and ancillary forms".*

The Chief Judge also suggested that the more logical system would be to grade the basic wage according to family responsibilities by means of a comprehensive system of child endowment, and that if a scheme of this nature were established, future fixations of the basic wage would be greatly simplified.†

(vi) "*Interim*." *Basic Wage Inquiry, 1946.* As the result of (a) an application made by the Commonwealth Attorney-General for the restoration to the Full Court List of certain adjourned 1940 basic wage applications (see (v) above), (b) a number of fresh cases which had come to the Court since 1941, and (c) an application by the combined unions for an "interim" basic wage declaration, the Court commenced the hearing of this case on 25th November, 1946. Judgment was delivered on 13th December, 1946 whereby an increase of 7s. per week was granted in the "needs" portion of the basic

* 44 C.A.R., pp. 47-8. † Legislation covering a scheme to become operative on 1st July, 1941, was passed by the Commonwealth Parliament on 3rd April, 1941. For details see Chapter XIV.—Welfare Services.

wage then current, the rate for the Six Capital Cities as a whole being increased from 93s. to 100s. per week. For automatic quarterly adjustments a new "Court" Index (Second Series) (Base 1923-27 = 87.0) was adopted. All "loadings" on the basic wage were retained. Further particulars of this judgment may be obtained from *Labour Report* No. 38, page 79.

(vii) *Basic Wage Inquiry, 1949-50.* This finalized the case begun in 1940 and continued in 1946 (see above). Evidence was completed on 22nd August, 1950, and the three judges (Kelly, C.J., Foster and Dunphy, J.J.) delivered separate judgments on 12th October, 1950. In these judgments, which were in the nature of general declarations, a majority of the Court (Foster and Dunphy, J.J.) was of the opinion that the basic wage for adult males should be increased by £1 per week, and that for adult females should be 75 per cent. of the adult male rate. Kelly, C.J., dissenting, considered that no increase in either the male or female wage was justified.

On 24th October, 1950, and 23rd November, 1950, the Court made further declarations regarding the "Prosperity" loading of 1937 (see page 270) which was being paid at rates between 3s. and 6s. per week according to localities, etc., and the future basis of quarterly adjustments. The "Prosperity" loading was standardized at a uniform rate of 5s. per week for all localities and was declared to be an adjustable part of the basic wage. The Court also declared that the "War" loadings were not part of the basic wage.

With regard to other "loadings" the Court on 17th November, 1950 proceeded to examine the individual awards in the claims before it, for the purpose of determining to what extent such "loadings" formed part of the basic wage. Any "loading" declared to be part of the basic wage ceased to be paid as a separate entity, but apart from the special case of the Australian Capital Territory there were very few "loadings" which fell within this category.

The new rates operated from the beginning of the first pay-period in December, 1950, in all cases being the "needs" rate (Second Series) on the indexes of September quarter, 1950, plus a flat-rate addition of £1, together with the standardized "Prosperity" loading of 5s. (see above).

The basic wage rate for the Six Capital Cities (Weighted Average) arrived at by the Court after applying the foregoing declarations was £8 2s., comprising £6 17s. "needs" (Second Series) plus 5s. uniform "Prosperity" loading plus the £1 addition. The declaration provided that the whole of this basic wage would be subject to automatic quarterly adjustments as from the beginning of the first pay-period commencing in February, 1951, on the basis of the index numbers for the December quarter, 1950. For this purpose the new rate of £8 2s. was equated to the "C" Series retail price index number 1572 for the Six Capital Cities (Weighted Average) for September quarter, 1950. From this equation was derived a new "Court" Index (Third Series) with 103.0 equated to 1,000 in the "C" Series Index.

The basic wage rates operative in November, 1950, are shown below in comparison with those operative from the beginning of the first pay-period commencing in December, 1950:—

Date of Operation.	Sydney.	Mel-bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
November, 1950 ..	146 0	143 0	135 0	137 0	139 0	139 0	142 0
December, 1950 ..	165 0	162 0	154 0	158 0	160 0	160 0	162 0

Further details of this judgment are given in *Labour Report* No. 40, page 81.

(viii) *Basic Wage and Standard Hours Inquiry, 1952-53.* On 5th August, 1952, the Commonwealth Court of Conciliation and Arbitration began hearing claims by—

- (1) The Metal Trades Employers Association and other employers' organizations—
 - (a) that the basic wage for adult males be reduced ;
 - (b) that the basic wage for adult females be reduced ;
 - (c) that the standard hours of work be increased ;
 - (d) that the system of adjusting the basic wages in accordance with variations occurring in retail price index numbers be abandoned.
- (2) The Metal Trades Federation, an association of employees' organization, that the basic wage for adult males be increased, which would also result in increasing the amount, though not the proportion it bears to the basic wage for adult males, of the basic wage for adult females.

A number of Governments, organizations and other bodies obtained leave to intervene and in this role the Australian Council of Trade Unions supported the claims of the Metal Trades Federation.

The Court consisted of Kelly *C.J.*, Foster, Kirby, Dunphy, Wright, McIntyre and Morgan, *J.J.*, but before the hearing of evidence commenced Wright *J.* withdrew and during the hearing of the case Foster *J.* withdrew from the bench. The Court gave its decision on 12th September, 1953 and stated that reasons for its decision would be delivered later. Before the reasons for the judgment could be delivered McIntyre *J.*, who had been ill during the case, died.

In the early stages of the case the employers applied for an immediate and separate hearing of the question of suspension of the basic wage adjustment provisions in awards. The Court however, after hearing argument, indicated that it was not satisfied that a sufficient case had been made out for such a separate hearing.

Evidence in the employers' case began on 16th September, 1952. On completion of the employers' case the counsel for employee organizations submitted that there was "no case to answer" and asked for the dismissal of the case. The Court rejected this claim and the hearing of evidence for the employee organizations was concluded on 11th September, 1953.

The decision of the Court, announced on 12th September, 1953, was expressed in the following terms:—

"1. The employers' applications for reduction of the current basic wages for adult males and for reduction of the current basic wages for adult females are refused.

2. The employers' applications for an increase of the standard hours of work in the industries covered thereby are refused.

3. The employers' applications for omission or deletion of clauses or sub-clauses providing for the adjustment of basic wages are granted.

4. The Unions' applications for increases of basic wages are refused.

The Court makes orders accordingly, to operate as from to-day. The reasons for the above decisions will be delivered at a later date. The form of the appropriate orders will be settled by the Industrial Registrar." *

The reasons for the above decision were delivered on 27th October, 1953.

The Court in the course of its judgment said that in the present case nothing had been put before the Court in support of a departure from its now well established principle that the basic wage should be the highest that the capacity of the community as a whole could sustain. If the Court is at any time asked to fix a basic wage on a true needs basis, the question of whether such a method is correct in principle and all questions as to the size of the family unit remain open.

No evidence was submitted in the inquiry to suggest that the basic wage in its character of a "foundational wage" of providing, or helping to provide, a just and reasonable standard of living to employees whose income is based or dependent upon it, was inadequate, and the arguments of both the employers and employees were directed towards a basic wage based on the capacity of industry to pay.

The Court, in reviewing the claims of the respondents, in the light of the existing economic situation, indicated that although aware of the difficulties besetting industry and of the dependence of Australia's prosperity upon that large part of her productive effort whose rewards are conditioned by good seasons and whose prices are largely beyond its control, the Court was not satisfied that the employers had discharged the onus of proving that the existing situation called for a reduction of general standards either in the matter of the basic wage or in the ordinary working week. The Court was satisfied that there could be, in the existing situation, no increase in the basic wage, as was claimed by the Metal Trades Federation.

The Court decided to discontinue the principle of automatically adjusting the basic wage in accordance with variations in retail price index numbers while the basic wage was assessed on the capacity of industry. It was considered that "the further the Court has withdrawn from relating the basic wage to the fulfilment of any particular standard of needs, the less has become the justification for keeping the nominal wage 'automatically adjusted' during the currency of an award".* Moreover, there was no ground for assuming that the capacity of industry to pay will be maintained at the same level or that it will rise or fall coincidentally with the purchasing power of money. The Court found that the system of automatic adjustments had undoubtedly been an accelerating factor in the rapid increase in prices in Australia particularly in the years 1951 and 1952 and this factor supported the Court's decision to abolish the system.

In regard to the basic wage for female employees the Court decided that no basis for a review of the existing ratio which the female basic wage bears to the male basic wage existed on the material presented to it, the Court being satisfied that industry had the capacity to maintain the existing female basic wage rates.

In rejecting the claim for an increase in the standard hours of work, the Court considered that the industry of the country was healthy and prosperous enough at present to sustain the existing standard.

The Court intimated that time would be saved in future inquiries if the parties to the disputes, in discussing the principle of the "capacity to pay", directed their attention to the broader aspects of the economy, such as indicated by a study of—

- Employment
- Investment
- Production and Productivity
- Overseas Trade
- Overseas Balances
- Competitive position of secondary industry
- Retail Trade.

In order to remove certain misconceptions about the function of the Court it was stated during the course of the judgment that "the Arbitration Court is neither a social nor an economic legislature. Its function under section 25 of the Act is to prevent or settle specific industrial disputes".† However, this function "must be exercised in the social and economic setting of the time at which it makes its decision. It must settle industrial disputes upon terms which seem to it to be just, having regard to conditions which exist at the time of its decision." In addition, the Court stressed that "the primary rule that a claimant is required to substantiate his claim should always be observed".

In accordance with its decision to abolish the automatic adjustment clause from its awards, the Court began, on 21st October, 1953, to deal with awards which were not actually affected by the original order. During this process the Court announced that it had no other method in mind in substitution of the automatic adjustment clauses. In fact the only issue before the Court was the abolition of retention of the adjustment

* Print No. A3282, p. 21.

† Ibid, p. 30.

principle and that issue had been determined. The basic wage as fixed by the Court in the new or amended clauses in awards was that which had become operative in August, 1953, and no provision was made for its automatic quarterly adjustment. The last such adjustment had been made on the "Court" Series Index for June Quarter, 1953.

After the Court had amended all the awards listed before it as a result of applications by one of the parties to the awards, the Court, on its own motion under Section 49 of the Commonwealth Conciliation and Arbitration Act, listed those awards not the subject of an application by one of the parties and then proceeded to delete the clauses providing for the automatic adjustment of the basic wage.

The power of the Commonwealth Court of Conciliation and Arbitration to vary awards not the subject of an application by one of the parties was unsuccessfully challenged in the High Court of Australia.

(ix) *Rates Operative, Principal Towns.* The basic wage rates of the Commonwealth Court of Conciliation and Arbitration for adult males and females, operative as from the beginning of the first pay-period commencing in August, 1953, were as shown in the following table :—

COMMONWEALTH BASIC WAGE : WEEKLY RATES.(a)

City or Town.	Rate of Wage.		City or Town.	Rate of Wage.	
	Males.	Females.		Males.	Females.
	s. d.	s. d.		s. d.	s. d.
New South Wales—			South Australia—		
Sydney	243 0	182 0	Adelaide	231 0	173 0
Newcastle (b) ..	243 0	182 0	Whyalla and Iron Knob (f) ..	236 0	177 0
Port Kembla-Wolongong (b) ..	243 0	182 0	Five Towns (c) ..	230 0	172 6
Broken Hill ..	247 0	185 0	Western Australia—		
Five Towns (c) ..	242 0	181 6	Perth	236 0	177 0
Victoria—			Kalgoorlie	243 0	182 0
Melbourne	235 0	176 0	Geraldton	249 0	187 6
Geelong (d)	235 0	176 0	Five Towns (c) ..	237 0	177 6
Warrnambool (d) ..	235 0	176 0	Tasmania—		
Mildura (e)	235 0	176 0	Hobart	242 0	181 6
Yallourn (d)	241 6	181 0	Launceston	238 0	178 6
Five Towns (c) ..	235 0	176 0	Queenstown	233 0	174 6
Queensland—			Five Towns (c) ..	240 0	180 0
Brisbane	218 0	163 6	Thirty Towns (c) ..	236 0	177 0
Five Towns (c) ..	219 0	164 0	Six Capital Cities (c) ..	236 0	177 0

(a) Operative from the beginning of the first pay-period commencing in August, 1953. Consequent upon the 1952-53 Basic Wage Inquiry the Court announced on 12th September, 1953, the abandonment of the system of automatic adjustment (see page 272). (b) Based on Sydney. (c) Weighted average. (d) Based on Melbourne. (e) Melbourne rate plus 6s. 6d. loading for males; 75 per cent. of male rate for females. (f) Adelaide rate plus 5s. for males; 75 per cent. of male rate for females.

The rate for provincial towns, other than those mentioned above, is 3s. less than that for their respective capital cities.

The following table shows the movements of this wage in all capital cities and the six capital cities as a whole during the years 1939 to 1953.

BASIC WAGE : WEEKLY RATES(a), CAPITAL CITIES, PRESCRIBED BY COMMONWEALTH COURT OF CONCILIATION AND ARBITRATION FOR ADULT MALES.

Date Operative.(b)	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
September, 1939 ..	81 0	81 0	76 0	78 0	77 0	77 0	79 0
November, 1940 ..	85 0	84 0	79 0	80 0	80 0	81 0	83 0
" 1941 ..	89 0	88 0	84 0	84 0	85 0	85 0	87 0
" 1942 ..	97 0	97 0	91 0	93 0	91 0	92 0	95 0
" 1943 ..	99 0	98 0	93 0	94 0	94 0	95 0	97 0
" 1944 ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
" 1945 ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
" 1946 ..	101 0	99 0	94 0	95 0	95 0	97 0	98 0
December, 1946 ..	108 0	106 0	101 0	102 0	102 0	103 0	105 0
November, 1947 ..	112 0	109 0	105 0	106 0	106 0	107 0	109 0
" 1948 ..	122 0	120 0	115 0	116 0	116 0	118 0	119 0
" 1949 ..	132 0	130 0	125 0	126 0	129 0	128 0	129 0
" 1950 ..	146 0	143 0	135 0	137 0	139 0	139 0	142 0
December, 1950 ..	165 0	162 0	154 0	158 0	160 0	160 0	162 0
November, 1951 ..	207 0	199 0	185 0	195 0	197 0	199 0	200 0
November, 1952 ..	237 0	228 0	216 0	229 0	228 0	230 0	231 0
February, 1953 ..	238 0	229 0	215 0	225 0	229 0	232 0	231 0
May, 1953 ..	241 0	232 0	217 0	228 0	231 0	239 0	234 0
August, 1953 (c) ..	243 0	235 0	218 0	231 0	236 0	242 0	236 0

(a) Rates include "prosperity" loadings where applicable.

(b) Rates operative from beginning

of the first pay-period commencing in the month indicated.

(c) Consequent upon the 1952-53 Basic

Wage Inquiry the Court announced on 12th September, 1953, the abandonment of the system of automatic adjustment (see page 272).

3. **Australian Territories.**—In the Australian Capital Territory the rates payable as from the beginning of the first pay-period commencing in August, 1953, were £11 18s. for adult males and £8 18s. 6d. for adult females.

In the Northern Territory there are two basic wages operating, one in respect of areas north of the 20th parallel of South Latitude, generally referred to as the "Darwin" rate and the other in respect of areas south of that parallel and extending down to the 26th parallel (the "Port Augusta" rate).

The basic wage rates payable as from the beginning of the first pay-period commencing in August, 1953, were:—"Darwin" rate, adult males, £12 15s., adult females, £9 11s.; "Port Augusta" rate, adult males, £12 2s., and adult females, £9 18s. 6d.

In addition to the above rates special loadings were prescribed in Northern Territory awards following the fixation of the new basic wage rates operative from November, 1951.

4. **Basic Wage Rates for Females.**—Reference should be made to *Labour Report* No. 41, 1952 (page 83) for an account of the fixation of minimum rates and basic wages for adult females by the Commonwealth Court of Conciliation and Arbitration. At the end of the 1949-50 Basic Wage Inquiry the Commonwealth Court of Conciliation and Arbitration by a majority decision fixed a new basic weekly wage for adult females at 75 per cent. of the corresponding male rate from the beginning of the first pay-period commencing in December, 1950.

5. **State Basic Wages.**—(i) *New South Wales.* The first determination under the New South Wales Industrial Arbitration Act of a standard "living" wage for adult male employees was made on 16th February, 1914, by the Court of Industrial Arbitration.

A Board of Trade established in 1918 with power to determine the "living" wage for adult male and female employees in the State made numerous declarations from 1918 to 1925, but ceased to function after the Industrial Arbitration (Amendment) Act 1926 transferred its powers to the Industrial Commission of New South Wales as from 15th April, 1926.

The adult male rate was determined on the family unit of a man, wife and two children, from 1914 to 1925; a man and wife only in 1927, with family allowances for dependent children; and a man, wife and one child in 1929, with family allowances for other dependent children. With the adoption in 1937 of the Commonwealth basic wage, however, the identification of a specified family unit with the basic wage disappeared.

A table showing the variations in the living wages determined by the industrial tribunals of New South Wales up to 27th April, 1937 was published in earlier issues of the Official Year Book (see No. 37, page 481). Since that date the rates adopted have followed the Commonwealth basic wage.

Shortly after the Commonwealth Court of Conciliation and Arbitration announced its judgment in the 1937 Basic Wage Inquiry the Government of New South Wales amended the *Industrial Arbitration Act* to make the State basic wage agree with the Commonwealth rate ruling in New South Wales, and to adopt, as far as practicable, the general principles of operation laid down by the Commonwealth Court.

The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age was operative in New South Wales from July, 1927 until superseded by the Commonwealth Government Scheme operative from 1st July, 1941, and a brief account of the main features of the system appears in Official Year Book No. 37, pp. 485-6.

Further amendments to the Industrial Arbitration Act were made in 1950 to give effect to the new rates declared by the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry.

Differential basic wage rates for country areas, excepting Broken Hill, and for employees under Crown awards were eliminated by an amendment of the Industrial Arbitration Act in 1951.

The decision of the Commonwealth Court of Conciliation and Arbitration in September, 1953, to discontinue the system of automatic adjustment of the basic wage consequent on changes in the "Court" series retail price index number was considered by the New South Wales Industrial Commission. On 23rd October, 1953, it certified that there had been an alteration in the principles of fixation of the basic wage, and instructed that the automatic adjustment clause be deleted from awards, etc., within its jurisdiction.

As a result, the basic wages applicable for the State (excluding Broken Hill) and operative from the beginning of the first pay-period commencing in August, 1953, have remained unchanged at £12 3s. per week for adult males and £9 2s. for adult females. These rates were payable in November, 1954.

(ii) *Victoria.* There is no provision in Victorian industrial legislation for the declaration of a State basic wage. Wages Boards constituted from representatives of employers, employees and an independent chairman, for each industry group or calling, determine the minimum rate of wage to be paid in that industry or calling. In general, these Boards have adopted a basic wage in determining the rate of wage to be paid.

By an amendment to the Factories and Shops Act in 1934, Wages Boards were given discretionary power to include in their determinations appropriate provisions of relevant Commonwealth Awards. A further amendment to this Act in 1937 made it compulsory for Wages Boards to adopt such provisions of Commonwealth Awards. The 1937 Act, as amended, also gave Wages Boards power to adjust wage rates, "with the variation from time to time of the cost of living as indicated by such retail price index numbers published by the Commonwealth Statistician as the Wages Board considers appropriate". The Wages Boards thus adopted the basic wages declared by the Commonwealth Court of Conciliation and Arbitration and followed that Court's system of adjusting the basic wage in accordance with variations in retail price index numbers.

After the Commonwealth Court of Conciliation and Arbitration discontinued the system of automatic adjustment of the Commonwealth basic wage in September, 1953, a number of Wages Boards met in November, 1953, and deleted references to these adjustments. However, an amendment to the Factories and Shops Act required Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers.

The basic wages generally payable under the Victorian Wages Boards determinations from the beginning of the first pay-period commencing in November, 1954, were £11 14s. for adult males and £8 15s. 6d. for adult females.

(iii) *Queensland.* The first formal declaration of a basic wage (£4 5s. for adult males) by the Queensland Court of Industrial Arbitration was gazetted on 24th February, 1921. Prior to this declaration the rate of £3 17s. per week for adult males had been generally recognized by the Court in its awards as the basic or living wage. The Queensland Industrial Conciliation and Arbitration Act provides that any basic wage declared must at least maintain an employee, his wife and family of three children in a fair and average standard of comfort.

The rates declared by the Queensland Court at various dates are shown in the table on page 96 of *Labour Report* No. 42, 1953.

From 21st April, 1942, the Queensland Industrial Court adopted the practice of making quarterly declarations of the basic wage on the basis of variations in the "C" Series retail price index number for Brisbane.

The Queensland Industrial Court granted increases of 7s. and 5s. to the basic wages for adult males and adult females respectively, payable from 23rd December, 1946, following the "interim" basic wage judgment of the Commonwealth Court of Conciliation and Arbitration announced earlier in December, 1946.

Following the decision of the Commonwealth Court of Conciliation and Arbitration to increase the male and female basic wages from December, 1950, the Queensland Industrial Court conducted an inquiry as to what change, if any, should be made to the State basic wage for Queensland. The Industrial Court granted an increase of 15s. weekly to both adult males and adult females, operative from 7th December, 1950. The new male rate was identical with the Commonwealth basic wage for the Brisbane metropolitan area. The basic wage payable to adult females was approximately 66 per cent. of the male rate.

In January, 1953, the Queensland Industrial Court departed from the practice (established in 1942) of varying the basic wage in accordance with quarterly variations in the "C" series of retail price index numbers. If the practice had been continued,

a reduction of one shilling in the basic wage for adult males from January, 1953, would have been made. The Court was not satisfied, however, that the movement in the "C" series index for Brisbane for December quarter 1952 was a true representation or reflex of the economic position for Queensland as a whole and so declined to make any alteration to the then existing basic wage. Quarterly adjustments were made in the following four quarters although employers' organizations sought their discontinuance in October, 1953 and January, 1954.

On 11th June, 1954, the Court, in announcing its decision on the Basic Wage Inquiry which commenced in March, 1954, stated there would be no change in the basic wage previously declared in February, 1954.

At subsequent hearings consequent on the movement in the "C" series of retail price index numbers for Brisbane in respect of the quarters ended June and September, 1954, the Court again decided not to vary the existing basic wage rates.

As a result the basic wage rates of £11 5s. for adult males and £7 10s. for adult females payable from 1st February, 1954 in the Southern Division (Eastern District), in accordance with the basic wage declaration of 12th February, 1954, were still in operation during November, 1954.

The rates shown above are applicable throughout the Southern Division (Eastern District), which includes the metropolitan area; allowances are added for the following divisions—Northern (Eastern District) 10s., Northern (Western District) 17s. 4d., Mackay 5s. 6d., and Southern (Western District) 7s. 4d. Half of these allowances are granted to females.

(iv) *South Australia.* The Industrial Code 1920-1951 provides that the Board of Industry shall after public inquiry declare the living wages to be paid to adult male and female employees. The Board has power also to fix different rates to be paid in defined areas.

The family unit was not specifically defined in the Code, but the South Australian Industrial Court in 1920 decided that the average employee in respect of whom the living wage is to be declared is a man with a wife and three children.

The first declaration by the Board of Industry was made on 15th July, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. per week. A table showing the living wages declared from time to time appears on page 98 of *Labour Report* No. 42, 1953.

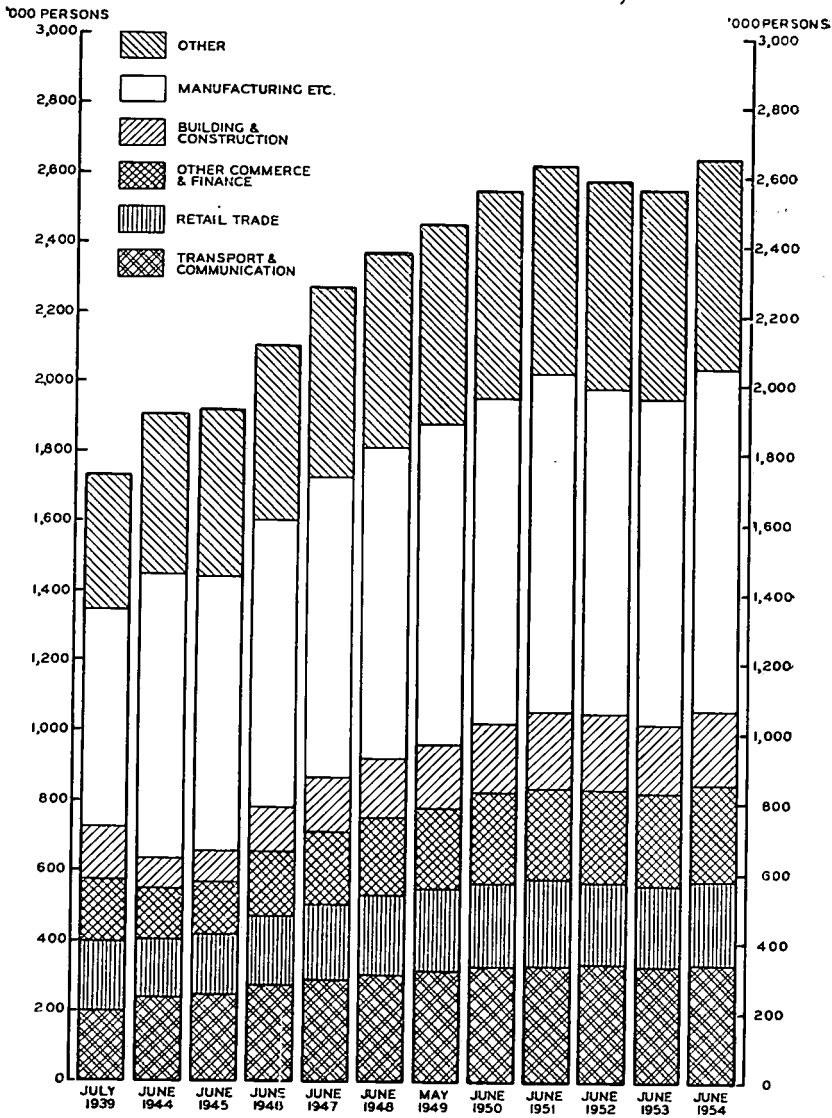
Following the "interim" increase in the "needs" basic wage of the Commonwealth Court of Conciliation and Arbitration announced on 13th December, 1946, the South Australian Government made a provision in the Economic Stability Act, 1946 for the declaration by the Governor of a "living wage" based on the Commonwealth basic wage for Adelaide. This action was taken because the Board of Industry had made a determination, on 5th September, 1946 and under the Industrial Code was not able to make a determination for a further six months.

The Industrial Code Amendment Act, 1949 made provision for the quarterly adjustment of the "living wage" in accordance with the variations in the Commonwealth basic wage for Adelaide. In effect this made the State "living wage" and the Commonwealth basic wage equal from the beginning of the first pay-period commencing in February, 1950. The prescribed adjustment to the female "living wage" was seven-twelfths of that made to the Commonwealth male basic wage. The Board of Industry retained power to amend the "living wage" but any new "living wage" was to be adjusted quarterly as above.

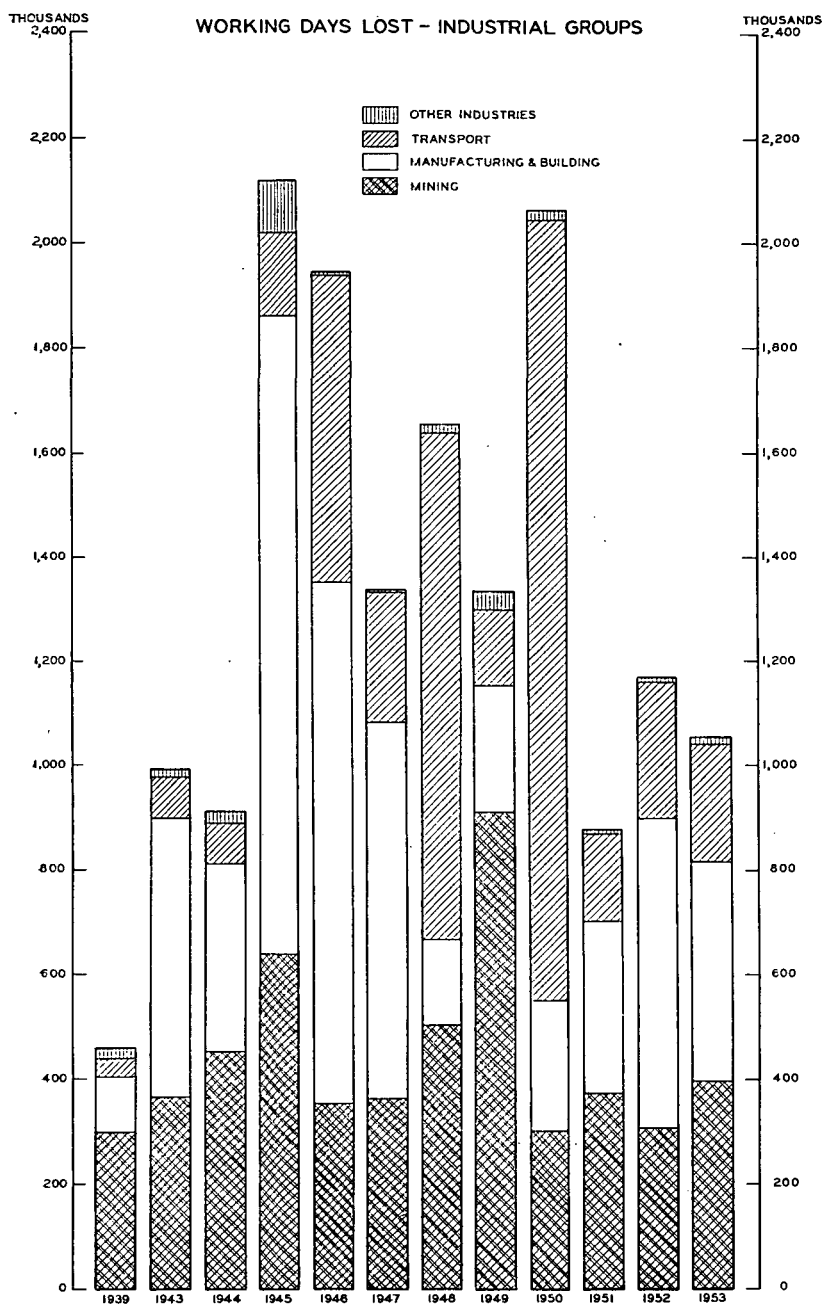
WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: AUSTRALIA 1939 AND 1944 TO 1954

BY MAIN INDUSTRIAL GROUPS

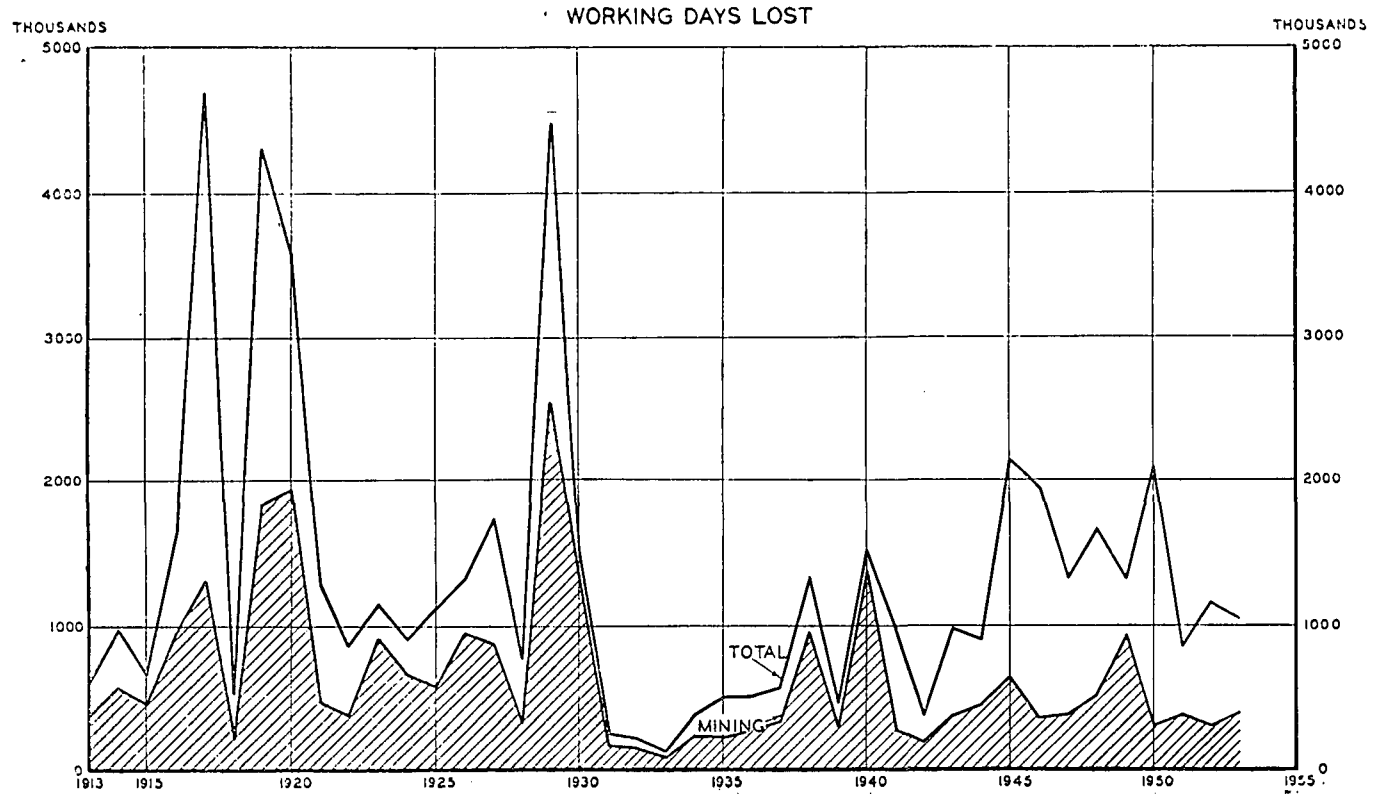
(EXCLUDING RURAL AND PRIVATE DOMESTIC WORKERS)



INDUSTRIAL DISPUTES: AUSTRALIA 1939 AND 1943 TO 1953



INDUSTRIAL DISPUTES: AUSTRALIA, 1913 TO 1953



Following the decision of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry the South Australian Industrial Code was amended to provide for declarations of the "living wage" by proclamation to prevent unjustifiable differences between the State and Commonwealth rates of wage. By proclamation dated 30th November, 1950, the South Australian living wage in the metropolitan area was made identical with the December, 1950, rates fixed by the Commonwealth Court of Conciliation and Arbitration for the metropolitan area of South Australia. The female basic wage, which had been approximately 54 per cent. of the male basic wage, was increased to 75 per cent. of the corresponding male rate.

The basic wages of the Commonwealth Court of Conciliation and Arbitration for Adelaide have remained unchanged from the beginning of the first pay period commencing in August, 1953, consequent on the abandonment of quarterly adjustments. The rates payable in accordance with the quarterly notifications, by the President of the Board of Industry, of the South Australian living wage for the metropolitan area have also remained unchanged over the period at £11 11s. for adult males and £8 13s. for adult females.

(v) *Western Australia.* The Industrial Arbitration Act 1912-1952 provides that the Court of Arbitration may determine and declare a basic wage at any time on its own motion and must do so when requested by a majority of industrial unions or by the Western Australian Employers' Federation, with the limitation that no new determination shall be made within twelve months of the last preceding inquiry.

The term "basic wage" is defined in the Act as "a wage which the Court considers to be just and reasonable for the average worker to whom it applies". In determining what is just and reasonable the Court must take into account not only the "needs of an average worker" but also the "economic capacity of industry" and any other matters the Court deems relevant.

The Act provides that the Court of Arbitration may make adjustments of the "basic wage" each quarter if the official statement supplied to the Court by the State Government Statistician relating to the cost of living shows that a variation of 1s. or more per week has occurred, compared with the preceding quarter. These adjustments apply from the dates of declaration by the Court.

The first declaration of the basic wage by the Court of Arbitration, since the authority to fix one was vested in the Court in 1925, was made on 11th June, 1926. The family unit is not specifically defined in the Act, but it has been the practice of the Court to take as a basis for its calculations a man, his wife and two dependent children. Since that date the principal inquiries have been those of 1938, 1947, 1950 and 1951. A table showing annual and special declarations of the basic wage by the Court of Arbitration will be found in *Labour Report* No. 42, page 100.

Following the judgment of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry the Western Australian Court of Arbitration resumed an inquiry which had been adjourned, to ascertain what change should be made in the State basic wage rates. In its judgment of 7th December, 1950 the Court decided that the basic wage should be increased by £1 per week for adult males and by 15s. per week for adult females. As the result of a subsequent inquiry the basic wage for adult females was increased from 1st December, 1951 to 65 per cent. of the corresponding male rate. This was subject to the condition that the increase in the basic wage should be offset by the reduction in or deletion of existing margins between the basic wage and the total wage as specified by the appropriate award or determination.

The Commonwealth Court of Conciliation and Arbitration announced on 12th September, 1953, the discontinuance of quarterly adjustments. Since this decision the Western Australian Court of Arbitration has exercised its discretionary power, and after reviewing the cost of living statements prepared by the Government Statistician for each quarter from September Quarter, 1953 to September Quarter, 1954, has declined to make, where applicable, any adjustment to the basic wage.

The rates payable in the metropolitan area in accordance with the last quarterly adjustments made by the Court, operative from 27th July, 1953, are £12 6s. 6d. for adult males and £8 0s. 3d. for adult females.

(vi) *Tasmania*. A State basic wage is not declared in Tasmania. Wages Boards are constituted for a number of industries, from representatives of employers and employees and an independent chairman, and determine the minimum rate of wage payable in each industry. In general these Boards have adopted the basic wages of the Commonwealth Court of Conciliation and Arbitration in determining the rate of wage to be paid.

The Wages Board Act gives Wages Boards power to adjust their wage rates with variations in cost of living as indicated by retail price index numbers published by the Commonwealth Statistician. When the Commonwealth Court abandoned the system of automatic adjustments of the basic wage in September, 1953, the Chairman of the Wages Boards stated he was of the opinion that automatic adjustment clauses should be deleted from all Wages Boards determinations. Before Wages Boards met to consider this matter, the wage rates for all determinations were automatically adjusted upwards from the beginning of the first pay-period commencing in November. By early December, 1953, all Wages Boards had met and deleted the automatic adjustment clause from determinations and cancelled the adjustment increases payable from November.

The rates commonly adopted by Tasmanian Wages Boards since the Commonwealth Court's decision to suspend the system of automatic adjustment are £12 2s. for adult males and £9 1s. 6d. for adult females.

(vii) *State Basic Wage Rates*. The "basic" wage rates of State industrial tribunals operative in November, 1953 and November, 1954 are summarized in the following table:—

STATE BASIC WAGES—WEEKLY RATES.

State.	November, 1953.			November, 1954.		
	Date of Operation.	Males.	Females.	Date of Operation.	Males.	Females.
	(a)			(a)		
		<i>s. d.</i>	<i>s. d.</i>		<i>s. d.</i>	<i>s. d.</i>
New South Wales(b)—						
Metropolitan and Country, excluding Broken Hill	Aug., 1953	243 0	182 0	Aug., 1953	243 0	182 0
Broken Hill	Aug., 1953	247 0	185 0	Aug., 1953	247 0	185 0
Victoria(c)	Nov., 1953	237 0	177 6	Nov., 1954	234 0	175 6
Queensland—						
Southern Division (Eastern District), including Brisbane	2.11.53	222 0	149 0	1.2.54(d)	225 0	151 0
Southern Division (Western District)	2.11.53	229 4	152 8	1.2.54(d)	232 4	154 8
Mackay Division	2.11.53	227 6	150 9	1.2.54(d)	230 6	153 9
Northern Division (Eastern District)	2.11.53	232 0	154 0	1.2.54(d)	235 0	156 0
Northern Division (Western District)	2.11.53	239 4	157 8	1.2.54(d)	242 4	159 8
South Australia(e)	Aug., 1953	231 0	173 0	Aug., 1953	231 0	173 0
Western Australia(f)—						
Metropolitan Area	27.7.53	246 6	160 3	27.7.53	246 6	160 3
South-West Land Division	27.7.53	246 0	159 11	27.7.53	246 0	159 11
Goldfield and other areas	27.7.53	249 4	162 1	27.7.53	249 4	162 1
Tasmania(g)	Aug., 1953	242 0	181 6	Aug., 1953	242 0	181 6

(a) Where dates are not quoted wage rates operate from beginning of first pay-period commencing in month shown. (b) Automatic adjustment discontinued from 23rd October, 1953, following decision of the Commonwealth Court of Conciliation and Arbitration on 12th September, 1953 (see page 276). (c) No basic wage declared but rates shown (Melbourne) are those commonly adopted by Wages Boards. The Victorian Factories and Shops (Wages Boards) Act, 1953 (proclaimed 25th November, 1953), requires Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers. (d) Between February and November, 1954 the Queensland Industrial Court declined to make any adjustment to the basic wage rates consequent on quarterly movements in the "C" Series of retail price index numbers. (e) The "living wage" declared for the metropolitan area is also adopted in country areas except at Whyalla where a loading of 5s. is generally payable. The "living wage" is subject to quarterly variation according to the amount of the general automatic quarterly adjustment in the Commonwealth basic wage (discontinued on 12th September, 1953) for Adelaide. (f) The Western Australian Arbitration Court from July, 1953 to November, 1954 declined to adjust the basic wage rates in accordance with movements in the cost of living statistics supplied by the Government Statistician. (g) None declared but rates shown (Hobart) are those commonly adopted by Wages Boards. From 9th December, 1953, automatic adjustment was suspended and the adjustment increases of 10s. for males and 7s. 6d. for females payable from early November, 1953 were cancelled.

§ 5. Child Endowment in Australia.

1. **General.**—The principle of supplementing wages by a payment in respect of dependent children under sixteen years of age became prominent in Australia following the recommendations of the Royal Commission on the Basic Wage, 1920, and was implemented in Australia as described in the following paragraphs. The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.

2. **National Scheme.**—Details of the appointment of another Royal Commission in 1927 and a brief summary of its findings and of consequent Government decisions were given in earlier issues of the Official Year Book (*see* No. 39, page 425).

In 1941, the Commonwealth Government introduced a scheme of child endowment throughout Australia. The main features of the scheme and a summary of the operations under the scheme from 1st July, 1947 to 30th June, 1953 are given in Chapter XIV.—Welfare Services.

3. **Earlier Schemes.**—Consequent upon the operation of the Commonwealth Child Endowment Scheme, appropriate steps were taken for the termination of the schemes operating in the Commonwealth Public Service and in New South Wales. The Commonwealth Public Service Scheme was the first system instituted in Australia and came into operation on 1st November, 1920. In New South Wales an unsuccessful attempt to institute the system was made in 1919 and a scheme was adopted under the Family Endowment Act 1927 which operated from 23rd July, 1927. For further details of these schemes reference may be made to Official Year Book No. 37, pages 485 and 486.

E. EMPLOYMENT AND UNEMPLOYMENT.

§ 1. Employment.

1. **Total Occupied Persons.**—(i) *General.* The following estimates of the total numbers of occupied males and females are based principally on data from the 1933 Census (June), the National Register (July, 1939), the Civilian Register (June, 1943), the Occupation Survey (June, 1945) and the 1947 Census (June). These sources of information have been supplemented by employment details from Pay-roll Tax returns, which first became available for July, 1941. Owing to some difference in coverage, 1947 figures in the following tables differ slightly from Census figures as shown in Chapter IX.—Population. The 1947 figures are subject to revision. Preliminary results of the 1954 Census will be found in the Appendix.

(ii) *Australia.* The estimates in the table below are divided into three categories (a) Defence Forces; (b) all persons fully occupied as employers, or as self-employed in businesses or on farms; and (c) wage or salary earners fully employed, or occupied as casual, part-time, intermittent or seasonal workers. Wage earners unemployed, in the sense that they are incapacitated or have no work to go to, are excluded, as also are persons engaged on Government relief works.

All unpaid "helpers" in non-rural industry have been included with wage and salary earners. Male unpaid "helpers" in rural industry have been included with employers and self-employed persons, as it is considered that the majority of these are sons or other close relatives of farmers working in an unofficial partnership, or as learners with the farm owner. Unpaid female "helpers" on farms are very numerous, but their exact number is not known. Generally, they combine part-time dairy or other farm work with part-time duties in the home. Together with women occupied in unpaid home duties they have been excluded from the category of occupied persons.

Statistics of net enlistments in the Defence Forces shown in the table below represent total enlistments for full-time duty less deaths and discharges. Prior to December, 1941, men in certain age-groups were called-up for short training courses but these men are excluded from the figures. In July, 1941 the number of such men was approximately 50,000.

TOTAL OCCUPIED PERSONS : AUSTRALIA.

('000.)

Year and Month.	Defence Forces (Net Enlistments). (a)	Employers and Self-employed.			Wage and Salary Earners.			Total Occupied Civilians.	Total Occupied Persons, including Forces. (a)
		Rural Indus-try.	Other Indus-tries.	Total.	Rural Indus-try.	Other Indus-tries.	Total.		
1933—June ..	5.8	292.4	248.3	540.7	200.0	992.0	1,192.0	1,732.7	1,738.5
1939—July ..	12.9	300.0	299.0	599.0	202.0	1,293.1	1,495.1	2,094.1	2,107.0
1941—July ..	282.8 <i>b</i>	284.0	208.0	492.0	188.0	1,303.4	1,551.4	2,043.4	2,326.2
1943—June ..	685.0	262.0	150.0	412.0	120.9	1,273.2	1,394.1	1,806.1	2,491.1
1945—June (c) ..	603.5	287.5	187.1	474.6	130.2	1,294.2	1,424.4	1,899.0	2,502.5
1947—June ..	53.2	278.9	286.8	565.7	148.2	1,649.4 <i>d</i>	1,797.6 <i>d</i>	2,363.3 <i>d</i>	2,416.5 <i>d</i>

MALES.

1933—June ..	5.8	292.4	248.3	540.7	200.0	992.0	1,192.0	1,732.7	1,738.5
1939—July ..	12.9	300.0	299.0	599.0	202.0	1,293.1	1,495.1	2,094.1	2,107.0
1941—July ..	282.8 <i>b</i>	284.0	208.0	492.0	188.0	1,303.4	1,551.4	2,043.4	2,326.2
1943—June ..	685.0	262.0	150.0	412.0	120.9	1,273.2	1,394.1	1,806.1	2,491.1
1945—June (c) ..	603.5	287.5	187.1	474.6	130.2	1,294.2	1,424.4	1,899.0	2,502.5
1947—June ..	53.2	278.9	286.8	565.7	148.2	1,649.4 <i>d</i>	1,797.6 <i>d</i>	2,363.3 <i>d</i>	2,416.5 <i>d</i>

FEMALES.

1933—June ..	..	15.1	56.2	71.3	4.4	447.5	451.9	523.2	523.2
1939—July ..	..	16.0	62.0	78.0	4.0	505.6	505.6	643.6	643.6
1941—July ..	1.8	14.0	56.8	70.8	6.0	566.2	662.2	733.0	734.8
1943—June ..	44.0	11.7	34.4	46.1	28.1	682.1	710.2	756.3	800.3
1945—June (c) ..	45.4	17.0	43.1	60.1	23.0	667.1	690.1	750.2	795.6
1947—June ..	0.8	13.8	55.8	69.6	8.1	659.9 <i>d</i>	668.0 <i>d</i>	737.6 <i>d</i>	738.4 <i>d</i>

PERSONS.

1933—June ..	5.8	307.5	304.5	612.0	204.4	1,439.5	1,643.9	2,255.9	2,261.7
1939—July ..	12.9	316.0	301.0	617.0	206.0	1,554.7	2,060.7	2,737.7	2,750.6
1941—July ..	284.6 <i>b</i>	298.0	204.8	502.8	194.0	2,019.6	2,213.6	2,776.4	3,061.0
1943—June ..	729.0	273.7	184.4	458.1	149.0	1,955.3	2,104.3	2,562.4	3,291.4
1945—June (c) ..	648.9	304.5	230.2	534.7	153.2	1,901.3	2,114.5	2,649.2	3,298.1
1947—June ..	54.0	292.7	342.6	635.3	150.3	2,309.3 <i>d</i>	2,465.6 <i>d</i>	3,100.9 <i>d</i>	3,154.9 <i>d</i>

(a) Includes those serving outside Australia. (b) Excludes approximately 50,000 men called up for short training courses. (c) Occupation Survey, 1st June, 1945. (d) Subject to revision. (e) Includes females, in thousands, in private domestic service as follows:—106.7 in June, 1933; 124.5 in July, 1939; 100.0 in July, 1941; 41.5 in June, 1943; 47.6 in June, 1945; and 40.3 in June, 1947.

From June, 1933 to July, 1939, the number of occupied persons of both sexes increased by 488,900, due to the increase of 223,700 in the number of available breadwinners and to the decrease of 265,200 in the number unemployed from 563,200 to 298,000. During the war years from July, 1939 to June, 1943, the number of males occupied as civilians decreased by 288,000, while females occupied as civilians increased by nearly 113,000, representing a net decrease of 175,000 persons. This decrease, together with decrease of unemployment (272,000), normal increase of breadwinners (91,000) and an abnormal war-time increase of 178,000 breadwinners (persons who would not otherwise have been working), balanced the net intake into the Defence Forces at June, 1943 (716,000). The estimate of 659,000 female wage and salary earners employed in non-rural industries as at June, 1947, includes 40,300 private domestics (the Census figure). The remaining 619,600 females in the estimate include females working part-time. The 1947 Census figure for the same industries (i.e., excluding rural and private domestic) was 579,200. Persons working regularly but for considerably less than normal working hours were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

(iii) *States.* The following table shows total occupied males and females in each State in July, 1939, and June, 1947, divided into Defence Forces, Employers and Self-employed, and Wage and Salary Earners.

TOTAL OCCUPIED PERSONS : STATES.

('000.)

State.	Defence Forces (Net Enlistments). (a)		Employers and Self-employed.		Wage and Salary Earners.		Total Occupied Persons, including Forces. (a)	
	July, 1939.	June, 1947.	July, 1939.	June, 1947.	July, 1939.	June, 1947.(b)	July, 1939.	June, 1947.(b)
MALES.								
New South Wales	4.9	23.1	216.2	197.5	596.2	723.6	817.3	944.2
Victoria	4.4	15.9	162.9	158.1	399.5	480.9	566.8	654.9
Queensland	1.0	5.9	95.1	96.9	218.6	255.4	314.7	358.2
South Australia	1.1	2.6	54.6	51.8	127.7	154.4	183.4	208.8
Western Australia	1.0	3.4	47.4	39.8	99.7	115.6	148.1	158.8
Tasmania	0.5	0.8	21.5	20.1	46.9	58.1	68.9	79.0
Australia(c)	12.9	53.2	599.0	565.7	1,495.1	1,797.6	2,107.0	2,416.5
FEMALES.								
New South Wales	..	0.3	28.4	25.4	220.8	268.8	249.2	294.5
Victoria	..	0.4	25.5	22.4	175.3	203.4	200.8	226.2
Queensland	..	0.1	11.1	10.2	71.2	83.2	82.3	93.5
South Australia	..	..	6.0	5.2	47.4	52.9	53.4	58.1
Western Australia	..	..	4.8	4.3	33.2	38.4	38.0	42.7
Tasmania	..	..	2.2	1.9	16.3	19.0	18.5	20.9
Australia(c)	..	0.8	78.0	69.6	565.6	668.0	643.6	738.4
PERSONS.								
New South Wales	4.9	23.4	244.6	222.9	817.0	992.4	1,066.5	1,238.7
Victoria	4.4	16.3	188.4	180.5	574.8	684.3	767.6	881.1
Queensland	1.0	6.0	106.2	107.1	289.8	338.6	397.0	451.7
South Australia	1.1	2.6	60.6	57.0	175.1	207.3	236.8	266.9
Western Australia	1.0	3.4	52.2	44.1	132.9	154.0	186.1	201.5
Tasmania	0.5	0.8	23.7	22.0	63.2	77.1	87.4	99.9
Australia(c)	12.9	54.0	677.0	635.3	2,060.7	2,465.6	2,750.6	3,154.9

(a) Includes those serving outside Australia.
Australian Capital Territory and Northern Territory.

(b) Subject to revision.

(c) Includes Aus-

Between July, 1939 and June, 1947, the occupied population of Australia (including Defence Forces but excluding unemployed, pensioners, retired persons of independent means and dependants) increased by approximately 14.7 per cent. The percentage increase in each State was as follows: New South Wales, 16.1; Victoria, 14.8; Queensland, 13.8; South Australia, 12.7; Western Australia, 8.3; Tasmania, 14.3.

2. *Wage and Salary Earners in Civilian Employment.*—(i) *Australia and States.* Estimates are made monthly of wage and salary earners in employment (excluding employees in rural industry and female domestics in private homes), based on Pay-roll Tax returns and supplementary returns of Government employment. Pay-roll Tax returns cover only a small proportion of wage earners on rural holdings, and practically no private domestic servants. It is not possible to obtain actual numbers of farm employees and private domestic servants except when a Census or quasi-Census such as

Occupation Survey (1st June, 1945) is taken, but estimates have been made from time to time using available data. The next table shows for each State and for Australia as a whole the trend in that section of wage and salary earning employment which it is possible to estimate monthly. Figures are shown as at June, 1933 (Census) and July, 1939 (based on National Register). From July, 1941 (commencement of Pay-roll Tax returns) the estimates are available for each month, and the table shows the level in May, 1949, and in June of the years 1950 to 1954.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT.

(*Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.*)

('000.)

Year and Month.	New South Wales.	Vic-toria.	Queens-land.	South Aus-tralia.	Western Aus-tralia.	Tas-manian.	Aus-tralia. (a)
MALES.							
1933—June	380.6	288.6	139.8	80.5	70.1	29.0	992.0
1939—July	529.9	357.5	172.8	106.7	82.9	37.4	1,203.1
1949—May(')(c) ..	721.4	489.3	230.8	155.0	112.8	57.4	1,787.1
1950—June(b)	740.8	510.7	250.4	165.7	120.5	58.4	1,858.7
1951—June(b)	758.2	525.8	259.3	170.0	125.3	60.2	1,911.5
1952—June(b)	754.4	524.4	258.1	171.5	126.0	61.0	1,908.1
1953—June(b)	734.3	521.6	255.2	170.6	130.2	61.8	1,886.8
1954—June(b)	758.1	539.7	263.7	176.0	135.0	62.8	1,948.4
FEMALES.							
1933—June	125.8	118.2	40.5	26.0	20.6	9.1	340.8
1939—July	168.0	142.9	53.2	34.0	26.2	11.6	437.1
1949—May(b)(c) ..	269.9	202.5	80.1	52.2	37.8	18.8	664.1
1950—June(b)	278.5	210.0	83.1	54.3	39.9	19.4	688.2
1951—June(b)	290.9	219.6	86.1	57.0	41.6	20.3	718.8
1952—June(b)	270.5	206.6	83.8	54.9	40.5	19.8	679.4
1953—June(b)	266.2	205.9	83.7	53.4	41.0	20.1	673.7
1954—June(b)	279.5	217.7	86.1	56.9	42.8	21.0	707.5
PERSONS.							
1933—June	506.4	406.8	180.3	106.5	90.7	38.1	1,332.8
1939—July	697.9	500.4	226.0	140.7	109.1	49.0	1,730.2
1949—May(b)(c) ..	991.3	691.8	319.9	207.2	150.6	76.2	2,451.2
1950—June(b)	1,019.3	720.7	333.5	220.0	160.4	77.8	2,546.9
1951—June(b)	1,049.1	745.4	345.1	227.0	166.9	80.5	2,630.3
1952—June(b)	1,024.9	731.0	341.9	226.4	166.5	80.8	2,587.5
1953—June(b)	1,000.5	727.5	338.9	224.0	171.2	81.9	2,560.5
1954—June(b)	1,037.6	757.4	349.8	232.9	177.8	83.8	2,655.9

(a) Includes Australian Capital Territory and Northern Territory. (b) Subject to revision. (c) Figures for May, 1949 have been used for purposes of annual comparison because of the effects of the coal dispute in June, 1949.

Estimates for recent months for Australia, corresponding to the foregoing, together with details for certain industrial groups, are published regularly in the *Monthly Review of Business Statistics* and the *Monthly Bulletin of Employment Statistics*.

(ii) *Industrial Groups.* The following table shows the total male and female wage and salary earners in civilian employment (excluding employees in rural industry, female private domestics, persons on the paid strength of the Defence Forces and National Service Trainees in camp) subdivided to show the extent of employment provided by Governmental authorities and by private employers respectively. Some principal industrial groups included in the total are shown separately and include both Governmental and private employees, except in the case of retail trade, where there are no Governmental employees.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT : INDUSTRIAL GROUPS, AUSTRALIA.

(Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.)

('000.)

Industrial Group.	July, 1939.	June, 1950. (a)	June, 1951. (a)	June, 1952. (a)	June, 1953. (a)	June, 1954. (a)
MALES.						
Mining and Quarrying	52.2	53.9	55.8	58.2	58.0	58.7
Manufacturing, etc.(b)	456.1	716.4	733.0	721.4	726.4	756.8
Building and Construction	149.7	197.2	212.7	214.0	193.2	205.7
Rail and Air Transport	73.0	100.9	100.9	106.9	104.9	106.3
Other Transport and Communication	112.9	191.9	193.8	193.0	190.2	193.8
Retail Trade	259.7	127.1	129.7	124.8	125.0	128.4
Other Commerce and Finance ..		178.0	188.4	191.2	191.0	198.3
Health		24.8	24.8	25.3	25.5	25.9
Education	22.1	30.7	31.9	33.2	35.4	36.7
Entertainment, Sport and Recreation	17.4	18.0	18.0	18.1	18.2	18.3
Personal Services	37.0	53.9	54.6	53.2	51.6	52.1
Other	95.2	163.9	167.9	168.2	167.4	167.4
Total	1,293.1	1,858.7	1,911.5	1,908.1	1,886.8	1,948.4
Governmental(c)	349.8	551.5	570.4	577.4	567.8	581.4
Private Employers	943.3	1,305.2	1,341.1	1,330.7	1,319.0	1,367.0
Total	1,293.1	1,858.7	1,911.5	1,908.1	1,886.8	1,948.4

FEMALES.

Mining and Quarrying	0.3	0.7	0.8	0.9	0.9	1.0
Manufacturing, etc.(b)	169.0	230.4	241.1	206.3	209.8	226.8
Building and Construction	1.2	3.3	3.8	4.2	4.3	4.7
Rail and Air Transport	2.5	8.0	8.2	8.6	7.7	8.0
Other Transport and Communication	10.1	30.8	31.9	30.9	28.5	28.5
Retail Trade	114.9	113.3	119.1	112.6	109.9	115.3
Other Commerce and Finance ..		64.8	71.3	72.9	71.5	77.0
Health		34.0	65.0	68.7	68.8	70.8
Education	32.0	39.1	39.7	41.8	43.3	44.9
Entertainment, Sport and Recreation	4.0	8.4	8.7	8.6	8.7	8.6
Personal Services	43.0	72.8	72.1	68.9	65.8	67.0
Other	26.1	51.6	54.7	55.0	54.5	54.9
Total	437.1	688.2	718.8	679.4	673.7	707.5
Governmental(c)	55.2	107.6	113.8	115.2	112.0	114.5
Private Employers	381.9	580.6	605.0	564.2	561.7	593.0
Total	437.1	688.2	718.8	679.4	673.7	707.5

PERSONS.

Mining and Quarrying	52.5	54.6	56.6	59.7	58.9	59.7
Manufacturing, etc.(b)	625.1	916.8	974.1	927.7	936.2	983.6
Building and Construction	150.9	200.5	216.5	218.2	197.5	210.4
Rail and Air Transport	75.5	108.9	109.1	115.5	112.6	114.3
Other Transport and Communication	123.0	222.7	225.7	223.9	218.7	222.3
Retail Trade	374.6	240.4	248.8	237.4	234.9	243.7
Other Commerce and Finance ..		212.8	259.7	264.1	262.5	275.3
Health		51.8	59.8	61.0	61.3	60.7
Education	51.1	69.8	71.6	75.0	78.7	81.6
Entertainment, Sport and Recreation	21.4	26.4	26.7	26.7	26.9	26.9
Personal Services	80.0	128.7	126.7	122.1	117.4	119.1
Other	121.3	215.5	222.6	223.2	221.9	222.3
Total	1,730.2	2,516.9	2,630.3	2,587.5	2,560.5	2,655.9
Governmental(c)	405.0	661.1	684.2	692.6	679.8	695.9
Private Employers	1,325.2	1,855.8	1,946.1	1,894.9	1,880.7	1,960.0
Total	1,730.2	2,516.9	2,630.3	2,587.5	2,560.5	2,655.9

(a) Subject to revision. (b) Estimates (subject to revision) based on Pay-roll Tax returns, etc., of employees predominantly engaged in secondary production. The figures include a considerable number of employees outside the scope of the factory employment figures as defined and published in Chapter XXIV.—Manufacturing Industry. (c) Includes employees of Commonwealth, State, Semi-Governmental and Local Government Authorities.

A graph showing wage and salary earners in civilian employment by main industrial groups appears on page 279.

(iii) *Factories.* Actual mid-monthly factory employment derived from the results of annual factory censuses is published in the *Secondary Industries Bulletin* issued by this Bureau.

Additional tables regarding employment in factories may be found in Chapter XXIV.—Manufacturing Industry.

An index of factory employment in Australia, published in the *Monthly Review of Business Statistics*, shows that employment in factories increased steadily throughout 1953-54 to a new post-war peak in June, 1954, which was slightly above the previous peak recorded in November, 1951. For the year 1953-54, the index showed the level of employment in factories to be the same as that for the year 1951-52, which was 70 per cent. higher than the average factory employment for the three years ended June, 1939.

3. **Government Employees.**—(i) *Australia, 1939 and 1950 to 1954.* The following table shows at June in each of the years 1950 to 1954, in comparison with 1939, the number of civilian employees of Commonwealth, State and Semi-Governmental and Local Government authorities. These include all employees of Governmental authorities on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia.

GOVERNMENT EMPLOYEES(a) : AUSTRALIA.

June—	Commonwealth.			State and Semi-Governmental.			Local Government.			Total.		
	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.	Males.	Fe-males.	Persons.
1939(b) ..	56,099	11,764	67,863	233,066	40,586	275,652	58,637	2,887	61,524	349,802	55,237	405,039
1950 ..	156,332	44,970	201,302	338,003	58,209	396,212	59,988	4,453	64,441	554,323	107,632	661,955
1951 ..	160,600	48,063	208,753	348,447	61,090	409,537	62,196	4,751	66,847	571,233	113,904	685,137
1952 ..	157,880	45,117	202,997	359,310	65,061	424,401	61,167	5,111	66,278	578,387	115,289	693,676
1953 ..	159,002	41,571	200,573	349,096	65,129	414,225	59,641	5,315	64,956	567,739	112,015	679,754
1954 ..	156,604	41,579	198,183	363,095	67,466	430,561	61,643	5,493	67,136	581,342	114,538	695,880

(a) See explanation above.

(b) July.

(ii) *Commonwealth and States, etc., June 1953 and 1954.* The numbers of employees of Commonwealth Government authorities in Australia as at June, 1953 and 1954, are shown in the following table, together with the numbers of employees of State, Semi-Governmental and Local Government authorities in each State.

GOVERNMENT EMPLOYEES(a), JUNE, 1953 AND 1954.

Employed by—	June, 1953.			June, 1954.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Commonwealth ..	159,002	41,571	200,573	156,604	41,579	198,183
New South Wales ..	151,390	25,277	176,667	156,721	26,209	182,930
Victoria ..	101,316	20,799	122,115	105,563	21,538	127,101
Queensland ..	64,275	7,510	71,785	68,258	7,604	75,862
South Australia ..	39,304	7,622	46,926	49,441	7,984	48,425
Western Australia ..	36,670	5,938	42,608	37,775	6,117	43,892
Tasmania ..	15,782	3,298	19,080	15,980	3,507	19,487
Total ..	567,739	112,015	679,754	581,342	114,538	695,880

(a) See explanation in para. 3 (i) above.

§ 2. Unemployment.

1. **Total Persons Unemployed.**—The total number of persons unemployed has been recorded only at the dates of the various censuses and quasi-censuses. The census records include all persons who state that they are unemployed, and distinguish between unemployment on account of sickness, accident, scarcity of work, industrial dispute, and all other causes combined. The following table sets out the number of unemployed at the Censuses of 1911, 1921, 1933 and 1947, the National Register, 1939, and the Occupation Survey, 1945. The percentage which the unemployed bore at each date to all wage and salary earners of the same sex, comprising those estimated to be in employment and those unemployed is also shown.

UNEMPLOYMENT (ALL CAUSES) : AUSTRALIA.

Year and Month.	Wage and Salary Earners Unemployed.			Proportion of Wage and Salary Earners Unemployed.		
	Males.	Females.	Total.	Males.	Females.	Total.
	'000.	'000.	'000.	%	%	%
1911—April (Census) . .	48.0	8.3	56.3	4.3	2.7	4.0
1921—April " " . .	139.4	21.5	160.9	10.7	5.7	9.6
1933—June(a) " " . .	460.2	103.1	563.3	27.9	19.1	25.8
1939—July(b) " " . .	264.0	34.0	298.0	15.0	5.7	12.6
1945—June(c) " " . .	39.9	16.2	56.1	2.7	2.3	2.6
1947—June (Census)(d)	66.6	16.9	83.5	3.6	2.5	3.3

(a) The figures shown for 1933 are in excess of those actually recorded at the Census, through an allowance having been made for a number of youths and girls who would normally have been wage and salary earners, but who, on account of the economic depression, having never been employed, were not classed as wage and salary earners. (b) Derived from National Register, 1939. (c) Derived from Occupation Survey, 1945. (d) Persons in the work force who were not at work at the time of the Census.

The estimates and percentages of unemployment given above for periods subsequent to the Census of 1933 should be interpreted in conjunction with the notes below.

The estimates for 1939 were based on the National Register, which covered males aged 18-64 years, and data available from other sources. The proportion of wage earners unemployed in July, 1939, immediately prior to the 1939-45 War, was estimated at approximately 12½ per cent. In July, 1941, it was about 4 per cent. and by June, 1943, under conditions of intensive mobilization of manpower for war purposes, involuntary unemployment was practically nil. Owing to the use on the Occupation Survey (1945) card of the definition "a person normally working for wages but without a job on 1st June", it appears that the 1945 figures exclude some persons who were temporarily absent from their jobs at the date of the survey.

Of the numbers at the 1947 Census shown above 25.6 per cent. were not at work owing to sickness or accident and 26.6 per cent. stated that they were resting. Of the latter, approximately half said they expected to resume their former jobs.

2. **Commonwealth Unemployment and Sickness Benefits.**—Details of conditions governing the payment of unemployment and sickness benefits under the Social Services Act 1947-1954, and tables showing numbers on benefit and payments made, may be found in Chapter XIV.—Welfare Services.

§ 3. Commonwealth Employment Service.

The Commonwealth Employment Service was established under Section 47 of the Re-establishment and Employment Act 1945, and under the Social Services Legislation Declaratory Act 1947.

The principal function of this Service, as set out in Section 48 of the first-mentioned Act, is to provide services and facilities in relation to employment for the benefit of persons seeking employment or to change employment, or to engage labour, and to

provide facilities to assist in bringing about and maintaining a high and stable level of employment throughout the Commonwealth. The Act also gives the Service a number of specific functions in relation to the re-establishment of ex-servicemen.

The Service also assists in the administration of the Unemployment and Sickness Benefits provided under the Social Services Act 1947-1954, and of the Re-employment Allowance provided under the Re-establishment and Employment Act 1945-1952 for certain classes of discharged members of the Forces. All persons who wish to claim unemployment benefits or re-employment allowances must register with a District Employment Office which is responsible for certifying whether or not suitable employment can be offered to them.

In addition to giving assistance and advice on employment problems through a network of District Employment Offices, the Service provides free vocational guidance in each State other than New South Wales by means of a staff of qualified psychologists. (In New South Wales a similar service is provided by officers of the New South Wales Department of Labour and Industry and Social Welfare who act as agents for the Service in this regard.) While vocational guidance is available to any individual, it is provided particularly for juveniles entering employment for the first time, for ex-servicemen and for physically and mentally handicapped persons. Invalid pensioners being considered by the Department of Social Services for training under the provisions of the Social Services Act 1947-1954 are examined by the Vocational Guidance Branch before training is provided. During the twelve months ended June, 1954, the Service provided vocational guidance for 8,804 individuals.

Under the scheme operated by the International Refugee Organization (since replaced by the Inter-Governmental Committee for European Migration) for the resettlement of Displaced Persons from Europe following the 1939-45 War, the Commonwealth Employment Service is responsible for placing in employment the workers amongst these people so that their services will be of most value to the economy. Up to 30th June, 1954, more than 100,000 workers had been so placed.

Towards the middle of 1950 the Service was given the responsibility for placing migrants from Great Britain under the Commonwealth-Nominated Migration Scheme. Since the agreements entered into with the Dutch, West German, Greek and Italian Governments for the entry of selected European workers into the country, the Commonwealth Employment Service has undertaken the initial placement of such persons and up to 30th June, 1954, had placed some 6,500 British and 22,000 European workers arriving under the above schemes.

Since early in 1951, the Commonwealth Employment Service has been responsible for the registration, medical examination, interview and call-up of young men for training in the Armed Forces, under the National Service Act 1951-1953, which is administered by the Department of Labour and National Service. The Service is also responsible for administering the provisions of the Act relating to the protection of the rights of National Service trainees in relation to their civil employment.

In association with its placement activities, the Commonwealth Employment Service carries out regular surveys of the labour market in all areas and supplies detailed information on the employment situation to Government Departments and instrumentalities and to the public. In order to assist in making effective placements, job analysis studies of Australian occupations are also made.

The Service operates within the Employment Division of the Department of Labour and National Service, and is under the control of the Permanent Head of that Department. It operates on a decentralized basis. The Central Office is in Melbourne, and there is a Regional Office in the capital city of each State, with 118 District Employment Offices and Branches in suburban and the larger provincial centres, and with 345 agents in the smaller country centres who are responsible to the various District Employment Offices. The District Offices and Branches are distributed as follows:—New South Wales, 46 (including Canberra); Victoria, 29; Queensland, 19; South Australia, 9 (including Darwin); Western Australia, 11; Tasmania, 4.

The Service completed its eighth year of operation in May, 1954. During the year ended June, 1954 there were 511,954 new registrations of applicants for employment of whom 407,860 were referred to employers and 263,676 placed in employment. Corresponding figures for the year ended June, 1953 were 600,149, 345,152 and 242,799 respectively. During 1953-54 there were 436,719 new notifications of vacancies compared with 332,101 during 1952-53. Vacancies unfilled were 45,870 at the end of June, 1954 and 22,523 at the end of June, 1953.

With the setting up of the Commonwealth Employment Service most of the State Labour Exchange Organizations existing previously were superseded. Details of the organization and administration of these exchanges in the several States were given in *Labour Report* No. 30, page 133.

§ 4. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work are given in previous issues of the Official Year Book, and also in the annual *Labour Report*.

Particulars of all disputes in progress during the year are included in the annual figures whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently details of "the number of disputes" and "workers involved" in disputes which commenced in the previous year and were still in progress during the current year will be duplicated in the figures for both years. The number affected is given in a footnote so that allowance can be made in comparing annual figures.

2. **Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1953.**—The following table gives for Australia as a whole particulars of industrial disputes which were in progress during 1953, classified according to industrial groups. Figures for States and Territories on a comparable basis may be found in *Labour Report* No. 42, 1953.

INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS: AUSTRALIA, 1953.(a)

Class.	Industrial Group.	Number.	Workers Involved.			Working Days Lost.	Estimated Loss in Wages. (£.)
			Directly.	Indirectly. (b)	Total.		
I.	Wood, Furniture, etc.	1	40	..	40	50	97
II.	Engineering, Metal Works, etc. . .	75	117,818	2,648	120,466	140,219	426,022
III.	Food, Drink, etc.	39	18,602	3,700	22,302	158,173	449,012
IV.	Clothing, Textiles, etc.	3	195	10	205	934	3,253
V.	Books, Printing, etc.	1	39	..	39	11	..
VI.	Other Manufacturing	24	8,333	3,864	12,197	52,335	144,982
VII.	Building	41	8,295	122	8,417	67,506	242,500
VIII.	(i) Coal-mining	944	147,591	200	147,791	378,715	1,247,895
	(ii) Other Mining, Quarries, etc. . .	6	2,626	394	3,020	18,956	80,486
IX.	Railway and Tramway Services . .	27	35,034	104	35,138	32,659	93,311
X.	Other Transport	4	1,300	1,051	2,351	12,875	35,087
XI.	(i) Stevedoring	268	141,027	153	141,180	174,764	567,969
	(ii) Shipping, etc.	12	1,117	..	1,117	2,266	7,170
XII.	Pastoral, Agricultural, etc.	2	200	..	200	2,700	14,718
XIII.	Domestic, Hotels, etc.	1	23	..	23	805	1,300
XIV.	Miscellaneous	11	1,560	..	1,560	7,862	23,635
	Total	1,459	483,800	12,246	496,046	1,050,830	3,337,437

(a) Two disputes in New South Wales and one in South Australia involving respectively 141 and 1,432 workers commenced in 1952 and were still in progress at the beginning of 1953. Particulars of these disputes have been included in statistics of disputes for both 1952 and 1953. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

Graphs showing, for a number of years, the working days lost as a result of industrial disputes in the main industrial groups will be found on pp. 280-281.

3. **Industrial Disputes, States and Territories, 1939 and 1951 to 1953.**—The following table gives particulars of the number of industrial disputes in each State and Territory, together with the number of workers involved, and the losses in working days and wages caused by disputes which either commenced or were in progress during each of the years 1939 and 1951 to 1953.

INDUSTRIAL DISPUTES : STATES AND TERRITORIES.

State or Territory.	Year.	Number.	Workers Involved.			Working Days Lost.	Estimated Loss in Wages. (£.)
			Directly.	Indirectly. (a)	Total.		
New South Wales ..	1939	386	139,301	9,230	148,531	410,183	419,330
	1951	1,052	279,823	23,738	303,561	682,418	1,803,947
	1952	1,316	333,990	13,106	347,096	763,860	2,279,619
	1953	1,080	302,007	6,375	308,382	759,391	2,403,242
Victoria ..	1939	10	1,989	180	2,169	27,313	19,946
	1951	41	27,219	..	27,219	42,210	104,038
	1952	33	60,753	1,167	61,920	116,339	339,109
	1953	53	65,962	2,164	68,126	57,160	176,330
Queensland ..	1939	5	373	2	375	1,870	1,753
	1951	191	51,685	4,412	56,097	96,307	218,454
	1952	195	39,208	1,624	40,922	76,286	235,914
	1953	265	87,986	3,511	91,497	153,448	465,830
South Australia ..	1939	2	170	5	175	1,880	1,416
	1951	27	12,713	21	12,734	34,057	88,286
	1952	32	24,408	1,623	26,031	64,738	175,043
	1953	24	18,502	190	18,692	55,476	200,610
Western Australia ..	1939	7	1,108	145	1,253	14,100	9,578
	1951	10	4,179	..	4,179	5,101	12,394
	1952	21	19,154	2	19,156	127,826	369,658
	1953	11	3,665	..	3,665	4,977	15,663
Tasmania ..	1939	4	53	..	53	166	93
	1951	21	4,644	..	4,644	10,401	23,949
	1952	26	10,258	34	10,332	14,143	39,640
	1953	18	5,060	6	5,075	18,441	68,259
Northern Territory	1939	2	234	40	274	3,642	3,600
	1951	1	48	..	48	60	120
	1952	3	257	..	257	272	762
	1953	5	535	..	535	1,807	7,161
Australian Capital Territory	1939	..	..	..	..	..	..
	1951	1	110	..	110	2,420	4,840
	1952	1	20	..	20	40	105
	1953	3	74	..	74	130	342
Australia ..	1939	416	143,228	9,602	152,830	459,154	455,716
	1951	1,344	380,421	28,171	408,592	872,974	2,256,028
	1952	1,627	486,178	17,556	505,734	1,163,504	3,439,850
	1953	1,459	483,800	12,246	496,046	1,050,830	3,337,437

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

Detailed information in regard to the disputes during the above-mentioned and previous years is given in the *Labour Report*.

4. **Duration of Industrial Disputes, 1953.**—The following table gives particulars of industrial disputes during 1953 in the three groups "Coal-mining", "Stevedoring" and "Other Industries" classified according to duration.

DURATION OF INDUSTRIAL DISPUTES : AUSTRALIA, 1953.

Limits of Duration.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.				
1 day and less ..	693	174	89	956
2 days and more than 1 day ..	137	60	35	232
3 days and more than 2 days ..	36	9	21	66
Over 3 days and less than 1 week ..	19	12	22	53
1 week and less than 2 weeks ..	36	13	35	84
2 weeks and less than 4 weeks ..	15	..	29	44
4 weeks and less than 8 weeks ..	3	..	8	11
8 weeks and over ..	5	..	8	13
Total ..	944	268	247	1,459

DURATION OF INDUSTRIAL DISPUTES: AUSTRALIA, 1953—continued.

Limits of Duration.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
WORKERS INVOLVED.				
1 day and less	91,619	92,594	160,446	344,659
2 days and more than 1 day .. .	19,073	36,602	8,355	64,030
3 days and more than 2 days .. .	4,374	2,840	3,304	10,518
Over 3 days and less than 1 week .. .	2,354	3,604	5,224	11,182
1 week and less than 2 weeks .. .	5,515	5,540	10,022	21,077
2 weeks and less than 4 weeks .. .	2,091	..	9,088	11,179
4 weeks and less than 8 weeks .. .	5,330	..	1,914	7,244
8 weeks and over	17,435	..	8,722	26,157
Total	147,791	141,180	207,075	496,046
WORKING DAYS LOST.				
1 day and less	90,018	72,515	97,319	259,852
2 days and more than 1 day .. .	33,214	52,358	13,705	99,277
3 days and more than 2 days .. .	9,295	7,602	9,977	26,874
Over 3 days and less than 1 week .. .	7,442	12,519	21,046	41,007
1 week and less than 2 weeks .. .	33,241	29,770	53,186	115,997
2 weeks and less than 4 weeks .. .	18,704	..	109,964	128,668
4 weeks and less than 8 weeks .. .	27,591	..	46,789	74,380
8 weeks and over	159,410	..	145,365	304,775
Total	378,715	174,764	497,351	1,050,830

5. Causes of Industrial Disputes.—(i) *General.* In issues of the Official Year Book prior to No. 40 the causes of industrial disputes were classified in some detail for all industries combined. As from 1950 a new classification has been introduced and stoppages have been analysed in three separate groups, "Coal-mining", "Stevedoring" and "Other industries". This dissection has been made because the pattern of the disputes in coal-mining and stevedoring differs significantly from that in other industries.

Under the new classification, causes are grouped under four main headings:—(1) Wages, Hours and Leave; (2) Physical Working Conditions and Managerial Policy; (3) Trade Unionism; (4) Other Causes. The first group is restricted to disputes involving general principles relating to wages, hours and leave; minor questions regarding the claims to pay or leave by individual employees are included under managerial policy. The second group comprises disputes regarding physical working conditions and general questions of managerial policy, which term covers those arising from disciplinary action, the promotion of employees, the employment of particular individuals, personal disagreements between employees and supervisory staff and disputes arising from the computations of wages, leave, etc., in individual cases. The third group, Trade Unionism, includes stoppages over employment of non-unionists, inter-union and intra-union disputes, disputes over recognition of union activities, and sympathy stoppages in support of employees in another industry. The last group comprises disputes by way of protest against situations not arising from the usual relationship of employer and employee, e.g., political matters, and cases (mainly occurring in the coal-mining industry) where the cause of the stoppage is not officially made known to the management.

As the items included under these headings differ somewhat from those included under the similar headings used for classifying causes of disputes in years prior to 1950 the figures for the years 1950 to 1953 are not strictly comparable with those for earlier years.

(ii) *Years 1939 and 1940 to 1953.* The following table gives particulars of industrial disputes according to causes for the years 1939 and 1949 to 1953.

CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA.

Cause of Dispute.	1939.	1949.	1950.(a)	1951.(a)	1952.(a)	1953.(a)
NUMBER OF DISPUTES.						
Wages, Hours and Leave ..	96	187	128	186	161	105
Physical Working Conditions and Managerial Policy ..	197	328	894	803	967	896
Trade Unionism ..	50	84	114	159	204	187
Other ..	73	250	140	106	294	271
Total ..	416	849	1,276	1,344	1,627	1,459

WORKERS INVOLVED.						
Wages, Hours and Leave ..	29,290	67,821	104,075	117,499	201,274	89,443
Physical Working Conditions and Managerial Policy ..	56,783	48,962	173,705	151,655	183,123	218,809
Trade Unionism ..	18,651	14,234	15,651	27,684	51,810	26,176
Other ..	48,106	133,560	138,270	111,844	60,518	161,618
Total ..	152,830	264,577	431,701	408,542	505,724	496,046

WORKING DAYS LOST.						
Wages, Hours and Leave ..	128,525	1,019,757	1,440,462	338,020	545,017	208,776
Physical Working Conditions and Managerial Policy ..	180,410	118,755	443,493	359,383	444,286	657,835
Trade Unionism ..	54,749	37,154	37,380	67,280	93,133	58,038
Other ..	86,170	158,324	133,353	108,294	81,068	126,181
Total ..	450,154	1,333,090	2,062,888	572,977	1,163,504	1,050,830

(a) Owing to the use of a new classification, figures for 1950 to 1953 are not strictly comparable with those for earlier years.

(iii) Year 1953. The following table shows the causes of industrial disputes during 1953 in three broad groups of industries :—(i) Coal-mining, (ii) Stevedoring, and (iii) Other Industries.

CAUSES OF INDUSTRIAL DISPUTES : AUSTRALIA, 1953.

Cause of Dispute.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.				
Wages, Hours and Leave ..	26	24	55	105
Physical Working Conditions and Managerial Policy ..	574	172	150	896
Trade Unionism ..	156	11	20	187
Other ..	188	61	22	271
Total ..	944	268	247	1,459

WORKERS INVOLVED.				
Wages, Hours and Leave ..	8,782	21,696	58,965	89,443
Physical Working Conditions and Managerial Policy ..	89,543	86,771	42,495	218,809
Trade Unionism ..	17,237	4,619	4,320	26,176
Other ..	32,229	28,094	101,295	161,618
Total ..	147,791	141,180	207,075	496,046

WORKING DAYS LOST.				
Wages, Hours and Leave ..	9,647	32,562	166,567	208,776
Physical Working Conditions and Managerial Policy ..	294,430	111,066	252,339	657,835
Trade Unionism ..	37,707	7,246	13,085	58,038
Other ..	36,931	23,890	65,360	126,181
Total ..	378,715	174,764	497,351	1,050,830

6. Results of Industrial Disputes.—In issues of the Official Year Book prior to No. 40, tables were included showing analyses of the results of industrial disputes over a period of years. Under a new method of collection of the basic data, the information on which these analyses were based is no longer available for the majority of disputes and the compilation has therefore been discontinued.

7. **Methods of Settlement.**—In the following table industrial disputes for the year 1953 have been classified according to method of settlement. Since the previous issue of the Official Year Book the classification of industrial disputes by industry groups has been extended to show details separately under: "Coal-mining", "Stevedoring", and "Other Industries".

INDUSTRIAL DISPUTES: METHODS OF SETTLEMENT, AUSTRALIA, 1953.(a)

Method of Settlement.	Coal-mining.	Stevedoring.	Other Industries.	All Industries.
NUMBER OF DISPUTES.				
1. By private negotiation	173	17	96	286
2. By mediation not based on legislation .. ..	..	..	1	1
3. State legislation—				
(a) Under State Conciliation, etc., legislation ..	2	1	56	59
(b) By reference to State Government officials ..	9	..	2	11
4. Commonwealth and Commonwealth-State legislation—				
(a) Industrial Tribunals under—				
(i) Conciliation and Arbitration Act ..	..	1	33	34
(ii) Coal Industry Acts ..	55	..	..	55
(iii) Stevedoring Industry Act ..	..	21	..	21
(iv) Other Acts ..	..	..	3	3
(b) By reference to Commonwealth Government officials ..	..	23	..	23
5. By filling places of workers on strike or locked out ..	..	..	..	..
6. By closing down establishment permanently ..	..	..	..	..
7. By resumption without negotiation	705	205	53	963
8. By other methods .. ..	..	..	..	..
Total	944	268	244	1,456

WORKERS INVOLVED.

1. By private negotiation	15,802	1,703	21,414	38,919
2. By mediation not based on legislation .. ..	..	..	450	450
3. State legislation—				
(a) Under State Conciliation, etc., legislation ..	3,430	22	25,053	28,505
(b) By reference to State Government officials ..	915	..	537	1,452
4. Commonwealth and Commonwealth-State legislation—				
(a) Industrial Tribunals under—				
(i) Conciliation and Arbitration Act ..	..	66	4,740	4,806
(ii) Coal Industry Acts ..	11,914	..	..	11,914
(iii) Stevedoring Industry Act ..	..	14,560	..	14,560
(iv) Other Acts ..	..	..	2,324	2,324
(b) By reference to Commonwealth Government officials ..	..	9,683	..	9,683
5. By filling places of workers on strike or locked out ..	..	..	..	..
6. By closing down establishment permanently ..	..	..	..	..
7. By resumption without negotiation	115,730	115,146	152,137	383,013
8. By other methods .. ..	..	..	..	..
Total	147,791	141,180	206,655	495,626

WORKING DAYS LOST.

1. By private negotiation	38,480	3,164	83,813	125,457
2. By mediation not based on legislation .. ..	..	..	360	360
3. State legislation—				
(a) Under State Conciliation, etc., legislation ..	17,281	22	218,212	235,515
(b) By reference to State Government officials ..	5,790	..	4,870	10,660
4. Commonwealth and Commonwealth-State legislation—				
(a) Industrial Tribunals under—				
(i) Conciliation and Arbitration Act ..	..	82	33,029	33,111
(ii) Coal Industry Acts ..	50,247	..	..	50,247
(iii) Stevedoring Industry Act ..	..	35,590	..	35,590
(iv) Other Acts ..	..	..	35,622	35,622
(b) By reference to Commonwealth Government officials ..	..	10,994	..	10,994
5. By filling places of workers on strike or locked out ..	..	..	..	..
6. By closing down establishment permanently ..	..	..	..	..
7. By resumption without negotiation	266,917	124,912	108,502	500,331
8. By other methods .. ..	..	..	..	..
Total	378,715	174,764	484,408	1,037,887

(a) As there are usually disputes in progress at the end of each year, totals in the above table will not necessarily agree with those shown in preceding tables.

F. WORKERS' COMPENSATION LEGISLATION.

A conspectus of the principal provisions of Workers' Compensation Acts in force in Australia at 30th June, 1953 will be found in *Labour Report* No. 41, 1952, pages 137-145. For a summary of the principal amendments to these Acts during the six months ended 30th June, 1954 reference should be made to *Labour Report* No. 42, 1953.

G. LABOUR ORGANIZATIONS.**§ 1. Labour Organizations in Australia.**

1. **Registration.**—(i) *Under Trade Union Acts.* In earlier issues of the Official Year Book (see No. 39, page 448) reference was made to the registration of trade unions under the Trade Union Acts. In general the available information is inadequate for statistical purposes.

(ii) *Under State Industrial Legislation.* Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in earlier issues of the Official Year Book (see No. 39, page 448).

(iii) *Under the (Commonwealth) Conciliation and Arbitration Act.* Under Part VI. of the Conciliation and Arbitration Act any employer or association of employers in any industry who has employed not less than 100 employees during the six months preceding application for registration, or any association of not less than 100 employees in any industry may be registered.* Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1953 the number of employers' organizations registered under the provisions of the Commonwealth Conciliation and Arbitration Act was 53. The number of unions of employees registered at the end of 1953 was 152, with a membership of approximately 1,378,200 representing 82 per cent. of the total membership of all trade unions in Australia.

2. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organizations :—(i) the local independent ; (ii) the State ; (iii) the interstate ; and (iv) the Australasian or international ; but a number of variations occur from each of these classes. The schemes of organization of interstate or federated unions vary greatly in character. In some unions the State organizations are bound together under a system of unification with centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. The leading characteristics of each of these types were briefly outlined in *Labour Report* No. 2 (pp. 7-9).

(ii) *Number and Membership.* Returns showing membership by States as at 31st December each year are obtained for all trade unions and employee organizations. The affairs of single organizations are not disclosed in the published results and this has assisted in securing complete information. The Bureau is greatly indebted to the secretaries for their cordial co-operation in supplying information. The following table shows the position at the end of 1939, 1952 and 1953 :—

TRADE UNIONS : NUMBER AND MEMBERSHIP.

State or Territory.	Number of Separate Unions.			Number of Members.			Percentage Increase in Membership.(a)		
	1939.	1952.	1953.	1939.	1952.	1953.	1939.	1952.	1953.
New South Wales	200	223	224	358,391	649,163	665,737	3.4	- 4.3	2.6
Victoria ..	149	159	159	216,803	416,349	424,428	0.8	- 3.9	1.9
Queensland ..	114	129	129	180,653	274,908	285,718	6.5	- 0.8	3.9
South Australia ..	117	139	138	67,282	137,495	140,154	8.7	- 1.8	1.9
Western Australia	141	151	152	67,833	105,462	107,642	0.1	- 0.0	2.1
Tasmania ..	79	98	98	22,062	46,948	48,293	4.8	- 1.0	2.9
Northern Territory	4	15	18	761	2,340	2,535	5.6	-15.3	8.3
Australian Capital Territory ..	15	31	28	1,685	4,877	5,251	9.6	-15.0	7.7
Australia ..	(b) 380	(b) 360	(b) 365	915,470	1,637,542	1,679,758	3.4	- 3.1	2.6

(a) On preceding year.

(b) Without interstate duplication. See letterpress below.

NOTE.—Minus sign (—) denotes decrease.

* Under the Public Service Arbitration Act an association of less than 100 employees may be registered as an organization, provided that its members comprise at least three-fifths of all persons engaged in that industry in the Service. Such organizations are included in the figures shown below.

In the table just given, under the heading "Number of Separate Unions", a union reporting members in a State is counted as one union within that State. The figures by States do not add to the Australian total (shown in the last line) because a union represented in more than one State is included in the figure for each State in which it is represented, but is counted only once in the Australian total.

Because of the difficulties involved, the collection of statistics relating to the "Number of Branches" of Trade Unions appearing in issues of the Official Year Book prior to No. 39 has been discontinued.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1939, 1952 and 1953. Compared with 1939, membership in 1953 had increased by 83 per cent.

TRADE UNIONS : INDUSTRIAL GROUPS, AUSTRALIA.

Industrial Group.	1939.		1952.		1953.	
	No. of Unions.(a)	No. of Members.	No. of Unions.(a)	No. of Members	No. of Unions.(a)	No. of Members.
Manufacturing—						
I. Wood, Furniture, etc. . .	4	27,990	6	42,439	6	43,051
II. Engineering, Metal Works, etc. . .	22	99,731	15	245,831	15	246,217
III. Food, Drink, Tobacco, etc. . .	35	80,328	35	93,847	36	95,806
IV. Clothing, Textiles, etc. . .	12	68,847	6	100,056	6	111,788
V. Books, Printing, etc. . .	8	22,303	6	34,494	6	35,467
VI. Other Manufacturing . . .	37	52,074	37	75,619	37	80,027
VII. Building . . .	28	45,651	26	115,837	28	123,811
VIII. Mining, Quarrying, etc. . .	13	48,812	12	49,991	12	50,515
IX. Railway and Tramway Services . .	29	105,938	25	144,710	25	143,642
X. Other Transport . . .	6	19,488	9	60,111	9	59,494
XI. Shipping, etc. . .	21	28,760	13	42,703	13	39,941
XII. Pastoral, Agricultural, etc. . .	5	40,276	3	59,055	3	62,070
XIII. Domestic, Hotels, etc. . .	18	13,177	14	37,749	14	33,025
XIV. Miscellaneous—						
(i) Banking, Insurance and Clerical . . .	20	39,013	17	104,486	17	108,605
(ii) Public Service . . .	50	89,848	60	187,255	63	195,777
(iii) Retail and Wholesale . . .	8	36,290	12	58,917	13	62,723
(iv) Municipal, Sewerage and Labouring . . .	11	46,552	12	72,858	10	75,097
(v) Other Miscellaneous . . .	53	50,392	52	111,584	52	112,702
Total . . .	380	915,470	360	1,637,512	365	1,679,758

(a) Without interstate duplication. See letterpress above.

(iv) *Number of Members and Proportion of Wage and Salary Earners, Australia.* The following table shows the estimated percentages of wage and salary earners in employment who are members of trade unions. As current estimates of wage and salary earners in employment do not include employees engaged in rural industry or females in private domestic service the percentages have been calculated on figures obtained by adding to the end of year estimates (see page 288 above) the number of employees in rural industry and females in private domestic service recorded at the Census of June, 1947. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

TRADE UNIONS : NUMBER OF MEMBERS AND PROPORTION OF TOTAL WAGE AND SALARY EARNERS(a), AUSTRALIA.

Year.	Number of Members.			Proportion of Total Wage and Salary Earners. (Per cent.)		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1939..	778,336	137,134	915,470	52	24	44
1949..	1,226,818	294,096	1,520,914	63	41	57
1950..	1,301,868	303,476	1,605,344	65	40	58
1951..	1,368,694	321,577	1,690,271	66	42	60
1952..	1,354,248	283,294	1,637,542	67	40	60
1953..	1,381,103	298,655	1,679,758	67	40	60

(a) Includes allowance for unemployed.

(v) *Interstate or Federated Trade Unions.* The following table gives particulars of the number and membership of interstate or federated unions in 1953 :—

INTERSTATE OR FEDERATED TRADE UNIONS : AUSTRALIA(a), 1953.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
Number of Unions ..	12	12	20	35	60	139
„ „ Members ..	32,050	46,691	134,998	381,910	885,795	1,481,444

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory and in the Australian Capital Territory.

The number of organizations operating in two or more States increased from 72 in 1912 to 139 in 1953, and the ratio of the membership of such organizations to the total membership of all organizations rose from 65 to 89 per cent. during the same period.

3. **Central Labour Organizations.**—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a *per capita* tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated therewith in each State at the end of the year 1953 :—

CENTRAL LABOUR ORGANIZATIONS : NUMBER, AND UNIONS AND BRANCH UNIONS AFFILIATED, 1953.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Number of Councils. .	10	9	12	6	10	5	1	1	54
Number of Unions and Branch Unions affiliated ..	255	275	128	127	369	109	4	20	1,287

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

A Central Labour Organization now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The Australian Council of Trade Unions consists of affiliated unions and affiliated Metropolitan and/or State Labour Councils and Provincial Councils. The Metropolitan or State Labour Council in each State is the State Branch of the Australian Council of Trade Unions and has the right to appoint two representatives to act on the Executive of the Council. In addition to the representatives from the Metropolitan or State Labour Councils, the Executive consists of four officers—the President, two Vice-Presidents and a Secretary—who are elected by and from the Australian Congress of Trade Unions.

The objectives of the Australian Council of Trades Unions are the socialization of industry, i.e., production, distribution and exchange and the utilization of the resources of Australia for the benefit of the people—ensuring full employment, with rising standards of living, real security and full cultural opportunities for all.

The methods to be adopted are :—the closer organization of the workers by the transformation of the Australian Trade Union Movement from the craft to an industrial basis, by grouping of unions in their respective industries and by the amalgamation of unions with a view to the establishment of one union in each industry ; the consolidation of the Australian Labour Movement, with the object of unified control, administration and action ; the centralized control of industrial disputes ; by educational propaganda and by political action to secure satisfactory working class legislation.

The Australian Council of Trades Unions is the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the trade union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the Annual International Labour Conference.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

§ 2. International Labour Organization.

The International Labour Organization (I.L.O.) was established on 11th April, 1919, as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII. of the Treaty of Versailles and formed part of other treaties of peace. During the years between its establishment and the outbreak of the 1939-45 War, the I.L.O., with headquarters at Geneva, played a leading role in promoting the improvement of labour conditions throughout the world.

In 1940, in order to ensure that the I.L.O. should be able to continue to function freely, a working centre was established at Montreal. In 1946 the Organization became the first of the specialized agencies of the United Nations. Under the terms of agreement, the United Nations recognizes the I.L.O. as a specialized agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organization, social security and other aspects of social policy. The Organization has three basic parts. These are the International Labour Conference, its highest authority, which, as a rule, meets annually ; the Governing Body, its executive council, which usually meets four times each year ; and the International Labour Office, which provides the secretariat of the Organization. The Conference is composed of delegations from the Member States of the Organization. At present there are 69 Member States, each of which is entitled to be represented by two Government delegates and one delegate each representing employers and workers, together with their advisers. In accordance with amendments adopted at the 36th Session of the International Labour Conference, the Governing Body, as from the elections held in Geneva in 1954, has consisted of the representatives of twenty governments, and ten employers' and ten workers' representatives. Particulars are given in the *Labour Report* of the proceedings of International Labour Conferences up to the 37th Session, held in Geneva in June, 1954.

H. COMPARATIVE INDEX NUMBERS.

In order to show the relative movements of certain price and related data, the following table of annual and quarterly index numbers for the six capital cities combined has been compiled with a common base 1911 = 1,000.

COMPARATIVE INDEX NUMBERS FOR THE SIX CAPITAL CITIES COMBINED.

(Base of each Group: Weighted Average of Six Capital Cities 1911 = 1,000 (a).)

Period.	Retail Price Index Numbers.						Nominal Wages, Adult Males.	Real Wages. (c)
	Food and Groceries.	Housing (4 and 5 Rooms). (b)	Food, Housing (4 and 5 Rooms) ("B" Series).	Clothing.	Miscellaneous.	Total "C" Series Index.		
Year—								
1911	1,000	1,000	1,000	(d) 1,000	(d) 1,000	(d) 1,000	1,000	1,000
1914	1,144	1,082	1,121	1,140	1,140	1,140	1,081	948
1921	1,902	1,410	1,717	1,883	1,537	1,680	1,826	1,087
1928	1,761	1,743	1,755	1,507	1,537	1,675	1,963	1,172
1932	1,425	1,336	1,390	1,215	1,458	1,377	1,639	1,190
1938	1,584	1,540	1,568	1,253	1,463	1,488	1,799	1,209
1939	1,657	1,577	1,626	1,271	1,465	1,526	1,846	1,210
1946	1,852	1,596	1,648	2,276	1,776	1,900	2,400	1,263
1947	1,967	1,597	1,816	2,367	1,825	1,971	2,598	1,318
1948	2,245	1,601	1,982	2,637	1,913	2,148	2,914	1,357
1949	2,492	1,605	2,128	3,019	2,037	2,349	3,210	1,307
1950	2,800	1,613	2,313	3,455	2,184	2,589	3,506	1,389
1951	3,649	1,649	2,827	4,156	2,555	3,124	4,495	1,439
1952	4,516	1,728	3,370	4,657	2,980	3,645	5,241	1,438
1953	4,723	1,861	3,546	4,872	3,126	3,820	5,539	1,450
Quarter—								
1953—								
March	4,599	1,835	3,463	4,838	3,118	3,763	5,443	1,446
June	4,658	1,857	3,506	4,906	3,122	3,805	5,512	1,449
September ..	4,804	1,870	3,597	4,880	3,127	3,851	5,591	1,452
December ..	4,831	1,882	3,618	4,863	3,136	3,861	5,611	1,453

(a) The index numbers given in the separate columns of the table cannot be compared with each other in order to show, for example, the relative cost of housing and food and groceries, since the cost in 1911 in each group or combination of groups is made equal to 1,000. (b) See footnote (b) on page 253.

(c) Index of nominal weekly wage rates for adult males divided by "C" Series Retail Prices Index number. (d) Taken back from true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of all Houses).

CHAPTER IX.

POPULATION.

NOTE.—The figures shown throughout this chapter for the Census of 30th June, 1954, are the preliminary results only, and population estimates shown for the intercensal period 1947 to 1954 are revised figures which have been adjusted in accordance with these results. Both sets of figures are subject to revision on completion of the detailed tabulation of the 1954 Census results.

A summary of additional census data which became available after this chapter was sent to press will be found in the Appendix.

§ 1. Population Statistics.

Population statistics relating to Australia or to the component States and Territories as at specific dates are of two types—

- (i) *Those ascertained by census enumeration.* These results attain a very high degree of accuracy and may generally be accepted without reservation.
- (ii) *Estimates derived by the application of vital and migration statistics to census data.* In general, three estimates are made for any specific date:
 - (a) Original estimates for dates subsequent to a census made before another census is taken.
 - (b) Two-stage revision of the original estimates for each newly completed intercensal period to adjust for the difference between the new census result and the comparable estimate. This is to bring intercensal estimates into line with the two census populations. The first revision is reconciled with preliminary census results and the second revision with final census results.

Final revised figures become the permanent population estimates. For purposes requiring a mean population for any twelve-monthly period such mean is calculated as described in § 4. As populations at specific dates are used in these calculations consequential revisions are made in mean populations when the estimates for specific dates are revised as described above.

In accordance with this policy all Australian population statistics shown in this Year Book for dates up to 30th June, 1947, and all mean populations for calendar years up to 1946 and financial years up to 1946-47 are final. Population statistics for dates or years subsequent to these have been adjusted in accordance with the preliminary results of the Census of 30th June, 1954, but are still subject to further revision when final results are available.

Since the establishment of the Commonwealth Bureau of Census and Statistics the populations of the States and Territories have been estimated in a comparable manner and attention has been given to the improvement of the basic demographic data from which the estimates are compiled. The principal source of error in early estimates lay in the migration records, both overseas and interstate, and efforts were directed towards their improvement. The 1911 Census disclosed an error in the precensal estimates equivalent to a proportion of 14.5 per cent. and 10.0 per cent., respectively, of recorded male and female overseas departures from Australia. These proportions were used as adjusting factors to recorded overseas departures during the intercensal period 1911-21. These adjusting factors were reduced after the 1921 Census to 1 per cent. for males and 4.5 per cent. for females and were discontinued altogether after the 1933 Census. From the results of the 1954 Census it would again appear that the accuracy of the records of overseas migration is such that in future little adjustment to recorded figures will be necessary for Australia as a whole.

It is improbable that the same degree of accuracy as has been attained in the record of overseas migration can be reached in the case of interstate movements. Records are made of interstate passengers by sea, rail and air, but it is impracticable, with occasional important exceptions, to record the movements by road.

§ 2. The Census.

1. *Census-taking*.—Although “musters” of the population were carried out at least annually from 1788 to 1825, the first regular census in Australia was not taken until 1828 when a count of the population of the Colony of New South Wales was made. Subsequent censuses were taken sporadically in the various colonies until 1881, when a census was taken on the same date throughout Australia.

In 1891 and 1901 census-taking was still in the hands of the Government Statisticians of the States, but, in 1911, under the provisions of the Commonwealth Census and Statistics Act, which provides for the enumeration to be made from one centre instead of by each State as formerly, the Commonwealth Statistician undertook the first census for the Commonwealth of Australia. The second was taken in 1921, the third in 1933, the fourth in 1947 and the fifth as on the night of 30th June, 1954.

2. *Population recorded at Censuses*.—State and Territorial populations recorded at the Australia-wide censuses taken over the period 1881 to 1954 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) as they existed at the date of each census except that Northern Territory has been shown separately from South Australia for three censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in Chapter I, § 4. and § 5. The total populations recorded at the censuses taken in the Colonies from 1828 to 1876 are shown in Official Year Book No. 40, page 326.

POPULATION : AUSTRALIAN CENSUSES, 1881 TO 1954.

Census.	Population Enumerated (Excluding Full-blood Aborigines).							
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.
MALES.								
3rd April, 1881 ..	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..
5th April, 1891 ..	609,666	508,222	223,770	162,241	29,807	77,560	4,560	..
31st March, 1901 ..	710,005	603,720	277,003	180,485	112,875	89,624	4,216	(a)
3rd April, 1911 ..	857,698	655,591	329,506	207,358	161,565	97,591	2,734	992
4th April, 1921 ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567
30th June, 1933 ..	1,318,471	903,244	497,217	290,962	233,937	115,007	3,378	4,805
30th June, 1947 ..	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092
30th June, 1954(b)	1,720,950	1,230,969	676,451	403,978	333,339	157,123	10,281	16,229
FEMALES.								
3rd April, 1881 ..	339,614	409,913	88,200	130,231	12,616	54,543	104	..
5th April, 1891 ..	511,471	541,866	169,939	153,292	19,975	69,107	338	..
31st March, 1901 ..	644,841	597,350	221,126	177,861	71,219	82,851	5	(a)
3rd April, 1911 ..	780,036	659,060	276,307	212,000	120,549	93,620	576	722
4th April, 1921 ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005
30th June, 1933 ..	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142
30th June, 1947 ..	1,492,627	1,040,834	538,914	326,042	244,404	127,834	3,490	7,813
30th June, 1954(b)	1,702,763	1,221,363	611,942	393,181	309,377	151,660	6,171	14,086
PERSONS.								
3rd April, 1881 ..	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..
5th April, 1891 ..	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..
31st March, 1901 ..	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	(a)
3rd April, 1911 ..	1,636,734	1,315,551	605,813	408,558	282,114	191,211	3,310	1,714
4th April, 1921 ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,57
30th June, 1933 ..	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947
30th June, 1947 ..	2,984,838	2,054,711	1,106,415	646,073	502,480	257,078	10,868	16,905
30th June, 1954(b)	3,423,718	2,452,337	1,318,393	797,159	639,716	308,783	16,452	30,315

(a) Part of New South Wales prior to 1911.

(b) Preliminary figures.

The preliminary results of the 1954 Census of the Australian External Territories will be found in § 12 of this chapter.

3. *Increase since 1881 Census*.—The increases in the populations of the several States and Territories and of Australia as a whole during the last seven intercensal periods are shown in the following table, which distinguishes the numerical increases, the proportional increases (which do not allow for the differences in the length of the intercensal periods) and the average annual rates of increase.

POPULATION : INTERCENSAL INCREASES.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	1881-1891 (10 years).	1891-1901 (10 years).	1901-1911 (10 years).	1911-1921 (10 years).	1921-1933 (12½ years).	1933-1947 (14 years).	1947-1954. (7 years).
NUMERICAL INCREASE.							
New South Wales..	(b)377,312	(b)227,709	(b)293,602	453,637	500,476	383,991	438,880
Victoria ..	278,322	60,982	114,481	215,729	288,981	234,440	397,636
Queensland ..	180,193	104,411	107,684	150,159	191,562	158,881	211,978
South Australia ..	39,119	42,813	50,212	86,602	85,789	65,124	151,086
Western Australia ..	20,074	134,342	97,990	51,618	106,120	63,628	137,236
Tasmania ..	30,962	25,808	18,736	22,569	13,819	29,479	51,705
Northern Territory ..	1,447	87	-1,501	557	983	6,018	5,584
Aust. Cap. Terr. ..	(c)	(c)	(c)	858	6,375	7,958	13,410
Australia ..	927,629	595,978	681,204	980,729	1,194,105	949,519	1,407,515
PROPORTIONAL INCREASE - PER CENT.							
New South Wales..	(b)50.32	(b)20.20	(b)21.67	27.55	23.83	14.76	14.70
Victoria ..	32.33	5.35	9.53	16.40	18.87	12.88	19.35
Queensland ..	84.39	26.52	21.62	24.79	25.34	16.77	19.16
South Australia ..	14.15	13.57	14.01	21.20	17.33	11.21	23.39
Western Australia ..	67.57	269.86	53.22	17.94	31.89	14.50	27.31
Tasmania ..	26.76	17.60	10.86	11.80	6.46	12.95	20.11
Northern Territory ..	41.93	-1.78	-31.20	16.83	25.42	124.08	51.38
Aust. Cap. Terr. ..	(c)	(c)	(c)	50.06	247.86	88.95	79.33
Australia ..	41.22	18.75	18.05	22.01	21.97	14.32	18.57
AVERAGE ANNUAL RATE OF INCREASE - PER CENT.							
New South Wales..	(b)4.16	(b)1.86	(b)1.97	2.46	1.76	0.99	1.98
Victoria ..	2.84	0.52	0.91	1.53	1.42	0.87	2.56
Queensland ..	6.31	2.38	1.98	2.24	1.86	1.11	2.54
South Australia ..	1.33	1.28	1.32	1.94	1.31	0.76	3.05
Western Australia ..	5.30	13.97	4.36	1.66	2.29	0.97	3.51
Tasmania ..	2.40	1.63	1.04	1.12	0.51	0.87	2.58
Northern Territory ..	3.56	-0.18	-3.67	1.57	1.87	5.93	6.11
Aust. Cap. Terr. ..	(c)	(c)	(c)	4.14	10.71	4.65	8.70
Australia ..	3.51	1.73	1.67	2.01	1.63	0.96	2.46

(a) Preliminary figures.

(b) Includes Australian Capital Territory.

(c) Part of New South Wales prior to 1911.

NOTE.—Minus sign (—) denotes decrease.

The numerical increase during the period 1947-54 (7 years) was greater by 457,996 than that for the period 1933-47 (14 years) and the proportional increase rose from 14.32 per cent. for 1933-47 to 18.57 per cent. for 1947-54. During the earlier period the increase corresponds to 0.96 per cent. per annum, and in the latter to 2.46 per cent. per annum.

§ 3. Growth and Distribution of Population.

1. **Growth of Population.**—The table which follows shows the growth in the population of each sex in the various States and Territories as measured by the estimated population at 31st December in 1880 and thereafter at decennial intervals to 1950. Each year from 1947 to 1953 is included in order to show recent fluctuations in greater detail.

ESTIMATED POPULATION : 1880 TO 1953.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the preliminary results of the Census of 30th June, 1954.

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
MALES.									
1880	404,052	450,558	124,013	147,438	16,085	60,568	..	..	1,204,514
1890	602,704	505,519	223,252	166,049	28,854	76,453	(a)	..	1,692,831
1900	716,047	601,773	274,684	180,349	110,088	89,793	4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	(b)	2,296,308
1920	1,067,945	753,803	396,555	244,300	176,895	107,259	2,911	1,062	2,751,730
1930	1,294,419	892,421	481,559	288,618	232,868	113,503	3,599	4,732	3,311,722
1940(c)	1,402,207	947,037	536,712	297,885	248,734	123,650	6,337	7,856	3,570,508
1947	1,501,571	1,016,739	571,007	323,404	261,652	135,194	7,389	9,513	3,828,469
1948	1,523,439	1,039,976	584,604	335,100	268,300	138,841	8,015	10,340	3,908,615
1949	1,580,135	1,071,847	601,795	349,628	280,267	143,430	8,647	11,571	4,047,320
1950	1,628,851	1,114,627	620,429	364,744	294,750	147,099	9,411	11,641	4,191,552
1951	1,668,036	1,150,143	637,003	375,237	304,443	153,717	9,366	12,165	4,311,070
1952	1,696,756	1,189,294	653,132	388,495	316,686	157,698	9,471	14,165	4,425,697
1953	1,713,985	1,211,983	666,533	397,681	326,351	161,301	9,847	15,785	4,503,469

For footnotes see following page.

ESTIMATED POPULATION: 1880 TO 1953—continued.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the preliminary results of the Census of the 30th June, 1954.

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
FEMALES.									
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,643	68,334	(a)	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	(b)	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	103,493	1,078	910	2,659,567
1930	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,029
1940(c)	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078
1947	1,501,108	1,046,038	541,821	329,232	247,106	132,743	3,502	7,957	3,809,507
1948	1,523,915	1,069,446	553,969	335,529	253,687	134,565	4,168	8,620	3,883,899
1949	1,570,206	1,097,105	568,571	346,017	263,899	137,922	4,686	9,956	3,998,362
1950	1,612,959	1,122,660	585,055	358,134	277,876	143,247	5,002	11,167	4,116,100
1951	1,646,592	1,149,510	601,299	368,591	285,864	148,088	5,239	11,876	4,217,059
1952	1,671,816	1,177,497	618,230	380,129	296,209	151,885	5,287	13,097	4,314,150
1953	1,695,349	1,204,071	632,010	388,047	305,338	155,194	5,772	13,758	4,399,539

PERSONS.									
1880	741,142	855,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	(a)	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,812	193,803	3,301	(b)	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	1,972	5,411,297
1930	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,904	8,719	6,500,751
1940(c)	2,790,948	1,914,918	1,031,452	599,056	474,076	244,002	8,974	14,160	7,077,586
1947	3,002,679	2,062,777	1,112,828	654,636	508,758	267,937	10,891	17,470	7,637,976
1948	3,047,354	2,109,422	1,138,573	670,629	521,937	273,406	12,183	18,960	7,792,514
1949	3,150,341	2,168,952	1,170,366	695,645	544,166	281,352	13,333	21,527	8,045,682
1950	3,241,810	2,237,287	1,205,484	722,878	572,626	290,346	14,413	22,808	8,307,652
1951	3,315,528	2,299,653	1,238,362	743,828	590,307	301,805	14,605	24,041	8,528,129
1952	3,368,572	2,366,791	1,271,362	768,624	612,895	309,583	14,758	27,262	8,739,847
1953	3,409,334	2,416,054	1,298,543	785,728	631,692	316,495	15,619	29,543	8,903,008

(a) Northern Territory figures included with South Australia prior to 1900. (b) Part of New South Wales prior to 1911. (c) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

Estimates of population for intercensal years are obtained in the manner outlined in § 1.

The estimated population as at 31st December each year from 1788 to 1949 on the same basis as in the table above is shown in *Demography Bulletin* No. 67, 1949 and for the period 1881 to 1953 in *Demography Bulletin* No. 71, 1953. Figures shown therein for the years 1917 to 1954 have not been revised in accordance with results of the 1954 Census. A graph illustrating the growth of the population of Australia and of each State and Territory thereof appears on page 315.

2. **Present Numbers.**—The population of Australia on 31st December, 1953, was estimated at 8,903,008 persons of whom 4,503,469, or 50.58 per cent., were males and 4,399,539, or 49.42 per cent., were females. The increase during 1953 was 163,161, equal to 1.87 per cent., males having increased by 77,772 or 1.76 per cent., and females by 85,389 or 1.98 per cent. This increase was due to an excess of births over deaths, of 122,047, together with a net gain by migration of 42,897 persons. An adjustment of 1,783 persons was necessary to effect a reconciliation with the preliminary results of the Census of 30th June, 1954.

3. **Proportion of Area and Population, Density and Masculinity.**—A previous table shows the number of persons in each of the States and Territories on 30th June, 1954. In the following table the proportions of the total area and of the total population represented by each State or Territory are given, together with the density and the masculinity of population.

DENSITY AND MASCULINITY OF POPULATION, CENSUS, 30th JUNE, 1954.

(Preliminary Figures.)

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Proportion of Total Area. (Per cent.)	Proportion of Population, 30th June, 1954. (Per cent.)			Density. (a)	Masculinity.(b)
		Males.	Females.	Persons.		
New South Wales ..	10.40	37.85	38.35	38.10	11.06	101.07
Victoria ..	2.96	27.08	27.50	27.29	27.90	100.79
Queensland ..	22.54	14.88	14.46	14.67	1.97	105.38
South Australia ..	12.78	8.89	8.85	8.87	2.10	102.75
Western Australia ..	32.81	7.27	6.97	7.12	0.66	106.78
Tasmania ..	0.88	3.45	3.41	3.43	11.78	103.60
Northern Territory ..	17.60	0.22	0.14	0.18	0.03	166.60
Australian Capital Territory..	0.03	0.36	0.32	0.34	32.28	115.21
Australia ..	100.00	100.00	100.00	100.00	3.02	102.38

(a) Number of persons per square mile.

(b) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

4. **Urban and Rural Distribution.**—Particulars of the distribution of the population amongst metropolitan, provincial urban and rural areas in each State and Territory at the 1947 Census were shown in Official Year Book No. 39, pages 521-524.

For Australia, the number of persons and the proportion of the total population in each division at the Census of 30th June, 1954 were:—metropolitan urban 4,845,263, 53.91 per cent.; other urban 2,227,786, 24.79 per cent.; rural 1,890,486, 21.04 per cent. Migratory population (23,338) accounted for the remaining 0.26 per cent.

Of the States Victoria had the largest proportion of population residing in the metropolitan area (62.15 per cent.) but was closely followed in this respect by South Australia (60.66 per cent.). Percentages for the other States were:—New South Wales, 54.42; Queensland, 38.10; Western Australia, 54.49; and Tasmania, 30.84.

A feature of the metropolitan population is its relatively high femininity. In 1933, 52.5 per cent. of the metropolitan population was composed of females; in 1947, the proportion had fallen slightly to 51.9 per cent., being highest in Tasmania at 52.3 per cent.; at the Census of 30th June, 1954, the proportion had fallen to 51.0 per cent., there being little difference in the proportions as between the several States.

5. **Metropolitan Population : Australia and Other Countries.**—In Australia there is an abnormal concentration of population in the capital cities, which are the only cities of outstanding importance in the various States. A comparison with the capitals of the more important countries is given in the following table:—

METROPOLITAN POPULATION : AUSTRALIA AND OTHER COUNTRIES.
(’000.)

State or Country.	Metropolis.	Year.	Metropolitan Population.	State or Country.	Metropolis.	Year.	Metropolitan Population.
New South Wales ..	Sydney ..	1954	1,863	Brazil ..	Rio de Janeiro	1951	2,490
Victoria ..	Melbourne ..	1954	1,524	Czechoslovakia ..	Prague ..	1949	933
Queensland ..	Brisbane ..	1954	502	Denmark ..	Copenhagen	1950	975
South Australia ..	Adelaide ..	1954	484	Egypt ..	Cairo ..	1951	2,373
Western Australia ..	Perth ..	1954	349	France ..	Paris ..	1951	2,910
Tasmania ..	Hobart ..	1954	95	Germany ..	Berlin ..	1951	3,340
England ..	London ^(b) ..	1952	8,364	Greece ..	Athens ^(e) ..	1951	1,368
Scotland ..	Edinburgh ..	1952	465	Hungary ..	Budapest ..	1948	1,058
Northern Ireland ..	Belfast ..	1952	444	Italy ..	Rome ..	1952	1,697
Ireland, Republic of	Dublin ..	1951	521	Japan ..	Tokyo ^(f) ..	1953	6,330
Canada ..	Montreal ^{(c)(d)} ..	1951	1,370	Netherlands ..	Amsterdam ..	1953	855
New Zealand ..	Wellington ..	1952	135	Norway ..	Oslo ..	1952	437
Union of South Africa	Capetown ..	1951	576	Poland ..	Warsaw ..	1950	601
Argentina ..	Buenos Aires ..	1952	3,404	Portugal ..	Lisbon ..	1952	795
Belgium ..	Brussels ..	1950	966	Spain ..	Madrid ..	1952	1,718
				Sweden ..	Stockholm ..	1952	752
				U.S.A. ..	New York ^(d) ..	1952	8,053

(a) Excludes full-blood aboriginals.

(b) Greater London.

(c) Greater Montreal.

(d) Principal City.

(e) Greater Athens, including Piræus.

(f) Greater Tokyo.

Canberra, the capital city of Australia, located in the Australian Capital Territory, had a population of 28,277 persons at 30th June, 1954, representing 93.3 per cent. of the population of the Territory.

6. **Principal Urban Areas.**—The following table shows the population of the principal urban incorporated areas (population 5,000 or more) in each State and Territory of Australia at 30th June, 1954.

**POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS : AUSTRALIA,
CENSUS 30TH JUNE, 1954.**

(Preliminary Figures.)

(EXCLUDING FULL-BLOOD ABORIGINALS.)

City or Town.	Population at Census, 30th June, 1954.	City or Town.	Population at Census, 30th June, 1954.	City or Town.	Population at Census, 30th June, 1954.
New South Wales.		Victoria.		South Australia.	
Sydney and Suburbs(a) ..	1,863,217	Melbourne and Suburbs(a) ..	1,524,062	Adelaide and Suburbs(a) ..	483,535
Newcastle and Suburbs(b) ..	178,156	Geelong and Suburbs(b) ..	72,349	Port Pirie ..	14,222
Greater Wollongong ..	90,829	Ballarat and Suburbs(b) ..	48,050	Mount Gambier ..	10,334
Broken Hill ..	31,387	Bendigo and Suburbs(b) ..	36,918	Whyalla ..	8,598
Blue Mountains ..	23,097	Mildura ..	10,971	Pt. Augusta ..	6,704
Maitland ..	21,334	Warrnambool ..	10,850	Pt. Lincoln ..	5,871
Wagga Wagga ..	19,243	Shepparton ..	10,848	Gawler ..	5,110
Goulburn ..	19,187	Wangaratta ..	10,716		
Orange ..	18,248	Hamilton ..	8,508	Western Australia.	
Penrith ..	17,922	Colac ..	8,032	Perth and Suburbs(a) ..	348,596
Lismore ..	17,376	Horsham ..	7,769	Kalgoorlie and Suburbs(b) ..	22,834
Albury ..	16,736	Ararat ..	7,414	Bunbury ..	9,870
Bathurst ..	16,090	Maryborough ..	6,827	Geraldton ..	8,308
Lithgow ..	15,126	Castlemaine ..	6,578	Albany ..	8,265
Cessnock ..	14,417	Sale ..	6,536	Northam ..	5,725
Grafton and South Grafton ..	14,198	Benalla ..	6,051		
Tamworth ..	13,047	Yallourn Works Area ..	5,580	Tasmania.	
Dubbo ..	12,025	Stawell ..	5,459	Hobart and Suburbs(a) ..	95,223
Windsor ..	9,867	Echuca ..	5,407	Launceston and Suburbs(b) ..	49,310
Campbelltown ..	9,695	Swan Hill ..	5,198	Burnie ..	11,195
Armidale ..	8,662			Devonport ..	10,598
Parkes ..	7,985	Queensland.		Ulverstone ..	5,006
Casino ..	7,814	Brisbane and Suburbs(a) ..	502,353		
Inverell ..	7,517	Toowoomba ..	43,152	Northern Territory.	
Kempsey ..	7,484	Rockhampton ..	40,676	Darwin ..	8,071
Taree ..	7,408	Townsville ..	40,485		
Queanbeyan ..	7,307	Ipswich ..	38,966	Australian Capital Territory.	
Forbes ..	6,525	Cairns ..	21,021	Canberra ..	28,277
Cooma ..	6,503	Bundaberg ..	19,953		
Cowra ..	6,098	South Coast ..	19,818		
Glen Innes ..	5,844	Maryborough ..	17,955		
Cootamundra ..	5,759	Mackay ..	14,764		
Muswellbrook ..	5,630	Redcliffe ..	13,865		
Shellharbour ..	5,523	Gympie ..	9,964		
Young ..	5,503	Warwick ..	9,149		
Moree ..	5,501	Charters Towers ..	6,960		
Mudgee ..	5,286	Gladstone ..	6,943		
Gunnedah ..	5,129	Dalby ..	6,183		

(a) Metropolitan Area.

(b) Entire Urban Area.

7. **Urban Areas Outside Metropolitan Areas.**—The proportion of the total population of each State which was located in incorporated urban provincial areas at the 1933 and 1947 Censuses is shown in Official Year Book No. 39, pages 522-3 and in Official Year Book No. 40, page 334, there is a table showing aggregate population at the 1947 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more inhabitants, irrespective of whether such centres were incorporated separately or not. In addition, the proportion of the aggregate population of these cities and towns to the total population of the State is shown. The following table shows similar particulars for the 1954 Census.

**AGGREGATE POPULATION OF CITIES AND TOWNS OF SPECIFIED SIZE :
1954 CENSUS.**

~~(Preliminary Figures.)~~

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Cities and Towns outside Metropolitan Area with Population of—					
	2,000 and over.			3,000 and over.		
	Number.	Population.	Proportion of Total Population.	Number.	Population.	Proportion of Total Population.
			%			%
New South Wales(a) ..	98	881,391	23.75	67	806,373	23.55
Victoria	56	415,690	16.95	40	376,347	15.35
Queensland	41	404,520	30.69	29	374,328	28.40
South Australia ..	14	74,502	9.35	9	62,008	7.78
Western Australia(b) ..	13	82,139	12.84	7	67,440	10.54
Tasmania	8	89,003	28.83	6	84,312	27.31
Northern Territory ..	2	10,856	65.92	1	8,071	49.01
Australian Capital Territory ..	1	28,277	93.28	1	28,277	93.28
Total	233	1,986,378	22.10	160	1,807,156	20.11

(a) Excludes that part of Liverpool Municipality outside the Metropolitan Area of Sydney.

(b) Excludes that part of Fremantle suburbs outside the Metropolitan Area of Perth.

In the foregoing table urban areas comprising two or more Local Government Areas or portions thereof are treated as units. The urban areas so treated are : in New South Wales, Newcastle ; in Victoria, Ballarat, Bendigo, and Geelong ; in Western Australia, Kalgoorlie ; and in Tasmania, Launceston. The figures in each instance include the populations of the adjoining areas which, together with the city proper, constitute the entire urban area.

The numbers of towns of 2,000 or more inhabitants in New South Wales and Victoria, and of 3,000 or more in New South Wales, show considerable decreases as compared with the figures for the 1947 Census. This is due to the absorption, by the increased metropolitan areas, of towns within these ranges which were formerly outside the metropolitan limits, and, in New South Wales, to similar absorptions by the City of Blue Mountains, Greater Wollongong and Newcastle Urban Area.

8. **Principal Cities in the World.**—The following table shows the population of the world's largest cities at the latest available date :—

POPULATION OF THE WORLD'S LARGEST CITIES.

(Names of cities in the British Commonwealth are printed in italics.)

Country.	City.	Year.	City Population ('000).	Country.	City.	Year.	City Population ('000).
England	<i>London(a)</i>	1952	8,364	China	Chungking	1950	1,100
U.S.A.	New York	1952	8,053	Singapore	<i>Singapore</i>	1952	1,099
Japan	Tokyo(b)	1953	6,330	Scotland	<i>Glasgow</i>	1952	1,087
China	Shanghai	1950	5,407	Hungary	Budapest	1948	1,058
U.S.S.R.	Moscow	1939	4,137	China	Dairen	1950	1,054
U.S.A.	Chicago	1950	3,606	Romania	Bucharest	1948	1,042
Argentina	Buenos Aires	1952	3,404	Egypt	Alexandria	1951	1,041
Germany	Berlin	1951	3,340	Japan	Nagoya	1950	1,031
U.S.S.R.	Leningrad	1939	3,191	Italy	Naples	1951	1,028
India	<i>Calcutta(c)</i>	1951	3,086	China	Nanking	1950	1,020
France	Paris	1951	2,910	Pakistan	Karachi	1951	1,005
Brazil	Rio de Janeiro	1951	2,490	Turkey	Istanbul	1950	1,000
Egypt	Cairo	1951	2,373	Persia	Tehran	1950	990
Brazil	Sao Paulo	1950	2,228	Denmark	Copenhagen	1950	975
Japan	Osaka	1952	2,115	Siam	Bangkok	1952	971
Mexico	Mexico City	1950	2,113	Belgium	Brussels	1950	966
U.S.A.	Philadelphia	1950	2,065	Japan	Yokohama	1950	951
China	Peking	1950	2,031	U.S.A.	Baltimore	1950	940
U.S.A.	Los Angeles	1950	1,958	Czechoslovakia	Prague	1949	933
Australia	<i>Sydney</i>	1954	1,863	India	<i>Delhi</i>	1951	916
U.S.A.	Detroit	1950	1,839	U.S.A.	Cleveland	1950	906
India	<i>Bombay</i>	1951	1,829	Germany	Munich	1952	888
China	Tientsin	1950	1,795	South Africa	<i>Johannesburg</i>	1951	881
Austria	Vienna	1951	1,766	Netherlands	Amsterdam	1953	855
Spain	Madrid	1952	1,718	U.S.A.	St. Louis	1950	853
Italy	Rome	1952	1,697	Pakistan	<i>Lahore</i>	1951	849
Germany	Hamburg	1952	1,660	U.S.S.R.	Kiev	1939	846
China	Mukden	1950	1,551	U.S.S.R.	Kharkov	1939	833
Australia	<i>Melbourne</i>	1954	1,554	Uruguay	Montevideo	1952	807
Chile	Santiago	1952	1,507	U.S.S.R.	Baku	1939	809
China	Canton	1950	1,496	China	Hankow	1949	800
India	<i>Madras</i>	1951	1,430	U.S.A.	Washington	1950	798
Canada	<i>Montreal(d)</i>	1951	1,370	Portugal	Lisbon	1952	795
Greece	Athens(e)	1951	1,368	U.S.A.	Boston	1950	791
Spain	Barcelona	1952	1,318	England	<i>Liverpool</i>	1951	785
Italy	Milan	1951	1,293	Japan	Kobe	1950	765
China	Wuhan	1950	1,200	U.S.A.	San Francisco	1950	761
Korea	Seoul	1946	1,142	China	Tsingtao	1946	756
Philippines	Manila	1952	1,132	Sweden	Stockholm	1952	752
England	<i>Birmingham</i>	1951	1,111	India	<i>Hyderabad</i>	1941	739
Canada	<i>Toronto(f)</i>	1951	1,108	Italy	Turin	1951	720
Japan	Kyoto	1950	1,102	England	<i>Manchester</i>	1951	700

(a) Greater London.
(c) Includes Piraeus.

(b) Greater Tokyo.
(f) Greater Toronto.

(e) Includes Howrah.

(d) Greater Montreal.

§ 4. Mean Population.

1. **General.**—Mean populations are calculated for twelve-monthly periods to provide a satisfactory average basis for calculations requiring allowance for the continuous change in population figures during such periods.

2. **Method of Calculation.**—From 1901 onwards the mean population for any year has been calculated by the formula :—

$$\text{Mean Population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where a , b , c , d and e , respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters, e.g., in the case of a calendar year, 31st December of the preceding year and 31st March, 30th June, 30th September and 31st December of the year under consideration. This

formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values *a, b, c, d, e*. Section V. of *Population and Vital Statistics Bulletin* No. 1, 1907 sets out in some detail the principles underlying the adoption of the formula.

3. Results.—(i) *Calendar Years*. The following table shows the mean population of each State and Territory for the calendar years 1943 to 1953 :—

MEAN POPULATION : CALENDAR YEARS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the preliminary results of the Census of 30th June, 1954.

Year ended 31st Dec—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1943(a)	2,857,547	1,973,533	1,047,421	613,327	476,745	242,860	9,574	13,644	7,234,651
1944(a)	2,886,204	1,989,870	1,061,467	619,409	481,498	245,618	10,440	14,200	7,308,706
1945(a)	2,917,415	2,006,649	1,076,610	627,102	487,510	248,596	10,512	15,012	7,389,406
1946(a)	2,945,220	2,025,475	1,090,238	635,127	492,771	252,192	10,568	15,883	7,467,474
1947 ..	2,983,829	2,053,923	1,105,884	646,688	502,949	257,637	10,866	17,002	7,578,778
1948 ..	3,019,755	2,092,113	1,127,337	661,379	514,614	263,447	11,982	18,962	7,709,589
1949 ..	3,093,594	2,142,682	1,155,677	680,306	532,589	270,335	13,062	20,722	7,908,967
1950 ..	3,193,851	2,209,100	1,191,139	709,506	557,857	278,796	14,304	22,884	8,177,437
1951 ..	3,280,270	2,276,391	1,223,794	732,577	580,289	288,310	15,170	23,787	8,420,588
1952 ..	3,342,198	2,343,704	1,255,991	755,090	600,580	298,381	15,077	25,888	8,636,909
1953 ..	3,387,009	2,395,895	1,287,347	776,414	620,988	306,345	15,520	28,383	8,817,901

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

(ii) *Financial Years*. The following table shows the mean population of each State and Territory for the years ended 30th June, 1944 to 1954 :—

MEAN POPULATION : FINANCIAL YEARS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Adjusted in accordance with the preliminary results of the Census of 30th June, 1954.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1944(a)	2,871,452	1,981,997	1,054,810	616,151	478,271	244,178	10,408	13,798	7,271,065
1945(a)	2,901,459	1,998,202	1,068,630	623,104	484,720	246,971	10,477	14,607	7,348,170
1946(a)	2,932,366	2,015,197	1,084,125	630,921	489,982	250,309	10,537	15,431	7,428,868
1947(a)	2,963,056	2,039,348	1,097,303	640,352	497,006	254,553	10,676	16,381	7,518,675
1948 ..	3,001,646	2,070,246	1,114,644	653,857	508,743	261,202	11,209	17,987	7,639,534
1949 ..	3,048,862	2,116,365	1,140,845	669,842	521,922	266,523	12,536	19,636	7,796,531
1950 ..	3,146,233	2,174,911	1,173,280	694,607	545,116	274,503	13,732	22,021	8,044,403
1951 ..	3,239,159	2,242,986	1,207,260	721,880	570,323	283,540	14,820	23,245	8,303,213
1952 ..	3,312,685	2,309,822	1,239,952	743,356	589,855	293,358	15,121	24,704	8,528,853
1953 ..	3,366,944	2,372,437	1,272,350	766,592	611,150	302,553	15,229	27,209	8,734,404
1954 ..	3,405,735	2,422,858	1,300,590	786,043	630,655	309,445	15,914	29,425	8,900,665

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

§ 5. Elements of Increase.

1. *Natural Increase*.—(i) *General*. The two factors which contribute to the growth of a population are the "natural increase," i.e., the excess of births over deaths, and the "net migration," i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book particulars of the natural increase from 1861 were given for each sex and for each State and Territory (see No. 22, page 899). Figures for more recent years will be found in *Demography Bulletin* No. 71.

During the present century the rate of natural increase grew until it reached the maximum rate of 17.44 per thousand of population in 1914, but it steadily declined after that year to 7.07 in 1934. There was little change until 1939, but during the war and in the post-war period the rate rose sharply, reaching the level of 14.37 in 1947, and it has since remained at between 13 and 14 per 1,000 of population.

In the following table particulars of the natural increase in each State and Territory are given for each sex for each quinquennium from 1926 to 1950 and for each of the years 1947 to 1953.

POPULATION : NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS).

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
MALES.									
1926-30..	72,430	43,756	25,645	14,583	11,245	7,001	-131	175	174,704
1931-35..	51,566	25,286	20,627	8,686	8,576	5,810	-93	270	120,728
1936-40(a)	49,092	26,141	23,145	9,187	9,409	6,040	39	397	123,450
1941-45(a)	68,071	42,650	31,871	15,563	12,391	7,234	15	740	178,535
1946-50(a)	93,564	63,984	41,580	24,206	19,367	11,356	412	1,583	256,052
1947(a) ..	19,743	13,130	8,661	5,048	3,802	2,314	86	265	53,049
1948 ..	17,453	12,017	8,255	4,559	3,867	2,129	77	290	48,656
1949 ..	18,498	12,224	8,262	4,817	3,933	2,314	108	395	50,551
1950 ..	19,218	13,773	8,720	5,159	4,271	2,434	121	414	54,110
1951 ..	18,007	13,357	8,666	4,995	4,598	2,392	117	416	53,448
1952 ..	19,939	14,882	9,327	5,333	4,749	2,699	149	452	57,530
1953 ..	20,444	15,200	9,428	5,576	5,048	2,479	165	337	58,677
FEMALES.									
1926-30..	80,733	44,417	31,128	15,407	14,406	6,893	126	203	193,313
1931-35..	60,300	28,216	26,036	9,228	12,352	5,953	156	280	142,521
1936-40(a)	60,628	28,464	28,991	10,057	13,626	6,574	220	437	148,997
1941-45(a)	75,809	42,538	36,709	15,654	16,029	7,420	232	826	195,217
1946-50(a)	102,959	63,744	46,650	24,605	22,273	11,667	652	1,574	274,124
1947(a) ..	21,206	12,794	9,581	5,054	4,349	2,463	125	295	55,867
1948 ..	19,378	12,257	9,141	4,563	4,379	2,322	130	311	52,481
1949 ..	20,950	12,658	9,325	4,852	4,788	2,407	146	324	55,450
1950 ..	21,409	13,716	9,909	5,407	4,899	2,342	194	418	58,294
1951 ..	21,230	13,750	9,881	5,284	4,908	2,398	173	438	58,062
1952 ..	22,219	15,534	10,455	5,501	5,455	2,638	210	511	62,523
1953 ..	22,739	15,711	10,348	5,618	5,742	2,706	179	327	63,370

(a) Excess of births over civilian deaths from September, 1939 to June, 1947.

NOTE.—Minus sign (—) denotes excess of deaths over births.

POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—
continued.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
PERSONS.									
1926-30..	153,163	88,173	56,773	29,990	25,651	13,894	— 5	378	368,017
1931-35..	111,866	53,502	46,063	17,914	20,928	11,763	63	550	263,249
1936-40(a)	109,720	54,605	52,136	19,244	23,035	12,614	259	834	272,447
1941-45(a)	143,880	85,188	68,580	31,217	28,420	14,654	247	1,566	373,752
1946-50(a)	196,523	127,728	88,230	48,811	41,640	23,023	1,064	3,157	530,176
1947(a) ..	40,949	25,924	18,242	10,102	8,151	4,777	211	560	108,916
1948 ..	36,831	24,274	17,396	9,122	8,246	4,451	207	610	101,137
1949 ..	39,448	24,882	17,587	9,669	8,721	4,721	254	719	106,001
1950 ..	40,627	27,489	18,629	10,566	9,179	4,776	315	832	112,404
1951 ..	40,137	27,107	18,547	10,279	9,506	4,790	290	854	111,510
1952 ..	42,158	30,416	19,782	10,834	10,204	5,337	359	963	120,053
1953 ..	43,183	30,911	19,776	11,194	10,790	5,185	344	664	122,047

RATE OF NATURAL INCREASE(b)—PERSONS.

1926-30..	12.51	10.10	12.84	10.58	12.63	12.85	-0.22	9.60	11.72
1931-35..	8.61	5.89	9.88	6.17	9.54	10.33	2.54	11.96	7.95
1936-40(c)	8.06	5.84	10.40	6.48	9.94	10.66	8.27	14.14	7.89
1941-45(d)	10.05	8.64	13.04	10.17	11.86	12.02	4.97	21.85	10.32
1946-50(c,d)	12.90	12.14	15.56	14.64	16.01	17.41	17.51	33.07	13.65
1947(c)(d)	13.72	12.62	16.50	15.62	16.21	18.54	19.42	32.94	14.37
1948(d) ..	12.20	11.60	15.43	13.79	16.02	16.90	17.28	32.17	13.12
1949(d) ..	12.75	11.61	15.22	14.21	16.37	17.46	19.45	34.70	13.40
1950(d) ..	12.72	12.44	15.64	14.89	16.44	17.13	22.02	36.36	13.75
1951(d) ..	12.24	11.91	15.16	14.03	16.38	16.61	19.12	35.90	13.24
1952(d) ..	12.61	12.98	15.75	14.35	16.99	17.89	23.81	37.20	13.90
1953(d) ..	12.75	12.90	15.36	14.42	17.38	16.93	22.16	23.39	13.84

(a) Excess of births over civilian deaths from September, 1939 to June, 1947. (b) Excess of births over deaths per 1,000 of mean population. (c) Excess of births over civilian deaths per 1,000 of mean population from September, 1939 to June, 1947. (d) revised in accordance with the preliminary results of the Census of 30th June, 1954.

NOTE.—Minus sign (—) denotes excess of deaths over births.

During the first five years of the present century the average increment to the population of Australia by natural increase was 56,886 persons per annum. The increment rose to 81,695 persons per annum in 1921-25, but thereafter fell to 52,650 persons per annum in the quinquennium 1931-35, increasing during 1936-40 to 54,489. During 1941-45 the average annual excess of births over civilian deaths was 74,750, while during 1946-50 the annual excess of births over deaths was a record high average of 106,035. In the year 1953 the excess was 122,047.

(ii) *Comparison with other Countries.* Notwithstanding its low birth rate, Australia has a higher rate of natural increase than most European countries, owing to the fact that its death rate is very low. The following table gives a comparison between the rate of natural increase in Australia and that in some of the principal countries for which such information is available.

NATURAL INCREASE OF POPULATION : VARIOUS COUNTRIES.

INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

Country.	1931-35.	1936-40.	1941-45.	1946-50.	Country.	1931-35.	1936-40.	1941-45.	1946-50.
Mexico	18.4	20.5	23.2	27.7	Portugal	12.1	10.7	9.0	11.8
Ceylon	12.2	14.5	17.1	25.1	Denmark	6.8	7.5	11.2	11.4
Israel	21.0	17.9	19.0	23.1	Norway	4.8	5.1	8.0	11.4
Egypt	15.5	16.1	12.7	21.4	Italy	9.8	9.4	5.2	10.6
Canada	11.7	10.7	13.7	18.1	Spain	(c)	3.8	7.3	10.0
Netherlands ..	12.3	11.5	10.9	18.0	Ireland, Republic of	9.5	6.3	10.0	8.9
Union of S. Africa(a)	14.4	15.3	16.2	17.6	Switzerland ..	4.6	3.6	7.5	8.1
Japan	13.8	11.5	9.9	17.6	Sweden	2.5	3.1	8.1	8.0
Chile	9.2	9.7	13.2	16.1	France	0.8	-1.5	-1.9	7.9
New Zealand(b)	8.8	9.1	11.7	16.1	United Kingdom ..	3.2	2.5	3.3	6.5
Argentina	(c)	(c)	13.8	15.6	Germany.. ..	5.4	7.6	(c)	(e)5.6
Finland	6.1	5.3	5.7	15.2	Belgium	3.9	1.3	-0.5	4.6
U.S.A.	6.3	6.3	9.6	14.2	Austria	0.9	2.4	1.2	4.0
Australia(d)	8.0	7.9	9.3	13.8					

(a) Whites only. (b) Excludes Maoris. (c) Not available. (d) Excludes full-blood aborigines. (e) Federal Republic.

NOTE.—Minus sign (—) denotes decrease.

2. Net Migration.*—The other factor of increase in the population, namely, the excess of arrivals over departures, known as "net migration," is, from its nature, much more subject to variation than is "natural increase".

Particulars of the increase by net migration are given below for quinquennial periods from 1926 to 1950 and for each of the years 1947 to 1953.

POPULATION : INCREASE BY NET MIGRATION.

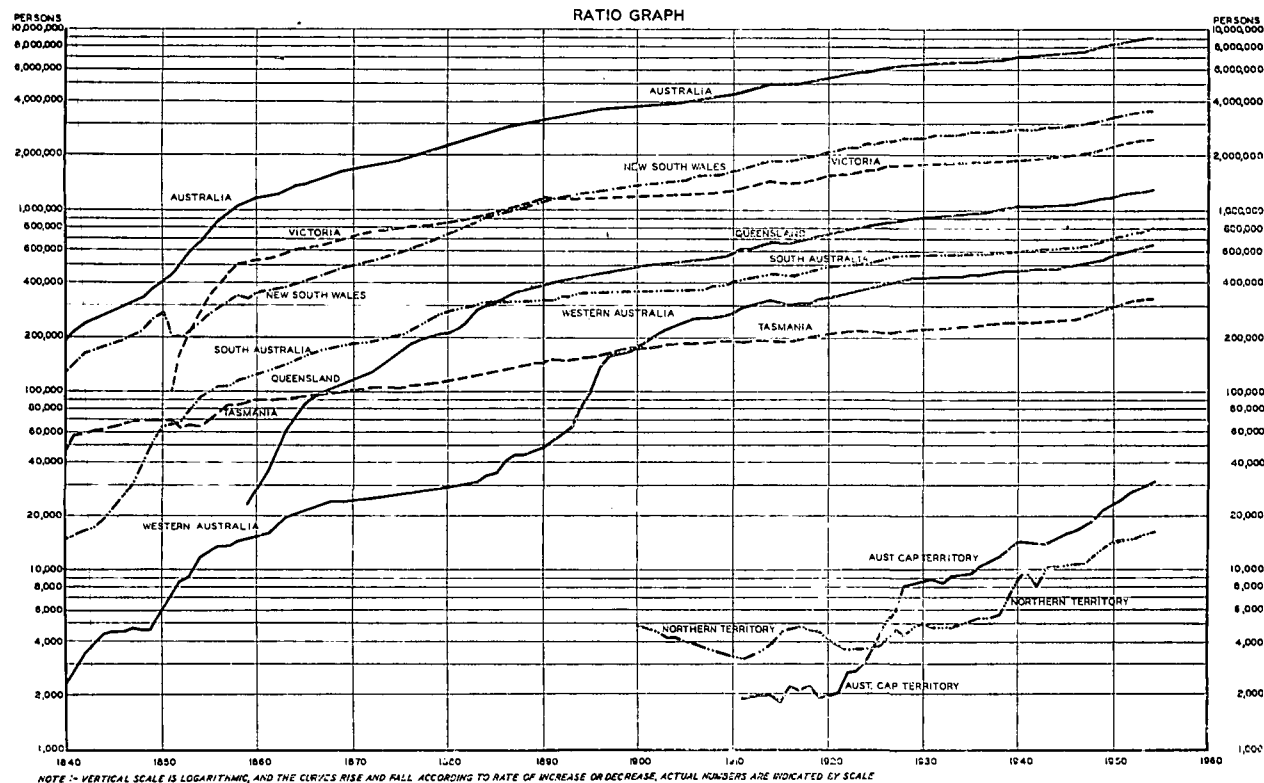
Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
MALES.									
1926-30..	37,524	7,849	11,584	2,230	19,069	3,668	870	2,259	73,257
1931-35..	1,646	5,951	6,195	3,654	4,215	1,384	24	3	10,676
1936-40(a)	7,847	12,096	5,249	4,988	2,501	793	2,787	1,176	20,873
1941-45(a)	6,614	17,502	6,487	2,202	9,261	4,312	889	1,822	5,325
1946-50(a)	84,834	58,331	15,038	18,531	23,299	13,178	1,852	2,665	217,728
1947(a)(b)	2,962	2,535	1,695	1,736	2,278	5,316	52	462	8,576
1948(b) ..	8,389	11,553	3,320	2,444	2,828	2,483	585	922	32,524
1949(b) ..	42,459	20,326	6,932	7,062	8,140	3,238	555	1,231	89,943
1950(b) ..	33,704	29,770	7,924	7,201	10,374	2,190	672	50	91,984
1951(b) ..	25,298	22,804	5,974	2,809	5,166	5,190	131	565	67,615
1952(b) ..	11,812	24,990	4,749	5,254	7,593	2,250	14	1,945	58,579
1953(b) ..	604	7,920	1,968	924	4,679	2,088	241	1,677	20,101

(a) Excludes troop movements from September, 1939 to June, 1947. (b) Figures for New South Wales, Victoria, Queensland and the Australian Capital Territory have been adjusted for discrepancies in road and rail movements.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

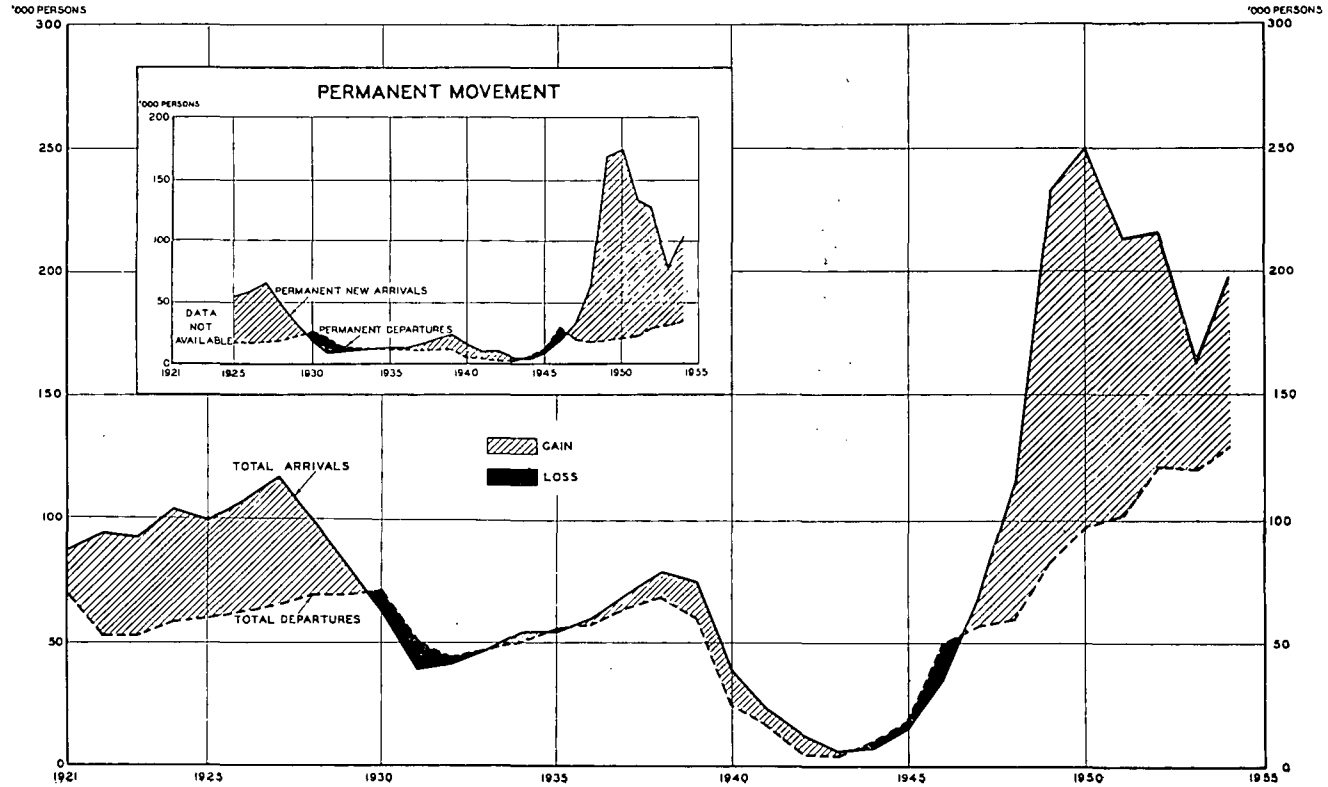
* The subject of migration is dealt with at some length later in this chapter (see page 333).

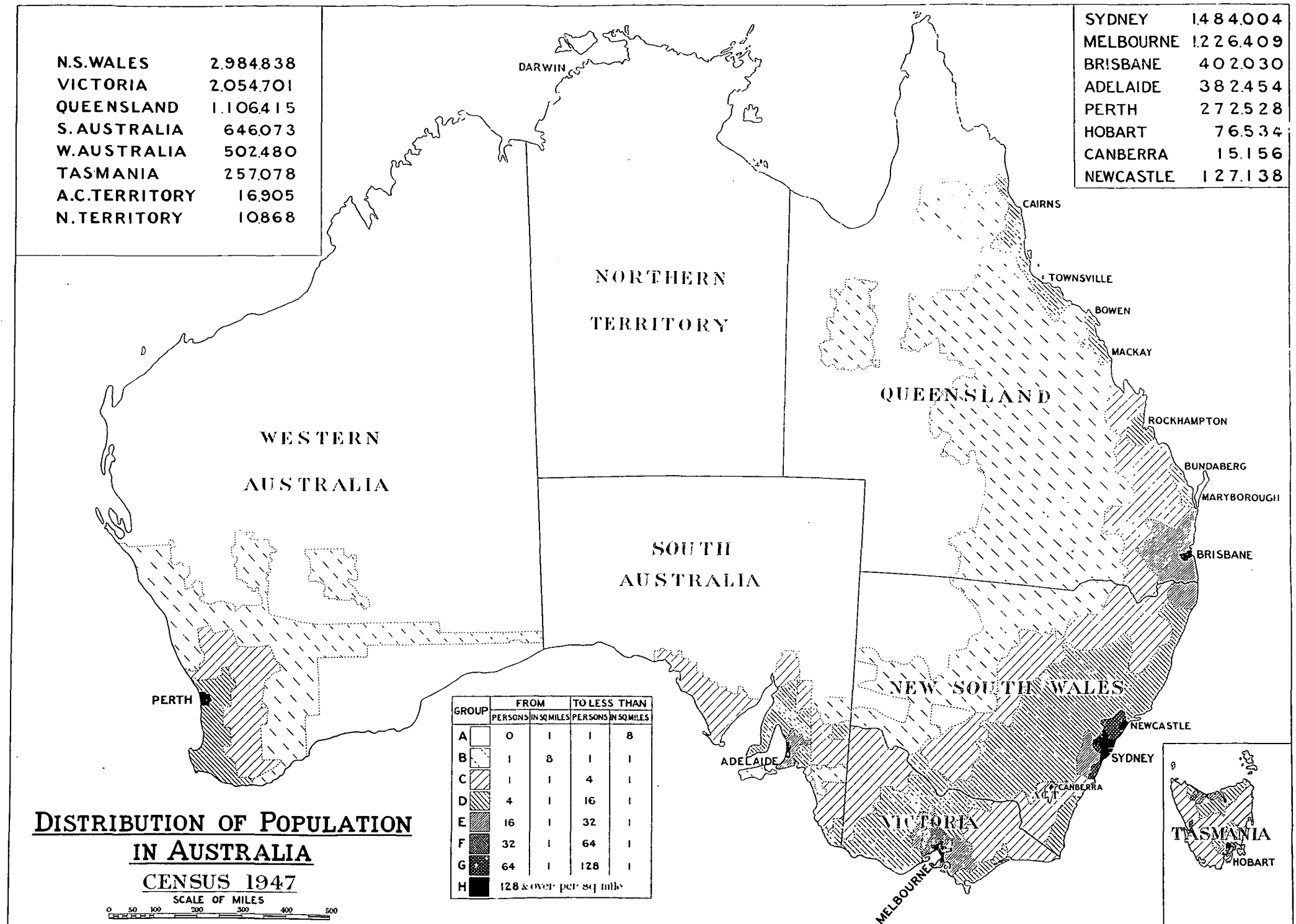
POPULATION OF AUSTRALIA, 1840 TO 1954



(See page 306.)

OVERSEA MIGRATION: AUSTRALIA, 1921 to 1954





POPULATION: INCREASE BY NET MIGRATION—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
FEMALES.									
1926-30..	33,326	12,532	3,537	— 341	9,363	— 4,293	278	2,048	56,450
1931-35..	1,093	2,943	1,125	— 2,284	— 578	— 2,644	88	47	— 210
1936-40(a)	14,414	9,409	1,509	— 2,608	32	— 1,872	715	656	22,255
1941-45(a)	3,648	10,745	— 4,759	786	— 3,654	— 3,701	357	— 938	2,484
1946-50(a)	53,087	30,124	10,233	13,464	17,552	7,708	1,643	1,545	135,356
1947(a)(b)	— 371	— 1,410	— 1,695	683	1,085	3,771	76	— 90	2,035
1948(b) ..	6,641	8,618	3,320	1,296	2,375	— 307	711	178	22,591
1949(b) ..	28,708	12,628	6,932	5,215	5,624	1,144	547	837	60,058
1950(b) ..	24,695	9,485	7,924	6,280	9,312	3,177	295	620	60,521
1951(b) ..	15,712	10,694	5,974	4,738	3,259	2,637	236	98	43,818
1952(b) ..	6,231	10,063	4,749	5,611	5,084	1,354	12	537	35,453
1953(b) ..	3,974	8,426	1,968	1,867	3,579	800	477	161	22,796
PERSONS.									
1926-30..	70,850	20,381	15,121	— 2,571	28,432	— 7,961	1,148	4,307	129,797
1931-35..	— 553	— 3,008	7,320	— 5,938	— 4,793	— 4,028	64	50	— 10,886
1936-40(a)	22,261	21,505	6,758	— 7,596	— 2,469	— 2,665	3,502	1,832	43,128
1941-45(a)	10,262	28,247	— 11,246	2,988	— 12,915	— 8,013	1,246	— 2,760	7,809
1946-50(a)	137,921	88,455	25,271	31,995	40,851	20,886	3,495	4,210	353,084
1947(a)(b)	2,591	— 3,945	— 3,404	2,419	3,363	9,087	128	372	10,611
1948(b) ..	15,030	20,171	6,399	3,740	5,203	2,176	1,296	1,100	55,115
1949(b) ..	71,167	32,954	12,287	12,277	13,764	4,382	1,102	2,068	150,001
1950(b) ..	58,399	39,255	14,581	13,571	19,686	5,376	967	670	152,505
1951(b) ..	41,010	33,498	12,418	7,547	8,425	7,827	105	603	111,433
1952(b) ..	18,043	35,053	11,310	10,865	12,677	3,604	— 2	2,482	94,032
1953(b) ..	4,578	16,346	5,480	2,791	8,258	2,888	718	1,838	42,897

(a) Excludes troop movements from September, 1939 to June, 1947. (b) Figures for New South Wales, Victoria, Queensland and the Australian Capital Territory have been adjusted for discrepancies in road and rail movements.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

There was a loss of population by migration in the first five years of the present century; in the next five quinquennial periods there were varying gains which averaged about 115,000 per quinquennium.

In the five years ended 1935 there was a net emigration of 10,886 and in the five years ended 1940 a net immigration of 43,128. During the war period 1941-45 net immigration fell to 7,809 persons. In 1940 there was a net loss by migration of 15,148 persons due mainly to the departure of refugees and evacuees, and also fiancées, wives and children of British and Allied servicemen but, with increasing transport facilities and the resumption of assisted migration, there was a net gain of 10,611 in 1947, increasing rapidly to 55,115 in 1948, 150,001 in 1949 and 152,505 in 1950. This large net gain was due in great measure to the arrival of successive contingents from Australia's quota of 176,000 former European displaced persons, of whom 156,491 had arrived by the end of 1950. As this flow diminished it was partly offset by new schemes for assisted migrants but nevertheless the total net gain from all sources in 1951 was lower at 111,433 and in 1952 and 1953 successively lower at 94,032 and 42,897 respectively. The net gains in each of the years 1949 to 1952 were the highest recorded for individual years with the exception of 1919 for which year troops returning from the 1914-18 War were included.

3. **Total Increase.**—The total increase of the population is obtained by combining the natural increase with the increase by net migration. For the period September, 1939 to June, 1947 deaths of defence personnel have been deducted from the total increase so derived. The results of the 1947 and 1954 Censuses disclosed some unaccountable movements of population during the intercensal periods, July, 1933 to June, 1947 and July, 1947 to June, 1954, and particulars of total increase, after taking into account deaths of defence personnel in the earlier period have been adjusted for these discrepancies. No separate adjustment has, however, been applied to individual elements of increase during the periods, although intercensal discrepancies disclosed by previous censuses were adjusted on recorded oversea departures.

The annual increments to the population for the years 1947 to 1953 are shown below, together with quinquennial figures from 1926 to 1950. For the reasons stated in the previous paragraph, figures for the period 1933 to 1953 differ from the totals of figures for natural increase and net migration shown in preceding tables by an amount equal to the net total of deaths of defence personnel and movements of population disclosed by the Censuses of 1947 and 1954.

POPULATION : TOTAL INCREASE.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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MALES.

1926-30..	109,954	51,605	37,229	12,353	30,314	3,333	739	2,434	247,961
1931-35..	50,277	18,318	26,789	5,049	5,871	4,619	109	502	111,316
1936-40(a)	57,601	36,297	28,364	4,218	9,995	5,526	2,847	2,622	147,470
1941-45(a)	62,389	47,747	20,117	14,703	2,856	2,204	915	427	151,358
1946-50(a)	164,165	119,843	63,600	52,156	43,160	21,245	2,159	3,358	469,686
1947(a) ..	20,927	10,344	7,994	8,166	6,342	7,187	126	694	61,780
1948 ..	21,868	23,237	13,597	9,666	6,648	3,647	626	827	80,146
1949 ..	56,696	31,871	17,191	14,528	11,667	4,589	632	1,231	138,705
1950 ..	48,716	42,780	18,634	15,116	14,483	3,669	764	70	144,232
1951 ..	40,085	35,516	16,634	10,493	9,093	6,618	-45	524	119,518
1952 ..	27,820	39,151	16,069	13,258	12,243	3,981	105	2,000	114,627
1953 ..	17,229	22,689	13,401	9,186	9,668	3,603	376	1,620	77,772

FEMALES.

1926-30..	114,059	56,949	34,665	15,066	23,769	2,600	404	2,251	249,763
1931-35..	61,442	30,672	27,772	7,246	12,142	3,507	275	539	143,595
1936-40(a)	75,275	37,026	31,791	8,076	14,458	5,053	997	1,778	174,454
1941-45(a)	79,661	52,442	33,295	17,123	13,156	4,074	657	845	201,253
1946-50(a)	144,647	102,337	57,020	39,840	39,378	18,821	1,768	4,018	407,769
1947(a) ..	19,360	12,664	8,003	6,052	5,443	6,180	123	390	58,215
1948 ..	22,807	23,408	12,148	6,297	6,581	1,822	666	663	74,392
1949 ..	46,291	27,659	14,602	10,488	10,212	3,357	518	1,336	114,463
1950 ..	42,753	25,555	16,484	12,117	13,977	5,325	316	1,211	117,738
1951 ..	33,633	26,850	16,244	10,457	7,968	4,841	237	709	100,959
1952 ..	25,224	27,987	16,931	11,538	10,345	3,797	48	1,221	97,091
1953 ..	23,533	26,574	13,780	7,918	9,129	3,309	485	661	85,389

(a) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1939 to June, 1947.

NOTE.—Minus sign (—) denotes decrease.

POPULATION : TOTAL INCREASE—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
PERSONS.									
1926-30..	224,013	108,554	71,804	27,419	54,083	5,933	1,143	4,685	497,724
1931-35..	111,719	48,990	54,561	12,295	18,013	8,126	166	1,041	251,911
1936-40(a)	132,876	73,323	60,155	12,294	24,453	10,579	3,844	4,400	321,924
1941-45(a)	142,050	100,189	53,412	31,826	16,012	6,278	1,572	1,272	352,611
1946-50(a)	308,812	222,180	120,620	91,996	82,538	40,066	3,667	7,376	877,455
1947(a) ..	40,287	23,008	15,997	14,218	11,785	13,367	249	1,084	119,995
1948 ..	44,675	46,645	25,745	15,993	13,229	5,469	1,292	1,450	154,538
1949 ..	102,987	59,530	31,793	25,016	22,179	7,946	1,150	2,667	253,168
1950 ..	91,469	68,335	35,118	27,233	28,460	8,994	1,080	1,281	261,970
1951 ..	73,718	62,366	32,878	20,950	17,681	11,459	192	1,233	220,477
1952 ..	53,944	67,138	33,000	24,796	22,588	7,778	153	3,221	211,718
1953 ..	40,762	49,263	27,181	17,104	18,797	6,912	861	2,281	163,161

(a) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1939 to June, 1947.

NOTE.—Minus sign (—) denotes decrease.

4. Rate of Population Growth.—(i) *Australia.* The annual percentage rate of population growth is computed by the compound interest formula. The formula is as follows:—

$$P_1 = P_0(1 + r)^t$$

where P_0 and P_1 are the populations at the beginning and end of the period respectively, t is the number of years intervening and r is the annual rate of growth.

The annual rates of growth per cent. of population in Australia during each of the years 1943 to 1953 were as follows:—1943, 0.95; 1944, 1.06; 1945, 1.13; 1946, 1.18; 1947, 1.60; 1948, 2.02; 1949, 3.25; 1950, 3.26; 1951, 2.65; 1952, 2.48; and 1953, 1.87.

The annual rate of population growth during the present century has been 1.64 per cent., but the results from year to year have deviated widely from this figure. In the following table the period 31st December, 1900 to 31st December, 1953 has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population:—

POPULATION : PERIODICAL RATES OF GROWTH.

Period.	Interval. (Years.)	Total Increase. ('000.)	Average Annual Numerical Increase. ('000.)	Annual Rate of Population Growth. (Per cent.)		
				Natural Increase.	Net Migration.	Total.
1901 to 1913 ..	13	1,128	87	1.59	0.53	2.04
1914 to 1923 ..	10	862	86	1.50	0.15	1.64
1924 to 1929 ..	6	680	113	1.28	0.64	1.88
1930 to 1939(a) ..	10	569	57	0.82	0.03	0.85
1940 to 1946(a) ..	7	513	73	0.98	0.03	1.01
1947 to 1953(a) ..	7	1,385	198	1.38	1.09	2.45

(a) Population figures include Australian defence forces overseas from September, 1939, to June, 1947.

Up to 1913 the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased governmental assistance, was responsible for the comparatively high annual rate of 2.04 per cent. during this period. The 1914-18 War was a dominating influence in the decade 1914-23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. In the next span, 1924-29, a more settled and prosperous era was experienced; encouraged migration

was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth rate, the annual rate of growth rose to 1.88 per cent. After 1929 came the economic depression, and immigration ceased—in fact Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the rate of growth of the population receded to 0.85 per cent. per annum. With the outbreak of war in 1939, Australia entered a new phase in her demographic history, the full effects of which will not be seen for some time to come. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945, and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The post-war period 1947 to 1953 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in record net gains in each of the four years 1949 to 1952. The annual rate of growth for the period was 2.45 per cent.

Rates of population growth from 1881 to 1953 may be found for each State and Territory of Australia in *Demography Bulletin* No. 71, 1953.

(ii) *Various Countries.* The table hereunder gives estimated rates of growth of the population of Australia in comparison with those for other countries:—

POPULATION : RATES OF GROWTH IN VARIOUS COUNTRIES.

Country.	Annual Rate of Population Growth. Per cent.					Country.	Annual Rate of Population Growth. Per cent.				
	1926-31.	1931-36.	1936-41.	1941-46.	1946-51.		1926-31.	1931-36.	1936-41.	1941-46.	1946-51.
Ceylon ..	1.18	1.34	1.40	2.15	2.95	Denmark ..	0.67	0.84	0.74	1.20	0.97
Canada ..	1.97	1.23	0.85	1.35	2.62	Germany ..	0.55	0.58	(b)	(b)	0.92
Australia ..	1.53	0.76	0.93	0.98	2.55	Belgium ..	0.71	0.42	-0.10	0.22	0.73
Japan ..	1.48	0.77	1.06	0.92	2.05	Italy ..	0.31	0.63	0.55	0.49	0.70
New Zealand ..	1.38	0.79	0.58	1.81	2.04	Spain ..	0.89	1.46	0.91	0.94	0.61
United States ..	1.27	0.69	0.79	1.18	1.79	England and Wales ..	0.44	0.42	0.44	0.45	0.61
Netherlands ..	1.06	1.26	1.12	1.00	1.72	Ireland, Republic of ..	-0.12	0.28	0.18	-0.20	-0.01
Norway ..	0.42	0.46	0.52	0.90	1.25	Scotland ..	-0.21	0.50	0.64	0.03	-0.08
Switzerland ..	0.62	0.44	0.43	0.98	1.24						
France ..	0.53	0.02	-1.48	0.51	1.10						
Sweden ..	0.29	0.34	0.45	1.01	1.03						

(a) Excludes armed forces overseas at 31st December, 1941.
(d) Territory defined by 1947 peace treaty.

(b) Not available.

(c) Excludes war losses.

NOTE.—Minus sign (—) denotes decrease.

§ 6. Density.

1. *General.*—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and a recorded population on 30th June, 1954, of 8,986,873, excluding about 47,000 full-blood aborigines, has a density of only 3.02 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents and sub-continents the densities are approximately as follows:—Europe (excluding U.S.S.R.), 210; Asia (excluding U.S.S.R.), 125; U.S.S.R., 22; Africa, 18; North and Central America, 24; and South America, 17. The population of Australia has thus about one-sixth of the density of that of South America and of Africa; about one-eighth of that of U.S.S.R. and of North and Central America; about one-fortieth of that of Asia (excluding U.S.S.R.); and about one-seventieth of that of Europe (excluding U.S.S.R.).

On account of the very large area of Australia and the unsuitability for settlement of much of the country, the density of population must necessarily increase slowly. In Australia as a whole the figure has increased from 1.29 per square mile in 1901 to 3.02 in 1954. Victoria's density, however, has grown from 13.77 to 27.90 and that of New South Wales from 4.43 to 11.06 in the same period.

A map showing the density of population throughout Australia at the 1947 Census appears on pages 317-18. When comparing the density of population of the several States

consideration should be given to the average annual rainfall distribution in each State as an indication of the climatic influence upon probable population numbers. The area of Australia receiving less than 10 inches of rainfall is 38 per cent.; that of the various States is:—New South Wales, 20 per cent.; Victoria, nil; Queensland, 13 per cent.; South Australia, 83 per cent.; Western Australia, 58 per cent.; and Tasmania, nil.

2. Main Countries of the World.—Number and density of population of the most important countries of the world at 30th June, 1952, are shown in the following table. In some instances, more particularly in the cases of Asia and Africa, the numbers must be considered as rough approximations only.

POPULATION OF THE PRINCIPAL COUNTRIES OF THE WORLD: NUMBER AND DENSITY, 1952.

Country.	Population. (‘000.)	Density. (a)	Country.	Population. (‘000.)	Density. (a)
EUROPE.			AFRICA.		
Germany ..	69,421	508.8	Nigeria ..	29,600	87.3
United Kingdom ..	50,429	535.3	Egypt ..	21,425	55.5
Italy ..	46,865	403.2	French West Africa(d)	17,363	9.5
France ..	42,600	200.2	Ethiopia(d)	15,000	36.6
Spain ..	28,306	145.7	Union of South Africa ..	12,912	27.3
Poland(b)	24,977	207.5	Belgian Congo ..	11,763	13.0
Yugoslavia ..	16,729	168.7	Algeria ..	9,140	10.8
Romania ..	16,300	177.8	Anglo-Egyptian Sudan ..	8,766	9.1
Czechoslovakia(b)	12,340	250.0	French Morocco ..	8,054	53.4
Netherlands ..	10,377	829.8	Tanganyika Territory ..	7,944	21.9
Hungary ..	9,460	263.4	Mozambique ..	5,846	19.6
Belgium ..	8,706	739.1	Other ..	57,187	..
Portugal ..	8,549	240.3	Total Africa ..	205,000	17.5
Greece(c)	7,776	151.9	NORTH AND CENTRAL AMERICA.		
Bulgaria ..	7,390	172.7	United States of America ..	156,981	51.9
Sweden ..	7,125	41.9	Mexico ..	26,922	35.4
Austria ..	6,949	214.6	Canada ..	14,430	3.8
Switzerland ..	4,815	302.0	Cuba(d)	5,471	123.7
Denmark ..	4,334	261.4	Other ..	23,196	..
Finland ..	4,091	31.4	Total North and Central America ..	227,000	24.3
Norway ..	3,327	26.6	SOUTH AMERICA.		
Ireland, Republic of ..	2,948	108.6	Brazil ..	54,477	16.6
Other ..	5,186	..	Argentina ..	18,056	16.7
Total Europe ..	399,000	210.0	Colombia ..	11,768	26.8
ASIA.			Peru ..	8,864	17.5
China(d)	463,500	123.3	Chile ..	5,932	20.7
India ..	367,000	289.1	Other ..	16,993	..
Japan ..	85,500	601.2	Total South America ..	116,000	16.8
Indonesia ..	78,163	135.7	OCEANIA.		
Pakistan(d)	75,842	208.1	Australia(g)	8,684	2.9
Indo-China ..	30,500	112.0	New Zealand and Dependencies ..	1,995	19.3
Korea(b)	29,500	346.0	Territory of New Guinea ..	1,100	11.8
Turkey(e)	21,983	74.2	Hawaii ..	522	81.3
Philippines ..	20,631	178.5	Papua ..	374	4.1
Peru ..	19,519	31.0	Fiji ..	307	43.6
Thailand ..	19,193	97.1	Other ..	653	..
Burma ..	18,859	72.1	Total Oceania ..	13,647	4.1
Afghanistan(b)	12,000	47.8	SUMMARY.		
Ceylon ..	7,941	313.5	Europe ..	399,000	210.0
Nepal ..	7,100	129.5	Asia ..	1,307,000	125.0
Saudi Arabia ..	7,000	11.3	U.S.S.R. ..	193,000	22.4
Malaya, Federation of ..	5,506	108.8	Africa ..	205,000	17.5
Other ..	37,363	..	America, North and Central ..	227,000	24.3
Total Asia ..	1,307,000	125.0	America, South ..	116,000	16.8
U.S.S.R. (Europe and Asia) (f)	193,000	22.4	Oceania ..	13,647	4.1
			Total ..	2,460,647	47.1

(a) Number of persons per square mile. (b) Population 1950. (c) Includes Ponderance Islands. (d) Population 1951. (e) Includes European Territory. (f) Population 1946. (g) Includes 47,000 full-blood aborigines.

The populations shown in the above table are, in the main, in accordance with figures published in the *Demographic Year Book*, 1953, published by the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

§ 7. General Characteristics.

NOTE.—Information provided throughout this section relates to the 1947 Census; corresponding information in respect of the 1954 Census was not available for Australia as a whole when this Chapter was printed. Further particulars will be found in the Appendix.

1. Sex Distribution.—(i) *States.* The number of males to each hundred females has been adopted as a measure of the "masculinity" of the population. On pp. 163-5 in the second issue of the Official Year Book a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on p. 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the 1911 Census.

With the exception of some dislocation arising from the two World Wars, there has been a continuous diminution of the masculinity of the population. This has resulted from the increasing proportion of the population in the higher age groups, in which females preponderate owing to their greater longevity, and the general long-term fall in the birth rate. At the 1947 Census the numbers of the sexes were practically equal, but there has since been an increase in masculinity owing to the higher birth rate and to the increase in the number of immigrants, the majority of whom are males.

The following table shows the masculinity of the population at quinquennial intervals from 1925 to 1950 and for each of the years 1947 to 1953 :—

POPULATION : MASCULINITY, 1925 TO 1953.

(NUMBER OF MALES PER 100 FEMALES.)

As at 31st December—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1925 ..	104.09	99.71	110.94	102.02	115.76	100.90	297.61	132.37	104.24
1930 ..	103.39	90.13	110.66	100.97	117.17	101.53	263.66	118.60	103.85
1935 ..	102.38	97.84	109.81	100.20	113.21	102.45	212.80	115.64	102.71
1940 ..	100.98	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1945 ..	99.75	97.50	105.45	98.21	105.49	101.15	220.16	115.86	100.36
1947 ..	100.03	97.29	105.39	98.84	105.89	101.85	210.09	119.56	100.50
1948 ..	99.97	97.24	105.33	99.87	105.70	103.18	192.30	119.96	100.64
1949 ..	100.63	97.79	105.84	101.04	106.20	103.99	184.53	116.22	101.22
1950 ..	100.99	99.28	106.05	101.85	106.67	102.60	188.14	104.24	101.83
1951 ..	101.36	100.06	105.95	101.80	106.50	103.80	178.77	102.43	102.23
1952 ..	101.49	101.00	105.65	102.20	106.91	103.83	179.14	108.15	102.59
1953 ..	101.10	100.66	105.46	102.48	106.88	103.94	170.60	114.73	102.36

(ii) *Various Countries.* The difference between young and old countries in the masculinity of their population is clearly illustrated by the comparisons furnished in the following table.

POPULATION : MASCULINITY IN VARIOUS COUNTRIES.

Country.	Year.	Number of Males per 100 Females.	Country.	Year.	Number of Males per 100 Females.
Ireland, Republic of ..	1951	103.7	Belgium ..	1951	97.0
Canada ..	1952	102.8	Japan ..	1951	96.3
Australia(a) ..	1953	102.4	Northern Ireland ..	1953	95.2
New Zealand(b) ..	1953	101.4	Italy ..	1950	95.0
Union of South Africa(c)	1951	100.3	Spain ..	1949	93.9
Sweden ..	1950	99.5	France ..	1952	93.5
Netherlands ..	1952	99.2	England and Wales ..	1953	92.7
Denmark ..	1952	98.4	Scotland ..	1953	91.4
Norway ..	1951	98.4	Poland ..	1950	91.2
Greece ..	1949	98.0	Germany(d)	1951	88.3
United States of America	1952	97.5			

(a) Excludes full-blood aboriginals.
(d) German Federal Republic.

(b) Excludes Maoris.

(c) White population only.

2. **Age Distribution.**—At each census the age distribution of the population is recorded by enumeration of individuals. An examination of these recorded age statistics will be found in the *Statistician's Report* on each census. The numbers recorded in each five-year age group (adjusted for ages not stated) at the Censuses of 1933 and 1947 will be found in Official Year Book No. 38, page 547. For each year subsequent to a Census, estimates are made to show the population at each age as at 30th June. The current series of estimates is based on the adjusted age distribution at the Census of 30th June, 1947, and on births, recorded ages at death and recorded ages of migrants from 1st July, 1947 to 30th June, 1953. This series of estimates has not yet been adjusted in accordance with the results of the Census of 30th June, 1954.

Particulars of the estimates for single years of age are published in the annual *Demography Bulletin*. Summarized in five-year age groups the estimates for the years 1952 and 1953 are as follows:—

POPULATION : AGE DISTRIBUTION(a), AUSTRALIA, 1952 AND 1953.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Age Group (Years).	Estimated, 30th June, 1952.			Estimated, 30th June, 1953.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
0-4 ..	480,226	458,098	938,324	489,344	467,570	956,914
5-9 ..	410,977	394,074	805,051	439,157	420,157	859,314
10-14 ..	323,707	310,712	634,419	335,129	321,609	656,738
15-19 ..	288,990	274,653	563,643	295,128	281,047	576,175
20-24 ..	332,953	304,038	637,891	322,969	295,449	618,418
25-29 ..	370,130	337,597	707,727	372,153	336,777	708,930
30-34 ..	340,162	324,430	664,592	354,008	334,916	688,924
35-39 ..	330,605	317,768	648,373	329,890	318,939	648,829
40-44 ..	309,626	288,414	598,040	315,991	296,553	612,544
45-49 ..	267,786	244,044	511,830	279,123	254,450	533,573
50-54 ..	233,389	229,501	462,890	237,192	229,564	466,756
55-59 ..	196,369	211,986	408,355	196,873	211,802	408,675
60-64 ..	179,561	188,544	368,105	179,069	191,972	371,041
65-69 ..	134,470	150,431	284,901	139,476	156,308	295,784
70-74 ..	90,305	108,550	198,855	93,849	113,229	207,078
75 and over ..	90,917	124,626	215,543	92,064	127,708	219,772
Total ..	4,380,173	4,268,366	8,648,539	4,471,415	4,358,050	8,829,465
Under 21 ..	1,564,875	1,403,586	3,058,461	1,617,412	1,544,450	3,161,862
21 and over ..	2,815,298	2,774,780	5,590,078	2,854,003	2,813,600	5,667,603
Total ..	4,380,173	4,268,366	8,648,539	4,471,415	4,358,050	8,829,465

(a) Not adjusted in accordance with results of the 1954 Census.

The next table shows the change which has been taking place in the age composition of the population of Australia since 1911. Each successive census, except that of 1921, has revealed a larger proportion of the population 15 years of age and over than was recorded at the previous Census. Since the 1947 Census, however, available information on which estimates of the age distribution are based indicates that there has been a reversal of this tendency.

POPULATION : PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA, 1911 TO 1953.
(Per Cent.)

Census.	Males.				Females.				Persons.			
	Under 15 years.	15 and under 65 years.	65 years and over.	Total.	Under 15 years.	15 and under 65 years.	65 years and over.	Total.	Under 15 years.	15 and under 65 years.	65 years and over.	Total.
1911	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933	27.53	66.09	6.38	100	27.42	65.09	6.59	100	27.48	66.04	6.48	100
1947	25.19	67.08	7.43	100	21.63	66.71	8.66	100	25.05	66.00	8.05	100
1953a	28.26	64.46	7.28	100	27.75	63.24	9.11	100	28.07	63.81	8.18	100

(a) Latest estimate, 30th June.

3. **Conjugal Condition.**—Of the total population of Australia at the 1947 Census, 47.3 per cent. had never married, 46.4 per cent. were married, 5.6 per cent. were widowed and 0.7 per cent. were divorced. Of all persons 15 years of age and over who stated their conjugal condition, 62.0 per cent. were married.

At 30th June, 1947, 1,900,697 males and 1,682,654 females had never married. Of these, 932,938 and 751,360 respectively were aged 15 years or over. Married males and females (including those permanently separated, legally or otherwise) numbered 1,759,258 and 1,760,650.

The number of widowed females recorded in Australia in 1947 was 311,168, or nearly three times as many as the number of widowed males (112,363). This disparity is the result of two influences. The first is the greater longevity of females coupled with the usually younger age at marriage; and the second is that a larger proportion of males cancel their widowhood by remarriage.

Divorced males numbered 25,052 and divorced females 27,516.

A table showing the conjugal condition of the population at 30th June, 1933 and 30th June, 1947 will be found in Official Year Book No. 40, page 352.

4. **Dependent Children under 16 years of Age.**—At the 1947 Census, 927,453 males and 66,418 females stated they had children under 16 years of age dependent on them at 30th June, 1947, the total number of dependent children under 16 years of age claimed being 1,962,791, of whom 1,853,314 or 94.4 per cent. were dependent on males and 109,477 or 5.6 per cent. were dependent on females. This represented an average of 2.00 for each male with dependent children and 1.65 for each female with dependent children.

Further information concerning dependent children may be found in Official Year Book No. 38, page 549.

5. **Birthplace.**—At 30th June, 1947, the number of Australian-born was 6,835,171 persons, representing 90.2 per cent. of the population, and the number of oversea-born was 744,187. Of the latter, 56 per cent. were males and 44 per cent. females. Australian residents born in England, Wales, Scotland and Ireland numbered 541,267 while those born in other European countries numbered 110,339, and there were 43,610 of New Zealand birth.

The numbers of persons of Asiatic, African or American birthplace at 30th June, 1947 were respectively 24,096 (British India and Ceylon, 8,160, China 6,404), 7,537 (Union of South Africa, 5,866), and 11,630 (Canada, 4,009, United States of America, 6,232).

For a table showing the number of persons in Australia at 30th June, 1933 and 30th June, 1947, classified according to birthplace, reference should be made to Official Year Book No. 38, page 550.

6. **Period of Residence in Australia.**—At the 1947 Census, of persons born outside Australia who stated their period of residence, 5.8 per cent. had resided in Australia for a period of less than 5 years, 11.3 per cent. for less than 10 years, and 14.9 per cent. for less than 15 years. A table showing, for the 1933 and 1947 Censuses, the number of completed years of residence of persons born outside Australia may be found on page 551 of Official Year Book No. 38.

7. **Nationality.**—At the 1947 Census, 7,540,705 persons, or 99.5 per cent. of the population, were of British nationality. The number of persons in Australia who were born in countries outside the British Commonwealth totalled approximately 128,000, and of this number 33,653, or 30 per cent., were of foreign nationality at 30th June, 1947, the remainder being British subjects mainly by naturalization. The principal foreign nationals in Australia were Italian, 7,172; Chinese, 4,858; Greek, 4,504; American (U.S.), 3,351; German, 2,361; Yugoslav, 2,096; and Dutch, 2,001. A table showing the nationality of Australian residents at 30th June, 1933 and 30th June, 1947 may be found in Official Year Book No. 38, page 552.

8. **Race.**—The people of Australia may be classified into two groups with respect to racial characteristics, namely, non-indigenous and indigenous. The former group comprises the European and other races who have migrated to Australia and their descendants born in Australia, while the latter group consists of the full-blood aboriginal natives of Australia, whose estimated number at 30th June, 1947, was about 47,000, but who are not included in the general population figures for Australia. The non-indigenous population of Australia is fundamentally British in race and nationality.

At 30th June, 1947, 7,524,129 persons or 99.3 per cent. of the population were of full-blood European race and 0.7 per cent. of non-European and half-caste. Full-blood non-Europeans numbered 21,495 and half-castes 33,734. The principal full-blood non-Europeans in Australia were Chinese, 9,144; Polynesian, 5,332; Natives of India, 2,480; and Syrian, 1,675. There were 27,179 half-caste Australian aboriginals, representing 80.6 per cent. of the total half-caste population. A table showing the comparative numbers of each sex at 30th June, 1933 and 30th June, 1947, classified according to race, may be found in Official Year Book No. 38, page 553.

9. **Religion.**—At the 1947 Census, when the public was informed there was no legal obligation to answer this question, 824,824 or 10.9 per cent. gave no reply. Of males 11.7 per cent. and of females 10.0 per cent. did not state their religion. The number of stated adherents at 30th June, 1947 was greatest for the Church of England, at 2,957,032; then followed Roman Catholic and Catholic combined (1,569,726), Methodist (871,425), Presbyterian (743,540), and Baptist (113,527). In all, 6,672,936, or 99 per cent., professed the Christian faith, 36,562 stated they were of non-Christian religion, 18,708 were classified as indefinite, while 26,328 professed no religion. Further information relative to the religions of the population may be found in a table on page 554 of Official Year Book No. 38.

10. **Industry.**—In the following table the male and female populations of Australia are classified according to the industry in which they are usually engaged. At the Census of 30th June, 1947, 124,439 persons failed to answer the question relating to industry, and the replies of 108,095 persons did not give an entirely satisfactory description of their industry. For practically all of these persons occupation particulars were recorded, and in the table below it has been possible to allocate them to their appropriate industries on the basis of occupational representation in those industries which were adequately described on the Census Schedules.

The term "in the work force" includes persons of all ages who are employers, self-employed or working on their own account, wage and salary earners, unpaid helpers engaged in industry, and those who usually work for their living but who have lost their jobs. Persons who do not earn their living by doing work for monetary reward, such as children, housewives, full-time students, retired persons, pensioners, and permanent inmates of institutions, are regarded as not being in the work force. Also persons working regularly but for considerably less than normal working hours were instructed to exclude themselves from the work force unless they looked to their earnings from such work for their main livelihood. On the average, 65 in every 100 males and 19 in every 100 females were in the work force, equivalent to 3½ males to every female in the work force.

POPULATION CLASSIFIED ACCORDING TO INDUSTRY(a) : AUSTRALIA, 1947.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Industry Group.	Census, 30th June, 1947.			
	Males.	Females.	Persons.	
			Number.	Proportion of Total. (Per cent.)
Primary Production—				
Fishing, Hunting and Trapping ..	16,547	88	16,635	0.22
Agriculture, Grazing and Dairying—				
Agriculture and Mixed Farming ..	235,455	8,030	243,485	3.21
Grazing	90,676	5,044	95,720	1.27
Dairying	97,005	10,049	107,054	1.41
Other	17,020	1,416	18,436	0.24
Total, Agriculture, etc. ..	440,156	24,539	464,695	6.13
Forestry	24,653	50	24,703	0.33
Total	481,356	24,677	506,033	6.68
Mining and Quarrying	56,944	630	57,574	0.76
Manufacturing—				
Inadequately Defined	6,638	3,369	10,007	0.13
Founding, Engineering and Metal-working (including Shipbuilding) ..	211,228	20,809	232,037	3.06
Manufacture of Clothing	21,214	75,062	96,276	1.27
Manufacture of Food and Drink ..	104,752	21,707	126,459	1.67
Paper, Printing, Bookbinding and Photography	45,791	17,268	63,059	0.83
Other	322,663	67,227	389,890	5.15
Total	712,286	205,442	917,728	12.11
Building and Construction—				
Inadequately Defined	147	..	147	0.00
Construction and Repair of Buildings	139,998	1,048	141,046	1.86
Construction Works and Maintenance (other than Buildings)	125,004	451	125,455	1.66
Total	265,149	1,499	266,648	3.52
Transport and Storage—				
Transport, undefined	4,613	366	4,979	0.06
Road Transport and Storage	118,731	5,526	124,257	1.64
Shipping and Loading and Discharging Vessels	50,557	1,909	52,466	0.69
Rail and Air Transport	80,600	7,891	88,491	1.17
Total	254,501	15,692	270,193	3.56
Communication	36,461	16,391	52,852	0.70
Finance and Property	55,535	24,353	79,888	1.05
Commerce	296,689	140,842	437,531	5.77
Public Authority (n.e.i.) and Professional Activities	217,583	149,140	366,723	4.84
Amusement, Hotels, Cafés, Personal Service, etc.	102,712	138,464	241,176	3.18
Other Industries	53	32	85	0.00
Persons in the Work Force ..	2 479,209	6 717,162	63,196,431	42.17
Persons not in the Work Force ..	1,318,101	3,064,826	4,382,927	57.83
Total Population	3,797,370	3,781,988	7,579,358	100.00

(a) The numbers of persons whose industry was either not specified or inadequately described have been distributed (see letterpress above). (b) Excludes approximately 40,000 female part-time workers believed to be unrecorded in the work force at the Census.

11. **Occupational Status.**—The term “occupational status” has been substituted for “grade of occupation” formerly in use, and it relates to the capacity in which persons

are engaged in the various branches of industry. At the Census of 30th June, 1947, persons working regularly, but for considerably less than normal working hours, were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood. It is believed that approximately 40,000 female part-time workers were, for this reason, unrecorded in the work force at the Census.

At 30th June, 1947 there were 2,479,269 males and 717,162 females in the work force, and of these 66,614 males and 16,915 females were not at work, i.e., they were unable to secure employment, were temporarily laid off from their jobs, or were not actively seeking work at the time of the census on account of sickness or accident, industrial dispute, resting between jobs or for any other reason.

Of the 2,412,655 males who were at work, 198,704 were employers, 345,743 were self-employed, 1,843,765 were employees (on wage or salary) and 24,443 were helpers (not on wage or salary). Corresponding figures for the 700,247 females who were at work at the time of the census were 24,626 employers, 44,991 self-employed, 626,094 employees and 4,536 helpers.

A table showing the occupational status of the population at the Censuses of 1933 and 1947 will be found in Official Year Book No. 40, page 355.

12. **Persons not at Work.**—The number of persons who were usually engaged in industry, business, trade or service but were out of a job on 30th June, 1947 was 82,774, consisting of 66,009 males and 16,765 females, or 3.5 per cent. of the males and 2.6 per cent. of the females in the wage-earning group, including those not at work. Only 41 per cent. of unemployment was due to scarcity of work. The balance consisted of those who stated that they were not actively seeking work at the time of the census, and these in turn consisted almost entirely, and in approximately equal proportions, of those who were indisposed through sickness or accident, and those who were resting between jobs.

Tables showing persons not at work at 30th June, 1947, classified according to cause and duration, may be found in Official Year Book No. 38 (see pp. 1303 and 1304).

13. **Other General Characteristics.**—Questions regarding orphanhood, and the ability to read and write a foreign language (of persons who could not read and write English), were not asked on the schedules of the 1947 Census. Consequently, the latest census data available concerning these questions are those of the 1933 Census, as published in previous issues of the Official Year Book (see No. 36, pp. 482 and 487).

§ 8. Dwellings.

NOTE.—Particulars of dwellings given in this section relate mainly to the 1947 Census. Further information in respect of the 1934 Census will be found in the Appendix.

1. **General.**—In addition to the questions relating to the personal particulars of the individual members of the household there were a number of important questions on the Census Schedule designed to elicit information concerning the dwellings in which the population was housed at the date of the census. From the replies to these questions much valuable information was tabulated concerning housing conditions and a comprehensive summary was published in Official Year Book No. 38, pp. 557 to 571. For the purpose of a census a "dwelling" is defined as a room or a collection of rooms occupied by a household group living together as a "family unit" whether comprising the whole or only part of a house or other building (including temporary structures). Included in this definition are private houses, flats, tenements, hotels, boarding houses, hospitals, institutions, and any other structure used for the purpose of human habitation.

2. **Number of Dwellings.**—The number of dwellings enumerated at the 1947 Census is shown in the following table.

DWELLINGS : STATES, CENSUS, 30th JUNE, 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

State or Territory.	Number of Dwellings.				Proportion of Total Dwellings.
	Occupied.	Unoccupied.	Being Built.	Total.	
					%
New South Wales ..	746,343	17,392	12,981	776,716	39.03
Victoria	527,406	11,412	11,328	550,146	27.65
Queensland	272,045	9,647	4,175	285,867	14.37
South Australia ..	168,538	3,547	2,794	174,879	8.79
Western Australia ..	124,767	2,606	1,535	128,908	6.48
Tasmania	62,484	2,351	1,607	66,442	3.34
Northern Territory ..	2,697	34	22	2,753	0.14
Australian Capital Territory	3,615	52	316	3,983	0.20
Australia	1,907,895	47,041	34,758	1,989,694	100.00

In respect of the 1954 Census, preliminary figures for occupied and unoccupied dwellings at 30th June, 1954 are as follows:—New South Wales, 912,971 occupied, 42,831 unoccupied; Victoria, 660,809, 27,491; Queensland, 339,378, 21,473; South Australia, 215,329, 8,524; Western Australia, 162,994, 6,614; Tasmania, 78,862, 5,288; Northern Territory, 3,426, 47; Australian Capital Territory, 7,118, 326; Australia, 2,380,887 occupied, 112,594 unoccupied.

Particulars relating to houses and flats constructed in Australia since the Census in 1947 will be found in Chapter XXIX.—Miscellaneous.

3. Class of Occupied Dwelling, etc., and Inmates.—As previously indicated, the dwellings in which the people are housed comprise private houses, tenements, flats, hotels, boarding-houses, charitable institutions, etc. It is desirable when considering the question of housing to exclude those forms of accommodation which do not represent the normal housing conditions associated with family life, and the statistics which follow relate mainly to private dwellings only, i.e., private houses, shares of private houses, tenements and flats.

For census purposes a "flat" is defined as part of a house or other building ordinarily intended for occupation by a separate family group, and is a self-contained dwelling unit with both cooking and bathing facilities. A "tenement" is part of a house or other building ordinarily intended for occupation by a separate family group but is not a self-contained unit, and consists in the main of a room or rooms with cooking facilities.

Owing to the shortage of houses in Australia in 1947, information was sought at the census as to the extent of house-sharing, and particulars as recorded are shown separately for 1947 in the following tables. In a number of cases where private houses were shared by more than one family unit, however, only one Householder's Schedule was returned for the whole of the house, instead of separate schedules for each portion occupied separately. These are shown in the tables as "Private Houses (Shared by Two or More Families)" and represent not "occupied dwellings" as defined for census purposes, but "houses" occupied by more than one family.

In the case of the remaining private houses shared by more than one family, separate schedules were furnished for each portion occupied separately and these portions are shown in the tables as separate dwellings under the heading "Share of Private House".

In the next table, occupied dwellings are distributed according to class and the total numbers of persons in Australia are distributed according to the dwellings in which they were recorded on census night.

**CLASS OF OCCUPIED DWELLING, ETC., AND INMATES : AUSTRALIA, CENSUS.
30th JUNE, 1947.**

(EXCLUDING FULL-BLOOD ABORIGINALS AND DWELLINGS OCCUPIED SOLELY BY THEM.)

Particulars.	Number of Occupied Dwellings.				Inmates.(a)			
	Urban.		Rural.	Total.	Urban.		Rural.	Total.
	Metro-politan.	Pro-vincial.			Metro-politan.	Pro-vincial.		
Private House (One Family) ..	739,870	281,133	561,250	1,585,253	2,892,194	1,107,052	2,139,086	6,138,332
Private House (Shared by Two or More Families)(b)	20,808	5,765	6,226	32,799	116,235	33,085	35,960	135,289
Share of Private House(c)	72,724	19,627	13,660	106,011	203,390	58,651	41,955	303,996
Flat (including Share of Flat) ..	94,822	12,697	3,880	111,399	265,239	38,823	12,033	316,115
Tenement ..	33,263	3,855	1,043	38,161	70,594	9,579	2,855	83,028
Total Occupied Private Dwellings ..	961,487	326,077	586,059	1,873,623	3,547,672	1,247,190	2,231,808	7,026,760
Total Other Occupied Dwellings ..	19,933	6,466	7,873	34,272	293,819	112,945	113,440	520,204
Total Occupied Dwellings ..	981,420	332,543	593,932	1,907,895	3,841,491	1,360,135	2,345,338	7,546,964
Wagon, Van, etc. (including Campers-out) ..	847	1,029	3,997	5,873	2,468	2,413	8,910	13,791
Total Population ..	..	..	..	..	3,843,959	1,362,548	2,354,248	7,579,355 (d)

(a) Includes all persons sleeping out on verandahs or in sleep-outs. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. (d) Includes 18,603 migratory population (shipping, railway and air travellers).

4. **Occupied Private Dwellings.**—(i) *Material of Outer Walls.* In the following table occupied private dwellings are classified according to the material of which the outer walls were built.

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO MATERIAL OF
OUTER WALLS : AUSTRALIA, CENSUS, 30th JUNE, 1947.**

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Division.	Number of Occupied Private Dwellings with Outer Walls of—								
	Brick.	Stone.	Concrete.	Wood.	Iron.	Fibro Cement.	Other Materials	Not Stated.	Total.
Urban—									
Metropolitan ..	551,618	36,714	10,442	315,567	6,087	31,924	5,086	4,049	961,487
Provincial ..	60,215	13,409	5,411	204,863	14,498	23,586	3,313	782	326,077
Rural ..	38,179	37,573	13,283	364,221	45,347	62,121	23,157	2,178	586,059
Total ..	650,012	87,696	29,136	884,651	65,932	117,631	31,556	7,009	1,873,623

(ii) *Number of Rooms, Number of Inmates and Nature of Occupancy.* The following table shows, for Australia as a whole, the number of occupied dwellings of each class at the Census of 30th June, 1947 classified according to number of rooms, number of inmates and nature of occupancy.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, NUMBER OF INMATES AND NATURE OF OCCUPANCY : AUSTRALIA, CENSUS, 30th JUNE, 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Classified According to—	Number of Occupied Private Dwellings.					
	Private House (One Family).	Private House (Shared by Two or More Families). (a)	Share of Private House. (b)	Flat (including Share of Flat).	Tenement.	Total.
Number of Rooms(c)—						
1	30,453	56	13,305	1,173	12,379	57,366
2	32,116	303	25,427	7,076	14,745	79,697
3	75,544	1,174	26,044	24,838	6,723	135,223
4	344,929	4,065	20,778	43,430	2,495	416,597
5	532,555	9,949	11,493	23,649	631	578,317
6	371,616	9,170	4,082	8,016	252	397,036
7	118,862	4,018	1,539	1,817	40	126,276
8	41,351	1,816	457	567	9	44,200
9	14,510	625	152	173	1	15,461
10 and over	13,016	548	88	100	..	14,652
Not Stated	6,371	175	84,6	520	886	8,798
Total Private Dwellings ..	1,585,253	32,799	106,011	111,399	38,161	1,873,623
Average Number of Rooms	5.11	5.61	3.16	4.06	2.07	4.88
Number of Inmates(d)—						
1	108,055	..	16,870	13,744	13,360	152,029
2	293,351	1,480	34,039	38,337	13,020	380,227
3	338,886	3,508	26,198	30,024	6,843	405,459
4	340,087	5,048	15,378	17,838	2,944	383,095
5	232,622	6,469	7,180	7,108	1,224	254,663
6	132,245	5,637	3,409	2,612	424	144,327
7	69,804	3,901	1,645	1,035	201	76,676
8	37,931	2,636	862	424	96	41,949
9	15,307	1,357	244	122	27	17,057
10 and over	15,975	1,563	180	95	22	18,141
Total Private Dwellings	1,585,253	32,799	106,011	111,399	38,161	1,873,623
Total Inmates	6,138,332	185,289	303,996	316,115	83,028	7,026,760
Average Number of Inmates	3.87	5.65	2.87	2.84	2.18	3.75
Nature of Occupancy—						
Owner	792,637	12,765	21,133	10,680	810	838,025
Purchaser by Instalments ..	141,204	2,300	3,472	503	108	147,677
Tenant	581,845	16,728	79,025	98,708	36,444	812,750
Caretaker	25,145	418	721	776	286	27,316
Other Methods of Occupancy	20,350	221	371	360	210	21,521
Not Stated	24,072	277	1,289	372	294	26,304
Total Private Dwellings ..	1,585,253	32,799	106,011	111,399	38,161	1,873,623

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Household's Schedules were furnished. (c) Includes kitchen and enclosed sleep-out or portion of a verandah that has been permanently enclosed but does not include bathroom, pantry, laundry or storehouse, unless generally used for sleeping. (d) Includes all persons sleeping out on verandahs or in sleep-outs.

(iii) *Rent per Week of Private Houses of Three to Six Rooms.* Special tabulations of rents were undertaken for tenanted private houses of three to six rooms with walls of wood or of brick or stone. The particulars for this group of private dwellings, which represented about 80 per cent. of all tenanted private houses in Australia, provide a very convenient summary of average rents ruling at the time of the census.

Rents were summarized for 468,536 tenanted private houses (occupied by one family) in this group. Forty-nine per cent. had walls of brick or stone and 51 per cent. of wood, compared with proportions of 46 and 54 per cent. respectively for all rented private houses in a similar tabulation in 1933. During the intercensal period there was little variation in the numbers of rented houses of three, four and six rooms, but the number of rented houses of five rooms increased by nearly 13 per cent. Brick dwellings were largely responsible for this increase.

The average rent of 25s. per week for all private houses, of three to six rooms, with walls of wood, brick or stone in the metropolitan areas at the 1947 Census was 6s. 7d., or 35.7 per cent., higher than the corresponding average in 1933. In the urban provincial sections the average rent was 21s. 3d. per week, or 36.4 per cent. higher than in 1933, while in the rural areas the average rent of 15s. 7d. per week was 35.5 per cent. higher than that at the 1933 Census.

The following table shows, for metropolitan, urban provincial and rural areas, the average weekly rent (unfurnished) of tenanted private houses of three to six rooms with walls of wood, brick, or stone, at the Census of 30th June, 1947.

AVERAGE WEEKLY RENT (UNFURNISHED) OF TENANTED PRIVATE HOUSES (ONE FAMILY), THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK, OR STONE : AUSTRALIA, CENSUS, 30th JUNE, 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Rooms.	Walls of Wood.					Walls of Brick or Stone.					Walls of Wood, Brick, or Stone.				
	Urban.		Rural.	Aus- tra- lia.	Urban.		Rural.	Aus- tra- lia.	Urban.		Rural.	Aus- tra- lia.			
	Metro- poli- tan.	Pro- vin- cial.			Metro- poli- tan.	Pro- vin- cial.			Metro- poli- tan.	Pro- vin- cial.					
3	s. d. 15 4	s. d. 15 2	s. d. 11 5	s. d. 13 9	s. d. 16 8	s. d. 16 10	s. d. 13 2	s. d. 16 6	s. d. 16 3	s. d. 15 8	s. d. 11 8	s. d. 15 2			
4	s. d. 19 11	s. d. 18 4	s. d. 13 9	s. d. 17 4	s. d. 23 1	s. d. 20 0	s. d. 14 9	s. d. 22 4	s. d. 22 1	s. d. 18 9	s. d. 13 10	s. d. 19 10			
5	s. d. 23 9	s. d. 21 1	s. d. 16 1	s. d. 20 8	s. d. 27 5	s. d. 23 7	s. d. 18 5	s. d. 26 5	s. d. 26 3	s. d. 21 10	s. d. 16 6	s. d. 23 7			
6	s. d. 26 3	s. d. 23 1	s. d. 17 6	s. d. 22 10	s. d. 31 9	s. d. 27 0	s. d. 20 10	s. d. 30 4	s. d. 29 11	s. d. 24 5	s. d. 18 3	s. d. 26 10			
3 to 6 ..	s. d. 22 7	s. d. 20 5	s. d. 15 2	s. d. 19 7	s. d. 26 3	s. d. 23 3	s. d. 17 8	s. d. 25 5	s. d. 25 0	s. d. 21 3	s. d. 15 7	s. d. 22 6			

(iv) *Facilities.* At the 1947 Census, householders were asked for the first time to state whether their dwellings were supplied with electricity, gas and running water, and whether they had such facilities as a bathroom, flush toilet, laundry and cooking facilities. In addition they were asked to indicate the means of cooking mostly used. Statistics of these facilities were given on page 571 of Official Year Book No. 38.

§ 9. Oversea Migration.

1. *Overseas Migration during Present Century.*—Earlier issues of the Official Year Book contain in summary form tables showing the increase of population by net migration from 1861 to the latest date, while the *Demography Bulletin* issued by this Bureau gives this information for individual years. The following table shows, for Australia, arrivals and departures and net migration since 1901. A graph showing overseas migration from 1921 to 1954 appears on p. 316.

OVERSEA MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.			Net Migration.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1901-05..	106,093	84,167	281,160	204,170	93,783	297,953	- 7,177	- 9,616	- 16,793
1906-10..	151,482	119,552	371,034	213,483	100,273	313,756	37,999	19,279	57,278
1911-15..	22,027	209,893	632,820	382,552	113,406	495,958	40,375	96,487	136,862
1916-20..	18,721	100,764	539,485	190,202	78,571	468,776	48,510	22,190	70,709
1921-25..	230,695	188,357	478,052	172,236	122,550	294,786	117,459	65,807	183,266
1926-30..	266,593	203,887	470,480	193,336	147,437	340,773	73,257	56,450	129,707
1931-35..	124,207	115,116	239,323	134,883	115,326	250,209	- 10,676	- 210	- 10,886
1936-40(a)	161,774	159,538	321,312	140,901	137,283	278,184	20,873	22,255	43,128
1941-45(a)	15,422	28,503	63,925	30,097	26,010	56,116	5,325	2,484	7,809
1946-50(a)	308,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1948 ..	66,121	49,402	115,723	33,797	26,811	60,608	32,524	22,591	55,115
1949 ..	132,648	100,487	233,135	42,705	40,429	83,134	89,943	60,058	150,001
1950 ..	141,091	108,513	250,404	49,907	47,992	97,899	91,084	60,521	152,505
1951 ..	122,136	91,504	213,640	54,521	47,686	102,207	67,615	43,818	111,433
1952 ..	127,516	88,123	215,839	68,047	52,870	121,807	58,570	35,453	94,032
1953 ..	88,584	74,541	163,125	68,483	51,745	120,228	20,101	22,796	42,897

(a) Excludes movements of defence personnel from September, 1939 to June, 1947.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

As the encouragement of immigration by Governmental assistance has been a feature of Australian immigration policy, a clear indication of the significance of migration movements is obtained when "assisted" and "unassisted" movements are distinguished. This has been shown broadly, for the period since 1901, in Official Year Book No. 40, page 361, and has been continued in the following table for the period 1926 to 1953.

"ASSISTED" AND "UNASSISTED" MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.	Excess of "Un-assisted" Arrivals over All Departures.
	Nominated and Selected ("Assisted").	Other ("Un-assisted").	Total.		
1926-30..	99,403	371,077	470,480	340,773	30,304
1931-35..	781	238,542	239,323	250,209	- 11,667
1936-40(a)	3,828	317,484	321,312	278,184	39,300
1941-45(a)	..	63,925	63,925	56,116	7,809
1946-50(a)	273,195	428,725	701,920	348,836	79,889
1948 ..	28,943	86,780	115,723	60,608	26,172
1949 ..	118,840	114,295	233,135	83,134	31,161
1950 ..	119,109	131,295	250,404	97,899	33,396
1951 ..	66,674	146,066	213,640	102,207	44,759
1952 ..	60,531	155,308	215,839	121,807	33,501
1953 ..	27,299	135,826	163,125	120,228	15,598

(a) Excludes movements of defence personnel from September, 1939 to June, 1947.

NOTE.—Minus sign (—) indicates excess of departures over "unassisted" arrivals.

It is not possible in the statistics of departures to distinguish the return movement of persons who came to Australia as "assisted" migrants and consequently the separate net migration of "assisted" and "non-assisted" persons cannot be ascertained. Nevertheless the basis on which the above table has been compiled is sufficient to throw into relief the major trends in Australian migration statistics in the period reviewed.

The table shows that, generally, Australia has gained considerably more population through its encouraged migration programme than it has from non-assisted migration.

A detailed review of assisted migration into Australia in recent years is given in § 10.

2. **Classes of Arrivals and Departures.**—(i) *General.* Since 1st July, 1924, all overseas travellers have been classified according to their declared intention in regard to residence made at the time of arrival or departure. For various reasons the intentions of travellers are subject to subsequent modification and the classification headings used must therefore be accepted as indicating intention only. The numbers so classified since 1st January, 1926 are as follows.

MIGRANTS CLASSIFIED ACCORDING TO INTENDED RESIDENCE : AUSTRALIA.

Period.	Arrivals.				Departures.			
	Per- manent Move- ment.	Temporary Move- ment.		Total.	Per- manent Move- ment.	Temporary Move- ment.		Total.
	New Arrivals.	Aus- tralian Residents Return- ing.	Visitors Arriving.		Aus- tralian Residents Departing Per- manently.	Aus- tralian Residents Departing Tem- porarily.	Visitors Departing.	
1926-30 ..	224,010	121,395	125,029	a 470,480	103,209	111,714	125,772	b 340,773
1931-35 ..	54,444	84,554	100,325	239,323	71,670	79,426	99,108	c 250,209
1936-40 ..	88,712	104,870	127,730	321,312	51,006	94,650	132,528	278,184
1941-45 ..	d 32,624	11,150	20,151	63,925	22,399	9,163	24,554	56,116
1946-50 ..	457,988	108,736	135,196	701,920	105,968	101,787	141,081	348,836
1948 ..	65,739	23,813	26,171	115,723	17,271	19,557	23,780	60,608
1949 ..	167,727	28,116	37,292	233,135	18,457	25,351	39,326	83,134
1950 ..	174,540	32,172	43,692	250,404	20,855	31,413	45,631	97,899
1951 ..	132,542	36,116	44,982	213,640	22,180	34,532	45,493	102,207
1952 ..	127,824	40,317	47,698	215,839	30,370	4,619	50,818	121,807
1953 ..	74,915	42,695	45,515	163,125	32,032	39,946	48,250	120,228

(a) Includes 46 arrivals whose intended period of residence was not stated. (b) Includes 78 departures whose length of intended stay abroad was not stated. (c) Includes 5 departures whose length of intended stay abroad was not stated. (d) Includes evacuees arriving in Australia during the war years as follows :—1936-40, 4,543 ; 1941-45, 12,586.

(ii) *Permanent Movement.* In the table above "permanent" means residence for a year or longer, in Australia in the case of arrivals or overseas in the case of departures.

The 1939-45 War caused a large drop, from 1940, in the number of permanent new arrivals but after the war the number rose progressively, reaching 174,540 in 1950, the highest on record. As in the case of arrivals, although not to the same extent, the number of Australian residents departing permanently rose rapidly in the period of immediate post-war re-adjustment of population, but the high figure of 29,806 in 1946 was surpassed in both 1952 and 1953, in which years the figures were higher than any recorded since this method of classification was introduced.

Up to and including 1929 there was a considerable net gain of permanent residents, but during 1930 and 1931 there was a heavy net loss. The loss was very much reduced in 1932, 1933 and 1934, whilst during the five years up to and including 1939 there was a net gain in permanent residents of more than 28,000. Except for the arrival of evacuees, little movement took place during the war period, but in 1946 a net permanent loss of 11,589 persons occurred, owing in large measure to the departure for the United States of America of Australian wives and children of American servicemen, and, when conditions

permitted after the war, the departure of Australians to Papua and New Guinea and of large numbers of war evacuees who were returned to their home countries. Subsequently large net gains were recorded, amounting to 48,468 in 1948, 149,270 in 1949, 153,685 in 1950, 110,362 in 1951, 97,454 in 1952, and 42,883 in 1953.

(iii) *Temporary Movement*. Temporary movement refers to persons intending residence for periods shorter than one year and includes Australian residents and visitors from overseas. Since 1st July, 1947, it also includes Australian defence personnel irrespective of length of intended residence. Although considerable in number, the temporary movement is of little significance from the point of view of population growth, as it represents principally the movement of business people and tourists.

3. *Extent of Journey*.—(i) *General*. Since 1st January, 1945, the journeys undertaken by passengers have been recorded for Australian overseas migration statistics in two ways: (a) according to country of embarkation or disembarkation and (b) according to country of last or future permanent residence. In the case of a complete journey in a single stage to or from Australia there is no difference in result between the two methods. With multiple-stage journeys to or from an Australian port, however, one method distinguishes only the first stage of outward journeys or the last stage of inward journeys, whilst the second method records the complete journey.

Detailed statistics of overseas journeys are published in the annual *Demography Bulletin* (see Bulletin No. 71, 1953). In addition, from January, 1951 onwards, statistics distinguishing State of residence have been compiled for special purposes. The following brief explanations indicate the principles followed in the compilation of migration statistics generally.

(ii) *Arrivals*. (a) *Country of Embarkation*—refers to the country in which the passenger embarked on the particular ship or aircraft which brought the passenger to Australia. Therefore in multiple-stage journeys to Australia these statistics refer only to the last booked stage.

(b) *State of Disembarkation*—refers to the State in which the passenger actually disembarked, irrespective of the State to which originally booked or of State of ultimate destination. Passengers embarking on fresh journeys from one Australian port to another State are recorded as interstate migration.

(c) *Country of Last Permanent Residence*—This is taken from the passenger's own statement and is not necessarily the country from which the single-stage or multiple-stage journey to Australia commenced. Permanent residence means residence for one year or longer.

(d) *State of Intended Future Permanent Residence*—In the administration of the encouraged migration schemes large numbers of migrants are disembarked in States other than the State for which they are destined, and their subsequent movements in Australia to State of ultimate destination are recorded as interstate migration in which distinction between individuals is not practicable. The classification by State of intended future permanent residence was introduced to permit compilation of statistics which show the true effect of overseas arrivals on the populations of individual States.

(iii) *Departures*. (a) *State of Embarkation*—refers to the State in which the passenger actually embarked on the ship or aircraft to leave Australia. The interstate travel of any such passengers prior to embarking is recorded as interstate migration.

(b) *Country of Disembarkation*—refers to the intended country of disembarkation from the particular ship or aircraft which takes the passenger from Australia. In multiple-stage journeys from Australia these statistics refer only to the first booked stage and changes in this, subsequent to departure, are not recorded.

(c) *Country of Intended Future Permanent Residence*—refers to the ultimate destination, after a complete single-stage or multiple-stage journey, of the passenger, as intended at the time of embarkation.

(d) *State of Last Permanent Residence*—refers to the State in which the passenger was last resident for a period of 12 months or longer, irrespective of the State in which actual embarkation on an overseas ship or aircraft took place. In the case of temporary visitors leaving Australia who have not resided for at least twelve months in any one State, the State of embarkation is regarded as the State of last permanent residence.

4. **Racial Origin.**—Up to 30th June, 1948, the system of classifying racial origin was a compromise based partly on nationality and partly on racial origin (*see* para. 5). From 1st July, 1948, this system was superseded by one in which the passenger's statement as to race is restricted to either "European", "Asian", "African", or "Polynesian", only. Statistics based on this system are shown for the years 1951 to 1953 in the following table. Under this system nationality is recorded independently, as indicated in the next paragraph.

RACIAL ORIGIN OF ARRIVALS AND DEPARTURES: AUSTRALIA.

Racial Origin.	Arrivals.			Departures.			Net Migration.		
	1951.	1952.	1953.	1951.	1952.	1953.	1951.	1952.	1953.
European ..	209,533	210,550	157,564	100,170	117,870	115,710	109,363	92,680	41,854
Asian ..	3,889	4,009	4,873	1,944	3,332	3,916	1,945	1,307	957
African ..	13	49	30	5	17	20	8	2	10
Polynesian ..	205	532	658	88	558	582	117	-26	76
Total ..	213,640	215,839	163,125	102,207	121,807	120,228	111,433	94,032	42,897

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

5. **Nationality.**—From 1st July, 1924 to 30th June, 1948, nationality of overseas passengers was recorded as "British" or "Alien" only. Racial origin was also recorded and as the particulars of racial origin stated by passengers closely reflected their nationalities and made it possible to present much more detail of "nationality" than was possible on the total "Alien" basis, published statistics were mostly confined to those compiled on the detailed basis according to a composite classification of "nationality or race".

This method was superseded on 1st July, 1948, by one in which each passenger's race was recorded as indicated in paragraph 4 above, and nationality, as shown on each passenger's passport or other document of identification, was recorded independently of race. The principal nationalities recorded on this basis for the years 1951 to 1953 are as follows:—

NATIONALITY OF ARRIVALS AND DEPARTURES: AUSTRALIA.

Nationality.	Arrivals.			Departures.			Net Migration.		
	1951.	1952.	1953.	1951.	1952.	1953.	1951.	1952.	1953.
British(a) ..	146,358	143,433	114,380	91,732	107,754	104,749	54,626	35,679	9,631
American (U.S.) ..	3,501	3,756	4,226	3,016	3,893	4,020	485	-137	206
Austrian ..	983	583	508	67	130	284	916	453	224
Chinese ..	1,055	1,256	1,010	554	618	885	501	608	125
Czechoslovak ..	1,130	536	105	102	158	124	1,037	378	-19
Dutch ..	15,113	16,760	10,411	2,352	1,950	2,041	12,761	14,810	8,370
Estonian ..	258	101	36	40	33	26	218	68	10
French ..	2,043	2,058	1,347	1,340	1,447	1,480	703	611	-133
German ..	4,562	7,270	8,185	201	402	778	4,271	6,778	7,407
Greek ..	2,634	2,467	3,036	130	457	261	2,504	2,010	2,775
Hungarian ..	1,506	511	111	78	81	99	1,428	430	15
Italian ..	16,744	28,213	13,981	534	1,561	2,302	16,210	26,652	11,679
Latvian ..	829	231	78	106	98	55	723	133	23
Lithuanian ..	184	72	28	32	53	48	152	19	-20
Polish(b) ..	3,986	1,033	307	153	177	170	3,833	856	137
Russian(c) ..	1,267	682	523	108	117	116	1,159	565	407
Ukrainian ..	508	65	54	18	27	23	490	38	31
Yugoslav ..	3,554	1,238	618	101	145	143	3,453	1,093	475
Stateless (so described) ..	2,679	1,738	909	150	289	278	2,529	1,449	631
Stateless (other)(d) ..	25	20	14	6	7	12	19	13	2
Other ..	4,712	3,807	3,255	1,297	2,290	2,334	3,415	1,517	921
Total ..	213,640	215,839	163,125	102,207	121,807	120,228	111,433	94,032	42,897

(a) Irish nationality is included with British for the purposes of this table. (b) Includes "Stateless" who were formerly Polish. (c) Includes "Stateless" who were formerly Russian. (d) Stateless, with former nationality stated but other than Polish or Russian.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

6. **Age Distribution and Conjugal Condition.**—The annual *Demography Bulletin* shows particulars of total arrivals and departures of oversea travellers classified according to intention as to residence (*see* para. 2 above) with independent dissections into five-year age groups and separate conjugal conditions (*see Demography Bulletin* No. 71 for 1953 figures). A summary of the age distribution and conjugal condition of permanent arrivals and departures during 1953 is as follows :—

AGE DISTRIBUTION AND CONJUGAL CONDITION OF PERMANENT ARRIVALS AND DEPARTURES : AUSTRALIA, 1953.

Particulars.	Permanent New Arrivals.			Permanent Departures.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
AGE DISTRIBUTION.						
0-14 years ..	10,810	9,737	20,547	2,573	2,533	5,106
15-44 years ..	22,920	21,097	44,017	12,037	8,805	20,842
45-64 years ..	3,359	4,552	7,911	2,342	2,492	4,834
65 years and over ..	703	1,137	1,840	568	682	1,250
Total ..	37,792	37,123	74,915	17,520	14,512	32,032

CONJUGAL CONDITION.						
Never Married ..	23,875	17,984	41,859	10,317	7,187	17,504
Married ..	13,399	16,841	30,240	6,727	6,013	12,740
Widowed ..	348	1,909	2,257	328	1,085	1,413
Divorced ..	170	389	559	148	227	375
Total ..	37,792	37,123	74,915	17,520	14,512	32,032

7. **Occupation.**—A classification of the occupations of males who arrived or departed permanently during 1953 is published in *Demography Bulletin* No. 71. A summary for 1953 for the main occupational groups is as follows :—Rural, fishing and hunting—permanent new arrivals, 5,422, permanent departures, 770; professional and semi-professional, 1,566, 1,603; administrative, 763, 767; commercial and clerical, 2,524, 2,181; domestic and protective service, 994, 659; craftsmen, 7,294, 4,192; operatives, 2,214, 1,611; labourers, 2,993, 1,915; indefinite or not stated, 1,005, 346; not gainfully occupied (mainly children), 13,017, 3,476; total, 37,792, 17,520.

§ 10. Immigration.

(A) Assisted Migration into Australia.

1. **Joint Commonwealth and States' Scheme.**—Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments which operated from 1920 to 1939 may be found in earlier issues of the *Official Year Book* (*see* No. 38, page 576).

2. **Suspension of Assisted Passage Scheme during the 1939-45 War.**—After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war.

3. **United Kingdom Free and Assisted Passage Agreement, March, 1946.**—(i) *General.* Resumption of migration was the subject of negotiations between the Commonwealth and United Kingdom Governments towards the end of 1945 and an agreement was signed in March, 1946 for free and assisted passages for British residents desirous of settling in Australia. This agreement, which came into operation on 31st March, 1947, continued until 31st March, 1949, when it was renewed for a further two years. It was revived from 1st April 1951 for a term of three years, but under changed financial arrangements. For the year ended 31st March, 1952 the United Kingdom Government contributed £500,000 sterling towards the scheme, and for the two following years agreed to pay a maximum amount of £150,000 sterling per annum. The agreement was again extended for a further period of one year as from 1st April, 1954 on the basis that the United Kingdom Government would contribute a maximum amount of £150,000 sterling for that period.

The Free and Assisted Passage Agreement has covered three main groups of migrants, viz., *Personal nominees*, who are migrants sponsored by residents of Australia able to provide suitable accommodation for them (any adult resident of Australia may nominate friends or relatives in the United Kingdom who are eligible to be considered for free or assisted passages under this agreement); *Group nominees*, who are recruited on a trade-qualification basis to meet applications lodged by employers and State Governments who guarantee to provide employment and accommodation for those selected; *Commonwealth nominees*, who comprise workers selected against known and assessed employment demands in Australia; and their families. Migrants in the latter group live in hostels established by the Commonwealth Government until such time as they are able to obtain private accommodation. The Commonwealth nominee scheme was introduced in 1950 in order to reinforce the personal and group nomination schemes, but towards the end of 1952 it was greatly curtailed and selection was confined to workers in a limited group of essential skilled trades. During the latter part of 1953 the list of categories of workers who could be selected was broadened and the scheme resumed its former impetus.

(ii) *Free Passages.* This part of the scheme is financed by the United Kingdom Government as part of its resettlement programme. Persons eligible for consideration are British ex-service men and women, together with their dependants, provided they were resident in the British Isles or were in the United Kingdom forces overseas on 1st September, 1938, and subsequently served in a full-time capacity in the armed forces or the merchant navy of the United Kingdom during any period after 25th May, 1939.

Applications for passages had to be lodged within certain time limits and the final closing date was 31st December, 1950. Those received prior to that date are still valid, and the persons concerned, if otherwise eligible, are entitled to receive free passages. The numbers now arriving under this scheme are very small.

(iii) *Assisted Passages.* Assisted passages are granted under the Empire Settlement Acts of the United Kingdom to suitable British subjects normally resident in the United Kingdom who do not come within the scope of (ii) above. Although the Commonwealth is not generally prepared to accept single persons or married persons without children if they have reached their forty-sixth birthday before the date of sailing, the parents or close relatives of intending migrants or of persons established in Australia may, if otherwise acceptable under the scheme, be granted passages irrespective of age. Each migrant of 19 years of age and over is required to contribute £10 sterling towards the cost of his or her passage, while juveniles of 14 years and up to the eve of their 19th birthday have to pay £5 sterling. Children under 14 years travel free. Apart from these contributions and that made annually by the United Kingdom Government, the cost of the passages is borne by the Commonwealth Government.

(iv) *Numbers Arrived.* The numbers of British migrants who came to Australia under the Free and Assisted Passage Agreement during the years 1947 to 1953 are given in the following table :—

UNITED KINGDOM FREE AND ASSISTED PASSAGE AGREEMENT : NUMBER OF MIGRANTS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Commonwealth Nominees.	Total.
1947-50 ..	27,984	27,662	12,975	8,464	11,106	3,831	1,721	4,062	97,875
1951 ..	6,386	10,727	4,097	1,017	2,091	1,176	255	17,058	41,007
1952 ..	7,386	10,596	4,101	2,326	2,801	1,235	382	6,217	35,680
1953 ..	3,881	3,960	1,835	1,072	1,969	485	110	372	13,684
Total, 1947-53	45,637	53,945	23,011	13,479	18,570	6,727	2,468	27,709	190,576

4. *Child Migration from the United Kingdom.*—(i) *General.* Since the commencement of the assisted passage schemes in 1947, the immigration of unaccompanied children and youths from the United Kingdom has been encouraged under the auspices of approved voluntary organizations. The organizations at present introducing child migrants include the Fairbridge Farm Schools of New South Wales and Western Australia, Dr. Barnardo's Homes, the Big Brother Movements of New South Wales and Tasmania, and the Northcote Children's Emigration Fund. All the principal religious denominations are also participating in the scheme. At the present time 46 institutions are caring for child migrants.

(ii) *Financial Assistance.* The United Kingdom Government contributes 12s. 6d. and the Commonwealth Government 10s. per week to approved organizations in respect of each child under 16 years of age, while the State Government concerned pays a minimum of 4s. 8d. per week for each child up to the age of 14. In addition, the Commonwealth Government and State Government concerned each contribute, where necessary, towards the approved capital expenditure on accommodation for child migrants brought in by these organizations.

(iii) *Numbers Arrived.* From the beginning of 1947 to the end of 1953, a total of 3,270 British children and youths arrived under the sponsorship of voluntary organizations, and of this number 547 came in 1951, 571 in 1952 and 574 in 1953. New South Wales took 1,673, Western Australia 951, Victoria 358, and the other three States 288. These children were brought to Australia under the United Kingdom Free and Assisted Passage Scheme and are included in the figures shown in the table above.

5. *Assisted Passage Scheme, Eire.*—In November, 1948, the Commonwealth Government decided to grant limited financial assistance to natural-born citizens of Eire normally residing in the British Isles, and to natural-born British citizens residing in Eire, who wish to emigrate to Australia and who are duly selected. This scheme applies only to prospective settlers and their dependants who are not eligible for free or assisted passages under the agreement with the United Kingdom Government (see para. 3 above). The maximum amount granted towards an adult passage is £30 sterling, with varying amounts for children according to age.

It is not essential for an applicant for a passage to be nominated by a friend or relative in Australia before the question of granting financial assistance is considered. Single men or women who are eligible under the scheme are readily accepted. Families, on the other hand, are accepted only if they can produce evidence of having secured accommodation in Australia, or, in the case of nominated migrants, a guarantee of accommodation by their sponsors. Up to the end of 1953, 1,805 migrants had arrived under this scheme (see table on p. 343).

6. *Maltese Migration.*—On 31st May, 1948, the Commonwealth Government and the Government of Malta entered into an agreement under which the two governments jointly grant financial assistance towards the cost of the passages of Maltese selected

to migrate to Australia. In the case of an adult the maximum contribution of the Commonwealth is £30 sterling, and the payment of this is subject to the Government of Malta contributing not less than a like amount.

Any person already established in Australia may nominate individual Maltese under the scheme, while an employer or firm or a voluntary or other organization may nominate a group. In all cases the nominator must undertake to provide accommodation and, so far as groups of migrants are concerned, employment. The Commonwealth retains the right of final selection of both personal and group nominees. The Government of Malta attends to their after-care in Australia.

At 31st December, 1953, a total of 13,374 Maltese had arrived under this scheme since its inception (*see* table on p. 343). The arrivals in 1952 and 1953 were largely dependants of those who had earlier migrated to Australia. To the end of 1953, 156 Maltese children had been brought out to approved institutions in Western Australia. These are included in the number shown above.

7. *Empire and Allied Ex-Servicemen's Scheme.*—With the object principally of giving ex-servicemen of Empire and Allied countries who had served in Australia during the 1939–45 War an opportunity to return for permanent settlement, the Commonwealth Government, on 26th May, 1947 initiated a scheme of financial assistance towards the cost of the passages of eligible Empire ex-servicemen not covered by the Free and Assisted Passage Agreement with the United Kingdom (*see* para. 3 above) and of ex-servicemen of the United States of America, and their dependants. This was later extended to cover ex-servicemen and former members of the resistance movements of the Netherlands, Norway, Belgium, France and Denmark, and their dependants. The maximum amount granted towards an adult passage is £30 sterling, with varying amounts for children according to age.

Since its inception, 19,104 migrants have come to Australia under this scheme (*see* table on p. 343), the number of each nationality being: Dutch, 14,348; American, 2,972; French, 994; British, 535; Belgian, 111; Norwegian, 72; Danish, 71; Polish, 1.

8. *Displaced Persons Scheme.*—On 21st July, 1947, the Commonwealth Government entered into an agreement with the International Refugee Organization to resettle in Australia European displaced persons who were under the protection of that body. In the first two years, limitation of shipping restricted the departure of these migrants, with the result that only 840 arrived in 1947 and 9,953 in 1948, but in the next two years the numbers rose to 75,486 and 70,212 respectively. When the International Refugee Organization wound up its activities in 1951, the Commonwealth agreed to receive those displaced persons already accepted for migration whose passages had still to be arranged. During that year 11,708 reached Australia. In 1952 another 2,055 arrived, whilst in 1953 arrivals numbered 441, bringing the total number of arrivals under this scheme to 170,695.

9. *Netherlands Migration.*—A migration agreement concluded between the Commonwealth and the Netherlands Governments in February, 1951, came into operation on 1st April of that year. This superseded an earlier agreement between the Commonwealth Government and the Netherlands Emigration Foundation which was made in December, 1946 (*see* Official Year Book No. 39, p. 567). The initial selection of the migrants is carried out by the Netherlands authorities in accordance with requisitions furnished from time to time by the Commonwealth, the responsibility for final selection resting with Australian migration officers stationed in that country.

The migrant contributes the maximum amount he can afford towards the cost of his passage, but in no case is this less than £10 sterling. The balance of the fare is made up by the Netherlands Government, which is later reimbursed by the Commonwealth to the extent of £37 10s. sterling or half the amount contributed by the Netherlands Government, whichever is the less, in respect of every Dutch adult arriving in Australia under the agreement, with *pro rata* rates for children.

The provision of the shipping is the responsibility of the Netherlands Government. The Commonwealth undertakes the arrangements for the reception of the migrants and their after-care, and assists in the securing of employment. Those unable to secure private accommodation in advance of their arrival are housed in "reception" centres controlled by the Department of Immigration, and if, when he obtains employment, the worker of the family cannot find accommodation for his dependants, they are moved to one of the department's "holding" centres. Here they remain until the family is able to arrange to live together privately again.

Under the 1946 agreement 584 persons arrived between 1948 and May, 1951 and, up to the end of 1953, 10,949 migrants had come to Australia under the 1951 agreement.

10. *Italian Migration.*—On 29th March, 1951, the Commonwealth and Italian Governments entered into a migration agreement on lines similar to those of the Commonwealth-Netherlands agreement. Under the terms of this agreement, which came into force on 1st August, 1951, the maximum amount payable by the Commonwealth towards the fares of selected Italian migrants is £25 sterling for each adult, with amounts in proportion for children according to the passage rates. During 1951 and 1952, 9,970 migrants arrived under this scheme. The agreement was temporarily suspended at the end of 1952.

11. *German Migration.*—On 29th August, 1952, a migration agreement was signed by representatives of Australia and the Federal Republic of Germany. Except in regard to financial and shipping arrangements, this agreement operates in a manner similar to those concluded with the Netherlands and Italy.

On the financial side, the Commonwealth and the West German Governments each contribute a sum up to a maximum of the equivalent of \$60 towards the fare of each adult selected, the payment of the balance being a matter of arrangement between the migrant and the Inter-Governmental Committee for European Migration. The ships to carry the migrants are provided by the Committee.

The number of Germans who had arrived under this scheme to the end of 1953 was 7,583.

12. *Other European Assisted Migration.*—Late in 1952 agreement was reached between the Inter-Governmental Committee for European Migration and the Commonwealth for the migration to Australia of a limited number of selected rural and other workers and their families from Austria and Greece. These arrangements were later extended to include selected migrants from Trieste and refugees from the East Zone of Germany. It was also agreed that selection would not be confined to rural workers. Passages for these migrants are arranged by the Inter-Governmental Committee for European Migration, which also bears the cost of fares initially. The Commonwealth later reimburses the Committee with such sums as are agreed upon from time to time, the current cost to the Commonwealth being the equivalent of \$60 per adult migrant with *pro rata* amounts for children. The reception of these migrants, their temporary accommodation on arrival, after-care and placement in employment are undertaken by the Commonwealth.

Under these arrangements 13 Austrians arrived in 1952 and 103 in 1953 and 1,486 Greeks arrived during 1953. The first Triestians and East Zone refugees arrived early in 1954.

13. *Summary of Arrivals of Assisted Migrants.*—The following table shows, for each of the years 1947 to 1953, the number of assisted migrants who arrived in Australia under the various schemes introduced since 1946. The first assisted migrants in this post-war period arrived in 1947.

ASSISTED MIGRATION SCHEMES : NUMBER OF MIGRANTS.

Assisted Migration Scheme.	1947.	1948.	1949.	1950.	1951.	1952.	1953.	Total, 1947-53.
United Kingdom Free and Assisted Passage Agreement 1946 (including Royal Navy Personnel) Empire and Allied Ex-Servicemen's Scheme, 1947	4,747	16,243	38,486	38,329	44,007	35,080	13,684	190,576
Displaced Persons Scheme, 1947	269	1,170	1,412	6,444	5,557	3,025	1,227	19,104
Polish Migrants from United Kingdom	840	9,953	75,486	70,212	11,708	2,055	441	170,695
Maltese Assisted Migration Agreement, 1948	447	1,010	..	..	..	..	..	1,457
Eire Assisted Migration Agreement, 1948	..	527	3,260	3,226	3,313	1,903	1,145	13,374
Netherlands Foundation Agreement, 1948	..	..	109	457	426	573	240	1,805
Netherlands Foundation Agreement, 1946	..	40	87	441	16	..	..	584
Netherlands Agreement, 1951	..	..	..	..	1,588	6,964	2,397	10,949
Italian Assisted Migration Agreement, 1952	..	..	..	..	59	9,911	..	9,970
German Assisted Migration Agreement, 1952	..	..	..	..	..	1,007	6,576	7,583
I.C.E.M. Agreement, 1952—	..	..	..	..	..	..	..	..
Australians .. ..	..	..	..	..	..	13	103	116
Greeks .. ..	..	..	..	..	..	..	1,486	1,486
Total Assisted Migrants	6,303	28,943	118,840	119,109	66,674	60,531	27,299	427,699

From the earliest years of assisted migration to the end of 1953 a total of 1,496,010 assisted migrants arrived in Australia, of whom 493,974 were destined for New South Wales, 433,150 for Victoria, 262,450 for Queensland, 134,687 for South Australia, 132,090 for Western Australia, 33,113 for Tasmania and 6,537 for the Australian Capital Territory.

(B) The Regulation of Immigration into Australia.

1. *Powers and Legislation of the Commonwealth.*—(i) *Constitutional.* Under Section 51, xxvii. and xxviii. of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals.

(ii) *Legislation.* Immigration into the Commonwealth is regulated by the Immigration Act 1901-1949, which specifies the persons whose immigration is prohibited and provides for their deportation if they enter contrary to the Act. Provision is also made for the deportation of persons who have entered lawfully but who contravene the provisions of the Act after they have entered. Power is given to the Minister for Immigration to admit prohibited immigrants for a specified period under Certificate of Exemption from the provisions of the Act relating to entry or stay in the Commonwealth.

The amending Act of 1948 provided for the registration of immigration agents, and made it unlawful for unregistered persons to charge fees in respect of applications by intending immigrants for admission to Australia, or to arrange or secure passages to Australia for such immigrants. In addition, the Minister for Immigration has power to fix the fees which registered agents may charge for these services.

The Aliens Deportation Act 1948 repealed the Aliens Deportation Act 1946 and empowers the Minister for Immigration to order the deportation of an alien who after investigation by a Commissioner is reported as not being a fit and proper person to be allowed to remain in Australia.

The War-time Refugees Removal Act 1949 enables the Minister for Immigration to effect the repatriation to their own countries of persons given refuge in Australia during the 1939-45 War. Deportation is limited to persons in respect of whom orders for deportation were issued prior to 12th July, 1950.

The Immigration (Guardianship of Children) Act 1946-1952 provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia other than in the charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the child welfare authorities in each State who, as the Minister's delegates under the Act, supervise the welfare of each "immigrant child".

The Aliens Act 1947-1952 provides that a register of aliens shall be maintained for every State and Territory of the Commonwealth. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration, and to notify the Department of any change of address, occupation or employment, and of their marriage. The Act also provides that consent must be obtained before an alien may change his surname.

2. *Conditions of Immigration into Australia.*—(i) *Immigration of Non-Europeans.* In pursuance of the established policy, the general practice is not to permit Asians or other coloured persons to enter Australia for the purpose of settling permanently.

Special arrangements were made with India, China, and other Eastern countries under which facilities are afforded for their nationals who are bona fide merchants, students, or tourists to enter and remain in Australia under exemption while they retain their status. Permission is also given for the entry of nationals of these countries as assistants or substitutes for local traders domiciled in Australia. Such persons are allowed to remain so long as they retain their status.

(ii) *Immigration of White Aliens.* White aliens desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration. Their admission under the present policy is subject to their compliance with the Commonwealth's requirements in regard to health, character, freedom from security risk, and general suitability as settlers.

(iii) *General Information.* General information as to conditions of entry into Australia may be obtained from the following officers:—

- (a) In Australia—The Secretary, Department of Immigration, Canberra, A.C.T., and Commonwealth Migration Officers in the capital cities of the various States;
- (b) In Great Britain—the Chief Migration Officer, High Commissioner's Office, Australia House, Strand, London;
- (c) In other British Dominions—the High Commissioner for Australia;
- (d) In other countries where Australia is represented—the Secretary, Australian Embassy, Legation or Consulate.

For details of the Australian representatives in the British Dominions and other countries, see the section entitled "Diplomatic and other Representatives Overseas and in Australia" in Chapter XXIX.

3. *Racial Origin and Nationality of Persons Arriving.*—For details of the racial origin and nationality of persons who arrived in Australia during the years 1951 to 1953 see § 9, paras. 4 and 5.

(C) Passports.

Provision is made in the Immigration Act 1901-1949 for the production of a passport by each immigrant over 16 years of age who desires to enter Australia. Under the Passports Act 1920, it was compulsory also for each person over 16 years of age to be in possession of a passport or other document authorizing his departure. This Act has now been superseded by the Passports Act 1938-48 which repealed the compulsory provisions. The Act also applies to the Territories of Australia, including Papua, Norfolk Island and the Trust Territory of New Guinea.

Although it is not compulsory for Australians to obtain a passport when leaving Australia, it is desirable in their own interests that they should have one in order to establish their identity and nationality overseas. A passport is necessary for admission into most countries, and the holder of an Australian passport also has no difficulty in landing on return to Australia. The charge for an Australian passport is £1.

As a result of the Nationality and Citizenship Act 1948-1953 (see § 11 below) and the enactment of similar citizenship legislation in other British Commonwealth countries it is now the general rule that Australian passports are issued only to Australian citizens. Citizens of other British Commonwealth countries secure passports from their own High Commissioners in Australia. Australian citizens abroad may secure passports only from Australian representatives.

Diplomatic and official passports are issued to members of the Australian diplomatic service and other Government officials proceeding abroad on official business.

Applicants for passports are required to produce evidence of their identity and nationality (e.g., birth certificates).

§ 11. Citizenship and Naturalization.

1. *Commonwealth Legislation.*—The Nationality and Citizenship Act 1948 commenced on Australia Day (26th January), 1949 and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the British Commonwealth. All Australian citizens, and the citizens of other countries of the British Commonwealth, are declared to be British subjects. Australian citizenship was automatically acquired as from 26th January, 1949 by persons who were British subjects at that date and who either (a) were born in Australia or New Guinea; or (b) were naturalized in Australia; or (c) had been residing in Australia during the five years immediately preceding 26th January, 1949; or (d) were born outside Australia of fathers to whom (a) or (b) above applied (provided the persons concerned had entered Australia without being placed under any immigration restriction); or (e) were women who had been married to men who became Australian citizens under the above headings (provided that the women concerned had entered Australia without being placed under immigration restriction). For the purposes of the Act, "Australia" includes Norfolk Island and the Territory of Papua, and by an amendment of the Act in 1950 it was further provided that Nauru shall be treated in the same manner as New Guinea.

After the Act's commencement citizenship may be acquired in the following ways:—(a) by birth in Australia; (b) by birth outside Australia, of a father who is an Australian citizen, provided that the birth is registered at an Australian Consulate; (c) by registration—Certificates of Registration as Australian citizens may be granted by the Minister to British subjects or Irish citizens who make application and satisfy the Minister that they can comply with specified requirements as to residence in Australia, good character and intention to reside permanently in Australia; (d) by naturalization—Certificates of Naturalization as Australian citizens may be granted by the Minister to aliens who make application and can comply with requirements somewhat similar to those previously required under the Nationality Act 1920-1946. New requirements for naturalization are—(i) a Declaration of Intention to apply must be lodged usually at least two years before the final application, but the Minister may waive this requirement in special circumstances; (ii) as a rule five years residence in Australia is required, but

residence in other British countries or service under a British government may be accepted (special concessions in the matter of residence qualifications in respect of persons who have voluntarily enlisted in the armed forces were made by an amending Act of 1952): (iii) the applicants must have an adequate knowledge of the responsibilities and privileges of citizenship; (iv) Certificates do not take effect until the applicant takes the Oath of Allegiance. The Oath is now taken, and citizenship is conferred, at public ceremonies held in the Town Hall of the applicant's place of residence, and presided over by the Mayor or equivalent head of the local government.

Under the Act, the independence of married women in nationality matters is recognized, and British nationality is restored to those women who had lost it through marriage to aliens. In future, marriage will not affect a woman's nationality. Alien women who marry Australian citizens may, however, be naturalized under somewhat easier conditions than those which apply to other aliens.

2. *Certificates Granted.*—(i) *Australia.* The following figures relate to certificates issued under the Nationality and Citizenship Act 1948-1952 during the year 1953:—

NATURALIZATION: CERTIFICATES GRANTED, AUSTRALIA, 1953.

PREVIOUS NATIONALITIES OF RECIPIENTS.

Nationality.	Certificates Granted.	Nationality.	Certificates Granted.	Nationality.	Certificates Granted.	Nationality.	Certificates Granted.
Albanian ..	6	Dutch ..	183	Italian ..	212	Spanish ..	4
American (U.S.) ..	33	Egyptian ..	7	Latvian ..	91	Swedish ..	13
Argentinian ..	1	Estonian ..	55	Lebanese ..	16	Swiss ..	14
Austrian ..	186	Filipino ..	1	Lithuanian ..	46	Syrian ..	2
Belgian ..	2	Finnish ..	7	Mexican ..	1	Ukrainian ..	18
Bulgarian ..	6	French ..	17	Norwegian ..	23	Russian ..	27
Burmese ..	3	German ..	114	Paraguayan ..	1	Yugoslav ..	98
Chinese ..	1	Greek ..	165	Peruvian ..	1	Stateless ..	242
Colombian ..	2	Hungarian ..	220	Polish ..	503		
Czechoslovak ..	138	Iraqi ..	5	Portuguese ..	2		
Danish ..	20	Israeli ..	6	Romanian ..	40	Total ..	2,532

COUNTRIES IN WHICH RECIPIENTS ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA OR NEW GUINEA.

Country.	Certificates Granted.	Country.	Certificates Granted.	Country.	Certificates Granted.	Country.	Certificates Granted.
Afghanistan ..	1	Egypt ..	65	Libya ..	1	Singapore ..	2
Africa ..	3	Estonia ..	3	Lithuania ..	15	South Africa ..	9
Albania ..	6	Finland ..	6	Malaya ..	8	South America ..	1
Argentina ..	5	France ..	160	Malta ..	1	Spain ..	2
Austria ..	70	Germany ..	401	Mexico ..	1	Sweden ..	25
Belgium ..	32	Greece ..	119	Morocco ..	1	Switzerland ..	42
Bolivia ..	4	Holland ..	118	New Caledonia ..	6	Syria ..	2
Brazil ..	4	Hong Kong ..	5	New Zealand ..	10	Tanganyika ..	2
Burma ..	1	Hungary ..	133	North Africa ..	1	Thailand ..	2
Canada ..	3	India ..	32	Norway ..	19	Trieste ..	1
Ceylon ..	2	Indonesia ..	58	Pakistan ..	5	Turkey ..	3
Chile ..	1	Iraq ..	4	Panama ..	1	Uganda ..	2
China ..	292	Israel ..	57	Persia ..	3	United Kingdom ..	149
Cuba ..	2	Italy ..	262	Peru ..	1	U.S. of America ..	64
Cyprus ..	3	Japan ..	2	Philippines ..	23	U.S.S.R. ..	7
Czechoslovakia ..	61	Kenya ..	2	Poland ..	99	Yugoslavia ..	30
Denmark ..	18	Latvia ..	2	Rhode Island ..	1		
Dodecanese Is. ..	4	Lebanon ..	14	Romania ..	34		
East Africa ..	1			Siberia ..	3	Total ..	2,532

(ii) *States.* The certificates of naturalization granted in 1953 were issued in respect of residents of the various States and Territories as follows :—New South Wales, 1,122 ; Victoria, 728 ; Queensland, 102 ; South Australia, 176 ; Western Australia, 216 ; Tasmania, 49 ; Northern Territory, 4 ; Australian Capital Territory, 34 ; New Guinea, 9 ; and Norfolk Island, 2 ; Total, 2,532.

§ 12. Population of Territories.

At the Census of 30th June, 1954, as at previous Censuses, arrangements were made to obtain complete information concerning not only the two internal territories of Australia—the Northern Territory and the Australian Capital Territory—but also the external territories under the control of Australia, namely :—Norfolk Island, Papua, the Trust Territory of New Guinea, and the Trust Territory of Nauru. Figures respecting population and number of dwellings in each Territory at the Census of 1954 are summarized in the following table :—

POPULATION AND DWELLINGS : TERRITORIES, CENSUS, 30th JUNE, 1954.
(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Population.			Dwellings.	
	Males.	Females.	Persons.	Occupied.	Unoccupied.
Internal—					
Northern Territory ..	10,281	6,171	16,452	3,426	47
Aust. Capital Territory	16,229	14,086	30,315	7,118	326
External—					
Norfolk Island ..	478	464	942	310	41
Papua ..	3,867	2,446	6,313	1,605	66
Trust Territory of New Guinea ..	7,201	4,241	11,442	3,098	104
Trust Territory of Nauru	1,269	376	1,645	99	13

Particulars concerning the indigenous populations of the internal and external territories will be found in Chapter V.—The Territories of Australia.

§ 13. The Aboriginal Population of Australia.

In Official Year Book No. 17, pp. 951–61, a brief account is given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. On pp. 914–6 of Official Year Book No. 22, particulars are shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appears on pp. 687–96 of Official Year Book No. 23.

The aboriginals are scattered over the whole of the mainland but the majority are concentrated in Western Australia, Queensland and the Northern Territory. Details of the number in each State at the June, 1947 Census are shown in the following table. Full-blood aboriginals in employment or living in proximity to settlements were enumerated at the Census, while estimates of the total numbers, including those living in the wild state, were furnished by the Protectors of Aborigines. Half-caste aboriginals are included in the numbers of the population and are of course enumerated at the Census. The figures shown for Queensland are exclusive of Torres Strait Islanders.

ABORIGINAL POPULATION, 30th JUNE, 1947.

State or Territory.	Full-blood.				Half-caste. (Enumerated at the Census.)	Total, Full- blood and Half- caste.		
	In Employment or Living in Proximity to Settlements.(a)			Esti- mate of Total Num- bers.(b)				
	Males.	Females.	Persons.	Persons.				
New South Wales ..	546	407	953	(c) 953	5,498	5,109	10,607	11,560
Victoria ..	160	108	268	(c) 268	537	532	1,069	1,277
Queensland ..	3,504	2,822	6,326	9,100	3,684	3,527	7,211	16,311
South Australia ..	259	205	464	2,139	1,103	1,054	(d)2,157	(d)4,296
Western Australia ..	2,664	2,269	4,933	20,338	2,359	2,215	(d)4,574	d 24,912
Tasmania ..	..	..	..	..	127	87	214	214
Northern Territory ..	5,615	5,370	10,985	13,900	660	587	1,247	15,147
Aust. Capital Territory ..	..	..	..	..	58	42	100	100
Total ..	12,688	11,181	23,869	46,638	14,026	13,153	27,179	73,817

(a) Enumerated at the Census. (b) Furnished by the Protectors of Aborigines. (c) Census totals. (d) In addition to these totals, the Protectors of Aborigines estimated that there were 826 half-caste and mixed bloods in South Australia and 1,322 in Western Australia, presumably living in the nomadic state.

According to the Annual Reports of the Protectors of Aborigines, there has been little change in the numbers of aborigines in most States since 1947. In Western Australia, however, the estimate for the total number of full-blood and half-caste aborigines at 30th June, 1952 was 21,051.

CHAPTER X.

VITAL STATISTICS.

NOTE.—1. In the Vital Statistics chapter of Official Year Book No. 39, tables covered 1950 and, where possible, 1949. In issue No. 40, totals and rates were shown for births, deaths, marriages and infant deaths for the year 1952, but in most cases an analysis of the figures was not carried beyond 1951. In the present issue tables cover 1953. More detailed figures will be found in *Demography Bulletin* No. 71 unless otherwise specifically indicated.

2. Figures for Australia throughout are exclusive of full-blood aboriginals.

§ 1. Provisions for Registration and Compilation of Statistics.

In Australia vital statistics are compiled from information obtained from the registers of births, deaths and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853 and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration in respect of the Northern Territory having been taken over from South Australia in 1911 and in respect of the Australian Capital Territory from New South Wales in 1930. The authority responsible for the registration of births, deaths and marriages occurring within his particular State or Territory is the Registrar-General or the Principal Registrar, or, as in the case of Victoria, the Government Statist.

In the Australian Capital Territory and the Northern Territory, information concerning a birth is required to be supplied within 21 days, in South Australia in 42 days, and in all other States 60 days is allowed. In all States, however, provision has been made for the late registration of births. For the registration of a death, the length of time varies more considerably, being 8 days in Tasmania, 10 days in South Australia, 14 days in Western Australia, the Northern Territory and the Australian Capital Territory, 21 days in Victoria and 30 days in New South Wales and Queensland. In all States and Territories provision is made for the celebration of marriages by ministers of religion registered for that purpose with the Registrar-General or the Principal Registrar of Births, Deaths and Marriages of the State or Territory and also by certain civil officers. In all cases the celebrant, whether minister of religion or civil officer, is required to register with the Registrar of the district in which the marriage has taken place particulars of the parties married. The length of time allowed for registration of marriage also shows considerable variation as between States and Territories. In Victoria, Western Australia, the Northern Territory and the Australian Capital Territory, registration is required immediately following the ceremony, in Tasmania and South Australia within 7 days and in New South Wales and Queensland within 30 days.

For all States except Queensland and Tasmania the registration of stillbirths is compulsory. Western Australia was the first State to introduce compulsory registration in 1908, followed by the Australian Capital Territory in 1930, New South Wales in 1935, South Australia in 1937 and Victoria in 1953. No statutory provision has been made in Queensland or Tasmania for the registration of stillbirths. In these States, however, provision is made for voluntary registration and it appears likely that such births are notified to the Registrar-General. In this chapter stillbirths have been excluded from all tables of births and deaths and shown only in those specially relating to stillbirths.

While there is every indication that the registration work of the several States and the Territories is very efficiently carried out, it is clear that in those States with a large area and scattered population, failure to register births and deaths may occur in some cases. It is believed, however, that consequent on the abolition, in 1943, of income limits previously restricting eligibility for maternity allowances, claims for which are checked against birth registers before payment, the proportion of births now occurring which is not registered is very small.

The data required for the compilation of vital statistics are copied from the registers of births, deaths and marriages in the Registrar General's Office and forwarded, through the Government Statistician in each State, and direct from the Principal Registrars in the two Territories, to the Commonwealth Statistician. The compilation and publication of vital statistics for Australia is a function of the Commonwealth Statistician. The Statisticians in the various States compile and publish statistics relating to their respective States.

§ 2. Marriages.

1. **Number of Marriages.**—The number of marriages registered in Australia during the year ended 31st December, 1953 was 70,640 giving a rate of 8.01 per 1,000 of the mean population for the year. A summary of the number of marriages registered in each State and Territory from 1926 to 1953 is given in the following table. Annual averages for each five-year period from 1861 will be found in *Official Year Book No. 39*, page 575.

MARRIAGES.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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ANNUAL AVERAGES.

1926-30 ..	19,253	12,955	6,279	4,036	3,167	1,506	23	30	47,249
1931-35 ..	18,742	12,773	6,950	3,967	3,328	1,638	29	53	47,480
1936-40 ..	25,295	17,784	8,082	5,726	4,399	2,187	83	85	64,541
1941-45 ..	28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981
1946-50 ..	30,162	20,453	10,666	6,581	5,205	2,520	114	181	75,891

ANNUAL TOTALS.

1940 ..	28,757	20,066	10,234	6,247	4,951	2,422	130	192	72,999
1950 ..	30,036	20,320	10,394	6,585	5,434	2,560	144	216	75,599
1951 ..	30,341	21,117	10,814	6,646	5,390	2,607	143	240	77,298
1952 ..	29,351	20,220	10,056	6,241	5,380	2,553	137	225	74,172
1953 ..	27,573	19,238	9,859	6,149	5,032	2,424	154	211	70,640

2. **Crude Marriage Rates.**—The crude marriage rates for each State and Territory from 1926 to 1953 are given hereunder:—

CRUDE MARRIAGE RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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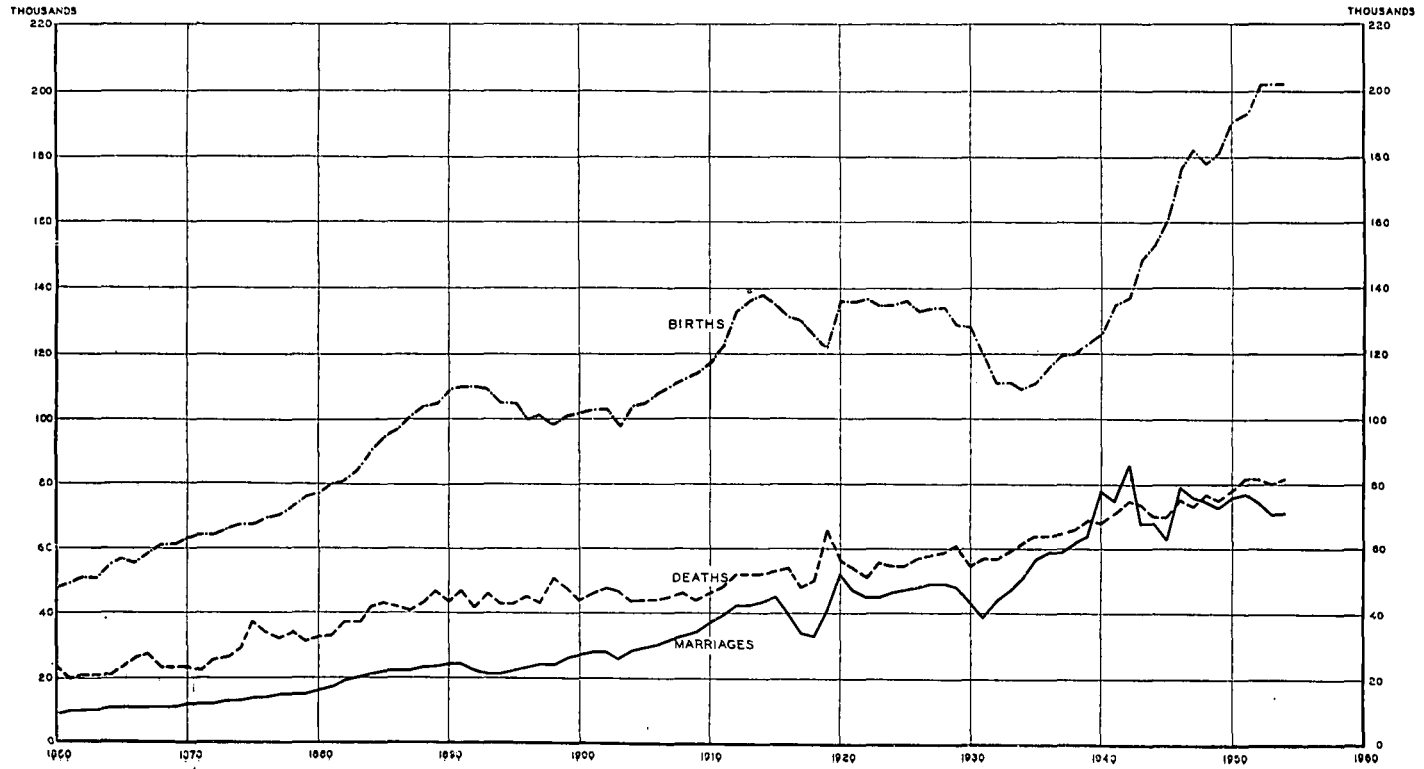
AVERAGE ANNUAL RATES.

1926-30 ..	7.86	7.42	7.10	7.12	7.80	6.97	5.11	3.86	7.52
1931-35 ..	7.20	7.02	7.35	6.83	7.58	7.19	5.92	5.74	7.16
1936-40 ..	9.29	9.52	8.80	9.65	9.49	9.25	13.28	7.22	9.35
1941-45 ..	9.97	9.86	10.04	10.61	9.74	8.61	7.18	7.57	9.94
1946-50 (b) ..	9.90	9.72	9.40	9.87	10.01	9.56	9.39	9.49	9.77

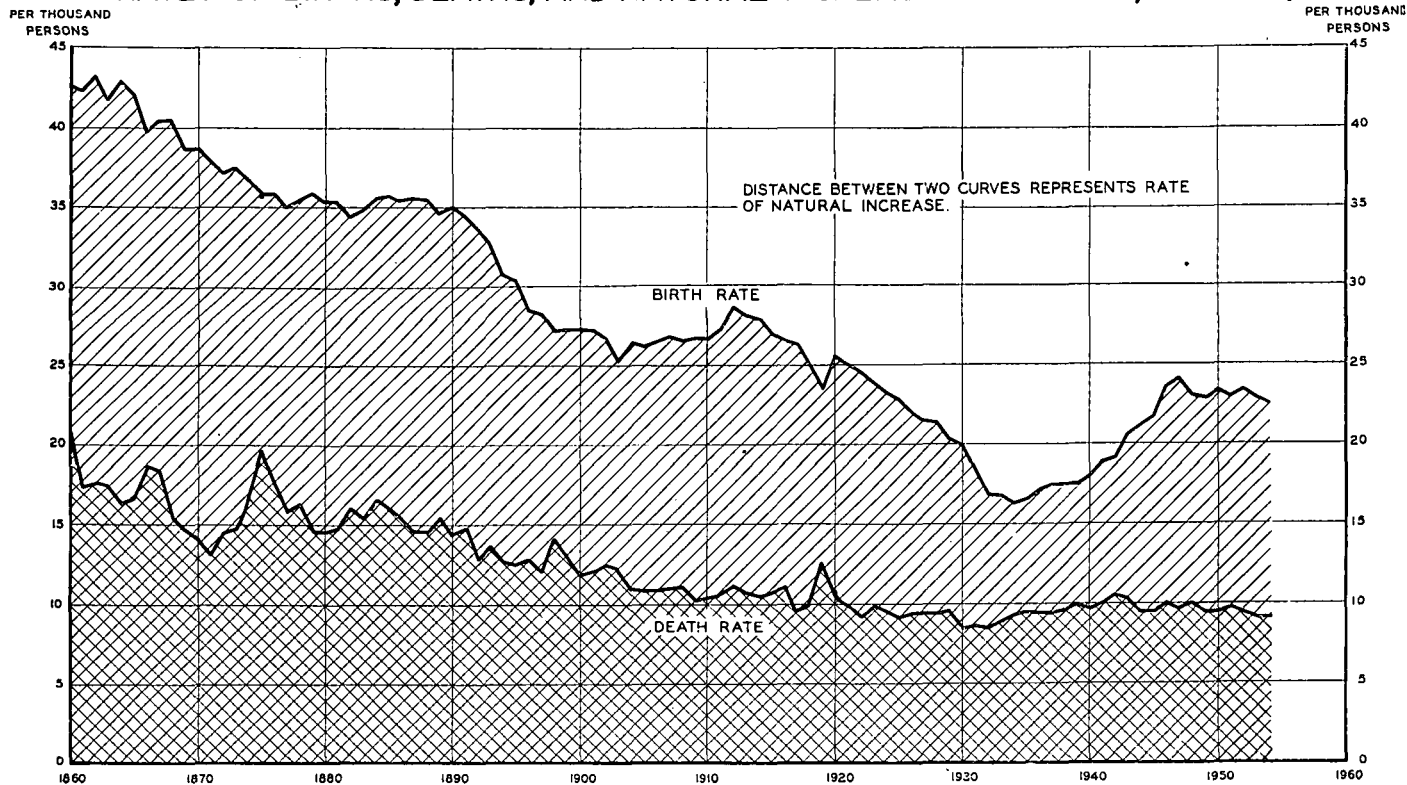
(a) Number of marriages per 1,000 of mean population.
population estimates shown on p. 311.

(b) Rates based on revised mean

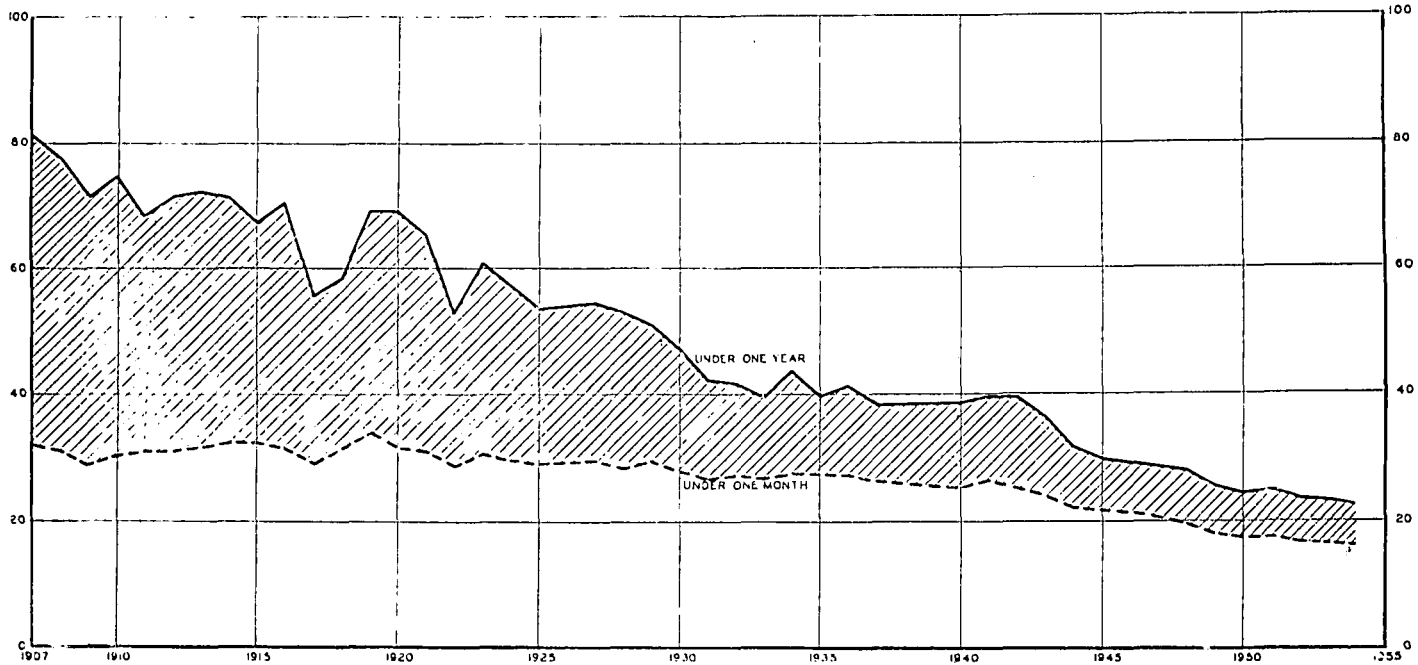
BIRTHS, DEATHS, AND MARRIAGES: AUSTRALIA, 1860 to 1954



RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE: AUSTRALIA, 1860 to 1954



INFANT MORTALITY RATES: AUSTRALIA, 1907 TO 1954 (INFANT DEATHS PER 1000 LIVE BIRTHS)



EXPLANATION.—This graph shows the marked improvement in infantile mortality rates over the past 47 years. The improvement has been confined mainly to children over one month, considerably less having occurred in the first month of life (*see* page 375).

CRUDE MARRIAGE RATES—*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Au-t.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL RATES.(a)									
1949	9.30	9.36	8.86	9.18	9.30	8.96	9.95	9.27	9.23
1950	9.40	9.20	8.65	9.28	9.74	9.18	10.07	9.44	9.24
1951	9.25	9.28	8.84	9.07	9.29	9.04	9.43	10.09	9.18
1952	8.78	8.63	8.01	8.27	8.97	8.56	9.09	8.69	8.59
1953	8.14	8.03	7.66	7.92	8.10	7.91	9.92	7.43	8.01

(a) Rates based on revised mean population estimates shown on p. 311.

3. **Marriage Rates based on Marriageable Population.**—As the marriage rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the seven census periods to 1946-48. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows :—

PERSONS MARRYING PER 1,000 OF UNMARRIED POPULATION : AUSTRALIA.

Period.	Rate.(a)	Period.	Rate.(a)
1880-82	48.08	1920-22	56.22
1890-92	45.74	1932-34	42.88
1900-02	42.14	1946-48	71.24
1910-12	50.44		

(a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

4. **Crude Marriage Rates of Various Countries.**—The following table gives the crude marriage rates for Australia in comparison with the rates for various other countries.

CRUDE MARRIAGE RATES(a) : VARIOUS COUNTRIES.

Country.	1921-25.	1926-30.	1931-35.	1953.	Country.	1921-25.	1926-30.	1931-35.	1953.
United States of America ..	10.6	9.9	9.2	9.9	Austria ..	9.6	7.5	6.8	7.8
Yugoslavia ..	10.6	9.5	7.8	9.9	United Kingdom ..	7.7	7.5	7.9	7.8
Union of South Africa(b) ..	8.0	9.3	9.4	(c)	Denmark ..	7.9	7.8	8.7	7.7
Canada ..	7.3	7.3	6.4	9.0	Belgium ..	10.6	9.1	7.8	7.7
New Zealand(d) ..	8.0	7.7	7.3	8.4	Finland ..	7.1	7.2	7.2	7.7
Netherlands ..	8.2	7.7	7.2	8.2	Switzerland ..	7.7	7.5	7.7	7.7
Australia(e) ..	8.0	7.5	7.2	8.0	Spain ..	7.3	7.3	6.5	7.6
Norway ..	6.3	6.1	6.5	7.9	Sweden ..	6.3	6.7	7.3	7.4
Japan ..	8.8	8.0	7.6	7.9	France ..	9.8	8.2	7.4	7.1
					Italy ..	9.0	7.3	6.8	7.0
					Ireland, Republic of ..	4.9	4.6	4.6	5.3

(a) Number of marriages per 1,000 of mean population. (b) White population only.
 (c) Not available. (d) Excludes Maoris. (e) Excludes full-blood aboriginals.

5. **Age and Conjugal Condition at Marriage.**—(i) *General.* Age at marriage in single years of age and previous conjugal condition of bridegrooms and brides in 1953 will be found in *Demography Bulletin* No. 71. A summary in age groups is given 2233/54.—11

hereunder. There were 5,107 males aged less than twenty-one years married during 1953 while the corresponding number of females was 21,482. At the other extreme there were 95 bachelors and 53 spinsters in the age group 65 years and over.

**AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA.
1953.**

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20 ..	2,284	..	..	2,284	14,527	13	8	14,548
20-24 ..	28,861	15	54	28,930	31,308	86	309	31,703
25-29 ..	19,091	87	606	19,784	9,678	210	1,149	11,037
30-34 ..	6,415	180	980	7,575	3,118	360	1,347	4,825
35-39 ..	2,703	259	1,078	4,040	1,434	480	1,031	2,945
40-44 ..	1,434	343	885	2,662	833	490	733	2,056
45-49 ..	732	395	609	1,736	472	464	413	1,349
50-54 ..	417	414	399	1,230	257	366	213	836
55-59 ..	206	455	216	877	150	331	102	583
60-64 ..	114	467	93	674	83	267	47	397
65 and over	95	689	64	848	53	288	20	361
Total ..	62,352	3,304	4,984	70,640	61,913	3,355	5,372	70,640

(ii) *Proportional Distribution.* In the following table the proportional distribution of bridegrooms and brides according to previous conjugal condition is shown in five-year periods from 1926 to 1950 and for each year 1951 to 1953 :—

**CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : PROPORTIONAL
DISTRIBUTION, AUSTRALIA.**

(Per Cent.)

Period.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
1926-30 ..	92.31	5.03	1.76	100.00	93.46	4.55	1.00	100.00
1931-35 ..	92.63	5.30	1.08	100.00	94.37	3.53	2.10	100.00
1936-40 ..	92.59	4.82	2.59	100.00	93.91	3.38	2.68	100.00
1941-45 ..	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00
1946-50 ..	88.82	4.74	6.44	100.00	88.71	4.74	6.55	100.00
1951 ..	88.49	4.65	6.86	100.00	87.94	4.97	7.09	100.00
1952 ..	88.91	4.65	6.44	100.00	88.14	4.76	7.10	100.00
1953 ..	88.27	4.68	7.05	100.00	87.65	4.75	7.60	100.00

(iii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1953 are shown in single years in *Demography Bulletin* No. 71. A summary in age groups of five years is given below.

RELATIVE AGES OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1953.

Age of Bridegroom (Years).	Total Bridegrooms.	Age of Bride (Years).							
		Under 15.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.
Under 20..	2,284	8	1,753	488	31	2	1	1	..
20-24 ..	28,030	5	9,510	17,200	1,880	194	36	12	3
25-29 ..	19,784	4	2,702	10,710	4,971	1,071	238	63	25
30-34 ..	7,575	..	426	2,374	2,511	1,506	558	158	42
35-39 ..	4,040	1	90	596	1,036	1,020	792	356	149
40-44 ..	2,662	..	32	177	398	612	633	544	266
45-49 ..	1,736	..	9	45	128	265	385	405	499
50-54 ..	1,230	1	5	11	55	98	174	276	610
55-59 ..	877	..	2	4	21	38	91	144	577
60-64 ..	674	..	..	3	4	13	24	63	567
65 and over	848	..	..	5	2	6	13	34	788
Total									
Brides ..	70,640	19	14,529	31,703	11,037	4,825	2,945	2,056	3,526

(iv) *Average Ages of Bridegrooms and Brides.* The age at marriage of brides has remained fairly constant during recent years at an average of about 25½ years, although in the period 1937-39 the average rose to almost 26 years. The average ages, in years, of brides for each of the five years to 1953 were:—1949, 25.65; 1950, 25.73; 1951, 25.71; 1952, 25.61; and 1953, 25.73. For the following five-year periods the average ages in years were:—1911-15, 25.76; 1916-20, 26.05; 1921-25, 25.76; 1926-30, 25.57; 1931-35, 25.50; 1936-40, 25.72; 1941-45, 25.68; and 1946-50, 25.61. The average ages, in years, of bridegrooms were 28.91 in 1949, 28.99 in 1950, 28.92 in 1951, 28.79 in 1952 and 28.96 in 1953. It follows, therefore, that brides are, generally speaking, a little more than three years younger than bridegrooms. The average ages of brides and bridegrooms for the years 1940-46 showed the effects of war-time conditions. The proportion of young persons marrying during those years increased, thereby causing decreases in the average ages of both brides and bridegrooms. The difference in age between brides and bridegrooms was 3.26 years in 1949, 3.26 in 1950, 3.21 in 1951, 3.18 in 1952 and 3.23 in 1953.

6. *Previous Conjugal Condition.*—The number of bachelors and spinsters, widowed and divorced persons who married during 1953 is shown in the table on page 356. The following table shows the relative conjugal condition of the contracting parties.

CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1953.

Conjugal Condition of Bridegrooms.	Total Bridegrooms.	Conjugal Condition of Brides.		
		Spinsters.	Widows.	Divorced.
Bachelors	62,352	57,630	1,474	3,248
Widowers	3,304	1,420	1,262	622
Divorced	4,984	2,863	619	1,502
Total Brides ..	70,640	61,913	3,355	5,372

7. *Birthplace of Persons Marrying.*—A table showing the relative birthplaces of bridegrooms and brides married in each year will be found in the *Demography Bulletin*.

8. *Occupation of Bridegrooms.*—The distribution of the 70,640 bridegrooms for 1953 amongst classes of occupations was as follows:—Craftsmen, 18,036; Operatives, 12,130; Commercial and Clerical, 12,031; Rural, Fishing and Hunting, 8,909; Labourers, 6,241; Domestic and Protective Service, 5,296; Professional and Semi-Professional, 3,563; Administrative, 2,522; and Not Gainfully Occupied and Not Stated, 1,912.

9. *Celebration of Marriages.*—In all the States marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars—but most of the marriages

are celebrated by ministers of religion. The registered ministers in 1953 belonged to more than forty different denominations, some of which, however, have only very few adherents. A number of these have been bracketed under the heading "Other Christian". The figures for 1953 are shown in the following table.

MARRIAGES IN EACH DENOMINATION, 1953.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Proportion of Total.
										%
Church of England	9,856	5,140	2,624	1,316	1,508	898	24	81	21,447	30.36
Roman Catholic ..	6,305	4,380	2,419	958	1,019	416	47	61	15,605	22.09
Presbyterian ..	3,211	3,691	1,977	319	424	136	18	23	9,799	13.87
Methodist ..	2,870	2,682	1,526	1,635	679	358	13	7	9,770	13.83
Baptist ..	375	306	188	155	55	66	..	3	1,148	1.63
Congregational ..	292	315	100	248	122	67	..	2	1,146	1.62
Lutheran ..	116	212	270	426	24	15	2	7	1,072	1.52
Church of Christ ..	66	319	56	154	68	14	..	1	678	0.96
Greek Orthodox ..	173	101	37	29	50	..	..	..	390	0.55
Salvation Army ..	106	107	94	30	19	21	8	..	385	0.55
Seventh-Day Adventist ..	84	26	28	17	21	10	..	..	186	0.26
Other Christian ..	154	194	141	54	93	34	..	..	670	0.95
Hebrew ..	151	212	5	2	12	1	..	..	383	0.54
Total ..	23,759	17,685	9,465	5,343	4,094	2,036	112	185	62,679	88.73
Civil Officers ..	3,814	1,553	394	806	938	388	42	26	7,961	11.27
Grand Total ..	27,573	19,238	9,859	6,149	5,032	2,424	154	211	70,640	100.00

PROPORTION OF TOTAL.

(Per cent.)

Denominational ..	86.17	91.93	96.00	86.89	81.36	83.99	72.73	87.68	88.73
Civil ..	13.83	8.07	4.00	13.11	18.64	16.01	27.27	12.32	11.27

10. Divorces.—Chapter XII.—Public Justice shows details of the number of marriages dissolved annually by divorce, nullity of marriage and judicial separation. The number dissolved by decrees for divorce and nullity of marriage made absolute and by judicial separation in 1953 was 8,041 or 11.4 per cent. of the number of marriages celebrated during the year. Detailed tables relating to divorce statistics for 1953 and summary tables for earlier years are shown also in *Demography Bulletin* No. 71, 1953.

§ 2. Fertility and Reproduction.

1. **Introductory.**—Of the two elements of increase in the population, namely, natural increase and net migration, the former has been by far the more important over the past few decades. The level of natural increase depends on the excess of births over deaths and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.

2. **Number of Live Births and Confinements.**—(i) *Year 1953.* There are various methods of measuring the fertility of the population by relating the number of births to the numbers in the population. In each the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1953 is shown in the table below. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only.

LIVE BIRTHS AND CONFINEMENTS, 1953.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Australia.
LIVE BIRTHS.									
Single births	73,126	52,168	30,060	17,717	15,516	7,562	454	770	197,373
Twins ..	1,746	1,378	719	436	343	165	6	18	4,811
Triplets ..	14	15	3	3	3	9	..	..	47
Quadruplets	4	..	..	..	..	..	..	..	4
Males ..	38,315	27,368	15,842	9,347	8,056	3,893	261	417	103,199
Females ..	36,575	26,193	14,940	8,809	7,806	3,843	199	371	98,736
Total ..	74,890	53,561	30,782	18,156	15,862	7,736	460	788	202,235

STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE.

Twins ..	58	22	17	8	19	5	..	..	129
Triplets ..	1	..	..	..	..	..	..	..	1

CONFINEMENTS RESULTING IN ABOVE BIRTHS.

Nuptial ..	71,046	51,048	28,936	17,342	14,598	7,368	407	768	191,913
Ex-nuptial ..	2,988	1,825	1,493	598	700	282	50	11	7,947
Total ..	74,034	52,873	30,429	17,940	15,698	7,650	457	779	199,860

NOTE.—In Queensland and Tasmania the registration of stillbirths is not compulsory and it is possible that in some cases where one child only of a multiple pregnancy is live-born the confinement has been treated as a single birth. This applies particularly to South Australia, where registration practice for twins when one is live-born and one still-born is to treat each child as a single birth, and for triplets with one still-born, to treat the two live-born as twins, and so on.

(ii) *Live Births, Years 1926 to 1953* The average annual number of live births in each State and Territory for each five-year period from 1926 to 1950 and the total number of live births in each State and Territory for each year from 1949 to 1953 are given in the following table. Corresponding figures for each five-year period from 1861 will be found in Official Year Book No 39, p. 583.

LIVE BIRTHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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ANNUAL AVERAGES.

1926-30 ..	53,308	34,333	19,361	11,006	8,748	4,819	70	118	131,763
1931-35 ..	44,964	28,380	17,480	8,646	8,061	4,547	79	145	112,302
1936-40 ..	47,679	30,282	19,534	9,388	8,877	4,866	125	221	120,972
1941-45 ..	56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886
1946-50 ..	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718

ANNUAL TOTALS.

1949 ..	68,812	46,873	27,748	16,042	13,511	7,110	346	819	181,261
1950 ..	71,592	40,830	29,028	17,306	14,228	7,242	411	954	190,591
1951 ..	72,069	50,553	29,652	17,463	14,794	7,357	407	1,003	193,208
1952 ..	74,196	53,738	30,053	17,884	15,413	7,916	418	1,102	201,650
1953 ..	74,890	53,561	30,782	18,156	15,862	7,736	460	788	202,235

3. *Crude Birth Rates.*—The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining the crude birth rate. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period.

Crude birth rates for each five-year period from 1926 to 1950 and for each year from 1949 to 1953 for each State and Territory are set out below :—

CRUDE BIRTH RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
1926-30 ..	21.76	19.65	21.90	19.41	21.54	22.29	15.60	14.96	20.98
1931-35 ..	17.28	15.60	18.48	14.89	18.36	19.95	15.99	15.77	16.94
1936-40 ..	17.51	16.20	19.48	15.82	19.16	20.58	19.96	18.68	17.52
1941-45 ..	19.79	19.27	22.28	20.43	21.72	22.23	11.40	26.82	20.28
1946-50(b)	22.60	22.51	24.69	24.41	25.24	26.71	23.77	38.46	23.39

ANNUAL RATES.

1949	22.24	21.88	24.01	23.58	25.37	26.30	26.49	39.52	22.92
1950	22.42	22.56	24.37	24.39	25.50	25.98	28.73	41.69	23.31
1951	21.97	22.21	24.23	23.84	25.49	25.52	26.83	42.17	22.96
1952	22.20	22.93	24.64	23.68	25.66	26.53	29.71	42.57	23.35
1953	22.11	22.36	23.91	23.38	25.54	25.25	29.64	27.76	22.93

(a) Number of births per 1,000 of mean population.
estimates shown on p. 311.

(b) Rates based on revised mean population

NOTE.—The birth rates in the table above are based on live births registered in the respective States and Territories. Some years ago a large proportion of births in respect of which the mother's usual residence was the Australian Capital Territory took place in Queanbeyan, just over the New South Wales border, but with improved hospital facilities in the Territory the movement to outside hospitals rapidly diminished and has been reversed since 1939. The following rates, based on births in respect of which the mother's usual residence is the Australian Capital Territory and on revised population figures, are a truer measure of birth rates in the Australian Capital Territory :—

Annual Average.			Year.		
1926-1930 ..	..	22.45	1949 ..	..	27.99
1931-1935 ..	..	19.53	1950 ..	..	30.55
1936-1940 ..	..	19.29	1951 ..	..	29.55
1941-1945 ..	..	23.06	1952 ..	..	31.91
1946-1950 ..	..	27.51	1953 ..	..	27.94

The variations similarly caused in the birth rates for the States and Northern Territory by referring the birth registrations to the State or Territory in which the mother was usually resident are shown by the following corrected rates for 1953 :—New South Wales, 22.04 ; Victoria, 22.41 ; Queensland, 24.00 ; South Australia, 23.30 ; Western Australia, 25.57 ; Tasmania, 25.34 ; and Northern Territory, 30.35.

In the earlier years of the present century the crude birth rate fluctuated somewhat but from 1912, when 28.60 was recorded, there was an almost continuous decline to the very low figure of 16.39 in 1934. The decline in the depression years was to some extent occasioned by the postponement of marriages, and with subsequent improvement in economic conditions the rate rose. Since 1940 the rate has increased quite appreciably owing to a continued improvement in the economic welfare of the community and the war-time boom in marriages. The latter resulted in an abnormal number of first births but investigation indicates that rates for births other than first were generally slightly higher than might have been expected from pre-war experience. The improvement in the birth rate has been maintained since the end of the war despite some falling off in marriage rates.

4. Crude Birth Rates of Various Countries.—The following table gives the crude birth rates for Australia in comparison with the rates for various other countries.

CRUDE BIRTH RATES(*a*) : VARIOUS COUNTRIES.

Country.	1921-25.	1926-30.	1931-35.	1953.	Country.	1921-25.	1926-30.	1931-35.	1953.
Yugoslavia ..	35.0	34.2	31.8	28.3	Ireland, Republic of ..	20.3	20.1	19.4	21.1
Canada ..	27.4	24.1	21.4	27.9	Spain ..	29.8	28.5	27.1	20.6
Union of South Africa(<i>b</i>) ..	27.1	25.9	24.1	25.7	Norway ..	22.2	18.0	15.2	18.8
United States of America ..	22.5	19.7	16.9	24.7	France ..	19.3	18.2	16.5	18.6
New Zealand(<i>d</i>) ..	22.2	19.7	17.0	24.1	Denmark ..	22.3	19.4	17.7	17.7
Australia(<i>c</i>) ..	23.9	21.0	16.9	22.9	Italy ..	29.8	26.8	23.8	17.4
Finland ..	24.7	22.5	19.5	21.4	Switzerland ..	19.5	17.6	16.4	17.0
Netherlands ..	25.7	23.2	21.2	21.8	Belgium ..	20.4	18.6	16.8	16.6
Japan ..	34.6	33.5	31.6	21.5	United Kingdom ..	20.4	17.2	15.5	15.9
					Sweden ..	19.1	15.9	14.1	15.4
					Austria ..	22.2	17.6	14.4	14.5

(*a*) Number of births per 1,000 of mean population. (*b*) White population only. (*c*) 1933-35.
 (*d*) Excludes Maoris. (*e*) Excludes full-blood aboriginals.

5. Fertility Rates.—The principal demographic factors affecting the level of crude birth rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a high proportion of married women of child-bearing age will have a much higher crude birth rate than one with a low proportion, although the fertilities of the two populations may be identical.

In order to compare fertilities, births are sometimes related to the number of women of child-bearing age or, alternatively, nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility rate.

The following table sets out for certain periods, commencing with 1880-82, the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table the child-bearing age has been taken to be 15-44 years inclusive, but births to mothers who were stated to be under 15 or over 44 years have been included in the compilations.

CRUDE BIRTH RATES AND FERTILITY RATES : AUSTRALIA.

Period.	Average Annual Rates.			Index Nos. (Base : 1880-82 = 100).		
	Crude Birth Rate(<i>a</i>)	Fertility Rates.		Crude Birth Rate(<i>a</i>)	Fertility Rates.	
		Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.		Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.
1880-82 ..	35.3	170	321	100	100	100
1890-92 ..	34.5	159	332	98	94	103
1900-02 ..	27.2	117	235	77	69	73
1910-12 ..	27.2	117	236	77	69	74
1920-22 ..	25.0	107	197	71	63	61
1932-34 ..	16.7	71	131	47	42	41
1946-48 ..	23.6	104	167	67	61	52

(*a*) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth rate. Thus while the nuptial birth rate for married women increased by only 27 per cent. over the period 1932-34 to 1946-48 the crude birth rate rose by 41 per cent., owing principally to the greatly increased number of marriages during that period.

6. **Age-specific Fertility Rates for Females.**—So long as customary ages at marriage do not change drastically, the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group the fertility of women of different ages varies considerably and a clearer view of the fertility of the population can be obtained from an examination of what are known as its age-specific fertility rates, that is, the number of births to women of specified ages per thousand women of those particular ages.

Age-specific fertility rates are more commonly expressed in age groups than single ages. The following table sets out age-specific fertility rates for Australia over the period 1921 to 1953 in five-year age groups.

AGE-SPECIFIC FERTILITY RATES^(a) : AUSTRALIA.

Age Group (Years).	1921.	1926.	1931.	1936.	1941.	1946.	1950.	1951.	1952.	1953.
15-19..	12.83	14.02	13.08	12.18	11.90	12.63	18.11	18.59	19.07	18.45
20-24..	65.45	60.23	53.08	50.33	59.42	73.52	84.32	85.84	90.93	94.53
25-29..	82.24	76.82	62.47	62.02	70.78	80.51	90.53	90.24	91.53	94.73
30-34..	68.50	61.90	51.25	46.33	49.72	65.03	60.31	59.16	61.51	61.17
35-39..	49.48	43.55	33.23	28.89	28.69	37.43	33.80	32.29	32.61	31.87
40-44..	21.66	17.63	13.61	10.19	9.52	11.87	10.35	9.97	9.95	9.77
45-49..	2.10	1.90	1.45	1.11	0.80	1.03	0.73	0.80	0.83	0.67

(a) Number of female births per 1,000 women in each age group.

The table above indicates that the most fertile age group is 25-29 years. The decline in fertility between 1921 and 1936 was general but was more pronounced in the older age groups. During the period 1936 to 1953 a rise in fertility occurred in all age groups below 40.

7. **Gross and Net Reproduction Rates for Females.**—A single measure of reproduction known as the gross reproduction rate is obtained by adding together the specific fertility rates for each age in the child-bearing group. This measure indicates the number of female children who would be born on the average to women living right through the child-bearing period, if the conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers, and consequently it shows more clearly than the crude birth rate the reproductive propensity of the population. It is, however, an imperfect measure of reproduction because it does not take into account the females who fail to live from birth to the end of the reproductive period. A more accurate measure of this nature is obtained by multiplying the specific fertility rates by the number of females in the corresponding age group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality and the result is known as the net reproduction rate. The net reproduction rate indicates the average number of female children who would be born to women during their lifetime if they were subject at each age to the fertility and mortality rates on which the calculation is based. A constant net reproduction rate of unity indicates that the population will ultimately become stationary. If it continues greater than unity, the population will ultimately increase; if less than unity, it will ultimately decrease. The following table should be read in the light of the comment which follows it and of the index of fertility in paragraph 9 hereof.

GROSS AND NET REPRODUCTION RATES : AUSTRALIA.

Year.	Gross Reproduction Rate.	Net Reproduction Rate.	Year.	Gross Reproduction Rate.	Net Reproduction Rate.	
					(f)	(g)
1881 (a)	2.65	(b) 1.88	1947 ..	1.493	1.364	1.416
1891 (a)	2.30	(b) 1.73	1948 ..	1.451	..	1.376
1901 (a)	1.74	(c) 1.39	1949 ..	1.457	..	1.382
1911 ..	1.705	(d) 1.421	1950 ..	1.491	..	1.415
1921 ..	1.511	(e) 1.313	1951 ..	1.485	..	1.409
1931 ..	1.141	(f) 1.039	1952 ..	1.547	..	1.468
1941 ..	1.154	(f) 1.053	1953 ..	1.556	..	1.477

(a) Approximate only. (b) 1881-1890 mortality experience used. (c) 1891-1900 mortality experience used. (d) 1901-1910 mortality experience used. (e) 1920-1922 mortality experience used. (f) 1932-1934 mortality experience used. (g) 1946-48 mortality experience used.

NOTE.—It is not strictly correct to assume, as above, that a particular age-specific fertility rate can be applied to a hypothetical group of women reaching that age, without taking account of previous fertility and marriage experiences. Reproduction rates are, therefore, somewhat unreliable when birth and marriage rates have been changing. The indexes of marriage fertility shown on the next page are also of doubtful reliability in similar circumstances.

Since 1881 there has been a substantial downward trend in both rates, but the gross rate has fallen considerably more than the net, showing that the decline in fertility has been offset to some extent by a decline in mortality. The net reproduction rate was below unity over the period 1932 to 1939, and if the low level of those years were to continue, ultimate population decline would be certain. The progressive rise in both gross and net reproduction rates from 1939 to 1947 was due largely to higher marriage rates during the war and early post-war years than had been experienced in the immediate pre-war years. Such fluctuations in marriage rates affect both gross and net reproduction rates substantially. When fluctuations in marriage rates are transient, reproduction rates calculated as above are not valid as indicators of relative fertility nor of the extent to which population will replace itself. Owing to various influences the number of marriages in each year since 1948 has remained at a relatively high level and the net reproduction rates have been steady at about 1.4. The fertility of marriages is measured in paragraph 9 below.

8. **Gross and Net Reproduction Rates of Various Countries.**—In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1947 to 1949. These have been taken mainly from the United Nations *Demographic Year Book*, 1949-50 and represent the latest available international comparison. More recent Australian rates are shown in the table above.

GROSS AND NET REPRODUCTION RATES : VARIOUS COUNTRIES.

Country.	Period.	Reproduction Rate.		Country.	Period.	Reproduction Rate.	
		Gross.	Net.			Gross.	Net.
Canada ..	1948	1.67	(a)	France ..	1947	1.46	1.31
New Zealand(b)	1949	1.62	1.51	Denmark ..	1947	1.40	1.27
United States of America(c) ..	1948	1.54	1.46	Switzerland ..	1946	1.29	1.16
Netherlands ..	1949	1.56	1.43	Sweden ..	1947	1.21	1.13
Finland ..	1948	1.67	1.40	Portugal ..	1949	1.55	1.13
Ireland, Republic of ..	1945-47	1.63	1.38	Norway ..	1948	1.23	1.13
Australia(d)	1949	1.46	1.38	England and Wales ..	1948	1.16	1.07
Scotland ..	1947	1.50	1.35	Belgium ..	1948	1.19	1.00

(a) Not avail. ble.
full-blood aboriginals.

(b) Excludes Maoris.

(c) White population only.

(d) Excludes

In comparing the reproduction rates of the countries shown above allowance should be made for any differences in years as the rates for any one country from year to year are affected by variations in the incidence of marriage.

9. **Fertility of Marriages.**—In issues of the Official Year Book prior to No. 36 estimates of the fertility of marriages were published. These were calculated by relating the births of one five-year period to the marriages in the preceding five years (see Official Year Book No. 35, p. 329). Since the publication of that issue, an improved method has been formulated for measuring current marriage fertility by relating nuptial confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current fertility per marriage in respect of confinements in the individual years shown.

FERTILITY OF MARRIAGES : AUSTRALIA.

Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.
1939..	2.20	1944..	2.28	1949..	2.45
1940..	2.18	1945..	2.36	1950..	2.56
1941..	2.19	1946..	2.55	1951..	2.55
1942..	2.12	1947..	2.55	1952..	2.63
1943..	2.21	1948..	2.44	1953..	2.66

NOTE.—See Note at foot of p. 362.

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year. It will be noted that there was an almost continuous decline to 1942, but a pronounced increase from 1943 to 1946. Comparing this index with the net reproduction rate it is evident that the rise in the latter since 1935 has been caused by a rise in the marriage rate, due firstly to the postponed depression marriages, and secondly to war-time marriages, and only in the last six years to any increase in the fertility of marriages. The figures for 1949 and subsequent years present a somewhat inflated index as many of the births which have been used to calculate the index relate to marriages of immigrants which took place overseas and are consequently not included in Australian marriage records. Partial investigation suggests that this factor may overstate the index by as much as 6 per cent.

10. Masculinity of Live Births.—The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example, State totals), considerable variation is shown. For 1953 the figures ranged from 97.36 in the Northern Territory to 108.87 in Tasmania. The averages for the ten years 1941–50 were as follows:—New South Wales, 105.49; Victoria, 105.47; Queensland, 105.49; South Australia, 105.78; Western Australia, 104.27; Tasmania, 104.45; Australia, 105.38. The following table shows the figures for Australia for each ten-year period from 1901 to 1950 and for each year 1950 to 1953:—

MASCULINITY(a) OF LIVE BIRTHS REGISTERED : AUSTRALIA.

Particulars.	1901–10.	1911–20.	1921–30.	1931–40.	1941–50.	1950.	1951.	1952.	1953.
Total Births ..	105.22	105.27	105.55	105.12	105.38	105.46	105.86	105.20	102.44
Ex-nuptial Births	104.08	105.25	105.16	105.36	105.34	105.38	105.30	99.57	105.69

(a) Number of males born for every 100 female births.

11. Ex-nuptial Live Births.—(i) *General.* Since 1901 the highest proportion of ex-nuptial births recorded in any one year was in 1905 when there were 6,545 ex-nuptial births representing 6.24 per cent. of total births. Since then the proportion has declined steadily. The largest number of ex-nuptial births was recorded in 1953 when 8,032 were registered, but this number represented only 3.97 per cent. of total births. The lowest proportion was 3.78 per cent. in 1940.

The variations in the proportions of ex-nuptial births as between the individual States and Territories for 1953 are shown below. Corresponding figures for 1952 may be obtained from *Demography Bulletin* No. 70.

EX-NUPTIAL LIVE BIRTHS : NUMBER AND PROPORTION, 1953.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number ..	3,013	1,843	1,513	607	709	286	50	11	8,032
Proportion of Total Births%	4.02	3.44	4.92	3.34	4.47	3.70	10.87	1.40	3.97

The number and proportion of ex-nuptial births at intervals from 1901 to 1953 are as follows:—

EX-NUPTIAL LIVE BIRTHS : NUMBER AND PROPORTION, AUSTRALIA.

Particulars.	Annual Average.					1950.	1951.	1952.	1953.
	1901–10.	1911–20.	1921–30.	1931–40.	1941–50.				
Number ..	6,498	6,836	6,238	5,133	6,780	7,324	7,555	7,842	8,032
Proportion of Total Births .. %	6.05	5.22	4.66	4.40	4.13	3.84	3.91	3.89	3.97

It is, of course, possible that the number of ex-nuptial births is somewhat understated owing to diffidence in proclaiming the fact of ex-nuptiality.

(ii) *Rate of Ex-nuptiality.* A further comparison is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population between the ages of 15 and 45 years. On this basis the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows:—1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; 1920-22, 10.50; 1932-34, 6.91; and 1946-48, 11.45.

(iii) *Comparison of Rates.* The following table, showing the relative proportions of ex-nuptial and nuptial births to the total population, discloses a much greater proportional reduction in the ex-nuptial birth rate than in the nuptial rate:—

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES(a): AUSTRALIA.

Birth Rate.	Annual Average.					1950.	1951.	1952.	1953.
	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.				
Ex-nuptial	1.60	1.39	1.04	0.76	0.90	0.90	0.90	0.91	0.91
Nuptial ..	24.01	25.18	21.40	16.47	20.99	22.39	22.03	22.41	21.09
Total ..	26.51	26.57	22.44	17.23	21.89	23.31	22.96	23.35	22.93

(a) Number of births per 1,000 of mean population.

12. *Legitimations.*—In the several States Acts have been passed to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who comes within the scope of their purposes, born before or after the passing thereof is deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. During 1953 the number of children legitimized in Australia was 954.

13. *Multiple Births.*—Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are still-born the confinement is excluded, and secondly, because of differences in registration practice where stillbirths are involved, from which it is evident, in recent years, that in Victoria and Queensland, some, and in South Australia, all, cases of multiple births in which only one child was live-born have been registered as single births. It is estimated that the deficiency due to this second cause is about 50 cases per annum. During 1953 multiple births recorded on the above basis comprised 2,470 cases of twins, 16 cases of triplets and one case of quadruplets, the resultant numbers of live-born and still-born children being respectively 4,811 and 129 for twins and 47 and 1 for triplets. The four quadruplet children were live-born. This represents an average of 12.36 recorded cases of twins and 0.08 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented one in every 81 mothers and mothers of triplets one in every 12,500. Total cases of multiple births represented 12.44 per 1,000 confinements or one in every 80 mothers.

The proportion of mothers of multiple births to total mothers does not vary greatly from year to year.

Detailed statistics of multiple births will be found in the *Demography Bulletin*.

14. *Ages of Parents.*—The relative ages of the parents of children registered in 1953 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births the relative ages of parents are shown in *Demography Bulletin* No. 71. In the present work the exigencies of space allow only the insertion of a table showing, in respect of all confinements, the relative ages of parents in groups of five years.

CONFINEMENTS : RELATIVE AGES OF PARENTS, AUSTRALIA, 1953.

Age of Father (Years), and Type of Birth.	Total.	Age of Mother (Years).								
		Under 15.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	Not Stated
Under 20 ..	1,143	..	884	244	12	2	..	1	..	..
20-24 ..	28,073	4	5,815	19,126	2,853	241	30	4	..	..
25-29 ..	61,717	2	1,951	26,207	29,010	4,129	377	31	1	..
30-34 ..	49,090	..	308	6,916	21,805	17,191	2,363	202	5	..
35-39 ..	29,020	..	70	1,436	6,307	12,132	8,228	834	13	..
40-44 ..	15,030	..	18	399	1,836	4,400	5,948	2,376	62	..
45-49 ..	5,458	..	7	111	472	1,184	2,046	1,495	143	..
50-54 ..	1,720	1	3	33	149	317	609	529	79	..
55-59 ..	429	..	1	12	29	76	158	129	24	..
60-64 ..	130	..	1	2	9	26	52	44	5	..
65 and over ..	85	..	1	3	10	20	22	24	5	..
Mothers of Nuptial Children	Single	189,516	7	8,986	54,017	61,736	39,372	19,480	5,586	332
	Twins	2,381	..	73	469	762	642	347	83	5
	Triplets	15	..	..	3	3	4	5	..	..
	Quadruplets	1	..	..	..	..	..	..	..	..
	Total ..	191,913	7	9,059	54,489	62,501	40,018	19,833	5,669	337
Mothers of Ex- nuptial Children	Single	7,857	26	1,702	2,379	1,764	1,038	686	233	16
	Twins	89	..	8	25	23	16	14	3	..
	Triplets	1	..	..	..	..	..	..	..	..
	Quadruplets	1	..	..	..	..	..	..	..	..
	Total ..	7,947	26	1,710	2,404	1,788	1,054	700	236	16
Total Mothers	Single	197,373	33	10,688	56,396	63,500	40,410	20,166	5,819	348
	Twins	2,470	..	81	494	785	658	361	86	5
	Triplets	16	..	..	3	4	4	5	..	..
	Quadruplets	1	..	..	..	..	..	1	..	..
	Total ..	199,860	33	10,769	56,893	64,289	41,072	20,533	5,905	353

15. Birthplaces of Parents.—A table showing birthplaces of parents of children whose births were registered during 1953 appears in *Demography Bulletin* No. 71.

16. Occupation of Fathers.—A table showing occupations of the fathers of all nuptial children registered in 1953 appears in *Demography Bulletin* No. 71.

17. Age, Duration of Marriage and Issue of Mothers.—(i) *General.* The total number of nuptial confinements resulting in live births in 1953 was 191,913, comprising 189,516 single births, 2,381 cases of twins, 15 cases of triplets and 1 case of quadruplets. The tables relating to previous issue exclude the issue of former marriages and still-born children. On the other hand, they include children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the total issue shown.

The tables below are shown in summarized form, more detailed statistics for 1953 being given in *Demography Bulletin* No. 71.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that in 1953 the duration of marriage of mothers of nuptial children ranged from less than one year to over 25 years, and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1953 was 2.45 compared with 2.42 in 1952, 2.40 in 1951, 2.39 in 1950 and 2.37 in 1949.

**NUPTIAL CONFINEMENTS : DURATION OF MARRIAGE AND ISSUE OF MOTHERS.
AUSTRALIA, 1953.**

Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.	Duration of Marriage (Years).	Total Married Mothers.	Total Issue.	Average Issue.
0-1 ..	24,183	24,608	1.02	14-15 ..	2,443	11,554	4.73
1-2 ..	23,124	27,679	1.20	15-16 ..	2,118	10,708	5.06
2-3 ..	22,116	37,064	1.68	16-17 ..	1,550	8,295	5.35
3-4 ..	20,136	40,185	2.00	17-18 ..	1,245	6,942	5.58
4-5 ..	17,574	40,197	2.29	18-19 ..	936	5,568	5.95
5-6 ..	15,600	40,237	2.58	19-20 ..	729	4,709	6.46
6-7 ..	13,445	38,630	2.87	20-21 ..	548	3,594	6.56
7-8 ..	10,691	33,364	3.12	21-22 ..	349	2,429	6.96
8-9 ..	7,719	25,491	3.30	22-23 ..	284	2,064	7.27
9-10 ..	6,443	22,560	3.50	23-24 ..	180	1,476	8.20
10-11 ..	6,417	23,343	3.64	24-25 ..	114	976	8.56
11-12 ..	5,839	22,625	3.87	25 and over	194	1,648	8.55
12-13 ..	4,307	17,908	4.16				
13-14 ..	3,629	16,415	4.52	Total ..	191,913	470,269	2.45

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages. In the younger ages there is, naturally, little difference in the average number of children to each mother from year to year, but with the increase of the age of the mother the number of issue has fallen in comparison with past years. The average issue of mothers of all ages recorded for 1953 (namely, 2.45) is 24.6 per cent. below the average of 3.25 for the years 1911-20.

AGE AND AVERAGE ISSUE OF MOTHERS: AUSTRALIA.

Period.	Age of Mother (Years).							All Ages.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
1911-20 ..	1.21	1.75	2.61	3.74	5.11	6.69	8.16	3.25
1921-30 ..	1.20	1.71	2.46	3.48	4.80	6.27	7.74	3.04
1931-40 ..	1.20	1.68	2.30	3.19	4.41	5.89	7.40	2.71
1941-50 ..	1.17	1.56	2.15	2.85	3.67	4.79	6.19	2.37
1953 ..	1.22	1.67	2.33	3.03	3.72	4.60	5.54	2.45

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers by age group and previous issue is given for 1953 in the following table. Complete detailed figures appear in *Demography Bulletin No. 72*.

NUPTIAL CONFINEMENTS : AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1953.

Previous Issue.	Age of Mother (Year).							Total Married Mothers.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
0 ..	7,317	29,128	17,486	6,573	2,546	645	31	63,726
1 ..	1,579	17,315	22,061	10,263	3,621	742	40	55,621
2 ..	159	6,026	13,843	10,718	4,414	915	31	36,106
3 ..	11	1,570	5,777	6,519	3,700	926	44	18,547
4 ..	..	367	2,188	3,078	2,280	769	50	8,732
5 ..	..	69	769	1,455	1,208	505	29	4,125
6 ..	..	10	238	761	798	327	27	2,161
7 ..	..	4	97	359	477	272	22	1,231
8 ..	..	..	29	160	296	200	19	704
9 ..	..	..	6	81	206	127	10	430
10 and over	..	..	7	51	197	241	34	530
Total Married Mothers	9,066	54,489	62,501	40,018	19,833	5,669	337	191,913

The masculinity of nuptial first births in 1953 was 105.29 compared with 102.44 for total births.

(ii) *Age of Mother and Duration of Marriage.* A tabulation showing the individual ages of mothers of nuptial first-born children in conjunction with full detail of duration of marriage is given in *Demography Bulletin* No. 71 for 1953. A summary showing grouped ages and grouped durations is given in the following table.

**FIRST BIRTHS : AGE OF MOTHER AND DURATION OF MARRIAGE,
AUSTRALIA, 1953.**

Duration of Marriage.	Age Group of Mother (Years).							Total.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
Under 8 months ..	4,201	4,201	1,179	450	226	62	3	10,322
8 months ..	385	1,060	337	134	47	10	..	1,982
9 " ..	506	2,633	985	308	85	20	..	4,537
10 " ..	404	2,248	867	267	93	16	..	3,895
11 " ..	345	1,907	715	201	90	18	2	3,278
Total under 1 year ..	5,841	12,050	4,083	1,360	541	120	5	24,014
1-2 years ..	1,324	10,766	4,677	1,445	568	136	4	18,920
2-3 " ..	122	3,982	2,973	890	313	104	9	8,393
3-4 " ..	25	1,526	2,181	641	206	51	3	4,637
4-5 " ..	4	561	1,472	502	147	46	2	2,734
5-10 " ..	..	233	2,047	1,393	421	72	5	4,171
10-15 " ..	..	2	47	336	287	71	1	744
15 years and over ..	..	..	3	6	63	39	2	113
Total ..	7,317	21,118	17,186	6,573	2,546	645	31	63,726

(iii) *First Births and Subsequent Births.* The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1911 and shows also the proportion of first to total nuptial confinements.

NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS : AUSTRALIA.

Period.	Nuptial Confinements.			Proportion of First to Total Nuptial Confinements (Per Cent.).
	First Births.	Other Births.	Total.	
ANNUAL AVERAGES.				
1911-20	33,595	88,997	122,592	27.40
1921-30	38,120	88,086	126,206	30.20
1931-40	39,243	71,136	110,379	35.55
1941-50	58,818	96,994	155,812	37.75
ANNUAL TOTALS.				
1949	60,927	111,080	172,007	35.42
1950	62,081	119,101	181,182	34.26
1951	62,078	121,594	183,672	33.80
1952	65,238	126,432	191,670	34.04
1953	63,726	128,187	191,913	33.21

19. *Stillbirths.*—Registration of stillbirths is not compulsory in all Australian States. It has been compulsory in Western Australia since 14th January, 1908; in the Australian Capital Territory since 1st January, 1930; in New South Wales since 1st April, 1935; in South Australia since 1st May, 1937; and in Victoria from 1st January, 1953. In Victoria, independently of compulsory registration, and in Queensland and Tasmania where registration is not enforced, some information is obtained by notification of stillbirths for various purposes. Because registration is not compulsory in all States detailed statistics of stillbirths for Australia as a whole have not been compiled.

The number of stillbirths in each State and Territory, as recorded since 1936 by the means outlined above, is shown in the following table :—

STILLBIRTHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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ANNUAL AVERAGES.

1936-40 ..	1,409	854	(a) (b) 274	234	144	(a)	5	(a)
1941-45 ..	1,478	966	(c) 657	324	248	(a)	9	de 3,825
1946-50 ..	1,405	949	626	363	274	(a)	12	(e) 3,795

ANNUAL TOTALS.

1949 ..	1,279	907	581	338	268	159	8	14	3,554
1950 ..	1,406	963	607	325	240	138	6	11	3,696
1951 ..	1,291	929	651	316	297	166	5	15	3,670
1952 ..	1,195	919	596	320	283	154	13	10	3,490
1953 ..	1,256	899	562	287	268	141	8	16	3,437

(a) Not available. (b) Three years 1938-40. (c) Four years 1942-45. (d) Excludes Queensland for 1941. (e) Excludes Northern Territory.

The incidence of stillbirth in each State and Territory as measured by the rate per 1,000 of all births, both live and still, is as follows :—

PROPORTION OF STILLBIRTHS.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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AVERAGE ANNUAL RATES.

1936-40 ..	28.71	27.43	(b)	27.49	25.70	28.75	(b)	22.18	(b)
1941-45 ..	25.46	24.79	26.76	25.17	23.29	25.68	(b)	22.87	ef 25.25
1946-50 ..	19.99	19.64	21.87	22.12	20.46	22.26	(b)	16.35	(f) 20.46

ANNUAL RATES.

1949 ..	18.25	18.98	20.94	20.03	19.45	21.87	22.60	16.81	19.23
1950 ..	19.26	18.96	20.48	18.43	16.59	18.70	14.39	11.40	19.02
1951 ..	17.60	18.05	21.48	17.77	19.68	22.07	12.14	14.73	18.63
1952 ..	15.85	16.81	18.89	17.58	18.03	19.08	28.20	8.99	17.01
1953 ..	16.49	16.51	17.93	15.56	16.62	17.90	17.09	19.90	16.71

(a) Number of stillbirths per 1,000 of all births (live and still). (b) Not available. (c) Three years 1938-40. (d) Four years 1942-45. (e) Excludes Queensland for 1941. (f) Excludes Northern Territory.

§ 3. Mortality.

1. Number of Deaths.—(i) Year 1953. The following table shows the number of deaths, male and female, registered in each State and Territory during the year. Stillbirths, although registered as both births and deaths in some States, are excluded from the death statistics published herein.

DEATHS, 1953.

Sex.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	17,871	12,168	6,414	3,771	3,008	1,414	96	80	44,822
Females ..	13,836	10,482	4,592	3,191	2,064	1,137	20	44	35,366
Persons ..	31,707	22,650	11,006	6,962	5,072	2,551	116	124	80,188

(ii) Years 1926 to 1953. A summary of the number of deaths in each State and Territory from 1926 to 1953 is given in the following table. Annual averages for each five-year period from 1861 will be found in Official Year Book No. 39, p. 597.

DEATHS.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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ANNUAL AVERAGES.

1926-30	22,677	16,698	8,007	5,008	3,617	2,040	71	42	53,160
1931-35	22,591	17,680	8,147	5,063	3,876	2,194	67	35	59,653
1936-40(a)	25,735	19,361	9,107	5,540	4,270	2,342	73	54	66,482
1941-45(a)	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
1946-50(a)	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683

ANNUAL TOTALS.

1949	..	29,364	21,991	10,161	6,373	4,790	2,389	92	100	75,260
1950	..	30,965	22,341	10,369	6,740	5,058	2,466	96	122	78,187
1951	..	31,932	23,446	11,105	7,184	5,288	2,567	117	149	81,788
1952	..	32,038	23,322	11,171	7,050	5,209	2,579	89	139	81,597
1953	..	31,707	22,650	11,006	6,962	5,072	2,551	116	124	80,188

(a) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September, 1939 to June, 1947.

2. **Crude Death Rates.**—The commonest method of measuring the mortality rate is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death rate. This rate for a given period measures the numbers per thousand of population by which the population is depleted through deaths during that period. Crude death rates for each State and Territory from 1926 to 1953 are shown in the following table.

CRUDE DEATH RATES.(a)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
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AVERAGE ANNUAL RATES.

1926-30	9.26	9.56	9.06	8.83	8.90	9.44	15.84	5.49	9.26
1931-35	8.68	9.72	8.61	8.72	8.82	9.62	13.45	3.81	9.00
1936-40(b)	9.45	10.36	9.08	9.33	9.21	9.91	11.76	4.50	9.62
1941-45(b)	9.73	10.63	9.24	10.27	9.86	10.21	6.51	4.98	9.96
1946-50(b)(c)	9.70	10.37	9.13	9.76	9.23	9.30	7.71	5.38	9.74

ANNUAL RATES.(c)

1949	..	9.49	10.26	8.79	9.37	8.99	8.84	7.04	4.83	9.52
1950	..	9.70	10.11	8.73	9.50	9.07	8.85	6.71	5.33	9.56
1951	..	9.73	10.30	9.07	9.81	9.11	8.90	7.71	6.26	9.71
1952	..	9.59	9.95	8.89	9.34	8.67	8.64	5.90	5.37	9.45
1953—										
Males	..	10.48	10.11	9.70	9.60	9.39	9.05	9.71	5.38	10.04
Females	..	8.22	8.79	7.33	8.32	6.87	7.57	3.55	3.25	8.12
Persons	..	9.36	9.45	8.55	8.97	8.33	7.47	4.37	9.09	

(a) Number of deaths per 1,000 of mean population. (b) Excludes deaths of defence personnel from September, 1939 to June, 1947. (c) Rates based on revised mean population estimates shown on page 311.

3. **Standardized Death Rates.**—(i) *General.* The death rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death rate of a community will be low if it contains a large proportion of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, "standardized" death rates may be computed. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death rate if the death rates for each sex and in each age group were as recorded, but the age and sex distribution were the same as in the standard population. For the standardized rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their Censuses nearest to the year 1900. Full details of the "Standard Population" are given in Official Year Book No. 22, p. 962.

(ii) *Death Rates in Age Groups.* An examination of the age distribution of deaths and the resultant age-specific mortality rates is made in paragraph 9, p. 379.

(iii) *Comparison of Crude and Standardized Death Rates.* The relative incidence of mortality as between individual States and as between the years 1921, 1933 and 1947 is illustrated in the following statement of crude and "standardized" death rates. These years have been chosen for comparison because the Census data give essential information as to sexes and ages of the State populations. Crude death rates are shown to indicate the degree to which they disguise the true position.

CRUDE AND STANDARDIZED DEATH RATES.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Crude Death Rate(a)—							
1921	9.50	10.52	9.37	10.02	10.42	10.30	9.91
1933	8.58	9.59	8.84	8.44	8.64	9.60	8.92
1947	9.53	10.44	9.15	9.62	9.39	9.17	9.69
Standardized Death Rate(b)—							
1921	10.35	10.79	10.24	10.38	11.88	10.83	10.58
1933	8.52	8.74	9.10	7.66	8.74	8.86	8.62
1947	7.44	7.31	7.47	6.77	7.28	7.21	7.34

(a) Total deaths per 1,000 of mean population.
in para. 3 (i) above.

(b) See explanation of standardized death rates

The comparisons above relate to individual years in which a census of population was taken and should not be used as the basis for general conclusions as to changes in incidence of mortality for other than those years.

(iv) *Standardized Death Rates, Australia, 1949-1953.* The standardized death rates for Australia for 1949 and later years were as follows:—1949, 7.18; 1950, 7.23; 1951, 7.45; 1952, 7.25; and 1953, 6.96.

4. **True Death Rates.**—The main objections to standardized death rates are that the choice of a standard population is arbitrary and that the standardized rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. A correct measurement of the mortality of the population can be obtained, however, from life tables. A life table represents the number of survivors at each age from a selected group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death rate, since, if the complete expectation of life of a person at birth is 50 years, say, then each person will on the average die 50 years after birth, so that in the standard population one person in 50 or 20 per thousand will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined

solely by the mortality experience of the period as manifested in the rate of survivorship from each year of age to the next. The table below sets out complete expectation of life at birth and true death rates for the periods covered by Australian life tables.

COMPLETE EXPECTATION OF LIFE AT BIRTH AND TRUE DEATH RATES : AUSTRALIA.

Period.	Complete Expectation of Life at Birth (Years).		True Death Rate.	
	Males.	Females.	Males.(a)	Females.(b)
1881-1890.. .. .	47.20	50.84	21.19	19.67
1891-1900.. .. .	51.08	54.76	19.58	18.26
1901-1910.. .. .	55.20	58.84	18.12	17.00
1920-1922.. .. .	59.15	63.31	16.91	15.80
1932-1934.. .. .	63.48	67.14	15.75	14.89
1946-1948.. .. .	66.07	70.63	15.14	14.16

(a) Number of deaths per 1,000 males in life table or stationary population. (b) Number of deaths per 1,000 females in life table or stationary population.

5. **Crude Death Rates of Various Countries.**—The following table gives the crude death rates for Australia in comparison with the rates for various other countries.

CRUDE DEATH RATES(a) : VARIOUS COUNTRIES.

Country.	1921- 25.	1926- 30.	1931- 35.	1953.	Country.	1921- 25.	1926- 30.	1931- 35.	1953.
Netherlands ..	10.4	9.9	8.9	7.7	Finland ..	15.1	14.8	13.3	9.6
Norway ..	11.5	11.0	10.4	8.3	Sweden ..	12.1	12.1	11.6	9.7
Canada ..	11.2	11.1	9.7	8.6	Spain ..	20.2	17.9	16.4	9.7
New Zealand(b) ..	8.6	8.6	8.2	8.8	Italy ..	17.4	16.0	14.1	10.0
Union of South Africa(c) ..	9.7	9.7	9.8	8.9	Switzerland ..	12.5	12.1	11.8	10.6
Japan ..	21.8	19.3	17.9	8.9	United Kingdom ..	12.4	12.3	12.2	11.4
Denmark ..	11.3	11.1	10.9	9.0	Ireland, Republic of ..	11.6	14.4	14.0	11.8
Australia(d) ..	9.5	9.3	9.0	9.1	Austria ..	15.8	14.4	13.5	11.9
United States of America ..	11.8	11.8	10.9	9.6	Belgium ..	13.4	13.7	12.9	12.1
					Yugoslavia ..	20.2	20.6	17.9	12.4
					France ..	17.2	16.8	15.7	12.8

(a) Number of deaths per 1,000 of mean population. (b) Excludes Maoris. (c) White population only. (d) Excludes full-blood aboriginals. (e) 1933-35.

6. **True Death Rates of Various Countries.**—The following table gives the true death rates for Australia in comparison with the rates for various other countries :—

TRUE DEATH RATES : VARIOUS COUNTRIES.

Country.	Period.	True Death Rate.		Country.	Period.	True Death Rate.	
		Males. (a)	Females. (b)			Males. (a)	Females. (b)
Netherlands ..	1947-49	14.4	14.0	Germany ..	1949-51	15.5	14.6
Norway ..	1945-48	14.7	13.9	Union of South Africa(e) ..	1945-47	15.7	14.6
Denmark ..	1946-50	14.7	14.3	Switzerland ..	1939-44	16.0	14.9
Sweden ..	1941-45	14.9	14.3	Belgium ..	1946-49	16.1	14.9
England and Wales ..	1951	15.2	14.1	France ..	1946-49	16.2	14.8
Australia(c) ..	1946-48	15.1	14.2	Austria ..	1949-51	16.2	14.9
United States of America—				Ireland, Re- public of ..	1945-47	16.5	16.0
Whites ..	1950	15.0	13.8	Northern Ire- land ..	1936-38	17.3	16.9
Others ..	1950	16.9	15.8	Japan ..	1949-50	17.8	16.8
Canada ..	1947	15.3	14.5	Finland ..	1941-45	18.3	16.4
New Zealand(d) ..	1934-38	15.3	14.6	Italy ..	1930-32	18.6	17.9
Scotland ..	1952	15.3	14.4				

(a) Number of deaths per 1,000 males in life table or stationary population (see explanation on p. 372).
(b) Number of deaths per 1,000 females in life table or stationary population (see explanation on p. 372).
(c) Excludes full-blood aboriginals. (d) Excludes Maoris. (e) White population only.

7. **Australian Life Tables.**—(i) *Life Tables prior to 1947.* It has been the practice at each Census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. In 1911 the mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881–1890, 1891–1900 and 1901–1910. These compilations furnished a comprehensive view of Australian mortality in respect of sex, of time, and of geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, monetary tables based on the experience for the whole of Australia for the decennium 1901–1910 were prepared and published.

At the Census of 1921 Life Tables were prepared by the Commonwealth Statistician from the population recorded and the deaths in the three years 1920–22. Similarly in 1933 the Life Tables, which were prepared by Mr. F. W. Barford, M.A., A.I.A., were based on the Census population and the deaths in the calendar years 1932–34.

(ii) *Life Tables of Census of 1947.* On the occasion of the 1947 Census, Life Tables representing the sixth in the series were compiled by the Commonwealth Actuary, Mr. W. C. Balmford, O.B.E., F.I.A. These were based on the population recorded, in conjunction with the deaths during 1946, 1947 and 1948, as it was considered undesirable to take into account deaths occurring prior to 1946 owing to the possible effects on the civilian population of conditions arising from the 1939–45 War. Full particulars of the data used, the methods of construction and the tabulations of these Life Tables will be found in the report of the Commonwealth Actuary which was published by the Commonwealth Statistician in 1950. This report also appeared in Volume III. of the Census of the Commonwealth of Australia, 1947. Monetary tables for both single and joint lives have also been prepared by the Commonwealth Actuary.

Comparative tables showing the number of survivors (l_x) out of 100,000 births, rates of mortality (q_x) and probability of surviving ten years ($_{10}p_x$), at selected ages, in respect of the Australian Life Tables of 1920–22, 1932–34 and 1946–48, together with a summary of the main characteristics of the tables, were published in Official Year Book No. 39, pp. 602–3. The expectation of life at selected ages taken from these three Life Tables is as follows:—

**AUSTRALIAN LIFE TABLES : COMPLETE EXPECTATION OF LIFE (e_x) AT
SELECTED AGES.**

Age (x).	Males.			Females.		
	1920–22.	1932–34.	1946–48.	1920–22.	1932–34.	1946–48.
0	59.15	63.48	66.07	63.31	67.14	70.63
10	56.01	58.02	59.04	59.20	61.02	63.11
20	46.90	48.81	49.64	50.03	51.67	53.47
30	38.44	39.90	40.40	41.48	42.77	44.08
40	30.05	31.11	31.23	33.14	34.04	34.91
50	22.20	22.83	22.67	24.90	25.58	26.14
60	15.08	15.57	15.36	17.17	17.74	18.11
70	9.26	9.60	9.55	10.41	10.98	11.14

8. **Infant Deaths and Death Rates.**—(i) *Australia, 1926 to 1953.* The universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 496,857 male infants born from 1949 to 1953, 13,469 (27.11 per 1,000) died during the first year of life, while of 472,178 female infants only 10,172 (21.54 per 1,000) died during the first year. Stillbirths are not included in any of the tables relating to deaths.

INFANT DEATHS AND DEATH RATES : AUSTRALIA.

Period.	Number of Deaths under One Year.			Rate of Infant Mortality.(a)		
	Males.	Females.	Total.	Males.	Females.	Total.
ANNUAL AVERAGES.						
1926-30 ..	3,909	2,942	6,851	57.66	45.99	51.99
1931-35 ..	2,649	1,986	4,635	46.00	36.29	41.27
1936-40 ..	2,679	2,016	4,695	43.23	34.16	38.81
1941-45 ..	2,921	2,215	5,136	39.11	31.18	35.24
1946-50 ..	2,808	2,094	4,902	30.09	23.70	26.98
ANNUAL TOTALS.						
1949	2,624	1,903	4,587	28.29	22.18	25.31
1950	2,661	2,004	4,665	27.20	21.60	24.47
1951	2,749	2,129	4,878	27.66	22.67	25.24
1952	2,774	2,024	4,798	26.83	20.60	23.79
1953	2,661	2,052	4,713	25.71	20.78	23.30

(a) Number of deaths of children aged under one year per 1,000 live births registered.

(ii) *States, 1926 to 1953.* For each State and Territory the rates of infant mortality during the period 1926 to 1953 were as follows:—

INFANT MORTALITY RATES(a) : UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
1926-30 ..	54.74	52.34	47.41	46.95	49.27	53.37	66.09	71.31	51.99
1931-35 ..	41.92	42.76	39.46	35.12	40.81	44.47	80.60	34.48	41.27
1936-40 ..	41.18	37.63	36.75	33.08	39.70	41.23	44.80	21.78	38.81
1941-45 ..	36.29	34.73	34.55	33.20	33.37	39.54	55.97	18.75	35.24
1946-50 ..	28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98
ANNUAL RATES.									
1949 ..	27.29	21.89	24.72	27.68	26.42	23.91	37.57	15.87	25.31
1950 ..	27.04	20.09	24.77	24.04	27.13	23.75	36.50	20.96	24.47
1951 ..	26.29	22.61	25.66	24.51	28.73	26.64	44.23	11.96	25.24
1952 ..	24.50	22.29	24.94	23.09	24.91	21.73	31.25	23.59	23.79
1953 ..	24.65	21.15	24.98	20.65	23.82	22.88	39.13	21.57	23.30

(a) Number of deaths of children aged under one year per 1,000 live births registered.

INFANT MORTALITY RATES(a) : UNDER ONE MONTH.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
1926-30 ..	29.63	29.75	27.66	26.84	25.10	33.12	14.37	28.86	28.96
1931-35 ..	27.62	27.78	27.91	22.99	25.11	30.09	35.26	23.45	27.27
1936-40 ..	27.63	25.94	26.15	21.62	22.62	29.56	28.80	16.33	26.19
1941-45 ..	24.52	24.40	24.41	20.86	20.60	27.24	33.57	12.54	23.97
1946-50 ..	20.53	17.55	19.95	18.38	19.53	19.34	21.45	15.80	19.34
ANNUAL RATES.									
1949 ..	19.24	16.28	17.44	18.39	19.24	17.02	26.01	12.21	18.02
1950 ..	18.77	14.71	18.43	17.57	18.41	16.02	19.46	16.77	17.41
1951 ..	18.01	16.04	18.21	16.38	20.08	18.35	14.74	8.97	17.50
1952 ..	16.56	16.39	17.96	15.04	17.97	14.65	17.86	17.24	16.64
1953 ..	17.17	15.70	17.80	13.09	16.45	15.51	23.91	13.96	16.48

(a) Number of deaths of children aged under one month per 1,000 live births registered.

INFANT MORTALITY RATES(a) : ONE MONTH AND UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES.									
1926-30 ..	25.11	22.59	19.75	20.11	24.17	20.25	51.72	42.45	23.03
1931-35 ..	14.30	14.98	11.55	12.13	15.70	14.38	45.34	11.03	14.00
1936-40 ..	13.55	11.69	10.60	11.46	17.08	11.67	16.00	5.45	12.62
1941-45 ..	11.77	10.33	10.14	12.34	12.77	12.30	22.40	6.21	11.27
1946-50 ..	8.38	6.27	7.54	8.12	8.62	7.19	15.92	4.09	7.64
ANNUAL RATES.									
1949 ..	8.05	5.61	7.28	9.29	7.18	6.89	11.56	3.66	7.29
1950 ..	8.27	5.38	6.34	6.47	8.72	7.73	17.04	4.19	7.06
1951 ..	8.28	6.57	7.45	8.13	8.65	8.29	29.49	2.99	7.74
1952 ..	7.94	5.90	6.08	8.05	6.94	7.08	13.39	6.35	7.15
1953 ..	7.48	5.45	7.18	6.66	7.38	7.37	15.22	7.61	6.82

(a) Number of deaths of children aged one month and under one year per 1,000 live births registered.

These tables indicate the striking decrease in infant mortality in Australia, the mortality rate of children aged under one year per 1,000 live births for 1953 being slightly less than one-half of the average rate for 1926-30. The tables above reveal the fact that this improvement was due largely to the decrease in deaths from preventable causes, the mortality rate for children aged one month but under one year declining by 75 per cent. while that for children aged under one month declined by only 43 per cent.

(iii) *Statistical Divisions.* The total numbers of births and of deaths of children under one year of age for 1953 are shown in *Demography Bulletin* No. 71 for each of the sixty-six statistical divisions for which vital statistics have been tabulated.

(iv) *Various Countries and Cities.* Compared with other countries Australia occupies a very favourable position in respect of infant mortality. In 1953 only New Zealand, Sweden and the Netherlands recorded a lower rate than Australia.

A study of the respective rates shows that a high birth rate is often, though not invariably, accompanied by a high infant death rate.

INFANT MORTALITY RATES : VARIOUS COUNTRIES.

Country.	Infant Mortality Rate.(a)						Crude Birth Rate (b) 1953.
	1921-25.	1926-30.	1931-35.	1936-40.	1952.	1953.	
Sweden	60	58	50	42	20	19	15.4
New Zealand (c)	43	37	32	32	22	20	24.1
Netherlands	64	56	45	37	22	22	21.8
Australia (d)	58	52	41	39	24	23	22.9
Denmark	82	82	71	60	29	27	17.9
Norway	52	49	45	(e) 40	24	(f) 18.8	
United States of America ..	74	68	59	51	29	28	24.7
United Kingdom	78	70	65	59	29	28	15.9
Switzerland	65	54	48	45	29	30	17.0
Union of South Africa (g) ..	73	67	63	53	35	34	25.7
Finland	96	88	72	72	31	34	21.9
Canada	98	93	75	64	38	36	27.9
France	95	89	73	70	41	38	18.7
Ireland, Republic of	69	70	68	69	41	39	21.1
Belgium	100	95	82	77	45	43	16.6
Japan	150	137	120	(h) 112	48	48	21.5
Austria	136	117	90	81	52	50	14.5
Spain	143	124	113	121	54	54	20.6
Italy	127	119	105	103	64	59	17.2
Yugoslavia	(i)	151	153	(h) 141	125	117	28.3

(a) Number of deaths under one year per 1,000 live births registered. (b) Number of live births per 1,000 of mean population. (c) Excludes Maoris. (d) Excludes full-blood aboriginals. (e) 1935-39. (f) Not available. (g) White population only. (h) 1935-38.

(v) *Causes of Death: Children under one Year.* Causes of deaths of children under one year of age should be considered in relation to age at death, because the emphasis on various causes changes rapidly as age at death varies. In 1953, 2,754 (96.8 per cent.) of the deaths occurring during the first week of life were caused by congenital malformations (10.5 per cent.) and certain diseases of early infancy (86.3 per cent.). Of the latter, 64.6 per cent. were associated with immaturity (*see table below*). At ages one week and under four weeks the proportions were 25.6 per cent. and 60.0 per cent. respectively. Of deaths of children over four weeks and under one year of age, 23.2 per cent. were caused by congenital malformations and only 5.7 per cent. by diseases of early infancy, the emphasis having shifted to respiratory and digestive diseases (40.9 per cent.), infective and parasitic diseases (8.9 per cent.), diseases of the nervous system (7.3 per cent.) and accidents and violence (8.6 per cent.). A summary for 1953 of the deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

Deaths from each cause in the detailed list of titles adopted for publication, classified according to age at death, will be found in *Demography Bulletin* No. 71. Causes of infant deaths in each State and Territory in 1953 will also be found therein.

CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE, AUSTRALIA, 1953.

Cause of Death.	Age at Death.															Un- der One Year.
	Weeks.				Months.											
	Un- der 1.	1.	2.	3.	1. (w)	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
Tuberculosis .....	..	..	..	..	1	..	..	..	1	1	1	2	..	1	8
Septicæmia and pyæmia ..	..	1	1	..	4	3	2	1	4	2	2	..	1	3	25
Diphtheria .....	..	..	..	..	..	7	1	1	3	1	1	2	2	1	4
Whooping cough .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19
Meningococcal infections ..	..	..	..	1	2	4	4	3	4	7	5	7	4	4	46
Measles .....	..	..	..	..	1	..	..	..	..	1	..	1	..	1	4
Other infective and parasitic diseases	1	..	1	..	2	4	2	1	2	1	5	1	1	2	26	
Neoplasms	1	..	..	..	2	1	1	..	3	1	1	2	1	4	18
Allergic, endocrine system, etc., diseases	5	1	1	..	4	2	3	3	4	4	3	2	1	..	35	
Diseases of the blood	2	2	..	..	1	1	1	..	1	..	1	1	..	..	10
Mental, etc., disorders	4	3	1	1	3	1	2	1	1	..	1	3	..	1	22	
Meningitis	2	4	4	5	2	4	4	3	3	4	4	3	3	3	51	
Encephalitis .....	..	..	..	..	..	..	..	..	..	..	2	2	..	..	6
Erythroderma polynurica ..	..	..	..	..	..	..	..	..	..	..	..	3	1	2	4
Otitis media and mastoiditis ..	..	..	1	..	..	4	..	2	1	3	..	..	..	..	12
Other diseases of the nervous system, etc. ....	..	..	..	..	2	1	1	..	..	1	4	2	..	1	13
Diseases of the circulatory system ..	2	..	..	..	3	2	3	..	2	..	..	1	..	..	15
Pneumonia, age four weeks and over	..	..	..	..	41	40	36	30	26	29	23	28	24	19	315
Bronchitis .....	..	..	1	1	2	3	3	5	1	3	1	3	2	4	30
Other diseases of the respiratory system	3	2	2	1	5	3	4	6	3	5	4	2	5	1	47	
Hernia and intestinal obstruction ..	27	2	4	2	2	4	3	2	4	3	1	1	1	..	56	
Gastro-enteritis and colitis, age four weeks and over .....	..	..	..	..	16	11	15	11	15	10	11	12	8	9	129
Other diseases of the digestive system	2	..	4	1	9	1	1	2	1	2	2	1	1	1	29	
Diseases of the genito-urinary system	..	1	2	1	1	..	..	1	..	2	..	..	1	2	11
Diseases of the skin and cellular tissue	1	..	..	1	1	..	..	..	1	1	..	..	2	..	9
Diseases of the bones and organs of movement	1	..	..	..	..	2	2	..	..	3	..	..	1	..	9
Congenital malformations	299	64	40	31	71	54	45	30	27	30	22	15	15	10	767	
Certain diseases of early infancy(b) — Without mention of immaturity(b) ..	867	80	39	30	16	13	11	6	4	4	..	5	2	4	1,102	
With immaturity(b)	1,588	99	18	9	12	2	1	..	..	..	..	..	..	..	1,730
Symptoms and ill-defined conditions	28	..	..	..	1	3	..	..	..	..	1	1	..	..	34
Accidents, poisoning and violence ..	11	5	2	1	12	11	11	19	10	5	7	7	7	9	127	
All Causes	2,814	273	121	94	215	182	156	127	121	123	101	101	94	80	4,713	

(a) Age 4 weeks and under 2 months.

(b) For further detail of this group of causes *see* next table.

The individual categories representing the causes of death which come within Class XV.—Certain Diseases of Early Infancy are designed to show the effect of immaturity in such causes of infant death. In 1953, 65 per cent. of deaths during the first week of life and 43 per cent. of those in the next three weeks of life were due, directly or indirectly, to immaturity. The relationship between immaturity and each of the individual categories of Class XV. is shown for the year 1953 in the following table:—

DEATHS FROM CERTAIN DISEASES OF EARLY INFANCY : AUSTRALIA, 1953.

Category No.	Cause of Death.	Without Mention of Immaturity.			With Immaturity.			Total.		
		Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.
760	Intracranial and spinal injury at birth ..	181	114	295	58	14	72	239	128	367
761	Other birth injury ..	46	45	91	74	67	141	120	112	232
762	Post-natal asphyxia and atelectasis ..	140	112	252	169	129	298	309	241	550
763	Pneumonia of the newborn ..	88	70	158	31	12	43	119	82	201
764	Diarrhoea of the newborn ..	3	4	7	3	1	4	6	5	11
765	Ophthalmia neonatorum ..	..	..	..	..	..	..	..	..	..
766	Perimphig neonatorum ..	..	1	1	..	..	..	..	1	1
767	Umbilical sepsis ..	1	..	1	3	..	3	4	..	4
768	Other sepsis of newborn ..	3	3	6	1	..	1	4	3	7
769	Neonatal disorders arising from maternal toxæmia ..	20	19	39	48	39	87	68	58	126
770	Hæmolytic disease of newborn (erythroblastosis) ..	78	49	127	18	13	31	96	62	158
771	Hæmorrhagic disease of newborn ..	29	21	50	10	4	14	39	25	64
772	Nutritional maladjustment ..	14	14	28	..	2	2	14	16	30
773	Ill-defined diseases peculiar to early infancy ..	25	22	47	32	24	56	57	46	103
774	Immaturity with mention of any other subsidiary condition ..	..	..	..	20	16	36	20	16	36
775	Immaturity subsidiary to some other cause ..	..	..	..	..	..	..	..	..	..
776	Immaturity unqualified ..	..	..	..	506	436	942	506	436	942
	Total, Class XV. ..	628	474	1,102	973	757	1,730	1,601	1,231	2,832

(vi) *Deaths of Ex-nuptial Children under one Year of Age.* Distinction between nuptial and ex-nuptial children in death statistics for Australia as a whole has been made only since 1925. Results show that death rates during infancy are generally much higher for ex-nuptial children than for nuptial children, but the disparity has become smaller in recent years. The following table shows the number of deaths of children under one year of age and the infant mortality rates for nuptial, ex-nuptial and all children in five-year periods since 1926 and for each year from 1949 to 1953.

DEATHS UNDER ONE YEAR OF AGE : NUPTIAL AND EX-NUPTIAL, AUSTRALIA.

Period.	Nuptial Children.		Ex-Nuptial Children.			All Children.	
	Number of Deaths.	Infant Mortality Rate.(a)	Number of Deaths.	Infant Mortality Rate.(b)		Number of Deaths.	Infant Mortality Rate.(c)
				Actual.	Ratio to Nuptial Rate. (Per Cent.)		
1926-30 ..	31,367	49.96	2,888	93.38	187	34,255	51.99
1931-35 ..	21,460	40.09	1,713	65.37	163	23,173	41.27
1936-40 ..	21,792	37.59	1,680	66.87	178	23,472	38.81
1941-45 ..	24,053	34.20	1,627	52.39	153	25,680	34.97
1946-50 ..	23,139	20.54	1,373	37.37	141	24,512	26.98
1949 ..	4,333	24.92	254	34.45	138	4,587	25.31
1950 ..	4,444	24.25	221	30.17	124	4,665	24.47
1951 ..	4,687	25.23	191	25.28	100	4,878	25.24
1952 ..	4,609	23.78	188	23.97	101	4,797	23.79
1953 ..	4,515	23.25	108	24.65	106	4,713	23.20

(a) Number of deaths under one year of age per 1,000 nuptial live births registered. (b) Number of deaths under one year of age per 1,000 ex-nuptial live births registered. (c) Number of deaths under one year of age per 1,000 total live births registered.

The ex-nuptial rates are higher at all ages under one year but the difference is greatest several months after birth. For the five years 1949-53 the ratio of the ex-nuptial to the nuptial rate at various ages was as follows:—Under one month, 113 per cent.; one month, 129 per cent.; 2 months, 106 per cent.; 3 months, 126 per cent.; 4 months, 114 per cent.; 5 months, 148 per cent.; under one year, 114 per cent.

Full particulars of the causes of deaths of ex-nuptial children who died in 1953, aged under four weeks and under one year, are given for each State and Territory in *Demography Bulletin* No. 71. Detailed information for Australia as to the age at which ex-nuptial children died from each cause of death will also be found therein. It is difficult to assess the real significance of the differences between the numbers of nuptial and ex-nuptial deaths from each individual cause because of the small number of ex-nuptial deaths involved in each case.

9. Age Distribution.—(i) *Number of Deaths.* Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first two years and in completed years of life thereafter. Owing to exigencies of space these ages are usually combined in groups for publication, the most common grouping being in weeks for the first four weeks, in months or groups of months for the first year, in single years of age for the first five years and thereafter in the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for Australia is given in the following table for the year 1953.

AGE AT DEATH : AUSTRALIA, 1953.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week ..	1,608	1,236	2,844	Total 5-9 years ..	339	233	572
1 week and under 2 weeks ..	157	116	273	" 10-14 ..	230	108	338
2 weeks and under 3 weeks ..	70	51	121	" 15-19 ..	446	186	632
3 weeks and under 28 days ..	54	40	94	" 20-24 ..	604	221	825
				" 25-29 ..	607	306	913
				" 30-34 ..	621	370	991
Total under 28 days ..	1,889	1,443	3,332	" 35-39 ..	318	554	1,372
				" 40-44 ..	1,177	726	1,903
28 days and under 3 months	254	143	397	" 45-49 ..	1,684	1,088	2,772
3 months and under 6 ..	221	183	404	" 50-54 ..	2,490	1,526	4,016
6 months and under 12 ..	297	283	580	" 55-59 ..	3,392	2,034	5,426
				" 60-64 ..	4,905	2,929	7,834
				" 65-69 ..	5,672	3,730	9,402
Total under 1 year ..	2,661	2,052	4,713	" 70-74 ..	5,937	4,554	10,491
				" 75-79 ..	5,121	4,984	10,105
1 year ..	268	246	514	" 80-84 ..	4,066	4,598	8,664
2 years ..	172	132	304	" 85-89 ..	2,463	3,113	5,576
3 ..	125	88	213	" 90-94 ..	763	1,239	2,002
4 ..	97	77	174	" 95-99 ..	141	242	383
				" 100 and over ..	8	23	31
				Age not stated ..	15	7	22
Total under 5 years ..	3,323	2,595	5,918	Total, All Ages ..	44,822	35,366	80,188

The number of deaths in 1953 at each year of life is shown in *Demography Bulletin* No. 71.

There are different mortality rates at various stages of life and the actual number of deaths in any period depends upon the impact of these rates on the numbers living at the respective stages. Changes in the number of deaths from one period to another are caused by changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups.

In Australia during the last fifty years there has been a steady improvement in the rate of mortality at all ages, thus tending to reduce the number of deaths. This has been most pronounced at ages under one year. The increased length of life due to this factor, coupled with the long-term decline in the birth rate and the effects of past and present migration, has been a significant cause in changing the age distribution of the population and consequently the age distribution of deaths, thus obscuring the effects of improved mortality rates.

The combined effect of these various influences can be seen from the following table, which shows the proportion of deaths in various age groups in periods of ten years from 1901 to 1950 and for the year 1953.

PROPORTION OF DEATHS IN EACH AGE GROUP : AUSTRALIA.
(Per Cent.)

Period.	Age Group (Years).								Total.
	Under 1.	1-4.	5-19.	20-39.	40-59.	60-64.	65 and over.	Unspecified.	
1901-10 ..	20.51	6.45	6.37	14.99	17.99	5.31	28.26	0.12	100.00
1911-20 ..	16.66	6.09	5.49	14.44	20.32	6.19	30.63	0.13	100.00
1921-30 ..	13.10	4.51	4.85	12.12	20.55	8.26	36.53	0.08	100.00
1931-40 ..	7.40	2.56	3.83	9.36	20.54	8.36	47.92	0.03	100.00
1941-50 ..	6.79	1.71	2.26	6.01	19.04	9.33	54.84	0.02	100.00
1953—Males ..	5.94	1.48	2.26	5.91	19.51	10.94	53.93	0.03	100.00
Females ..	5.80	1.54	1.49	4.10	15.20	8.28	63.57	0.02	100.00
Persons ..	5.88	1.50	1.92	5.11	17.61	9.77	58.18	0.03	100.00

A table showing these proportions for males and females separately for the period 1901 to 1950 will be found in Official Year Book No. 39, p. 614.

(ii) *Age-specific Death Rates.* In previous issues of the Official Year Book average annual age-specific death rates were given for each State and for Australia for the years 1932-34 and 1946-48 (see No. 37, p. 778 and No. 39, pp. 615-6). A table showing the rates in the age groups used for calculating the standardized death rate for each State for the year 1947 appeared in Official Year Book No. 39, p. 599. Estimates of the age distribution of the population in each State are not available to enable a similar comparison to be made for later years.

Estimates of the age distribution of the population of Australia as a whole have been used to calculate the following age-specific death rates for the years 1951, 1952 and 1953.

AGE-SPECIFIC DEATH RATES(a) : AUSTRALIA.

Age Group (Years).	1951.	1952.	1953.	Age Group (Years).	1951.	1952.	1953.
0-4	6.62	6.39	6.18	50-54	8.93	8.91	8.60
5-9	0.69	0.64	0.67	55-59	14.39	13.87	13.28
10-14	0.64	0.55	0.51	60-64	21.75	22.07	21.11
15-19	1.17	1.08	1.10	65-69	34.23	33.98	31.79
20-24	1.57	1.40	1.33	70-74	53.51	51.45	50.66
25-29	1.45	1.42	1.29	75-79	88.88	81.93	83.31
30-34	1.72	1.61	1.44	80-84	136.79	136.23	127.56
35-39	2.36	2.28	2.11	85-89	241.46	232.25	236.98
40-44	3.39	3.34	3.11	90 and over ..	353.50	352.43	343.67
45-49	5.63	5.62	5.20				

(a) Average number of deaths per 1,000 of population in each age group.

10. *Birthplaces of Persons who Died.*—A table showing the birthplaces of persons whose deaths were registered in each year will be found in the *Demography Bulletin*. Tabulations were discontinued for the years 1941 to 1945 inclusive, but were revived for 1946. Details for 1953 appear in *Demography Bulletin* No. 71.

11. **Occupation of Males who Died.**—A table showing occupations of males who died during 1953 appears in *Demography Bulletin* No. 71.

12. **Causes of Death.**—The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899 and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death and further revisions by International Commissions in 1909 (Second), 1920 (Third), 1929 (Fourth) and 1938 (Fifth) were successively adapted for use in Australian statistics.

Proposals for the Fourth and Fifth revisions were drafted by a "Mixed Commission" of representatives of the International Statistical Institute and the Health Organization of the League of Nations and the final revision was carried out by the International Conference for the Revision of the International List of Causes of Death. Preparatory work in connexion with the Sixth Revision was entrusted by the International Health Conference in 1946 to the Interim Commission of the World Health Organization. As a result of this arrangement the World Health Organization compiled the International Statistical Classification of Diseases, Injuries and Causes of Death, which in its final stages was unanimously approved by the International Conference for the Sixth Revision of the International Lists of Diseases and Causes of Death in April, 1948. This classification was adopted by the First World Health Assembly, which also issued Regulations to guide member states in its application. Australia adopted the classification, together with the rules for using it, for use commencing with the year 1950.

For the first time in connexion with the International List, international rules for a uniform method of selecting the main cause to be tabulated, if more than one cause is stated on the death certificate, have been laid down, as well as the new classifications of causes of death. Prior to 1950 the rules adopted in Australia for the selection of the cause of death to be tabulated were those laid down in the United States Manual of Joint Causes of Death, first published in 1914 and revised to conform with successive revisions of the International List.

The adoption of the new method marked a fundamental change in Australian cause of death statistics, with emphasis now placed on the underlying cause of death as indicated by the certifying practitioner. The introduction of this method required the adoption by all States of a form of medical certificate substantially identical with the International Form of Medical Certificate of Cause of Death as laid down in Article 9 of the World Health Organization Regulations No. 1. By 1950 all States had adopted satisfactory forms of certificate and it was possible to apply the new principles uniformly to all State cause of death records.

This change in principle affects the comparability of the statistics for 1950 and subsequent years with those of earlier years. For convenience in assessing the extent of the change and in accordance with a recommendation of the Sixth Decennial Revision Conference, causes of death for Australia for 1950 were also classified according to the detailed classification of the Fifth Revision, 1938, on the joint cause rules current for that revision. A complete detailed classification according to both the Fifth and Sixth Revisions is shown in *Demography Bulletin* No. 68. Commencing with 1951 the classification is according to the Sixth Revision only and detailed figures on this basis for 1953 are shown in *Demography Bulletin* No. 71.

In order to facilitate the limited presentation of cause of death statistics the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used for the cause of death tabulations A to C which follow. Tables A and B show deaths of males and females, respectively, for 1953 and Table C shows the numbers of persons who died and the death rates and proportion per 10,000 deaths for the years 1952 and 1953.

A.—CAUSES OF DEATH : MALES, 1953.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	294	174	118	36	37	13	2	1	675
B 2 Tuberculosis, other forms	010-019	20	18	7	3	2	1	..	..	51
B 3 Syphilis and its sequelæ	020-029	62	48	22	12	4	3	..	2	153
B 4 Typhoid fever	040	3	..	..	..	..	..	..	..	3
B 5 Cholera	043	..	..	..	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	8	3	1	2	..	..	..	..	14
B 7 Scarlet fever and streptococcal sore throat	050, 051	1	1	1	1	..	..	..	..	4
B 8 Diphtheria	055	17	3	7	1	..	1	..	..	29
B 9 Whooping cough	056	3	2	1	2	3	2	..	..	13
B10 Meningococcal infections	057	18	10	7	5	3	8	..	..	51
B11 Plague	058	..	..	..	..	..	..	..	..	..
B12 Acute poliomyelitis	080	35	11	5	13	2	7	1	..	74
B13 Smallpox	084	..	..	..	..	..	..	..	..	..
B14 Measles	085	4	3	1	1	1	2	..	..	12
B15 Typhus and other rickettsial diseases	100-108	1	..	..	..	..	..	..	..	1
B16 Malaria	110-117	1	..	..	..	..	..	..	..	1
B17 All other diseases classified as infective and parasitic	(a)	72	36	41	13	14	9	3	..	188
B18 Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues	140-205	2,381	1,675	827	485	411	177	4	10	5,970
B19 Benign and unspecified neoplasms	210-239	72	41	33	7	11	4	..	..	168
B20 Diabetes mellitus	260	143	129	40	18	18	16	..	..	364
B21 Anemias	290-293	26	30	15	11	7	6	..	3	98
B22 Vascular lesions affecting central nervous system	330-334	1,892	1,272	634	430	246	125	5	8	4,612
B23 Non-meningococcal meningitis	340	19	28	13	5	5	2	1	..	73
B24 Rheumatic fever	400-402	17	12	12	5	1	..	..	..	47
B25 Chronic rheumatic heart disease	410-416	116	103	67	36	27	7	1	1	358
B26 Arteriosclerotic and degenerative heart disease	420-422	5,280	3,573	1,542	1,106	924	424	9	19	12,877
B27 Other diseases of heart	430-434	627	274	223	81	23	26	1	1	1,256
B28 Hypertension with heart disease	440-443	523	254	182	96	84	40	..	..	1,179
B29 Hypertension without mention of heart	444-447	255	169	114	58	47	17	..	1	661
B30 Influenza	480-483	38	25	16	3	14	3	..	..	99
B31 Pneumonia	490-493	588	348	208	133	126	54	1	3	1,463
B32 Bronchitis	500-502	198	201	71	35	34	24	1	2	566
B33 Ulcer of stomach and duodenum	540, 541	216	131	81	36	32	15	1	2	514
B34 Appendicitis	550-553	49	14	20	7	4	2	1	..	97
B35 Intestinal obstruction and hernia	560, 561, 570	109	77	49	39	24	10	3	1	312
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	101	50	47	21	14	5	1	1	240
B37 Cirrhosis of liver	581	99	63	36	29	23	5	3	1	259
B38 Nephritis and nephrosis	590-594	330	218	176	62	46	32	2	1	867
B39 Hyperplasia of prostate	610	178	215	99	57	48	21	..	..	618
B41 Congenital malformations	750-759	233	164	97	54	39	18	..	2	607
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	244	181	108	47	56	27	3	2	668
B43 Infections of the newborn	763-768	45	51	17	10	10	..	..	..	133
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	338	166	135	65	56	33	5	3	801
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	301	191	107	56	19	14	6	3	697
B46 All other diseases	Residual	1,250	1,131	533	319	236	115	9	4	3,606
BE47 Motor vehicle accidents	E810-E835	575	434	214	136	147	49	15	3	1,573
BE48 All other accidents	E800-E802, E840-E962	767	467	339	167	157	80	15	3	1,995
BE49 Suicide and self-inflicted injury	E963, E970-E979	280	157	137	57	47	15	2	3	698
BE50 Homicide and operations of war	E980-E999	33	15	11	9	6	2	1	..	77
All Causes	..	17,871	12,168	6,414	3,771	3,008	1,414	96	80	44,822

(a) 030-039, 041, 042, 044, 049, 051-054, 059-074, 081-083, 086-096, 120-138.

B.—CAUSES OF DEATH : FEMALES, 1953.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A. C. T.	Aust.
B 1 Tuberculosis of respiratory system	001-008	80	67	33	8	6	9	..	I	204
B 2 Tuberculosis, other forms	010-019	16	20	4	2	I	I	..	..	44
B 3 Syphilis and its sequelæ	020-029	19	17	4	3	I	4	..	..	48
B 4 Typhoid fever	040	3	I	..	..	..	..	..	..	4
B 5 Cholera	043	..	..	..	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	..	7	2	I	..	..	..	..	10
B 7 Scarlet fever and streptococcal sore throat	050, 051	3	..	..	2	..	..	..	..	5
B 8 Diphtheria	055	16	..	5	..	I	..	..	..	22
B 9 Whooping cough	056	4	I	3	..	5	..	..	..	13
B10 Meningococcal infections	057	20	18	10	4	3	6	..	..	61
B11 Plague	058	..	..	..	..	..	..	..	..	..
B12 Acute poliomyelitis	080	17	3	7	9	I	4	..	..	41
B13 Smallpox	084	..	..	..	..	..	..	..	..	..
B14 Measles	085	6	7	I	I	..	..	..	..	15
B15 Typhus and other rickettsial diseases	100-108	..	..	..	..	..	..	..	..	..
B16 Malaria	110-117	..	..	..	..	..	..	..	..	..
B17 All other diseases classified as infective and parasitic	(a)	70	31	17	12	5	4	I	..	140
B18 Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	140-205	2,164	1,692	677	501	327	169	..	7	5,537
B19 Benign and unspecified neoplasms	210-239	85	34	37	15	13	6	..	..	190
B20 Diabetes mellitus	260	260	284	89	46	27	23	..	2	740
B21 Anæmia	290-293	75	67	23	17	7	8	..	..	197
B22 Vascular lesions affecting central nervous system	330-334	2,457	1,799	717	568	330	187	I	4	6,063
B23 Non-meningococcal meningitis	340	23	13	5	2	5	3	..	..	51
B24 Rheumatic fever	400-402	22	12	9	3	4	2	..	I	53
B25 Chronic rheumatic heart disease	410-416	151	139	50	33	32	13	..	..	418
B26 Arteriosclerotic and degenerative heart disease	420-422	3,357	2,521	868	816	548	243	I	6	8,360
B27 Other diseases of heart	430-434	364	234	137	75	17	25	I	I	854
B28 Hypertension with heart disease	440-443	443	310	176	87	71	48	I	2	1,138
B29 Hypertension without mention of heart	444-447	251	201	100	40	39	22	..	2	655
B30 Influenza	480-483	19	22	20	7	13	3	..	..	84
B31 Pneumonia	490-493	510	311	118	102	63	55	..	4	1,163
B32 Bronchitis	500-502	77	60	34	14	13	10	..	..	217
B33 Ulcer of stomach and duodenum	540, 541	46	37	25	20	10	6	..	..	144
B34 Appendicitis	550-553	28	7	10	2	3	3	I	..	54
B35 Intestinal obstruction and hernia	560, 561, 570	97	63	47	23	14	2	..	..	246
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	101	53	44	27	10	10	I	I	247
B37 Cirrhosis of liver	581	38	40	11	8	6	..	..	..	112
B38 Nephritis and nephrosis	590-594	251	197	149	50	30	25	..	I	703
B40 Complications of pregnancy, childbirth and the puerperium	640-652, 670-680	48	27	22	12	9	7	..	I	126
B41 Congenital malformations	750-759	166	144	69	36	30	13	..	I	459
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	172	148	85	33	29	11	I	2	481
B43 Infections of the newborn	763-768	33	23	13	12	9	I	..	..	91
B44 Other diseases peculiar to early infancy and immaturity unqualified	769-776	255	136	108	55	68	32	3	2	659
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	320	249	127	90	22	20	4	2	843
B46 All other diseases	Residual	1,061	1,127	448	286	187	122	4	3	3,238
BE47 Motor vehicle accidents	E810-E835	142	99	55	28	40	11	..	..	375
BE48 All other accidents	E800-E802, E840-E962	413	174	187	107	45	25	I	I	953
BE49 Suicide and self-inflicted injury	E963, E970-E979	122	59	42	18	16	4	..	..	261
BE50 Homicide and operations of war	E980-E985, E980-E999	22	10	4	7	4	..	..	..	47
All Causes	..	13,836	10,482	4,592	3,191	2,064	1,137	20	44	35,366

(*) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

C.—CAUSES OF DEATH : PERSONS, AUSTRALIA.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	Number of Deaths.		Rate per 1,000,000 of Mean Population.		Proportion per 10,000 Deaths.	
		1952.	1953.	1952.	1953.	1952.	1953.
B 1 Tuberculosis of respiratory system	001-008	1,165	879	135	100	143	110
B 2 Tuberculosis, other forms	010-019	125	95	14	11	15	12
B 3 Syphilis and its sequelæ	020-029	204	201	24	23	25	25
B 4 Typhoid fever	040	5	7	1	1	1	1
B 5 Cholera	043	..	..	..	..	..	..
B 6 Dysentery, all forms	045-048	42	24	5	3	5	3
B 7 Scarlet fever and streptococcal sore throat	050, 051	8	9	1	1	1	1
B 8 Diphtheria	055	33	51	4	6	4	6
B 9 Whooping cough	056	23	26	3	3	3	3
B 10 Meningococcal infections	057	136	112	16	13	17	14
B 11 Plague	058	..	..	..	..	..	..
B 12 Acute poliomyelitis	060	109	115	13	13	13	14
B 13 Smallpox	084	..	..	..	..	..	..
B 14 Measles	085	32	27	4	3	4	3
B 15 Typhus and other rickettsial diseases	100-108	4	1	1	..	1	..
B 16 Malaria	110-117	10	1	1	..	1	..
B 17 All other diseases classified as infective and parasitic	(a)	289	328	33	37	35	41
B 18 Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	140-205	11,137	11,507	1,289	1,305	1,365	1,435
B 19 Benign and unspecified neoplasms	210-239	357	358	41	41	44	45
B 20 Diabetes mellitus	260	1,085	1,104	126	125	133	138
B 21 Anæmia	290-293	322	295	37	33	39	37
B 22 Vascular lesions affecting central nervous system	330-334	10,798	10,675	1,250	1,211	1,323	1,331
B 23 Non-meningococcal meningitis	340	145	124	17	14	18	15
B 24 Rheumatic fever	400-402	114	100	13	11	14	12
B 25 Chronic rheumatic heart disease	410-416	814	776	94	88	100	97
B 26 Arteriosclerotic and degenerative heart disease	420-422	21,784	21,237	2,522	2,408	2,670	2,648
B 27 Other diseases of heart	430-434	2,019	2,110	234	230	247	263
B 28 Hypertension with heart disease	440-443	2,242	2,317	256	263	271	289
B 29 Hypertension without mention of heart	444-447	1,408	1,316	163	149	173	164
B 30 Influenza	460-483	219	183	25	21	27	23
B 31 Pneumonia	490-493	2,793	2,626	323	298	342	327
B 32 Bronchitis	500-502	823	783	95	89	101	98
B 33 Ulcer of stomach and duodenum	540, 541	591	658	68	75	72	82
B 34 Appendicitis	550-553	174	151	20	17	21	19
B 35 Intestinal obstruction and hernia	560, 561, 570	541	558	63	63	66	70
B 36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	543, 571, 572	478	487	55	55	59	61
B 37 Cirrhosis of liver	581	408	371	47	42	50	46
B 38 Nephritis and nephrosis	590-594	1,611	1,570	187	178	197	196
B 39 Hyperplasia of prostate	610	653	618	76	70	80	77
B 40 Complications of pregnancy, childbirth and the puerperium	640-652	190	126	22	14	23	16
B 41 Congenital malformations	670-689	1,090	1,066	126	121	134	133
B 42 Birth injuries, post-natal asphyxia and atelectasis	760-762	1,162	1,149	135	130	142	143
B 43 Infections of the newborn	763-768	195	224	23	25	24	28
B 44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	1,497	1,460	173	166	184	182
B 45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	1,731	1,540	200	175	212	192
B 46 All other diseases	Residual	7,004	6,844	811	776	858	854
BE 47 Motor vehicle accidents	E810-E835	2,080	1,948	241	221	255	243
BE 48 All other accidents	E800-E802 E840-E962	2,922	2,948	338	334	358	368
BE 49 Suicide and self-inflicted injury	E963, E970-E979	919	959	106	109	113	120
BE 50 Homicide and operations of war	E964, E965, E980-E990	136	124	16	14	17	15
All Causes .. .. .	..	81,597	80,188	9,447	9,094	10,000	10,000

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

13. Deaths from Principal Causes.—(i) *General*. In the preceding tables particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Sixth Revision of the International List. The more important of these causes are treated in detail hereunder. The Abbreviated Classification number used in tables A to C is indicated in parentheses for each cause or group of causes.

(ii) *All Forms of Tuberculosis (B1, B2)*. (a) *General*. The total number of deaths classified to all forms of tuberculosis in 1953 was 974 consisting of 726 males and 248 females, compared with 1,290 (954 males and 336 females) in 1952. In comparing any of the figures for 1950 and subsequent years with those for 1949 and earlier years consideration should be given to the effect of the change in basis from the Fifth to the Sixth Revision of the International List. This was discussed in Official Year Book No. 39, p. 626.

(b) *Age at Death*. The following table shows the age groups of males, females and persons who were classified as dying from this disease in 1953 together with figures for 1931, 1941 and 1951.

TUBERCULOSIS (ALL FORMS) : DEATHS IN AGE GROUPS. AUSTRALIA.

Age Group (Years).	1931.			1941.			1951.			1953.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 5 ..	57	47	104	42	28	70	17	29	46	14	11	25
5-9 ..	14	14	28	12	10	22	3	4	7	1	..	1
10-14 ..	19	20	39	9	16	25	3	2	5	2	3	5
15-19 ..	45	105	150	30	52	82	6	4	10	2	..	2
20-24 ..	113	183	296	69	91	160	15	28	43	7	3	10
25-29 ..	136	199	335	63	132	195	25	36	61	13	13	26
30-34 ..	191	164	355	125	129	254	29	46	75	16	17	33
35-39 ..	187	156	343	144	111	255	44	47	91	41	25	66
40-44 ..	207	102	309	159	79	238	62	49	111	42	25	67
45-49 ..	197	83	280	180	76	256	92	31	123	63	30	93
50-54 ..	185	62	247	216	64	280	146	40	186	75	20	95
55-59 ..	164	57	221	210	52	262	148	25	173	86	17	103
60-64 ..	128	50	178	187	59	246	184	30	214	112	13	125
65-69 ..	110	38	148	137	39	176	130	23	153	92	24	116
70-74 ..	52	31	83	74	41	115	97	29	126	87	11	98
75-79 ..	27	16	43	48	18	66	47	16	63	54	22	76
80 and over ..	4	4	8	20	12	32	32	18	50	18	14	32
Not Stated ..	..	..	..	..	..	..	..	1	1	1	..	1
Total ..	1,836	1,331	3,167	1,725	1,009	2,734	1,080	458	1,538	726	248	974

(c) *Occupation at Death, Males*. A summary of the main groups of occupations of males who died from tuberculosis during 1953 is given in *Demography Bulletin* No. 71.

(d) *Length of Residence in Australia*. The length of residence in Australia of persons who died from tuberculosis in 1953 is given in relation to age at death in *Demography Bulletin* No. 71.

(e) *Death Rates*. The improvement which has taken place in the incidence of tuberculosis in recent years is shown by the fall in the death rate, for Australia, from tubercular diseases. The death rate represents the number of deaths from tuberculosis per 100,000 of mean population. In 1931 the rate was 49 (males, 55; females, 42). In 1941 it was 38 (males, 48; females, 29) and by 1951 had fallen to 18 (males, 25; females, 11). Figures for 1953 show that the rate has declined still further, to 11 per 100,000 of mean population (males, 16; females, 6).

(f) *Proportion of Total Deaths*. A table showing the number of deaths from tuberculosis per 10,000 deaths from all causes in each State and Territory during 1911-20, 1921-30, 1931-40 and 1941-50 was given in Official Year Book No. 39, p. 627.

(g) *Death Rates, Various Countries*. A comparison of the death rates from tuberculosis for Australia with those for various other countries, made on the latest figures available, shows that Australia with a rate of 11 deaths per 100,000 of mean population occupies a favourable position as regards this disease. Whereas the rate for Denmark is only 10, rates range as high as 91 for Japan. For various other countries rates are

as follows:—Netherlands, 10; New Zealand, 12; United States of America, 13; Union of South Africa, 16; Canada, 20; United Kingdom, 24; France, 36; Italy, 42; Finland, 45; and Portugal, 63.

(iii) *Malignant Neoplasms, including Neoplasms of Lymphatic and Haematopoietic Tissues* (B18). (a) *General*. It was shown in Official Year Book No. 39, p. 628 that deaths classified under this heading according to the Sixth Revision of the International List are not directly comparable in total with those on the Fifth Revision basis and comparability ratios were given to enable comparison on an adjusted basis to be made. This change must be kept in mind in considering the comparisons between 1951, 1941 and 1931 which are shown in the following pages.

(b) *Type and Seat of Disease*. Tables showing the type and seat of disease, in conjunction with age and conjugal condition of the persons dying from malignant neoplasms in 1953 will be found in *Demography Bulletin* No. 71. A summary regarding type and seat of disease for 1953 is given below. It may be pointed out that the significance of the number of deaths shown for the various types of neoplasms enumerated hereunder is doubtful, owing to the fact that, in the absence of a post-mortem, it is impracticable for the certifying doctor in the majority of cases to make an accurate diagnosis as to type in the detail required for the following classification.

DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPOIETIC TISSUES: TYPE AND SEAT OF DISEASE, AUSTRALIA, 1953.

Type of Disease.	Males.	Females.	Persons.	Seat of Disease.	Males.	Females.	Persons.
Malignant Neoplasms—				Malignant Neoplasms—			
Cancer and Carcinoma (other than skin) ..	4,929	4,736	9,665	Buccal Cavity and Pharynx ..	189	51	240
Skin Cancer ..	65	35	100	Digestive Organs and Peritoneum—			
Sarcoma and Myeloid Sarcoma ..	118	98	216	Oesophagus ..	186	73	259
Myeloma ..	..	..	..	Stomach ..	1,131	760	1,900
Glioma ..	81	48	129	Small Intestine ..	18	17	35
Endothelioma ..	2	2	4	Large Intestine ..	599	775	1,374
Melanoma and Melanotic Sarcoma ..	76	61	137	Other ..	757	626	1,383
Hypernephroma ..	38	15	53	Respiratory System ..	970	236	1,206
Teratoma ..	19	2	21	Breast ..	7	1,081	1,088
Malignant Disease and Malignant Tumor n.o.s.	176	188	364	Uterus ..	..	593	593
				Other Female Genital Organs ..	..	360	360
Total. Malignant Neoplasms ..	5,504	5,185	10,689	Male Genital Organs ..	732	..	732
				Urinary Organs ..	362	164	526
Neoplasms of Lymphatic and Haematopoietic Tissues—				Skin ..	160	92	252
Lymphosarcoma and Reticulosarcoma ..	97	64	161	Other and Unspecified Organs ..	393	348	741
Hodgkin's Disease ..	82	45	127	Total. Malignant Neoplasms ..	5,504	5,185	10,689
Other forms of Lymphoma (Reticulosis) ..	15	7	22	Neoplasms of Lymphatic and Haematopoietic Tissues ..	466	352	818
Multiple Myeloma (Plasmacytoma) ..	26	23	49				
Leukaemia and Aleukaemia ..	245	213	458				
Mycosis Fungoides ..	1	..	1				
Total. Neoplasms of Lymphatic, etc., Tissues ..	466	352	818				
Grand Total ..	5,970	5,537	11,507	Grand Total ..	5,970	5,537	11,507

(c) *Age at Death*. The ages of persons who died from malignant neoplasms in 1953, together with figures for 1931, 1941 and 1951 are given below. Inferences drawn from the great increase in the number of deaths from malignant neoplasms in 1953 compared with 1931 need qualification in view of the altered age constitution of the population since the earlier year. The number of people over 55 years of age, at which level cancer risks are greatest, nearly doubled between 1931 and 1953, whilst those in the age group

75 years and over more than doubled. It is only in this extreme old age group from 75 onwards that the rate of mortality, as distinct from the number of deaths, has increased. For groups up to age 75 there has been no increase in mortality rates since 1931; indeed, in some age groups the rates have actually declined. It is also probable that a proportion of the increased number of deaths from cancer recorded in recent years has been due to better diagnosis and certification on the part of medical practitioners rather than to any actual increase in the disease itself.

MALIGNANT NEOPLASMS : NUMBER OF DEATHS IN AGE GROUPS, AUSTRALIA.

Age Group (Years).	1931.			1941.			1951.			1953.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 15 ..	25	23	48	21	25	46	91	71	162	113	94	207
15-19 ..	12	11	23	10	10	20	28	14	42	31	16	47
20-24 ..	12	14	26	15	13	28	33	17	50	40	18	58
25-29 ..	19	13	32	24	22	46	42	45	87	54	54	108
30-34 ..	26	55	81	28	45	73	65	74	139	62	74	136
35-39 ..	59	98	157	56	106	162	96	122	218	101	124	225
40-44 ..	111	173	284	92	193	285	114	191	305	155	206	361
45-49 ..	149	261	410	149	282	431	210	274	484	275	308	583
50-54 ..	261	287	548	316	403	719	374	418	792	360	413	773
55-59 ..	349	344	693	425	435	860	541	538	1,079	532	556	1,088
60-64 ..	519	400	919	558	491	1,049	793	642	1,435	836	693	1,529
65-69 ..	662	478	1,140	670	558	1,228	904	663	1,567	947	721	1,668
70-74 ..	609	410	1,019	753	623	1,376	844	741	1,585	919	780	1,729
75-79 ..	397	294	691	676	512	1,188	700	604	1,304	743	692	1,435
80-84 ..	187	152	339	331	330	661	438	417	855	468	472	940
85 and over ..	87	92	179	131	175	306	242	273	515	304	316	620
Not Stated ..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	3,484	3,105	6,589	4,255	4,223	8,478	5,515	5,104	10,619	5,970	5,537	11,507

(d) *Occupation at Death, Males.* A table showing main groups of occupations of males who died from malignant neoplasms and neoplasms of lymphatic and haematopoietic tissues during 1953 appears in *Demography Bulletin* No. 71.

(e) *Death Rates.* The death rates from malignant neoplasms have continued to rise over recent years. The rates are crude death rates representing the number of deaths from malignant neoplasms per 100,000 of mean population and do not take account of changes in the age constitution of the population, and to a substantial extent reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see para. 13 (iii) (c) p. 386). In 1931 the rate for Australia was 101 (males, 105; females, 97). In 1941 it was 119 (males, 119; females, 120) and in 1951 it had risen to 126 (males, 129; females, 122). Figures for 1953 show that a further rise has taken place, the rate being 130 (males, 133; females, 127).

(f) *Proportion of Total Deaths.* A table showing the number of deaths from malignant neoplasms per 10,000 deaths from all causes in each State and Territory during 1911-20, 1921-30, 1931-40 and 1941-50 was given in *Official Year Book* No. 39, p. 631.

(g) *Death Rates, Various Countries.* Death rates from malignant neoplasms for Australia and for various other countries are as follows:—Portugal, 70; Spain, 75; Japan, 78; Union of South Africa, 125; Canada, 127; Australia, 130; United States of America, 139; New Zealand, 149; France, 176; Switzerland, 192; and United Kingdom, 196. The rates are for the latest available year in each case.

(iv) *Diseases of the Heart (B25 to B28).* The number of deaths classified to diseases of the heart in 1953 was 26,440 (15,670 males and 10,770 females). Details for each individual category within the group may be obtained from *Demography Bulletin* No. 71. This class is the largest amongst causes of death, the death rate having increased from 102 per 100,000 of mean population in 1911-15 to 300 in 1953. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past twenty years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners.

The death rates for heart diseases for the years 1931, 1941, 1951 and 1953 were as follows—1931, 159 (males, 178; females, 142); 1941, 269 (males, 306; females, 231); 1951, 314 (males, 367; females, 259); and 1953, 300 (males, 351; females, 247). In 1953 deaths from heart diseases represented 33 per cent. of the total deaths.

(v) *Diarrhoea and Enteritis (Children under two years of age)*. Figures published in Official Year Book No. 39, p. 634, show that deaths in this category declined from a rate of 22.8 per 1,000 children born for the period 1911–15 to 1.5 for the period 1946–50, from which it is evident that this cause of death is no longer the scourge that it was in earlier years.

Owing to changes in classification it is not possible to continue the tables in the same form for 1953.

(vi) *Puerperal Causes (B40)*. It was shown in Official Year Book No. 39, p. 634, that the changes introduced with the Sixth Revision of the International List did not significantly affect the comparability of the total number of deaths from puerperal causes. The death rate from these causes (including criminal abortion) has fallen rapidly during recent years and in 1953 the rate was 0.62 per 1,000 live births as compared with a rate of 6 per 1,000 in 1936. The 126 deaths in 1953 correspond to a death rate of 2.9 per 100,000 females. The death rate may be expressed in other terms by stating that 1 of every 1,605 women giving birth to a live child in 1953 died from puerperal causes; the corresponding ratios for married women were 1 in every 1,618, and for single women 1 in every 1,339. More detailed information will be found in a series of tables in *Demography Bulletin* No. 71.

The death rate per 1,000 live births from puerperal causes in various countries for the latest available years is as follows:—Australia, 0.6; Denmark, 0.6; New Zealand, 0.7; France and United States of America, 0.8; United Kingdom, Union of South Africa and Canada, 0.9; Switzerland and Spain, 1.1; Portugal, 1.6; and Japan, 1.7.

A tabulation of puerperal causes for Australia according to age at death for married and single women separately will be found in *Demography Bulletin* No. 71.

The total number of children left by the 120 married mothers who died from puerperal causes in 1953 was 308, an average of 2.6 children per mother.

Four of the mothers who died had been married less than one year, 12 between one and two years, and 9 between two and three years. The duration of marriage ranged up to 24 years. Tabulations distinguishing the ages at marriage and at death will be found in *Demography Bulletin* No. 71, which also includes a table showing in combination the duration of marriage and previous issue.

(vii) *Congenital Malformations and Diseases of Early Infancy (B41–B44)*. This combined group embraces two complete classes of the International List of Causes of Death which relate more specifically to infant deaths and they have already been presented in detail in the section devoted to causes of infant death (see pp. 377 and 378).

(viii) *Accidents, Poisonings and Violence (BE 47 to BE 50)*. (a) *General*. Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accident, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; and injury resulting from operations of war, including late effects. The number of deaths in 1953 for each of these sub-groups is shown on pp. 382–384. Full details for each individual category in this class will be found in *Demography Bulletin* No. 71.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population and the proportion of deaths caused by violence during the period 1926–53, indicates that the death rate from violence is generally about twice as great for males as for females. It can be seen also that in 1953 the percentage of deaths caused by violence was 7.46, which was higher than in any year since 1939.

The low level of the rates and proportions for the years 1941–45 is attributable mainly to the fact that deaths of defence personnel have been excluded but the rates

have been based on total mean population (including defence personnel). A contributing factor is the decrease during this period in the number of automobile accidents which resulted from the war-time restrictions on travel. From 1st July, 1947, deaths of defence personnel have again been included and the rates and proportions have since risen fairly steadily.

ACCIDENTS, POISONINGS AND VIOLENCE : DEATH RATES.(a)

Period.	Death Rate(a) from—												All Violence. Proportion per 10,000 Deaths.		
	Accident.(b)			Suicide.			Homicide.(c)			Total Violence.					
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
1926-30..	84	24	54	20	4	13	2	2	2	106	30	69	1,039	365	746
1931-35..	71	22	47	19	5	12	2	1	2	92	28	61	929	353	676
1936-40..	86	28	58	17	5	11	2	1	1	105	34	70	979	399	724
1941-45..	67	26	46	11	4	8	1	1	1	79	31	55	730	348	558
1946-50..	76	27	51	14	5	10	1	1	1	91	33	62	844	383	640
1949 ..	75	25	50	15	4	10	1	1	1	91	30	61	863	360	642
1950 ..	80	27	54	14	5	9	1	1	1	95	33	64	893	387	670
1951 ..	86	31	59	14	5	10	2	1	1	102	37	70	918	429	721
1952 ..	83	32	57	16	5	11	2	1	2	101	38	70	907	454	742
1953 ..	79	30	56	16	6	11	2	1	1	97	37	68	909	463	746

(a) Number of deaths per 100,000 of mean population.

(b) Includes "open verdict".

(c) Includes "war wounds".

(b) *Accident* (BE 47, BE 48). In 1953 the total number of deaths from accidental causes was 4,896 (3,568 males and 1,328 females). Slightly less than half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows:—Motor vehicle traffic accidents, 1,873 (38.26 per cent.); motor vehicle non-traffic accidents, 75 (1.53 per cent.); other road vehicle accidents, 148 (3.02 per cent.); railway accidents, 138 (2.82 per cent.); water transport accidents, 71 (1.45 per cent.); aircraft accidents, 18 (0.37 per cent.); a total of 2,323 (47.45 per cent). Other important causes were accidental falls, 1,038 (21.20 per cent.); accidental drowning, 450 (9.19 per cent.); and accidents caused by fire and explosion of combustible material, 157 (3.21 per cent.). Full details of the number of deaths caused by the various types of accidents are given in *Demography Bulletin* No. 71.

(c) *Suicide* (BE 49). (i) *Modes Adopted*. Deaths from suicide in 1953 numbered 959 (males, 698; females, 261). Firearms and explosives were used in 246 cases (25.65 per cent. of total deaths by suicide). Other important modes of death, together with the numbers and relevant percentages, were as follows:—Poisoning other than gases, 207 (21.59 per cent.); hanging or strangulation, 171 (17.83 per cent.); poisoning by gases, 133 (13.87 per cent.); submersion (drowning), 78 (8.13 per cent.); other modes, 124 (12.93 per cent.).

Of the 698 males who committed suicide, 227 (32.54 per cent.) used firearms and explosives. For females the most common means was poison (other than gases). This was used in 88 cases (33.72 per cent.).

(ii) *Death Rates*. The death rates from suicide for Australia in five-year periods since 1926 and for each of the years 1949 to 1953 are shown in the table above. Further details will be found in *Demography Bulletin* No. 71.

(iii) *Age at Death*. From the following table which shows the age of persons who committed suicide in 1953 it will be seen that both young and extremely old people took their lives during this year.

AGE OF PERSONS WHO COMMITTED SUICIDE : AUSTRALIA, 1953.

Age Group (Years).	Males.	Females.	Persons.	Age Group (Years).	Males.	Females.	Persons.
10-14 ..	2	..	2	00-04 ..	84	27	111
15-19 ..	12	6	18	05-09 ..	64	13	77
20-24 ..	41	5	46	70-74 ..	35	11	46
25-29 ..	50	18	68	75-79 ..	22	5	27
30-34 ..	52	19	71	80-84 ..	11	3	14
35-39 ..	62	22	84	85-89 ..	5	1	6
40-44 ..	59	33	92	90-94 ..	1	..	1
45-49 ..	69	28	97	Not stated ..	1	..	1
50-54 ..	71	48	119				
55-59 ..	57	22	79	Total Deaths	698	261	959

(iv) *Occupation at Death, Males.* A table showing main groups of occupations of males who committed suicide during 1953 appears in *Demography Bulletin* No. 71.

(d) *Homicide and Operations of War (BE 50).* In 1953 there were 115 deaths from homicide and injury purposely inflicted by other persons (not in war), of which non-accidental poisoning caused 1 death: assault by firearms and explosives, 33; assault by cutting and piercing instruments, 20; assault by other means, 59; injury by intervention of police, 1; and execution, 1. Deaths from injury resulting from the operations of war numbered 9, but all were deaths from late effects of such injuries.

14. *Age at Death of Deceased Married Males and Females, and Issue.*—*Demography Bulletin* No. 71 contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married (including widowed or divorced) persons who died in Australia in 1953. Deaths of married males in 1953 numbered 32,790, and of married females, 27,440. The tabulations which follow deal, however, with only 32,342 males and 27,225 females, the information regarding issue in the remaining 663 cases being incomplete. The total number of children in the families of the 32,342 males was 106,125 and of the 27,225 females, 96,742. The average number of children is shown for various age groups in the following table.

AGE AT DEATH AND AVERAGE ISSUE OF DECEASED MARRIED (a) MALES AND FEMALES : AUSTRALIA.

Age Group (Years).	Average Issue.									
	Males.					Females.				
	1921.	1931.	1941.	1951.	1953.	1921.	1931.	1941.	1951.	1953.
Under 20 ..	..	0.75	..	0.43	0.50	0.77	0.60	0.74	0.83	0.54
20-24 ..	0.84	0.81	0.73	0.96	0.72	1.22	1.13	0.95	0.86	0.98
25-29 ..	1.20	1.33	1.12	1.29	1.40	1.86	1.81	1.45	1.61	1.58
30-34 ..	2.06	1.79	1.76	1.79	1.83	2.45	2.34	1.91	1.98	1.87
35-39 ..	2.58	2.13	2.11	2.12	2.06	3.29	2.89	2.30	2.49	2.26
40-44 ..	3.23	2.77	2.49	2.30	2.34	3.66	3.29	2.77	2.39	2.37
45-49 ..	3.48	3.10	2.68	2.51	2.38	3.76	3.55	2.93	2.54	2.50
50-54 ..	3.76	3.46	2.96	2.56	2.49	4.23	3.60	3.29	2.76	2.62
55-59 ..	4.41	3.69	3.28	2.71	2.70	4.69	4.01	3.55	3.03	2.86
60-64 ..	4.98	4.02	3.55	3.07	2.92	5.39	4.21	3.79	3.29	3.15
65-69 ..	5.50	4.41	3.73	3.25	3.17	5.86	4.82	4.01	3.63	3.45
70-74 ..	6.06	5.06	4.17	3.58	3.48	6.30	5.41	4.29	3.64	3.60
75-79 ..	6.66	5.65	4.56	3.83	3.72	6.56	6.02	4.85	3.96	3.85
80-84 ..	6.89	6.17	4.93	4.30	4.10	6.76	6.26	5.39	4.19	4.02
85-89 ..	7.18	6.59	5.70	4.63	4.49	6.93	6.57	5.85	4.68	4.37
90-94 ..	7.21	6.94	6.57	5.06	4.88	6.53	6.73	6.11	5.08	5.03
95-99 ..	6.97	6.69	7.04	5.78	5.27	6.05	7.10	6.34	5.76	5.34
100 and over ..	9.20	7.00	8.69	5.71	5.86	5.11	8.20	6.73	7.72	5.95
Age not stated ..	5.36	5.00	..	8.00	..	5.80	5.00	..	5.55	..
All Ages ..	1.07	1.41	1.07	2.20	2.58	1.72	1.72	1.41	1.41	1.55

(a) Includes widowed or divorced.

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about five to one. The totals for 1953 are shown in the following table :—

ISSUE OF DECEASED MARRIED(a) MALES AND FEMALES : AUSTRALIA. 1953.

Issue of Married Males.				Issue of Married Females.			
Issue.	Males.	Females.	Total.	Issue.	Males.	Females.	Total.
Living ..	46,633	45,989	92,622	Living ..	39,596	40,210	79,806
Dead ..	8,010	5,493	13,503	Dead ..	9,952	6,984	16,936
Total ..	54,643	51,482	106,125	Total ..	49,548	47,194	96,742

(a) Includes widowed or divorced.

15. Age at Marriage of Deceased Males and Females, and Issue.—While the table giving the average issue of married males and females naturally shows an increase in the averages with advancing age at death, the following table which gives the average issue of males and females according to the age at marriage of the deceased parent shows a corresponding decrease in the averages as the age at marriage advances.

AGE AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE : AUSTRALIA.

Age Group (Years).	Average Issue.									
	Males.					Females.				
	1921.	1931.	1941.	1951.	1953.	1921.	1931.	1941.	1951.	1953.
Under 15 ..	..	..	..	..	..	7.60	6.36	7.80	4.88	7.09
15-19 ..	6.32	6.15	5.40	4.63	4.58	6.97	6.79	6.10	5.41	5.30
20-24 ..	6.05	5.56	4.89	4.23	4.10	5.50	5.23	4.80	4.28	4.11
25-29 ..	5.17	4.70	4.21	3.65	3.50	4.09	3.70	3.51	3.14	3.13
30-34 ..	4.45	3.96	3.41	3.00	2.95	2.66	2.42	2.35	2.23	2.11
35-39 ..	3.90	3.14	2.80	2.45	2.37	1.61	1.40	1.26	1.16	1.14
40-44 ..	2.67	2.36	2.01	1.69	1.73	0.62	0.39	0.35	0.36	0.39
45-49 ..	2.20	1.96	1.52	1.33	1.15	0.03	0.12	0.01	0.07	0.18
50-54 ..	1.70	1.60	1.05	0.80	0.81	..	..	..	..	..
55-59 ..	1.30	0.95	0.79	0.49	0.48	..	..	..	..	..
60-64 ..	0.33	0.63	0.29	0.24	0.38	..	..	..	..	..
65 and over ..	0.25	0.18	0.01	0.29	0.22	..	..	..	..	..
Age not stated	4.93	3.64	2.95	2.81	2.70	5.41	3.96	2.45	3.17	2.86
All Ages ..	4.97	4.44	3.91	3.39	3.28	5.05	4.72	4.22	3.68	3.55

16. Occupation of Deceased Married Males, and Issue.—A summary of the main groups of occupations of married (including widowed and divorced) males who died during 1953, together with issue, appears in *Demography Bulletin* No. 71.

§ 4. Vital Statistics of External Territories.

Because of the outbreak of hostilities in the Pacific during the 1939-45 War, civil administration in the external territories was suspended on 11th February, 1942, and registration of births, deaths and marriages was not resumed until 1946. The following table for the year 1953 shows the number of births, deaths and marriages registered in the external territories under the control of Australia, namely:—Norfolk Island; Papua; Trust Territory of New Guinea; and Trust Territory of Nauru. More detailed information will be found in a series of tables in *Demography Bulletin* No. 71.

VITAL STATISTICS : EXTERNAL TERRITORIES, 1953.

(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Marriages.	Births.			Deaths.		
		Males.	Females.	Persons.	Males.	Females.	Persons.
Norfolk Island ..	5	6	6	12	7	7	14
Papua	63	48	61	109	19	5	24
Trust Territory of New Guinea	64	165	171	336	34	4	38
Trust Territory of Nauru	2	3	6	9	1	..	1

CHAPTER XI.

EDUCATION.

§ 1. Evolution of Educational Systems in Australia.

An account of the development of the Australian school system up to 1929 is to be found in Year Books Nos. 1, 2, 17 and 22. Although the general pattern has not altered in any fundamental way, marked changes have taken place in the educational programme since 1929 and in Year Book No. 40 a reasonably complete review of the changes and current practices was presented from material furnished in the main by the Commonwealth Office of Education.

§ 2. Government Schools.

1. *Administration.*—Education is the responsibility of the State Governments. The Commonwealth is, however, empowered to provide financial assistance to students and meets the full cost of education in Commonwealth territories, although this is largely provided by State education authorities.

Although there is a tendency towards regional administration, State educational administration is centralized. The permanent head of the Department of Education or Public Instruction in each State is responsible to the Minister for Education (or Public Instruction). Contact with the schools is maintained principally through Inspectors, called Superintendents in Western Australia and Tasmania. Departments are usually divided into primary, secondary and technical divisions. Some technical colleges are, however, in a large measure autonomous. Universities are independent foundations although much of their income is derived from State and Commonwealth grants.

Examination Boards, representative of the Universities, the Education Departments and non-government schools, control public examinations and syllabuses, and curriculum committees prepare primary and secondary curricula. State Ministers for Education meet periodically as the Australian Education Council, to discuss matters of common interest, and Directors of Education meet annually as a Standing Committee of this Council.

2. *The School System.*—(i) *Compulsion.* In all States, there is legislation for compulsory school attendance. The original Victorian Education Act was passed in 1872, followed by similar Acts in Queensland (1875), South Australia (1878), New South Wales (1880), and Tasmania and Western Australia (1893).

In 1952 the ages between which children were legally required to attend school were as follows:—New South Wales, 6 to 15 years; Victoria, 6 to 14 years; Queensland, 6 to 14 years; South Australia, 6 to 14 years (children may not leave school until the end of the term during which they reached the age of 14 years); Western Australia, 6 to 14 years; and Tasmania, 6 to 16 years.

In Victoria, South Australia and Western Australia amendments to the Acts have provided for the raising of the school leaving age to 15 years, but to date, this legislation has not been implemented.

Schooling may be given in government schools (including correspondence and special schools) or non-government schools and in a small minority of cases by private tuition.

The employment of children of school age is prohibited by law.

(ii) *Beyond Compulsion.* Since 1929 especially, the development of large-scale industry and scientific farming has demanded a diversity of skills, and a general raising of the educational level of the population. The raising of the school leaving age in two

States and the tendency everywhere for children to stay longer at school have been expressions of public realization of this. In 1951 less than half of all children left school when they reached the age limit for compulsory attendance. Indeed almost half now proceed to some form of further education beyond secondary school, either as full-time students, as part-time apprentices or trainees released during the day by their employers, or as part-time evening students.

In the early years of government provision of education, the main emphasis was on the primary school, which catered for children under compulsion and offered a course largely confined to the tool subjects, reading, writing and arithmetic. However, a process of extension and differentiation both at the bottom—infants' schools and kindergartens—and at the top—secondary schools—was well under way long before 1929.

3. *The Educational Ladder.*—(i) *Infants' Schools.* It is now customary, although not compulsory, for children to begin school when they are five years old. In larger primary schools they enter the infants' school, and in smaller schools "infants' classes", which occupy two or three years, the first year in some States being called "Kindergarten" or "Preparatory". The emphasis in the infants' classes is very much on general development on play activities and on the informal aspects of the educational processes. In some cases the first two grades of primary education, together with any "Preparatory" or "Kindergarten" classes, are to be found in separate infants' schools or departments. But whether in a separate establishment or as a part of a primary school, there is a gradual move towards formal instruction. At the end of the period most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and can write in pencil. In addition, they have acquired skills with art materials and the like. A good deal of the instruction is carried on through activity methods, involving, for example, dramatic work, puppetry, and school "shops". Children then pass at about the age of 8 or 9 to the more formal primary school, in which they normally spend four or five years.

(ii) *Primary Schools.* The main emphasis in the primary school as distinct from the infants' school still lies, as it always did, on the tool subjects (reading, writing and arithmetic) and, in more recent years, oral language. Since 1929, however, the methods of teaching have undergone considerable changes. Changes in the purpose and outlook of educationists, and the raising of the professional standards of teachers, have made for greater freedom for pupils and teachers, some departure from the methods of mass instruction, and the closer linking of the curriculum with the child's social environment.

In general, it is true to say that in 1951 there was less emphasis on results, and that basic skills are taught at a somewhat later stage. At the same time, the curriculum has been broadened. More individual instruction has led to a reduction of minimum standards of achievement for the less able and a stress on curriculum enrichment for the bright. Retardation, i.e., the repeating of grades, has been considerably reduced, the aim being for each child to remain with his age group. In all States "opportunity classes" exist for backward children, and in one State "opportunity classes" are provided for the especially bright.

(iii) *Secondary Schools.* At the age of 12 or 13 (in Queensland, 14) children transfer to a secondary school course. In the cities and larger country centres this is provided in a separate school, but in less densely populated areas secondary classes share the same buildings as primary classes. In rural areas secondary pupils may share teachers or classrooms with primary pupils, and even in one-teacher schools a few secondary students may carry out correspondence assignments under the supervision of the primary teacher-in-charge.

Secondary curricula have developed from the matriculation requirements of the universities. English grammar and literature, mathematics, including algebra, geometry and trigonometry were the core. Languages, chiefly Latin and French, or science, chiefly physics and chemistry, and history had an important place. Geography and drawing were often taken in the first two or three years.

The academic course for matriculation has undergone some change since 1929. Greater emphasis has been placed on oral language and written expression in the English course; Latin has waned in popularity and modern languages other than French and German are being taught in a few schools. A general science course has been introduced in some States, and social studies, a synthesis of history, geography and civics, is a subject to third-year level. More emphasis has been placed on art, music and physical education. Since 1929 the provision of a secondary education for all has gained ground rapidly, although the entrance requirements of tertiary institutions are still provided for.

Consequently, alongside the academic course, other courses have grown up. In country areas they may be offered in the same school or the academic course may even be largely abandoned. In the city, it is usual to offer non-academic courses in separate schools. The academic schools and multi-lateral country schools are usually known as High Schools, while the other types are generally distinguished by such names as Junior Technical Schools and Home Science Schools.

Particular mention should be made of the recent development of the all-age consolidated school sometimes with an agricultural bias, found under various names in different States. Tasmania and South Australia adapted the idea of the English village area schools to Australian conditions and established "Area Schools", some of which have farms attached.

The courses followed in the non-academic schools are in general broader than in the academic schools. There is less concentration on establishing an academic discipline and method peculiar to each subject, but more attention to correlation between fields of knowledge, sometimes expressed by projects involving them all. Less time is generally devoted to mathematics and the formal sciences, more time to practical work and to art and musical appreciation. In English, oral language is emphasized rather more and grammar much less than in the academic schools.

(iv) *State Details.* Very brief particulars of the position in each of the States were given on pp. 432-3 of Year Book No. 40.

4. *Examinations and Accrediting.*—(i) *Examinations.* Before 1929 most States had three examinations for school children. The first came at the end of primary school and was variously known as the "Qualifying Certificate" or "Scholarship". These examinations were regarded as a qualification for secondary education. The third came at the end of the secondary course, at the age of sixteen to seventeen, and was known as the "Leaving" or "Senior Public" Examination, which qualified students for university matriculation. Between these came the "Intermediate Certificate" or "Junior Public Certificate", usually one or two years before the end of the full course of secondary schooling. A pass in this examination was a useful entrance qualification for clerical occupations, nursing, some Public Service positions, and other callings requiring academic training.

The entrance examination for secondary schools was administered by the Education Departments, although students from private schools also sat for it. The two higher examinations were generally under the control of a board, on which universities, Education Departments and non-government schools were represented.

By 1950 the external examination for secondary school entrance had been abolished in every State except Queensland, where the age of transition is fourteen and the "Scholarship" Examination must be passed to entitle the student to free secondary education and, if necessary, boarding allowances. The external Intermediate Examination had declined in importance, some States substituting internal examinations in some, or all, schools, other States providing a variety of internal certificates from different types of schools. The Leaving Certificate in most States had not been supplanted, but had been modified to provide a greater variety of subjects and, as for example in mathematics, the opportunity of choosing several specialized courses or a broad course.

The length of the secondary course has been increased in two States from two to three years for the Intermediate Certificate and from a further one to a further two for the Leaving. South Australia has a further year beyond the Leaving Certificate for a separate

examination known as "Leaving Honours". Only the "Leaving Certificate" is necessary for matriculation, but good results—credits as distinct from passes—in the Leaving Honours Examination may carry exemption from some subjects of the first year university course. In Victoria a similar system had operated, but the optional Leaving Honours year has been replaced by adding a further year after the Leaving Examination for a course leading to a special matriculation examination. Separate matriculation examinations also exist in New South Wales, Western Australia and Tasmania, but successful Leaving candidates are not required to sit.

(ii) *Accrediting.* The system of granting certificates, or credit for subjects passed, without external examination is a major development and now operates in four States. Credit is assessed mainly on the student's record of work for the year, although some internal examinations are generally given. Syllabuses can be less rigidly controlled and can be more freely adapted to local conditions, although standards are maintained by the supervision of the central authority.

(iii) *State Details.* The details of accrediting in each State were given on pp. 433-4 of Year Book No. 40.

5. *Health Services to Schools.*—During the period under review, health services to schools have extended far beyond the routine medical and dental inspections which operated in 1929. Information relating to school medical and dental services is given in Chapter XIII.—Public Health and Related Institutions.

6. *Guidance.*—Each of the Australian States has now a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of school record cards. In general, the functions of these services are:—selection and differentiation for secondary education, diagnosis and guidance of atypical children, preliminary vocational guidance, and in some States, research. The weight given to each of these functions varies considerably from State to State, but since the early 1930's there has been a steady and continuous progress towards thorough educational guidance services for all children.

The Vocational Guidance Division of the Commonwealth Employment Service co-operates with State Education Departments by giving post-school vocational guidance, using the data obtained and made available by the Education Departments during the school career of the children.

7. *Research.*—(i) *State Education Departments.* Since 1929 all State Education Departments have set up research branches which function as integral parts of head offices. In several States the officer who directs research is also responsible for the guidance service offered by his Department. The research undertaken is directed toward departmental activities and the findings of research are examined carefully in the determination of policy and procedures; in addition, many problems of immediate importance are handled. In the majority of States, too, the Research Branch supervises the collation of statistics; it also plays an important part in curriculum revision and modification of examinations.

(ii) *Australian Council for Educational Research.* Research in education is also carried out by a non-governmental body called the Australian Council for Educational Research. It is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and enquiries, makes grants to approved educational investigators, serves as a centre to disseminate educational information, provides training for research workers, and standardizes and distributes educational and psychological tests for use in Australia. Although this Council is an autonomous body, the Commonwealth and State Governments contribute some financial support to it.

8. *Atypical Children.*—Since 1929 there has been a marked increase both in the range of special provision and in the number of schools or classes for pupils who, for one reason or another, cannot progress to their best advantage in an ordinary school. Among groups given special attention are the mentally backward, the gifted, the physically

handicapped, the blind, deaf and dumb, the epileptic, the cerebral palsied, the partially sighted, the hard of hearing and the delinquent. The provision of special schools and classes has involved the appointment of departmental specialists, special training courses and close liaison with school health services. In some States, special clinics attached to hospitals or functioning as an independent child welfare service handle cases of personality maladjustment; they work in co-operation with the psychological services of the Education Departments.

9. *Education of Migrant Children.*—From 1945 to 1951, the net increase through migration in children at Australian schools was about 75,000, or 6 per cent. of the total school age population, more than half being alien and non-English speaking on arrival. During this period the impact of the increased birth-rate of the Australian population in the mid 1940's also contributed to the heavy burden placed on State education resources.

It was generally considered desirable for migrant children to attend schools with Australian children, although some purely migrant schools were built, with Commonwealth assistance, in hostels, etc., and in some States, schools or classes exclusively for alien migrant children assisted the children until they could take their place in their age group classes in the normal schools. As was to be expected, alien children found little difficulty in learning the English language, which is the language of instruction in all schools in Australia. Non-government schools absorbed a significant proportion of migrant children.

The major problems were those of staffing and accommodation. The Commonwealth assisted by providing school buildings in migrant centres and in some residential hostels. Some States relieved the staffing position by employing suitably qualified English-speaking migrants as teachers in schools exclusively used by migrant children, although the policy of teaching migrant children in schools with Australian children was adhered to wherever possible. Where it was not possible, particularly in large migrant centres, parents were encouraged to move into Australian communities. In almost all cases children of secondary school age were accommodated in existing Australian secondary schools.

10. *Education of Native Children in Australia.*—The Commonwealth Government is responsible for the education of full-blood native children in the Northern Territory. Each State has responsibility for the welfare and education of native children within its boundaries.

Native children are admitted to Government schools in all States except in areas where separate facilities are provided for the natives. In those States where natives are more numerous special schools are located at or near aboriginal reserves, settlements and stations. The schools are for the most part staffed by teachers from the Education Departments, and the curriculum is similar to that in ordinary Government schools with a bias towards handicrafts. Numbers of native children also attend the mission schools conducted in several States by the various denominations. The standard of education in these schools generally is similar to that in the Government schools.

11. *Provision for Rural Areas.*—(i) *General.* The population of Australia is so scattered that there is a problem in providing primary, and more especially secondary, education for all eligible pupils. One method of meeting this problem was the establishment of a wide network of one-teacher primary schools, staffed in the main with trained teachers. The practice of sending itinerant teachers to outlying areas is still in force in the far north of Western Australia, and mobile railway cars are used for technical and agricultural education in New South Wales and domestic science in Queensland. However, in general, it has been the practice to bring the child to the educational facilities rather than vice versa.

(ii) *Subsidized Schools.* Where there is a group of children too few in number to warrant the establishment of a one-teacher school, a "subsidized school" may be opened. The Education Department pays part of the cost, and in some States appoints a teacher. Some States also administer "provisional schools", which are completely financed by the Government, but which are not large enough, or sufficiently assured of adequate continued attendance of pupils, to warrant classification as permanent schools.

(iii) *Consolidation.* As early as 1904, the policy of transporting pupils to larger and more central schools began to come into operation. Trains, bicycles and horses were first employed, but the use of buses has led to a very great development of school transport systems, particularly since 1935. This policy, known as "consolidation", has been responsible for a substantial reduction in the number of small schools, and is one of the most striking developments of the past twenty years. The consolidated school is usually not merely a larger primary or secondary school; it generally provides a curriculum specially adapted to the needs of the rural area it serves. Organized transport for children attending country primary and secondary schools consists of more than 2,300 services at a total cost of £2½ million.

(iv) *Special Assistance.* Another way of bringing children and schools together has been the provision of financial assistance for children who have to live away from home in order to attend school. Most of these board in private homes but there are six government hostels and 56 private ones (excluding private boarding schools) which cater for more than 1,500 children of secondary school age and a small number of primary school children also. Special scholarships for country children, giving allowances for living away from home, and substantial fare concessions for vacation travel are provided by all States.

(v) *Correspondence.* For those who were still unable to attend school, correspondence tuition had been established in every State by 1929. These schools have grown in size and extended in scope since then, and Technical Correspondence Schools, which grew out of the Commonwealth scheme of technical training, were established in each State by 1942, and have grown under State administration since. An interesting development in 1947 was the appointment of a Liaison Officer for Correspondence School pupils in Tasmania. The activities have been made more effective by his personal contact with pupils and parents and his practical aid in supervision.

12. *School Broadcasting in Australia.*—Over the years an extensive school broadcasting system has been developed in Australia by the co-operative efforts of the Australian Broadcasting Commission and education authorities. The School and Youth Education Department of the A.B.C. is responsible for the broadcasting of the programmes, but it draws freely on the advice and services of teachers and maintains permanent liaison officers with the Education Department. More than two-thirds of Australian schools are equipped with radio receivers.

School broadcasts are presented as part of the regular A.B.C. programmes without separate stations or wave lengths. Special efforts are made, however, to relate the broadcasts to the actual work in the schools by the extensive distribution of booklets giving details of programmes in advance and subject notes accompanied by picture sheets, work books, and teacher's notes.

Broadcasting has proved to be a most effective way of reaching the outback children of Australia. The "Kindergarten of the Air", begun in 1942 as a service to children unable to attend kindergarten, has proved popular in both town and country. Children are encouraged to take part in the programme in response to suggestions made by the broadcaster. Radio lessons have been designed to supplement those being done by means of correspondence.

13. *Teacher Training and Recruitment.*—(i) *General.* The training of Government school teachers is carried out by the State Education Departments, but in most States persons who wish to train for teaching in private schools may attend government training colleges on payment of a fee. Many non-government school teachers have been drawn from the government teaching services; others have been recruited at the university graduate level. Private training institutions also provide some teachers.

An account of the early growth of teacher training systems is to be found in Year Book No. 22 and subsequent developments were reviewed extensively in Year Book No. 40. By 1929, the pupil-teacher system was universal except in one State. The student spent one or two years, or even longer, teaching in school under supervision, studying and receiving instruction from the headmaster in the art of teaching. In some

States, at the end of that period he passed into a teachers' college. After emerging as a trained teacher, he often continued his studies to obtain a series of graded certificates which were necessary for promotion. The pupil-teacher system has, however, been abandoned as the chief method of training teachers and teacher students are now recruited at matriculation level and given a professional course of training at colleges controlled by Education Departments or by University Departments of Education. The raising of entrance standards and prolongation of training has led to a close association between the Education Departments and Universities. The trend has been towards placing teacher training on the same basis as other professional training.

Stemming from the diversion of thousands of teachers into the armed services during the war of 1939-45 there is at present a shortage of teachers in Australia. Measures taken to overcome this shortage include publicity drives to attract recruits, increased allowances to student teachers amounting to some States to more than £200 per annum, substantial increases in teachers' salaries and liberalization of promotion systems.

Despite increased training facilities and higher teachers' college enrolments in the post-war period, the supply of teachers throughout Australia has done little more than replace wastage, and has not kept pace with the rising enrolments. Difficulty is being experienced in staffing small schools in remote areas, while the shortage of secondary scientific and mathematics teachers is reported to be acute in some States.

(ii) *Training Colleges.* Every State maintains at least one teachers' training college. Most students are trained at colleges in the capital cities, although there has been a movement towards the establishment of colleges in the country. In 1951 there were in Australia fifteen Teachers' Colleges conducted by Departments of Education and professional training for teachers was provided by five universities.

The entrance standard is generally at the Leaving Certificate level at about the age of seventeen. In some States intending teachers can obtain a scholarship at the Intermediate Certificate level to enable them to complete teachers' college entrance requirements. In return they are required to enter a bond of service additional to that normally required of teachers' college trainees.

(iii) *Training of Primary Teachers.* In most States, teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments. Colleges are conducted on a co-educational basis, and departmental trainees are given a monetary allowance while in training and are required to enter into a bond to serve for a specified period or to repay all or portion of the cost of training.

In general, the duration of courses is two years for primary teachers, including infants' teachers. There is a variety of subject detail in training courses in the different States. The basic subjects taken in the various courses are principles, history and general methods of teaching, special methods of teaching primary school subjects and educational psychology. In addition, students undertake courses in physical education, art, music, school hygiene and handicrafts as well as lectures designed to widen their own cultural background. In Tasmania teacher training is provided by the University and in South Australia student teachers attend lectures in normal degree courses at the University to complete the academic part of their training.

(iv) *Training of Secondary Teachers.* Prospective secondary teachers are generally required to undertake a degree course, and then are required to undertake a course of professional training of one year's duration. This normally qualifies trainees for a Diploma in Education. The year's professional training in education includes lectures and seminars on subjects associated with educational theory and practice, study of methods and techniques appropriate to secondary school subjects, periods of practice teaching and the observation of classroom techniques in the teaching of special subjects.

(v) *Training of Specialist Teachers.* Teachers of specialist subjects such as music, art, manual arts, physical education and domestic science receive from two to five years' training. Physical education courses are generally conducted at teachers' colleges

or at a university; use is made of technical colleges and conservatoria of music for other specialist training. Teacher trainees attending the institutions, however, are regarded as being in attendance at a teachers' training college and are normally required to spend a portion of each week at the teachers' college.

(vi) *Training of Technical Teachers.* Teachers of general subjects in technical schools and colleges generally receive their training either as primary or as secondary teachers and after some experience in either or both fields are transferred to a technical institution.

Teachers of specialist subjects in technical schools are in the main recruited from the ranks of qualified tradesmen engaged in either industry or commerce. Upon appointment teachers of technical subjects usually receive instruction in classroom teaching techniques and procedures. A Technical Teachers' Training Centre has been established in Victoria.

(vii) *In-service Training.* As almost all teachers now enter the profession by way of Teachers' Training Colleges, where they receive basic professional training, in-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training. Education Departments have always encouraged practising teachers to pursue university courses, which are free to approved applicants in some States, and facilities have been made available for teachers to obtain the academic qualifications for higher certificates where such exist.

Efforts are also made to keep teachers informed of new ways of meeting classroom problems. District Inspectors are usually responsible for the conduct of meetings where professional topics are discussed and for the arrangement of visits to other schools where special work is being done. Official publications of the Education Departments contain articles dealing with both educational theory and practice. In most States, the teachers' organizations publish magazines containing, among other material, articles dealing with educational theory. These reach the great majority of government teachers.

(viii) *State Details.* The details of teacher training in the States were given on pp. 442-3 of Year Book No. 40.

(ix) *Sex and Status of Teachers.* Although about one half of the teachers in State schools in Australia are men, the ratio varies considerably from State to State. There has been a continuous increase in the proportion of men since 1929, at first because of a government policy of male preference during the period of severe unemployment, and since then, the difficulty of recruiting females at a rate rapid enough to replace their greater "wastage" rate. Only women teachers are employed in the infant schools and generally in girls' departments. However, men predominate in the senior positions, both because of their greater preponderance amongst those with long service and because the higher promotion positions are generally reserved for men, except for some in infants' schools and girls' schools which are reserved for women.

14. *School Buildings and Grounds.*—In 1930, school building programmes were seriously cut because of the financial difficulties of the depression. The 1939-45 War intervened before school building could be resumed on a large scale. During the post-war period the building of schools was given a high official priority in order to obtain labour and materials. Most schools are therefore either quite new or more than 20 years old.

The post-war buildings fall into two big groups, portable and permanent. In primary schools, in particular, some Education Departments favour a mixture of both kinds of classrooms, thus enabling them to cope with the changing age-composition of different areas. Prefabricated classrooms have been imported or locally produced in very large numbers—the Bristol aluminium dual units being especially popular. Generally, these have been used to extend existing schools, although in a few cases entire schools have been composed of them. To meet the very acute shortage all kinds of emergency measures have been taken, including the hiring of hals, and the use of cloak-rooms, weather sheds and verandahs for class instruction. However, a considerable number of modern and imposing new secondary schools has been built and equipped with special facilities for the varied activities of the pupils.

15. *Equipment.*—(i) *Text Books and Materials.* All equipment regarded as essential by the Education Department in each State, including equipment for manual training and home arts, is provided free of charge, except for text books for pupils.

The more widespread application in recent years of activity and play-way methods in the infant schools has been stimulated by the provision of a greater volume of free materials such as blocks, counters, peg-boards and modelling clay.

Secondary schools are almost always provided with laboratories, but these are not found in primary schools, with the exception of the larger all-age schools in the country.

(ii) *Furniture.* There has been considerable development since 1929 in this field. Originally most schools were equipped with long desks and benches, seating six to eight pupils. By 1929 nearly all of these had been replaced by the standard dual desk with tip-up seat, and in infant classes by individual chairs and small tables. No important change in furniture took place then until the post-war period, when considerable research was undertaken on posture and the physical measurement of children. The dual desk is now being replaced in some States by the individual table and chair, provided in a range of sizes suitable to each class. In some States tubular steel is used. The new type of furniture is more suitable for flexible arrangements of the class in line with modern educational practice.

(iii) *Visual Aids.* The period since 1929 has seen a remarkable growth in the use of the visual aids in education. After some resourceful pioneering work had been done by individuals the Departments of Education between 1936 and 1939 appointed special committees and teacher demonstrators to guide the development of the new educational medium. Production units to produce film strips suitable for use in schools were set up in five States and an Australian-produced film-strip projector was manufactured. After the war, the emphasis moved from the strip projector to the 16 mm. sound machine and the National Film Board, set up by the Commonwealth Government to promote the use of educational films, became the main producer of these films. Film companies are also designing films primarily for class-room use and several manufacturers have produced 16 mm. sound projectors. Education Departments have their own film libraries to distribute films to schools and borrow largely from the National Library which is the main distributing centre for non-technical films in Australia.

16. *Parent and Citizen Organizations.*—In Australia, where all Government schools are administered by central Departments, there is little opportunity for local administration of education. Public interest is expressed through Parent and Citizen Organizations. Although the names of these bodies differ in the various States they have similar aims which are:—to promote the interests of the school by bringing parents, pupils and teaching staff together; to help provide teaching aids not supplied by the Department; to provide recreational materials; to assist in the regular attendance of children at school; to help find accommodation for teachers.

In all States the Parent and Citizen Organizations have affiliated to become State-wide bodies. These, in turn, are the members of the Australia-wide body, the Australian Council of School Organizations.

17. *Statistics of Government Schools.*—(i) *General.* The Government schools shown in the following tables include primary, secondary, junior technical, correspondence and subsidized schools, but exclude senior technical colleges, evening schools and continuation classes.

Particulars relating to Senior Technical Colleges are given in § 5 following.

(ii) *Returns for Year 1952.* (a) *General.* The following table shows for 1952 the number of Government Schools, together with the teachers employed, teachers in training and the number of individual children enrolled.

GOVERNMENT SCHOOLS(a), 1952.

State or Territory.	Schools open at end of year.	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
New South Wales(b)	2,530	14,169	2,468	453,632
Victoria	2,013	9,842	1,744	278,755
Queensland	1,571	6,144	729	183,385
South Australia	682	3,756	384	104,530
Western Australia	500	2,726	638	(c) 76,874
Tasmania	315	1,717	236	46,022
Northern Territory(d)	9	53	..	1,457
Australia	7,620	38,407	6,199	1,144,655

(a) Excludes Senior Technical Colleges.

(b) Includes Australian Capital Territory.

(c) Average

weekly enrolment.

(d) Year ended 30th June, 1953.

(b) *Average Enrolment and Attendance.* The methods of calculating enrolment are not identical throughout the States. The unit in South Australia is the daily enrolment, while New South Wales, Victoria, Western Australia and Tasmania employ the weekly enrolment. In Queensland no average enrolment is compiled, and the August census enrolment figure has been taken.

As with enrolments, there is not complete uniformity in arriving at the average attendance, but most of the States aggregate the attendances for the year and divide by the number of school sessions. New South Wales and Western Australia, however, employ averages of term averages. The matter of securing uniformity in these respects has been under consideration for some time, and was discussed at a meeting of Directors of Education at a conference held in Sydney in July, 1947. The average enrolment and attendance in each State and Territory during 1952 are shown below :—

GOVERNMENT SCHOOLS(a) : AVERAGE ENROLMENT AND ATTENDANCE, 1952.

State or Territory.	Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Attendance to Enrolment.
New South Wales(b)	424,152	376,098	88.67
Victoria	264,869	238,798	90.16
Queensland	(c) 174,837	154,666	88.46
South Australia	100,379	91,815	91.47
Western Australia	76,874	71,654	93.21
Tasmania	45,422	41,824	92.08
Northern Territory (d)	1,457	1,216	83.46
Australia	1,087,990	976,071	89.71

(a) Excludes Senior Technical Colleges.

(b) Includes Australian Capital Territory.

(c) Census

enrolment at 1st August, 1952.

(d) Year ended 30th June, 1953.

Recurring epidemics of contagious diseases, minor illnesses and bad weather are all serious factors which affect the full attendance of pupils at school.

The average attendance at Government Schools in Australia is shown below for the year 1891 and at varying intervals to 1952.

GOVERNMENT SCHOOLS(a) : AVERAGE ATTENDANCE, AUSTRALIA.

Year.	Total Population. (b)	Average Attendance.	Year.	Total Population. (b)	Average Attendance.
	'000.	No.		'000.	No.
1891	3,421	350,773	1941	7,144	732,116
1901	3,825	450,246	1947	7,639	754,799
1911	4,574	463,799	1948	7,795	770,554
1921	5,511	666,498	1949	8,051	810,800
1931	6,553	817,262	1950	8,316	844,123
1933	6,657	805,334	1951	8,539	890,514
1939	7,005	744,095	1952	8,753	976,071

(a) Excludes Senior Technical Colleges.

(b) At 31st December.

(c) *Schools in the Australian Capital Territory.* During 1952 eleven Government Schools were in operation in the Australian Capital Territory; enrolment numbered 3,108; and average attendance was 2,835. By arrangement with the Commonwealth Government these schools are conducted by the New South Wales Education Department with provision for primary and secondary education, the Department being recouped for expenditure. The cost of the teaching staff in 1952-53 was £118,641, while the cost of general maintenance amounted to £83,439. The figures quoted exclude enrolment, etc., at the Canberra Technical College and the Evening Continuation School. For further particulars of education facilities in the Australian Capital Territory see Chapter V.—The Territories of Australia, Australian Capital Territory, p. 108.

(iii) *Expenditure.* (a) *Maintenance—All Schools (excepting Senior Technical Colleges).* The net expenditure on maintenance in all grades of schools, excepting senior technical colleges and, in Victoria and (in 1939) Tasmania, junior technical schools, and the cost per head of average attendance for 1939 and the five years ended 1952 are shown in the following table. The figures do not include expenditure on buildings, which is shown separately in a subsequent table. In all expenditure tables the figures for Victoria, Queensland and Western Australia relate to the financial year ended six months later than the calendar year.

GOVERNMENT SCHOOLS(a) : NET EXPENDITURE ON MAINTENANCE.

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
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TOTAL (INCLUDING SECONDARY SCHOOLS).
(£.)

1939	4,598,376	2,667,094	1,481,390	854,037	730,500	(c) 320,616	6,802	10,658,824
1948	8,065,326	5,226,383	2,898,833	1,703,589	1,488,193	810,342	25,580	20,218,246
1949	9,426,879	6,302,506	3,388,274	1,653,121	1,801,259	928,201	35,322	23,832,742
1950	10,830,086	7,763,962	3,963,736	2,135,007	2,283,666	1,082,758	40,578	28,399,793
1951	13,222,500	9,776,057	4,813,817	3,050,624	3,288,769	1,367,216	57,156	35,574,088
1952	17,844,140	11,930,560	5,630,480	3,767,881	3,897,881	1,916,383	88,176	45,075,501

PER HEAD OF AVERAGE ATTENDANCE.
(£ s. d.)

1939	15 12 2	14 1 4	13 0 9	12 18 4	14 5 7	11 7 6	11 3 0	14 6 7
1948	26 10 6	27 16 0	23 18 6	25 6 0	25 15 9	25 12 3	34 16 0	26 4 9
1949	29 9 10	32 4 1	26 6 0	27 2 7	20 15 4	27 14 1	31 13 3	29 7 11
1950	33 0 6	37 11 1	20 17 1	31 11 8	36 0 8	30 6 3	39 14 1	33 12 11
1951	37 16 1	44 12 4	33 11 8	36 18 9	49 2 1	36 11 1	52 6 10	30 11 0
1952	47 8 11	49 19 3	36 8 1	41 0 9	54 8 0	45 16 5	72 10 3	46 3 7

(a) Excludes Senior Technical Colleges.

(b) Gross figures, receipts not being available.

(c) Excludes Junior Technical Schools. See above.

(b) *Maintenance—Secondary Schools.* The figures shown in the preceding table refer to expenditure on maintenance of all Government primary and secondary schools, excluding senior technical colleges. It has been the practice of the State Education Departments to give separate information in regard to the cost of secondary education. The difficulty of making any satisfactory allocation of the kind, however, will be understood, when it is realized that both elementary and higher education are in some instances given in the same school and by the same teacher. Unfortunately, too, the term "secondary" has not the same meaning in all States. It might be mentioned here that similar difficulties arise in connexion with the apportionment amongst the various branches of expenditure on administration, inspection and the training of teachers. The figures quoted hereunder in regard to cost have been mainly extracted from the Reports of the State Education Departments, and are subject to the above qualifications.

GOVERNMENT SECONDARY SCHOOLS(a) : EXPENDITURE ON MAINTENANCE.

State.	1951.		1952.	
	Cost.	Cost per Head of Population.	Cost.	Cost per Head of Population.
	£	£ s. d.	£	£ s. d.
New South Wales	3,975,808	1 4 0	5,102,176	1 10 1
Victoria	2,515, 00	1 1 10	3,084,780	1 6 1
Queensland	513,834	0 8 5	602,682	0 9 8
South Australia	740,728	1 0 7	898,831	1 4 4
Western Australia	636,773	1 0 2	900,098	1 9 5
Tasmania(b)	260,278	0 17 0	372,493	1 4 6

(a) Excludes Senior Technical Colleges.

(b) Includes High and Junior Technical Schools.

The figures in all cases exclude the cost of buildings. In Queensland, the figure quoted excludes the cost of the Agricultural High School and College, which amounted in 1951-52 to £184,838, and in 1952-53 to £198,876.

(c) *Buildings.* Expenditure on Government School buildings, excluding senior technical colleges, for the years 1939 and 1948 to 1952 was as follows :—

GOVERNMENT SCHOOLS(a) : EXPENDITURE ON BUILDINGS.

(Including Loan Fund Expenditure.)

(£.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
1939	411,720	206,481	174,725	85,539	56,994	60,011	539	996,009
1948	1,069,789	1,017,227	305,776	261,683	303,213	185,286	1,790	3,145,764
1949	1,277,015	2,015,972	412,753	355,494	454,207	288,057	12,522	4,846,020
1950	2,163,917	2,364,674	633,149	544,859	676,742	402,080	13,723	6,700,144
1951	3,531,351	3,118,637	854,761	911,036	916,515	721,740	96,720	10,150,769
1952	4,845,271	3,099,502	644,998	1,667,480	2,006,693	599,338	116,735	12,980,017

(a) Excludes Senior Technical Colleges.

The totals for the various States in 1952 include the following amounts expended from loan and other funds; figures for 1951 are shown in brackets—New South Wales, £3,460,888 (£2,502,289); Victoria, £2,900,797 (£2,977,915); Queensland, £461,939 (£693,522); South Australia, £1,413,494 (£772,703); Western Australia, £1,772,072 (£716,858) and Tasmania, £467,482 (£625,888).

(d) *Net Total Cost.* The net total cost of education in Government Schools, including buildings, during the years 1939 and 1948 to 1952 was as follows :—

GOVERNMENT SCHOOLS(a) : NET TOTAL COST.

(£.)

Year.	N.S.W. (b)	Vic. (c)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
1939	5,010,096	2,973,575	1,656,124	939,576	787,494	(c) 380,627	7,341	11,654,833
1948	9,135,115	6,243,610	3,205,609	1,965,272	1,791,106	995,628	27,370	23,364,010
1949	10,703,894	8,318,568	3,828,027	2,308,613	2,255,456	1,216,348	47,844	28,678,762
1950	12,091,002	10,128,636	1,596,855	2,079,866	2,060,408	1,484,848	54,301	35,168,937
1951	16,744,866	12,895,594	4,668,508	3,061,660	1,202,781	2,088,976	153,885	44,724,847
1952	22,689,411	15,030,062	6,275,478	5,435,361	5,904,670	2,515,721	204,911	58,055,620

(a) Excludes Senior Technical Colleges.

(b) Gross figures, receipts not being available.

(c) Excludes Junior Technical Schools.

The figures in this and the preceding tables refer to all grades of Government Schools with the exception of senior technical colleges, and in Victoria and (in 1939) Tasmania, junior technical schools. Including buildings, the net cost per scholar in average attendance for the whole of the schools in Australia amounted in 1951 to £50 16s. 8d., and in 1952 to £59 9s. 7d. as compared with £4 9s. 3d. in 1901.

(e) *School Banking.* Particulars of School Savings Banks are included in Chapter XVI.—Private Finance.

§ 3. Non-Government Schools.

1. *Public Authority and the Non-Government Schools.*—In all States education is compulsory for all children between certain ages. It must be received in a government school, unless the child is under "regular and efficient" instruction elsewhere. This may be at home, or in a non-government school. The provision for control over the regularity and efficiency of instruction in the non-government schools varies considerably from State to State. In Queensland and South Australia it is possible under the present regulations for schools to exist without inspection. In New South Wales and Western Australia provision is made for the initial inspection when a new school starts, and for inspections thereafter as the Minister requires, to ensure efficiency. In Victoria and Tasmania, registers are kept of teachers and schools, and both teachers and schools must satisfy the administering authority that they are efficient before registration is granted. Without such registration, neither a teacher nor a school can operate. Provision is made, too, for inspections at any time by the registering authority.

Public authority over schools or institutions having scholars above the compulsory ages is generally less direct. It is effected directly by the registration procedures in Victoria and Tasmania, and in all States there is a measure of indirect control through provisions governing the awards of State scholarships for secondary education, which can be taken only in government or in approved non-government schools.

The eight State-subsidized grammar schools in Queensland are the only non-government schools of Australia for which an annual inspection is prescribed by statute.

In all States, non-government schools are required, under the authority of either the Education Acts or Statistics Acts, to furnish certain returns. The form of these returns may be prescribed in the Acts or may be subject to alteration by the Minister's consent.

2. Numbers of Non-Government Schools, Teachers and Enrolments, 1952.—The numbers of non-government schools, teachers and enrolments for 1952 are shown in the following table :—

NON-GOVERNMENT SCHOOLS, 1952.

Denomination.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Total.
NUMBER OF SCHOOLS.								
Church of England ..	43	36	16	14	9	5	..	123
Presbyterian ..	13	16	4	2	3	2	..	40
Methodist ..	5	4	(b) 6	3	2	1	..	21
Roman Catholic ..	618	356	231	100	137	40	2	1,484
Other Denominational ..	17	19	7	19	3	4	..	69
Undenominational ..	54	47	10	8	63	7	..	189
Total ..	750	478	274	146	217	59	2	1,926
TEACHERS.								
Church of England ..	724	621	225	168	114	89	..	1,941
Presbyterian ..	260	293	52	61	50	10	..	726
Methodist ..	154	148	(b) 112	71	39	33	..	557
Roman Catholic ..	4,331	1,873	1,440	536	595	211	12	9,018
Other Denominational ..	61	120	29	76	10	45	..	341
Undenominational ..	464	298	99	108	132	30	..	1,131
Total ..	6,014	3,353	1,957	1,020	940	418	12	13,714
ENROLMENTS.								
Church of England ..	9,444	11,916	3,813	3,073	2,006	1,380	..	31,632
Presbyterian ..	3,916	5,667	578	840	1,074	200	..	12,275
Methodist ..	2,319	3,239	(b) 1,657	1,182	832	322	..	9,551
Roman Catholic ..	115,740	73,824	41,200	14,440	17,507	6,285	386	269,382
Other Denominational ..	775	2,353	379	1,284	234	853	..	5,878
Undenominational ..	6,112	6,298	1,864	1,574	2,711	554	..	19,113
Total ..	138,306	103,297	49,491	22,393	24,364	9,594	386	347,831

(a) Includes Australian Capital Territory.

(b) Presbyterian and Methodist Schools' Association.

3. Growth of Non-Government Schools.—The enrolment and average attendance at non-government schools in 1891 and at varying intervals to 1952 were as follows :—

NON-GOVERNMENT SCHOOLS : ENROLMENT AND ATTENDANCE.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891 ..	121,485	90,588	1947 ..	280,543	257,430
1901 ..	148,659	120,742	1948 ..	281,354	251,092
1911 ..	160,794	132,588	1949 ..	293,306	264,164
1921 ..	198,688	164,075	1950 ..	309,673	275,562
1931 ..	221,387	180,665	1951 ..	326,258	293,420
1939 ..	247,482	219,171	1952 ..	347,831	315,796

4. The Organization of Roman Catholic Education.—There is, in each State capital, an official who acts under the Archbishop as a Director of Catholic Education for the area. Each diocese within the area is, however, autonomous and manages its own educational affairs subject to the local episcopal authority. The State Director has, in addition to possible inspectorial functions within his own diocese, the duty of co-ordination of educational matters within his area, and of liaison with other educational authorities, particularly the State Education Department.

The system includes kindergartens, sub-primary, primary, academic secondary, home science, commercial, agricultural and technical schools, juniorates and minor

seminaries, schools for the mentally and physically handicapped, orphanages and a variety of special schools of a charitable nature for under-privileged or socially handicapped children.

With the exception of a small number of permanent lay teachers and a number of visiting teachers—usually specialists in such matters as physical education, sport, speech, etc.—teaching is done by members of religious orders.

5. The Organization of Other Non-Government Education.—(i) *General*. Within each State, although the other non-Government schools may be organized into loose forms of association for purposes such as sports, conferences, uniform conditions, etc., there is no system corresponding in size, detail or organization with the Roman Catholic Schools.

(ii) *Church of England*. In certain schools under direct church control the appointment of a majority of Council members rests with the Synod. More frequently perhaps the appointment of such Council members lies in the hands of the diocese or even the parish. The ecclesiastical head of the area, the archbishop or bishop, is typically *ex-officio* chairman of the school Council. The church may appoint all members or on the other hand it may appoint a majority or only one or two. The other members are secured in many ways; some may be nominated by parents, some by "old boys" some by the "school association," some by co-option by the existing Council. Many combinations of these forms of membership occur.

(iii) *Other Denominations*. In general the pattern is similar to that described above, with appointments usually controlled by the State authority of the Church concerned, either alone or acting in conjunction with the local congregation. In Queensland there are six schools operated under the joint auspices of the Presbyterian and Methodist Churches.

(iv) *Undenominational*. There are three main groups of such schools; firstly, those partly controlled by State action, such as those Grammar schools for which some members of the controlling body are appointed under Act of Parliament; secondly, those operated under the auspices of corporate bodies, usually in the form of limited liability companies which may be affiliated with particular churches; and, thirdly, a number of privately-owned schools, many of which are small and restricted to kindergarten or primary schooling.

§ 4. Pre-school Education.

1. *Types of Pre-school Centres*.—Nursery-kindergartens under trained teachers provide daily sessions for children aged three to six, while play groups or play centres provide shorter periods for smaller groups. Day nurseries or crèches care for the children of mothers in employment and Lady Gowrie Child Centres are special centres set up in each State capital city by the Commonwealth Government to demonstrate a child development programme. There are also some private and denominational nursery schools which vary considerably in standard.

Free kindergartens were originally established and financed mainly in congested industrial areas, by voluntary effort, but over the years State Governments and some municipal councils have provided an increasing amount of financial assistance.

2. *The Training of Teachers*.—Since the development of this work depends on the availability of trained teachers, nearly all Kindergarten Unions now have teacher training colleges providing three-year courses. The minimum entrance age is seventeen, and the Leaving Certificate is usually required before admission.

The New South Wales Department of Education gives a two-years' course at the Teachers' College, covering such subjects as biology, physiology, child development, psychology, mental hygiene, child welfare, home science, English, world history, current affairs, sociology, art, crafts, physical education, music and early child development (which embraces principles and methods, play activities, children's literature, music for children, art and other creative experiences, and curriculum planning). A considerable amount of time is also spent in all colleges in practice teaching.

Financial help, such as free training, bursaries provided by the Government or voluntary bodies and living allowances, is provided for teachers, but there is a considerable shortage of trained pre-school teachers.

The six Kindergarten Unions in 1938 united to form the "Australian Association for Pre-School Child Development", a federal body whose aim is to promote the continuous advancement of the pre-school movement throughout Australia.

3. **Kindergarten of the Air.**—Daily kindergarten sessions of half an hour are now broadcast in all States by the Australian Broadcasting Commission in collaboration with Kindergarten Unions.

4. **Kindergarten Unions.**—The following information regarding kindergarten unions has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia where the details were furnished by the Education Department. It refers to kindergarten unions or associations, and excludes the kindergarten branches in the Government schools of the various States.

KINDERGARTEN UNIONS, 1953.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales ..	36	1,479	105	21	..
Victoria	47	970	91	..	..
Queensland	4	158	11	..	..
South Australia(a) ..	79	2,637	195	..	7
Western Australia ..	37	1,013	45	..	..
Tasmania	5	152	9	..	4
Total	208	6,409	450	21	11

(a) Includes affiliated suburban and country centres.

In 1953 only 27 of these 208 kindergartens were located outside metropolitan areas mainly in the larger provincial cities. In each capital city except Hobart there is a training college and the number of students in training during 1953 was 104 in Sydney, 132 in Melbourne, 24 in Brisbane, 36 in Adelaide, and 20 in Perth.

§ 5. Technical Education.

1. **General.**—In this section technical education refers to that branch of education which is concerned with the preparation for entry to skilled occupations, including trades and professions. In the main this education is vocational and is chiefly part-time, being carried out by the student while he is engaged in his occupation. The work of technical high schools, junior technical schools and other schools of this nature which provide courses with a bias towards technical handwork has been excluded, as they provide a form of education which is more properly regarded as secondary education.

The chief institutions for vocational training other than the universities are the senior technical colleges. These offer training not only in industrial skills, but also in commercial, agricultural and pastoral occupations, the plastic arts and homecrafts. There are, in addition, agricultural colleges and a substantial number of private business colleges.

Although, as in other branches of education, the main lines of technical education had been determined by 1929, expansion and development since then has, perhaps, been greater in this field than in any other. The following table gives some indication of the growth of technical education in the years 1939 to 1952.

TECHNICAL EDUCATION: AUSTRALIA.

Year.	No. of Colleges.	No. of Students.	No. of Teachers.(a)	Total Expenditure.
				£
1939	94	89,215	3,276	1,359,800
1945	114	110,841	5,175	1,849,051
1947	119	144,882	6,239	2,685,896
1948	126	150,482	6,819	3,235,129
1949	131	153,547	6,530	4,081,331
1950	141	161,564	6,409	5,096,563
1951	146	158,179	6,179	5,930,370
1952	141	169,089	6,344	7,145,402

(a) Includes both full-time and part-time teachers.

Technical education is the field most sensitive to changing material needs and has expanded to meet the requirements of new industries and techniques. The desire for the comparative economic security of skilled jobs during the period of economic depression and the increasing demand for skilled workers due to the development of more advanced techniques in industry stimulated public interest in all States.

A characteristic feature of technical education since 1929 has been the close co-operation between the Commonwealth and the States. This is understandable as the technical colleges were able to play an important part in meeting two crises with Australia-wide implications. During the years of the economic depression in the 1930's States sought means to provide technical training for the young unemployed and this led, in 1936, to the Youth Employment Scheme, in which the States and the Commonwealth participated. During the 1939-45 War the Commonwealth and the States worked together in the Commonwealth Technical Training Scheme to meet the war-time need for technicians; after the war this type of training was continued in the technical colleges in the States as a part of the Commonwealth Reconstruction Training Scheme. In addition, during the period 1940 to 1944 technical correspondence schools were founded in each State in conjunction with the Commonwealth and these have become an important part of the system of technical education in the Australian States.

The expansion of technical education in the last two decades has paralleled the growth of secondary production from predominantly scattered small-scale and light industry to more concentrated large-scale heavy industry utilizing advanced techniques. Technical colleges have always been linked with the industries from which they draw staff and students, but whereas formerly they produced skilled craftsmen they now also accept the responsibility of turning out persons capable of adapting themselves to swift technological changes and able to assume responsibilities of management and leadership. Furthermore, rapid changes in industrial methods call for a close connexion between college curricula and workshop practice in order that they may keep in step and so that applied research can make available to industry the results of pure research. The introduction of day training classes for apprentices is an indication of the development of this relationship between technical education and industry.

The history of the development of technical education since 1929 is one of increasing government support and control, increasing financial commitments by both State and Commonwealth Governments as well as considerable financial support and greater participation by industrial undertakings in the work of the colleges, increasing enrolments and facilities and the development of curricula and courses to meet new needs, and the growing realization of the need to recruit and train teaching staff in a systematic way.

2. Teacher Training.—Another important feature of technical education since 1929 relates to the training of teachers. Technical colleges at that time were staffed chiefly by men (and a few women) drawn from two sources. They were either trained teachers in the employment of the Education Department or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers. In order to remedy this, there has been a move to develop schemes of training technical college teachers without breaking the important link provided by recruiting specialist tradesmen to teach in the colleges. For example, since the 1939-45 War, New South Wales has extended a system whereby tradesmen-instructors receive a course of teacher training in both general educational theory and teaching method. After appointment a teacher in a large centre attends classes for six hours each week during his first year of service and two hours weekly thereafter until he has completed the training course. Correspondence courses and itinerant teachers care for the newly appointed teacher-instructor in country colleges. Modifications of this aspect are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers' certificates from teachers' colleges.

8. Colleges, Teachers and Students.—The numbers of colleges, teachers and enrolments of individual students during the years 1939 and 1949 to 1952 are given in the following table :—

TECHNICAL EDUCATION : COLLEGES, TEACHERS AND ENROLMENTS.

State.	Colleges.	Teachers.			Individual Students Enrolled.		
		Full-time.	Part-time.	Persons.	Males.	Females.	Persons.
New South Wales—							
1939	24	894	301	1,195	27,403	9,861	37,264
1949	38	1,010	1,735	2,765	48,569	16,333	64,902
1950	42	1,038	1,321	2,358	(a)48,310	(a)20,775	69,085
1951	44	935	947	1,882	(a)43,513	(a)20,652	63,165
1952	40	984	1,032	2,016	(a)44,161	(a)22,820	66,981
Victoria—							
1939	30	817	456	1,273	21,158	7,686	28,844
1949	35	1,161	1,054	2,215	30,898	10,597	41,495
1950	36	1,238	1,030	2,268	30,879	11,152	42,031
1951	36	1,280	1,071	2,351	29,220	12,217	41,436
1952	36	1,338	1,090	2,428	32,517	13,993	46,510
Queensland—							
1939	13	94	108	202	5,125	1,272	6,397
1949	12	111	264	375	10,746	3,911	14,657
1950	12	135	346	481	12,350	4,551	16,901
1951	12	135	346	481	12,654	5,425	18,079
1952	12	137	354	491	13,849	5,953	19,802
South Australia—							
1939	17	104	212	316	6,390	3,331	9,721
1949	25	167	460	627	9,700	7,531	17,231
1950	27	173	447	620	10,270	6,829	17,099
1951	28	195	482	677	10,512	6,893	17,405
1952	27	203	498	701	11,033	7,195	18,228
Western Australia—							
1939	5	36	119	155	3,843	1,830	5,673
1949	12	117	222	339	7,695	2,718	10,413
1950	15	131	264	395	7,424	3,925	11,349
1951	17	145	325	470	8,101	4,703	12,804
1952	17	159	321	480	7,995	5,284	13,279
Tasmania—							
1939	5	41	94	135	936	380	1,316
1949	9	35	174	209	2,777	2,072	4,849
1950	9	25	262	287	2,966	2,139	5,099
1951	9	34	284	318	3,356	1,924	5,280
1952	9	37	191	228	2,383	1,906	4,289
Total—							
1939	94	1,986	1,290	3,276	64,855	24,360	89,215
1949	131	2,601	3,929	6,530	110,385	43,162	153,547
1950	141	2,740	3,669	6,409	112,193	49,371	161,564
1951	146	2,724	3,455	6,179	106,365	51,814	158,179
1952	141	2,858	3,486	6,344	111,938	57,151	169,089

(a) Partly estimated.

4. Expenditure.—The expenditure on technical education in each State for 1952 is shown below :—

TECHNICAL EDUCATION : EXPENDITURE. 1952.

(Including Loan Fund Expenditure.)

(£.)

State.	Salaries and Maintenance.	Equipment.	Buildings.	Total Expenditure.	Receipts—Fees, etc.	Net Expenditure.
New South Wales ..	1,871,558	207,925	554,098	2,635,516	408,000	2,227,516
Victoria a) ..	2,093,113	59,946	352,820	2,657,407	304,794	..
Queensland ..	333,239	133,409	108,306	573,954	39,273	534,681
South Australia ..	443,079	(b)	138,601	582,202	60,004	522,198
Western Australia ..	453,198	..	28,429	545,821	19,938	525,883
Tasmania ..	93,122	10,131	32,489	150,502	1,159	149,343
Total ..	5,285,300	411,411	1,211,743	7,145,402	833,168	..

(a) Includes expenditure on Junior Technical Schools.

(b) Included with salaries and maintenance.

Fees and other receipts are paid into Consolidated Revenue in all States except Victoria, where they are retained and spent by the Technical School Councils. The expenditure on buildings is largely financed from loan moneys, the sums provided from this source in 1952 being :—New South Wales, £466,826 ; Victoria, £303,171 ; Queensland, £98,582 ; South Australia, £119,950 ; Western Australia, £15,766 ; and Tasmania, £28,498.

The net expenditure on maintenance (including salaries) for technical education in Australia in 1952 amounted to 12s. 6d. per head of the mean population, as compared with £5 3s. 7d. per head expended on the net maintenance (including salaries) for primary and secondary education.

§ 6. Commonwealth Activities.

Although the primary responsibility for education rests with the Australian States, the Commonwealth Government is committed to a number of educational activities related to its other functions. For example, it maintains officer training colleges and education services for each of its Defence Services, a School of Pacific Administration for training administrators for Papua-New Guinea and a School of Forestry. In each of the Australian Territories there is an education programme which provides for both the native and white children who live there. References to education in the Territories appear in Chapter V.—The Territories of Australia.

The Commonwealth Office of Education, established in 1945, acts as the Commonwealth's educational adviser, undertakes research work as Commonwealth activities require, and is the channel for liaison between Commonwealth and State educational authorities. This Office has responsibilities with regard to the education of migrants, the education of natives in the Northern Territory, the provision of scholarships at the tertiary level under the Commonwealth Scholarship Scheme and the Reconstruction Training Scheme, international relations including the association of Australia with the aims and activities of the United Nations Educational, Scientific and Cultural Organization and the provision of scholarships and fellowships for selected students under the Commonwealth Technical Co-operation Scheme, the UNESCO Fellowship Scheme and the South-East Asian Scholarship Scheme.

The Australian Broadcasting Commission features school broadcasts and other educational broadcasts as part of its daily programmes. The Commonwealth Scientific and Industrial Research Organization undertakes research, the results of which are made available to educational institutions. In 1951 the Commonwealth Government introduced a free-milk scheme for school children. This extends a service which some State authorities were already providing for a proportion of the school population. Under the Commonwealth Reconstruction Training Scheme many ex-servicemen and women have received the training which has enabled them to enter many different trades and professions.

The Commonwealth also assists a number of other bodies concerned with education. Besides grants to organizations such as the Australian Council for Educational Research and the National Fitness Council, Australian Universities have received grants for specific purposes through the Universities Commission.

§ 7. Australia and International Relations in Education.

Despite its isolation, Australia has always been responsive to educational developments in overseas countries, particularly those in the United Kingdom, but it is only recently that it has begun to make any considerable impact on educational thought overseas.

In this connexion there have been important developments since the 1939–45 War. For instance there has been a remarkable increase in the volume of information on educational matters exchanged between Australia and South-East Asia, and Australia has participated in the Commonwealth Technical Co-operation Scheme and the United Nations Technical Assistance programme.

Perhaps the most important single factor behind the quickening of Australian interest in international cultural affairs has been membership of the United Nations Educational, Scientific, and Cultural Organization. Australia has been a member since 1946. Some eleven expert Committees in Australia are responsible for a wide and varied programme of activities on behalf of UNESCO. Their advice has helped to make Australia's contribution to UNESCO International Conferences and Seminars highly effective. Other work undertaken by these Committees has included the supervision of studies relating to community attitudes towards international affairs, and to the assimilation of migrants, the conducting of seminars in Australia, arranging for exhibitions and displays in Australia, and the publication of handbooks and brochures to assist teachers and other persons in meeting the problems involved in educating for international understanding.

The Australian National Advisory Committee for UNESCO, on which all the other Committees are represented, advises the Commonwealth Government and co-ordinates the work of the specialist Committees.

§ 8. Universities.

1. **General.**—The last quarter of a century has seen a marked increase in the number of students and staff, the establishment of three new Universities and two new University Colleges, and the provision in the older Universities of additional courses. In spite of difficulties due, in some measure, to the economic depression of the 1930's and a World War, the period since 1929 has been one of significant development.

2. **University Expansion.**—(i) *The Establishment of New Universities.* The three new Universities represent new departures in the Australian University tradition.

(a) *The Australian National University.* By the Australian National University Act 1946, provision was made for the establishment of a University in the Australian Capital Territory. The University is required by the Act to provide facilities for post-graduate research including:—The School of Medical Research to be known as "The John Curtin School of Medical Research"; The Research School of Physical Sciences; The Research School of Social Sciences; and The Research School of Pacific Studies.

The Act also provides for the incorporation of the Canberra University College. In the first instance the Council has decided to concentrate on the establishment of the four Research Schools mentioned in the Act.

The government of the University is vested in a Council consisting of two representatives each of the Senate and the House of Representatives, up to eight nominated by the Governor-General, up to nine elected by Convocation, two elected by the students, and three elected by the academic staff; up to three members may be co-opted and the Vice-Chancellor is an *ex officio* member.

The senior academic body in the University is the Board of Graduate Studies of which all professors are members. The Board deals with questions affecting education, learning and research in the University.

The Act provides for a statutory grant of £325,000 per annum and in addition a supplementary grant is made to meet the running costs. A separate vote is made for capital works.

An area of 204 acres at Acton has been vested in the University. University House, a residential College for single members of the staff and the student body, was opened in February, 1954. University House also acts as the social centre for the whole University community.

The laboratories and office block for the Research School of Physical Sciences have been completed. The John Curtin School of Medical Research (with the exception of the Department of Medical Chemistry which is at present located in the Wellcome Foundation, London) is housed in temporary laboratories on the University site. The construction of the permanent building has been commenced and it is expected that it will be completed in 1956. The Research Schools of Social Sciences and Pacific Studies and the Library are housed in existing buildings on the site.

Seventeen professors and sixty-nine other members of the academic staff have been appointed.

Each department of the Research Schools accepts a small number of graduate students. Each student is assigned to a Supervisor and pursues a course of research. Subject to certain conditions, the following degrees may be awarded by the University:—Master of Arts (M.A.); Master of Science (M.Sc.); Doctor of Philosophy (Ph.D.); Doctor of Letters (Lit.D.); Doctor of Science (D.Sc.); and Doctor of Laws (LL.D.). The Right Honourable Viscount Bruce of Melbourne is Chancellor of the University and Mr. L. G. Melville is the Vice-Chancellor. Mr. R. A. Hohnen is the Registrar.

Each of the Research Schools will eventually be headed by a Director. Professor M. L. Oliphant, F.R.S., is Director of the Research School of Physical Sciences. But until further appointments can be made the following Deans have been appointed to act: Professor A. H. Ennor, Dean of the School of Medical Research; Professor S. F. Nadel, Dean of the School of Pacific Studies, and Professor G. Sawyer, Dean of the Research School of Social Sciences. In 1954 sixty-four students were enrolled in the University.

Finance for the year 1953 was as follows:—Income for General Activities—Commonwealth Government Grants Revenue £625,000, Capital £1,002,000, Student's fees £625, Interest, Donations, etc. £18,743, Halls of Residence £15,474, Total £1,661,842. Income for Special Purposes—Interest, etc. £1,040, Research Grants £6,350, other income £1,207, Total £8,597. Expenditure on General Activities—Administration £71,035, Teaching and Research £571,659, Library £44,584, Premises and Grounds £44,871, Buildings £398,663, Halls of Residence £344,100, other expenditure £54,123, Total £1,529,435 including Capital £964,013. Expenditure for Special Purposes £1,164.

(b) *New South Wales University of Technology.* Officially incorporated by the Technical Education and the New South Wales University of Technology Act of the New South Wales Parliament in April, 1949, the New South Wales University of Technology was established to provide facilities for training and research in the fields of Applied Science and Technology and to ensure a more adequate supply of highly skilled scientists and technologists to the expanding industries of Australia.

The University is governed by a Council consisting of not more than 30 members representing Parliament, industry, commerce, the trade unions, technical education, professional bodies, the University of Sydney and the teaching staffs and the graduate and under-graduate members of the University of Technology. The President of the Council is Mr. Wallace C. Wurth, C.M.G., LL.B., Chairman of the New South Wales Public Service Board.

The Director of the University, who is also a member of the Council, is Professor J. P. Baxter, O.B.E., B.Sc., Ph.D., A.M.I. Chem. E., F.R.A.C.I., M.I.E. Aust.

The Council may provide courses in applied science, engineering technology, commerce, industrial organization, and such related courses as it deems fit, and may after examination confer the several degrees of Bachelor, Master and Doctor, and such other degrees and such certificates in the nature of degrees or otherwise as it thinks fit.

The Council is empowered to establish and maintain branches, departments, or colleges of the University, at Newcastle, Wollongong, Broken Hill or such other places in the State of New South Wales as it may approve. Under this authority, a college of the University was established at Newcastle in December, 1951.

Under the guidance of a Developmental Council established on 8th July, 1947, the first courses leading to the degree of Bachelor of Engineering were instituted in 1948 in Civil, Electrical, Mechanical and Mining Engineering. Courses leading to the degree of Bachelor of Science were introduced in Applied Chemistry and Chemical Engineering in 1949, and in Applied Physics and Wool Technology in 1951. The first degree course

in Architecture was established in 1950. In 1954, first degree courses in Food Technology, Metallurgy, and Applied Geology were established, and part-time degree courses in Applied Psychology will be offered in 1955. During 1954, part-time degree courses were introduced in Applied Biology, Applied Chemistry, Applied Geology, Chemical Engineering, Civil Engineering, Electrical Engineering, Food Technology, General Science, Industrial Chemistry, Leather Chemistry, Mechanical Engineering and Metallurgy.

Two features are emphasized in the planning of first degree courses of the University of Technology, namely, the inclusion of industrial experience as an essential part of the courses to supplement the laboratory and lecture-room work at the University, and the study, in all faculties, of Humanities and Social Science subjects.

By mutual agreement of the Council of the University and of the New South Wales Department of Technical Education the following diploma courses, formerly provided by the Department of Technical Education and requiring matriculation standard for admission, are now administered by the University of Technology: Aeronautical Engineering, Applied Biology, Architecture, Building, Chemical Engineering, Chemistry, Civil Engineering, Electrical Engineering, Food Technology, Leather Chemistry, Mechanical Engineering, Metallurgy, Mining Engineering, Naval Architecture, Optometry, Physics, Production Engineering, Quantity Surveying, Radio Engineering, Science and Secondary Metallurgy.

In general, the full-time courses for the degree of Bachelor extend over four years. In some courses (e.g. Chemical Engineering) the Honours course requires a further year. The degree course in Architecture, Pass or Honours, is of six years' duration. Part-time degree courses extend over six or seven years with an additional year for Honours. The diploma courses generally are of five stages of one year each.

Special investigations may be carried out on any problem of technology or applied science on request, and in respect of any special investigation the Council may charge an appropriate fee.

Arts Courses.—In conjunction with the establishment of the University of New England in February, 1954, as an autonomous body with authority to confer degrees, arrangements were made to provide Arts courses at Newcastle University College in co-operation with the University of New England. Under these arrangements, the syllabuses of study are prescribed by the University of New England which is also the examining body and instruction is provided by members of the School of Humanities and Social Sciences of the University of Technology.

Staff.—The academic appointments are as follow:—*Faculty of Applied Science*—Seven professors, four associate professors, 31 senior lecturers, 69 lecturers. *Faculty of Engineering*—four professors, one associate professor, 23 senior lecturers and 75 lecturers. *Faculty of Architecture*—one professor, one associate professor, two senior lecturers and eleven lecturers. *Faculty of Humanities and Social Sciences*—one professor, two associate professors, seven senior lecturers and eleven lecturers.

Library.—The number of volumes in the library in 1953 was 45,488 (this figure includes the collection at the University Library at Kensington, and all joint libraries of the University and the Department of Technical Education).

Buildings and Sites.—Pending completion of its new buildings, the University has had at its disposal the facilities of the New South Wales Department of Technical Education. The erection of the first major University building is nearing completion on a site of 71 acres at Kensington, near Sydney. Portion of the building has been occupied by the School of Architecture and Building since the beginning of 1954, and the Schools of Humanities and Social Sciences, Applied Physics and Mining Engineering and Geology and the University Administration will be transferred to the building early in 1955. The Schools of Metallurgy and Chemical Engineering occupy eleven light frame buildings on the Kensington site.

Student Hostel.—The University conducts a student hostel at the University site at Kensington, where single room accommodation is available for approximately 200 students.

(c) *University of New England.* The New England University College was established as a branch of the University of Sydney on 1st January, 1938 by the Senate of the University of Sydney. It was established in accordance with the expressed wish of the people of northern New South Wales and for the purpose of providing education at university level for country students particularly. New England thus became the first experiment in university decentralization in Australia.

The original gift to the University of Sydney in 1937 by the late T. R. Forster of "Abington", comprised the old homestead of "Boooloominah", together with several other buildings and 183 acres of land. The New South Wales Government bore the cost of converting the property to its present use and of providing additional buildings. The Commonwealth Government made funds available under the Commonwealth Reconstruction Training Scheme for the erection of another large building to provide additional lecture rooms, laboratories and staff studies.

By virtue of the University of New England Act 1953, the New England University College was incorporated as the University of New England. It came into legal existence as an independent University on 1st February, 1954, and, in addition to fulfilling its previous functions, is now entitled to examine its own students and grant degrees and diplomas. The University is authorized by the Act to co-operate with the New South Wales University of Technology in the provision of degree courses at the Newcastle University College.

There are at present two faculties in the University of New England—The faculty of Arts, which was established in 1938, and the Faculty of Science, established in 1939. A Professor of Rural Science has recently been appointed, and a degree course in Rural Science will be offered in 1957 or 1958.

The University will offer in 1955 correspondence courses to external students in an adequate range of subjects leading to the degree of Bachelor of Arts.

(ii) *Canberra University College.* Particulars are given in Official Year Book No. 39, pp. 227-8, concerning the Canberra University College, which was created in 1930 mainly to establish courses of lectures for degrees in co-operation with the University of Melbourne.

(iii) *Expansion within the Universities.* An important administrative development which occurred in all Universities during the period under review was the appointment of full-time salaried Vice-Chancellors or Principals, a move which gave much greater effectiveness to University administration.

Within the past twenty years the appearance of some of the Universities has altered to a striking extent. New permanent buildings and some temporary ones have been erected and new wings have been added. An impressive expansion has been that taking place in Queensland where, since 1937, building has been proceeding upon a new site at St. Lucia, and, beginning with the transfer of some of the Engineering School in 1947, the University is being gradually moved into its new quarters.

This very considerable building activity has been made necessary primarily by the vast expansion in student numbers from 9,000 in 1929 to 28,792 in 1953. There was a continued increase in University enrolments from 1929 to 1940 followed by a slight recession. In the closing year of the war, however, the number of students had risen beyond any previous figure, and rapid post-war expansion was responsible for a peak enrolment of 32,453 students in 1948. After 1948 the numbers decreased each year as ex-service personnel completed their training under the Commonwealth Reconstruction Training Scheme, but it is anticipated that by 1960 some 40,000 students will be enrolled in Australian Universities.

3. *Courses.*—The post-war period has seen a noticeable expansion in the ranges of courses offered, particularly in the younger and smaller Universities. New faculties of Education were established in Western Australia and Queensland. Two new faculties of Dentistry, two of Commerce (Economics), three of Architecture and one each of Medicine, Law, Veterinary Science, Applied Science, and Engineering also came into being.

Within existing faculties, many new departments were set up. In Engineering, specialist departments of Chemical and Aeronautical Engineering, Civil, Electrical, Mechanical, Mining and Metallurgical Engineering and Surveying have been instituted.

In Medicine the most notable development has been the establishment of specialist courses leading to graduate diplomas in Radiology, Anaesthesia, Clinical Pathology, Ophthalmology, Laryngology, Gynaecology, Tropical Medicine, Dermatology and Psychological Medicine at Melbourne and Sydney.

In Science the smaller Universities followed the development of Melbourne and Sydney by breaking up departments such as Biology into Zoology and Botany, etc., and adding new departments such as Bacteriology and Biochemistry. Melbourne and Sydney also introduced some new courses and a new degree in Forestry was introduced in each University.

In Arts the same processes can be observed. New departments in Semitic Studies, Fine Arts, Music and Statistics were opened in various universities, and other departments were divided or sub-divided. The most prominent addition was the rapid development of Psychology departments which, in the post-war period, expanded into one of the biggest of the Arts departments.

In the smaller faculties, similar innovations and expansions, reflecting an increasing demand for specialized study, have taken place. Examples are the development of departments of Physical Education, Social Studies, Town and Country Planning and Criminology.

In addition, however, there were several attempts to provide integrated general education courses within the faculties of Arts and Science.

4. **Research.**—Australian Universities have long been criticized for their lack of provision for graduate students, but in recent years a notable feature of student enrolments has been the steady increase in the number of higher degree students. Factors contributing to the extension of research and the training of graduate students have been :—

- (a) The Commonwealth Government grant begun in 1936 for the prosecution of research and the training of research workers in Universities ;
- (b) the enlistment of university staffs on extensive research projects in connexion with the 1939-45 war ;
- (c) the establishment of research schools like the Departments of Experimental Medicine and Metallurgical Research in Melbourne and the Australian National University in Canberra ;
- (d) the institution of the Ph.D. degree requiring two years of full-time graduate research ; and
- (e) the development of four-year honour courses for the degrees of B.A. and B.Sc.

5. **Services.**—(i) *General.* The traditional division of the function of Universities into teaching and research seems no longer applicable. A third function has been added in recent times, that of community service. The University has long been responsible for providing an important service to the community in the form of professional training in many fields and in a number of other intangible ways, but of recent years there has been a noticeable increase in the performance by university departments of direct and deliberate services to the community. This was most apparent in time of war when the Universities whole-heartedly accepted the role given them by the Minister for War Organization of Industry when he said in 1942 to a meeting of the Vice-Chancellors, "the Government requires of the Universities specific services, falling under two heads : (i) investigations and research into particular problems relating to the war effort ; (ii) the training of personnel with special qualifications for the armed services, war production and other essential needs". The trend, however, was noticeable before the 1939-45 War and is still continuing. These services, which are of three main kinds, are dealt with hereunder.

(ii) *Service Research.* This is a form of applied research in which a University department applies itself to the solution of a problem of immediate practical importance to the community. The development of producer-gas units for use on motor vehicles during the 1939-45 War, research on poliomyelitis, tropical food plants, bovine mastitis, and mosquito control are examples of work of this type recently undertaken in various University departments.

(iii) *Applied Research.* Closely associated with the kind of research just mentioned are the projects which are requested of the University by outside bodies and are usually in the field of applied research. Services of this kind are most frequently rendered by the engineering faculty. Testing work for government departments and private industry is carried out in almost every engineering department. In Melbourne, since 1934, 400 reports on problems associated with ores and concentrates submitted from all over Australia have been issued by the Department of Mining. Research on servomechanisms for the Department of Supply, aerials for the R.A.A.F., the stability of power systems for the Electrical Research Board and studies on the site, materials and design for the Warragamba Dam are some of other tasks that have been undertaken. Services of this kind however, are by no means confined to the technological field. They have been rendered by almost all University departments and not least by workers in the Social Sciences who have been called upon to investigate matters such as colour-vision tests for the Civil Aviation Department, the teaching of English to foreign-born immigrants and anthropological problems encountered in the administration of New Guinea.

(iv) *Advisory Services.* Consultant and advisory services have come to occupy much of the time of the staff of many departments. There has been a long tradition of service in this field by members of the Departments of Agriculture and Medicine, and almost equally prominent have been the economists whose services were sought by governments and businesses in the depression period of the 1930's. The 1939-45 War saw an increase in demand for expert advice from University faculties and the seconding of personnel to government departments in considerable numbers. In the post-war period much of this demand has continued. Problems of land utilization have called for advice from agriculturalists, geographers and economists. Personnel and training problems in industry have required the services of psychologists and educationists. School broadcasts have been scripted by scientists, and lecturers in English history, modern languages and political science. University physicists, chemists and medical staff have played an important role in recent defence programmes. Developmental schemes have looked for advice to engineers, geologists and architects.

6. *The Commonwealth and the Universities.*—(i) *General.* Commonwealth financial support for university activities may be regarded as developing in three phases. Firstly, in the period up to 1939, Commonwealth interest in research projects carried out by or in collaboration with the Universities led to the granting of increasing sums for this purpose. Secondly, during and after the 1939-45 War the Commonwealth extended assistance to University students, at first with the object of increasing the number of highly qualified people available for the war effort, then with the object of rehabilitating ex-servicemen, and finally as a social service of benefit to the community. Thirdly, since 1951, the Commonwealth has made special grants to the States for university purposes.

(ii) *Grants for Research.* The Commonwealth had given some support to research prior to 1926, chiefly through the Institute of Science and Industry, but the amount spent did not exceed £25,000 per annum. In 1926 the Institute was replaced by the Council for Scientific and Industrial Research (known since 1949 as the Commonwealth Scientific and Industrial Research Organization) with an annual appropriation of £250,000. It has ever since worked in close association with the Universities. Both kinds of research, fundamental and applied, have at times occupied the attention of both the Universities and the Commonwealth Scientific and Industrial Research Organization, but in general, the preliminary training of graduates in research work has been left to the Universities.

In 1936 the Commonwealth Government made a grant of £30,000 per annum for five years to Australian Universities for research in physical and biological sciences. This figure rose over the years to £100,000 in 1950 and was subsequently absorbed in the larger general grant which was then made available by the Commonwealth to the States for Universities. These research grants together with other Commonwealth payments for research purposes, totalled more than £3½ million in 1950-51, compared with less than £½ million in 1939-40.

(iii) *Assistance to Students.* The Commonwealth Government in 1942 set up the Universities Commission to ensure that the flow of trained professional personnel from the Universities would be sufficient to meet the needs of the nation during the war and post-war periods. Selected University students were reserved from war service and were eligible for supplementary assistance of £104 per annum if living at home and £143 if living away from home.

Financial assistance to students was continued for five years after the end of the 1939-45 War with some increases in living allowances and in 1951 the Commonwealth Scholarship Scheme was planned by the Universities Commission.

Under this Scheme 3,000 scholarships are allocated annually to the States on a population basis, 2 per cent. of them being reserved for students over the age of 25 years. Awards are made on merit to students completing secondary courses and no regard is paid to the income of the students or their parents. Scholarship holders have their fares paid and, subject to a means test, are eligible for a maximum allowance of £169 per annum (£240 10s. for a student living away from home) and married scholars receive additional family allowances. At 30th June, 1954, there were 7,917 scholars in training at Universities and 1,298 at other Institutions.

In addition to the above eligible ex-service personnel received training at Universities and similar institutions at Commonwealth expense under the Reconstruction Training Scheme. A general description of the Scheme is to be found on page 240 of Official Year Book No. 39. The Commonwealth Government made available to the training institutions approximately £1 million for buildings and £½ million for equipment and also paid all tuition fees and subsidies designed to meet the cost to the Universities of the Reconstruction Trainees.

At the 30th June, 1954, 25,205 full-time and 19,519 part-time students had been selected for training under this scheme and more than 21,000 had successfully completed their courses.

(iv) *Commonwealth Grants to the States for University Purposes.* Following a report submitted by a committee of inquiry appointed to report on University finances and requirements the Commonwealth passed the States Grants (Universities) Act in 1951 to enable grants to be made to the States for their Universities.

The following grants were payable to the States for University purposes and for current expenditure only: (a) A special grant covering the six months' period ending 31st December, 1950 (payable to all States participating in the scheme); (b) A basic grant in each of the years 1951, 1952 and 1953 payable on condition that, for the University concerned, the total of State grants and fees received by the University in the year in question was at least equal to a stipulated "qualifying amount"; (c) An additional grant up to a stated maximum in each of the years 1951, 1952 and 1953 payable at the rate of £1 for every £3 by which, for the University concerned, the total of State grants and fees received by the University in that year exceeded the "qualifying amount".

In each of the years 1951, 1952 and 1953 a further grant was also payable to the States to be applied towards the teaching and administrative costs of residential colleges, provided that the University concerned qualified for the basic grant referred to in (b) above.

The States Grants (Universities) Act No. 75 of 1953 (assented to 10th December, 1953) repealed the 1951 Act, and shall be deemed to have come into operation on 1st January, 1953. The main provisions are summarized as follows:—

Section 5 (1).—If the sum of the fees and State grants received by a University during either of the years 1953 and 1954 exceeds the amount specified in column 2 of the table below, the grant to the State for that year is—

(a) an amount equal to one-third of the excess; and (b) the amount shown in column 3 of the table.

Section 5 (2).—The maximum amount payable under Section 5 (1.) (a) above is shown in column 4.

Section 6.—The State will, in the year in which payment is received, pay to the University concerned an amount equal to the grants received and must ensure that—

(a) the grant under Section 5 (1.) (a) is applied for expenditure, not being capital expenditure, on university purposes; and (b) of the grant under Section 5 (1.) (b), the amount shown in column 5 is applied towards the teaching and administrative costs of the residential colleges of the University and the remainder for expenditure, not being capital expenditure, on university purposes.

Section 9.—The provisions of the 1951 Act shall be deemed to have operated in respect of the year 1952 as if the amounts set out in relation to the New South Wales University of Technology had been the following:—£7,280; £81,885; £605,805; £30,826; £2,356.

COMMONWEALTH GRANTS TO THE STATES FOR UNIVERSITY PURPOSES.

(£.)

University.	Amount of Fees and State Grants.	Amount of Financial Assistance under Section 5. (1.) (b).	Maximum Amount Payable under Section 5. (1.) (a).	Amount for Teaching and Administrative costs of Residential Colleges.
(1)	(2)	(3)	(4)	(5)
New South Wales—				
University of Sydney	783,369	270,023	202,140	8,900
N.S.W. University of Technology ..	605,805	81,885	61,652	2,356
New England University College ..	64,164	13,099	9,960	220
Victoria—University of Melbourne ..	655,159	220,414	165,000	7,265
Queensland—University of Queensland	309,269	93,226	69,780	3,073
South Australia—University of Adelaide	272,394	93,893	70,320	3,095
Western Australia—University of Western Australia	183,531	62,845	47,400	1,668
Tasmania—University of Tasmania ..	106,319	33,127	22,920	505
Total	2,980,010	868,512	649,172	27,082

7. Teaching and Research Staff.—The following table shows the number of professors, readers, associate and assistant professors, lecturers in charge, lecturers including senior lecturers and assistant lecturers (full-time and part-time), demonstrators (full-time) and tutors (full-time and part-time), and honorary lecturers and demonstrators, on the teaching and research staffs of the Universities and University Colleges during the year 1953.

UNIVERSITIES : TEACHING AND RESEARCH STAFF, 1953.

University or College.	Pro- fessors.	Readers, Associate Pro- fessors, Assistant Pro- fessors, Lec- turers in Charge.	Lecturers.(a)		Demonstrators and Tutors.(b)		Honorary Lec- turers and Demon- strators.	Total.
			Full- time.	Part- time.	Full- time.	Part- time.(b)		
Sydney	52	23	293	244	90	105	57	864
Melbourne	42	32	220	114	99	84	2	593
Queensland (Brisbane) ..	29	21	143	165	36	27	(c) 24	445
Adelaide	28	27	95	64	11	41	..	266
Western Australia (Perth)	16	16	63	37	20	..	..	152
Tasmania (Hobart) ..	15	4	45	14	8	..	..	86
N.S.W. University of Tech- nology (Sydney) ..	10	6	216	333	11	..	..	576
New England University College (Armidale, N.S.W.) .. ..	..	16	28	4	2	1	14	65
Canberra University Col- lege	6	..	18	15	..	5	..	44
Total	193	145	1,121	990	277	263	97	3,091

(a) Includes Senior Lecturers and Assistant Lecturers.
(c) Department of External Studies.

(b) Excludes Part-time Demonstrators

The Conservatorium of Music in Sydney is attached to the Education Department, but in Melbourne and in Adelaide the Conservatorium of Music is under the control of the University.

8. Students.—(i) *Total.* The number of students (of whom 1,104 males and 18 females were Commonwealth Reconstruction Training Scheme students), enrolled for courses at the Universities and University Colleges for the year 1953 is shown in the following table :—

UNIVERSITIES : TOTAL STUDENTS ENROLLED, 1953.

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscel- laneous Subjects.	Total.(a)
		Post- Graduate.	Sub- Graduate.			
Sydney	5,904	112	771	..	185	6,918
Melbourne (b)	6,168	22	248	140	450	7,028
Queensland (Brisbane) ..	2,908	32	328	264	206	3,735
Adelaide	2,344	78	806	..	882	4,110
Western Australia (Perth) ..	1,639	..	..	..	102	1,732
Tasmania (Hobart) ..	503	46	6	32	87	664
N.S.W. University of Tech- nology (Sydney) ..	679	..	3,021	75	276	4,044
New England University College (Armidale, N.S.W.)	209	28	2	..	3	242
Canberra University College	203	..	8	..	108	319
Total	20,557	318	5,190	511	2,299	22,794

(a) Adjustment made for students enrolled for more than one course.
enrolled but attending Canberra University College.

(b) Includes seven students

Of the total students in 1953, 22,794 were males and 5,998 females. Included in those enrolled for degrees were 56 enrolled for higher degree courses in Sydney, 224 in Melbourne, 83 in Queensland, 175 in Adelaide, 64 in Western Australia, 18 in Tasmania, 110 at the New South Wales University of Technology, 4 at the New England University College, and 27 at the Canberra University College.

(ii) *New Students Enrolled.* The number of new students (of whom 27 males were Commonwealth Reconstruction Training Scheme students) enrolled for courses at the Universities and University Colleges during the year 1953 is shown in the following table :—

UNIVERSITIES : NEW STUDENTS ENROLLED, 1953.

University or College.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total.(a)
		Post-Graduate.	Sub-Graduate.			
Sydney	1,801	..	374	..	16	2,167
Melbourne	1,248	1	78	18	197	1,542
Queensland (Brisbane) ..	597	4	125	51	87	864
Adelaide	418	1	196	..	309	924
Western Australia (Perth) ..	448	..	..	..	16	464
Tasmania (Hobart) ..	174	3	4	21	36	237
N.S.W. University of Technology (Sydney) ..	172	..	510	28	166	875
New England University College (Armidale, N.S.W.)	89	..	1	..	3	93
Canberra University College	76	..	..	..	69	145
Total	5,023	9	1,288	118	899	7,311

(a) Adjustment made for students enrolled for more than one course.

Of the total new students enrolled in 1953, 5,318 were males and 1,993 females. Included in those enrolled for degrees were 11 enrolled for higher degree courses in Melbourne, 11 in Queensland, 6 in Adelaide, 1 in Tasmania, 17 at the New South Wales University of Technology, 4 at the New England University College, and 15 at the Canberra University College.

9. *University Income for General Activities.*—The income of the Universities and University Colleges are derived principally from State and Commonwealth Government grants (including capital grants), students' fees, and income from private foundations, etc. From all sources other than new bequests the income during 1953 for general university functions were as shown in the table below. In South Australia, Government grants and income from private foundations include amounts in respect of the Waite Agricultural Research Institute.

UNIVERSITIES : INCOME FOR GENERAL ACTIVITIES, 1953.

(£.)

University or College.	Government Grants.	Students' Fees.	Interest, Rent, Dividends and Donations.	Other.	Total.
Sydney	879,588	512,035	54,526	33,630	1,479,779
Melbourne	842,772	356,354	25,385	18,185	1,242,696
Queensland (Brisbane) ..	568,366	128,048	17,539	22,119	736,072
Adelaide	556,992	61,021	49,138	14,539	681,690
Western Australia (Perth) ..	397,578	19,412	13,907	38,706	469,603
Tasmania (Hobart) ..	201,391	26,266	1,121	4,284	233,062
N.S.W. University of Technology (Sydney) ..	1,159,951	46,152	..	2,201	1,208,304
New England University College (Armidale, N.S.W.)	141,540	11,099	679	27,338	180,656
Canberra University College	67,039	5,686	185	1,624	75,434
1953—Revenue	4,501,539	1,166,073	162,480	162,626	5,992,718
Capital	314,578	..	..	..	314,578
1952—Revenue	4,140,267	1,137,413	173,455	158,867	5,610,002
Capital	450,142	..	..	..	450,142

10. **Principal University Benefactions.**—In previous issues of the Official Year Book information is given in some detail in regard to the extent to which the Universities have benefited from private munificence. (See Year Book No. 40, pages 467-8).

11. **University Expenditure for General Activities.**—The principal item of disbursements under the general University activities consists of the maintenance of the teaching and research staff, representing 67.7 per cent. of the total in 1953 compared with 64.6 per cent. in 1952.

The following table shows the expenditure including capital expenditure during the year 1953 :—

UNIVERSITIES : EXPENDITURE FOR GENERAL ACTIVITIES, 1953.
(£.)

University or College.	Adminis- tration.	Maintenance of—			Other including Buildings.	Total.
		Teaching and Research Depart- ments.	Premises and Grounds.	Libraries.		
Sydney	166,020	1,017,923	166,282	45,994	84,467	1,480,686
Melbourne	105,187	835,729	119,993	53,617	95,226	1,209,752
Queensland (Brisbane)	44,240	563,235	62,761	30,269	31,303	731,808
Adelaide	63,595	464,790	72,931	28,616	26,567	656,499
Western Australia (Perth)	40,712	294,429	56,890	20,002	59,999	472,032
Tasmania (Hobart)	24,854	164,506	13,763	12,856	12,239	228,218
N.S.W. University of Tech- nology (Sydney)	85,473	757,984	62,295	25,439	277,113	1,208,304
New England University College (Armidale, N.S.W.)	21,873	81,866	18,863	6,797	50,871	180,270
Canberra University College	11,818	49,469	2,661	8,629	5,996	78,573
1953—Revenue	560,540	4,165,651	539,961	231,432	349,428	5,847,012
Capital	3,232	64,280	36,478	787	294,353	399,130
1952—Revenue	556,356	3,811,353	530,342	222,524	364,602	5,485,177
Capital	4,206	93,375	32,055	2,198	429,821	561,655

12. **Funds for Special Purposes.**—(i) *General.* The tables shown in paragraphs 9 and 11 relate to general University activities while the following show the financial position of the Special Purpose Funds which in the main are for Special Research Purposes.

(ii) *Income for Special Purposes.* The following table shows the main items of income for the year 1953 :—

UNIVERSITIES : INCOME FOR SPECIAL PURPOSES, 1953.
(£.)

University or College.	Govern- ment Grants.	Int. rest. Rent. and Dividends and Donations.	Public Examina- tion Fees.	Special Research Grants.	Other.	Total.
Sydney	7,100	44,446	..	161,911	9,906	223,363
Melbourne	51,962	150,847	62,381	47,385	32,239	344,814
Queensland (Brisbane)	7,225	9,140	34,761	36,963	23,754	111,843
Adelaide	14,095	4,885	15,556	20,143	2,500	57,179
Western Australia (Perth)	11,431	37,156	20,244	9,503	17,377	95,711
Tasmania (Hobart)	4,838	2,501	3,471	4,976	429	16,215
N.S.W. University of Tech- nology (Sydney)	13,560	7,230	..	8,812	..	29,602
New England University College (Armidale, N.S.W.) .. .. .	..	306	..	300	..	606
Canberra University College	6,787	24	..	1,000	1,492	9,303
1953—Revenue	109,580	205,773	136,413	290,993	85,197	827,956
Capital	7,418	50,762	..	..	2,500	60,680
1952—Revenue	98,445	165,885	117,519	255,366	164,514	801,729
Capital	21,297	121,565	..	..	87,595	230,457

(iii) *Expenditure for Special Purposes.* The following table shows the main items of expenditure for the year 1953 :—

UNIVERSITIES : EXPENDITURE FOR SPECIAL PURPOSES, 1953.
(£.)

University or College.	Special Research Expenses.	Public Examination Expenses.	Scholarships, Bursaries, etc.	Other including Buildings.	Total.
Sydney	108,753	..	18,293	52,673	179,719
Melbourne	177,328	59,547	5,728	99,777	342,380
Queensland (Brisbane)	40,594	40,290	4,626	13,311	98,821
Adelaide	47,842	17,861	2,533	..	68,236
Western Australia (Perth)	26,835	19,338	10,547	20,178	76,898
Tasmania (Hobart)	9,148	2,851	2,166	..	14,165
N.S.W. University of Technology (Sydney)	28,430	..	1,172	..	29,602
New England University College (Armidale, N.S.W.)	289	..	245	50	584
Canberra University College .. .. .	..	..	2,638	8,531	11,169
1953—Revenue	435,306	139,887	47,948	113,622	736,763
Capital	3,913	..	..	80,898	84,811
1952—Revenue	449,256	132,964	46,178	136,789	765,187
Capital	16,696	..	..	36,631	53,527

13. *Degrees Conferred, etc.*—The following table shows the number of degrees conferred and diplomas and certificates granted for males and females separately, at each University during the year 1953:—

UNIVERSITIES : DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, 1953.

Course	Sydney.		Melbourne.		Queensland.		Adelaide.		Western Australia.		Tasmania.		N.S.W. Univ. Tech.		Aust.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Degrees—																
Arts	199	172	180	99	53	28	32	21	55	44	29	17	..	..	548	381
Law	74	3	64	4	14	..	19	2	12	1	7	..	..	..	190	10
Commerce or Economics	66	3	145	10	36	3	9	..	..	..	8	2	..	..	264	18
Education	4	..	30	2	2	1	..	..	12	1	..	..	..	..	48	4
Science	143	37	124	26	78	21	74	12	54	10	21	5	27	..	521	111
Medicine(a)	529	90	151	13	44	4	89	14	..	..	..	..	..	..	813	121
Engineering	126	..	120	..	48	..	66	..	36	..	12	..	37	..	445	..
Agriculture	27	3	21	2	12	1	12	..	16	2	..	..	..	..	88	8
Veterinary Science	34	4	1	..	19	1	..	..	..	..	..	..	..	..	54	5
Dentistry	103	5	18	2	43	4	13	..	10	..	..	..	..	..	187	11
Music .. .. .	..	..	5	12	..	..	1	..	..	..	..	..	..	..	6	12
Architecture	36	5	33	1	5	..	..	..	..	..	..	..	..	..	74	6
Divinity	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Total	1,342	322	892	171	354	63	315	49	195	58	77	24	61	..	3,739	687
Diplomas (Post-Graduate)—																
Education	78	52	39	16	18	13	12	8	1	..	11	3	..	..	159	92
Medicine	29	3	18	1	..	..	..	..	..	..	..	..	..	..	47	4
Other .. .. .	..	..	..	1	6	..	..	..	..	..	1	..	..	..	7	1
Total	107	55	57	18	24	13	12	8	1	..	12	3	..	..	13	97
Diplomas (Sub-Graduate)	10	26	50	27	58	24	90	36	..	..	..	..	..	..	208	113
Certificates .. .. .	..	..	..	..	82	6	2	..	2	5	5	7	..	..	91	18

(a) Separate degrees for M.B. and B.S. are conferred at the Sydney University; this fact has to be taken into account to arrive at the number who qualify to practise as medical practitioners.

§ 9. Further Education.

1. **General.**—Beyond the schools, colleges and universities there are agencies engaged in less direct educational work which cannot be readily assessed and described. Among them are the mass media of communications (press, film and radio) which are powerful educational forces—whether they are used specifically to disseminate information such as new agricultural techniques or preventive health measures, or on the other hand in a much more general way to exert a powerful influence on the cultural level of the population. There are also bodies such as Adult Education Authorities, Libraries, Art Galleries and Museums which aim at catering for the educational requirements of particular groups.

2. **Adult Education.**—(i) *New South Wales. University Department of Tutorial Classes.* In 1914 the University Senate established a Department of Tutorial Classes to provide classes and study groups along the lines of similar work in England. The Department conducts tutorial classes in a variety of subjects, grouped under the broad headings of Social, Political and Economic Studies; History and International Affairs; Psychology; Philosophy; Literature and Drama; Foreign Languages; Child Study; Music and Art. Courses range from 9 to 28 lectures, and some go on from first to second and sometimes fourth year.

Since 1938 the Department has conducted a Discussion Group scheme, designed to provide country people in particular with opportunities for group study of the same type of subjects as are studied in its tutorial classes, and in 1946 made provision for groups of people interested in activities such as play reading and performance, writing, public speaking, painting and music-making, rather than discussion. In all the Department enrolled 6,290 students for continuous work in classes and groups in 1952. The Department also produces the *Current Affairs Bulletin* which is issued fortnightly and distributed widely to educational bodies, groups, business organizations and individual subscribers in Australian and overseas.

A library service is provided to all students in classes and groups by the Adult Education Section of the Public Library of New South Wales, and finance for the Department's activities is provided by University appropriation (£14,100 in 1952), Government Adult Education Extension Grant (£18,450 in 1952) and from discussion and other fees. Half the fees from tutorial classes are allotted for organizing purposes.

(ii) *Victoria.* The Council for Adult Education is a statutory body, with a basic annual grant of £25,000. Its expenditure was £74,000 in 1952–53. The Council organizes evening classes, summer and week-end schools, public lectures, sends drama and music to the country centres through its Travelling Theatre and Music Tours, co-operates with the National Gallery of Victoria in the organization of a Travelling Art Exhibition, operates an extensive system of discussion groups in Victoria and provides service for country dramatic and music societies.

(iii) *Queensland.* Each succeeding year has shown a considerable increase in the number of persons availing themselves of the facilities for Adult Education, which is provided by the State Government, working through the Board of Adult Education. In 1953 there were almost 3,000 enrolled students in Brisbane, together with many who attended casually, and at least four times that number in 127 country towns, for which arrangements are made through five district centres. The total attendances recorded at 4,954 lectures, group meetings, etc., was 150,286. As before subjects most in demand were English Literature and English Expression, Psychology, the Appreciation of Music and Art, Home Handicrafts and Photography.

The full cost of Adult Education is borne by the State and admission to all courses is free. The expenditure for the year 1952–53 was £35,039.

(iv) *South Australia.* Since 1917 the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided each year in the metropolitan area series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest, for people who have no intention of proceeding to a degree or diploma and are unable to attend the ordinary University courses. The fee is £1 15s. a course and is paid to the Workers' Educational Association, which accepts the responsibility of organizing the classes. The enrolment for these classes in 1953 was 1,238. The Joint Committee extends its activities into the larger country centres by sending art exhibitions and plays on tour, lending boxes of books and arranging lectures and film screenings.

(v) *Western Australia.* In Western Australia the policy of the Adult Education Board, is to provide men and women of varying educational attainments in country districts as well as in the metropolitan area with facilities for the constructive use of leisure by use of head or hands and in such a way as to stimulate in the individual a sense of citizenship and to encourage community activities among groups.

The Board organizes lecture classes, summer schools and discussion groups, sends drama and ballet companies to country towns, and encourages the activities of local repertory clubs. Other notable features of the work of the Board in 1952 were the presentation of concerts of a classical nature, screenings of foreign films, and open-air dramatic productions to the metropolitan public.

(vi) *Tasmania.* Although some form of Adult Education has existed since 1913 it was not until 1948 that provision was made by legislation for the formation of an Adult Education Board to plan and develop adult education in Tasmania and to assist other bodies actively engaged in adult education.

The executive officer of the Board is the Director of Adult Education, at Hobart, under whose direction three Regional Officers organize Adult Education in areas each covering approximately one-third of the State, and a fourth is organizer for Hobart.

In 1952 there were 167 courses in all subjects, with nearly 2,000 enrolled students. The State Government grant in 1952-53 was £20,000. Subjects most in demand are women's crafts such as dressmaking, then, in descending order of interest, drama, arts and crafts, public speaking, useful hobbies like photography, languages, psychology, science like marine biology, world affairs, economics, academic subjects.

3. *Workers' Educational Associations.*—In 1913, Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and providing for the higher education of the workers in civic and cultural subjects.

In Victoria the Association has been superseded by the Council for Adult Education, a statutory body appointed by the Government. A Statutory Board has also been appointed in Queensland. Direct grants are made by the Governments of New South Wales and South Australia. Grants in 1952, for classes and discussion groups organized by the Association and serviced by their respective State Universities in these two States, were as follows :—New South Wales, £32,590, 110 tutorial classes, 120 discussion groups (taking 181 separate courses) and 57 Kit groups; South Australia, £5,000, 34 tutorial classes and extension lectures at country centres.

Grants from fees from the Tutorial Classes amounting to £10,850 were made to the Association in New South Wales for both organizing work and a teaching service. The teaching service in 1952 included 25 classes, 5 summer schools (two each of 10 days, one of 7 days, and 2 of 5 days), 24 week-end schools, 37 public lectures (mainly in short courses of 3 lectures), 63 lectures to various organizations, and 35 broadcast talks. In South Australia the Association receives a grant of £812 for general organizing purposes.

In Tasmania the Association received a grant of £1,000 from the Adult Education Board and 108 lectures were organized in 1952, mostly in short series from 3 to 12. The Association's primary interest has been in subjects related to social change such as Industrial History, Economics, Political Science and Sociology. In recent years, however, there has been a substantial increase in the number of classes studying Psychology, History, Literature, Music, Drama and Popular Science.

4. The New Education Fellowship.—The New Education Fellowship is a world organization of parents, educators, and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State.

One of its principal functions is the organization of periodic conferences, to which leading oversea educators are invited. Sessions are usually held in each of the capitals and in various country centres, thus enabling oversea leaders of educational thought to influence considerable numbers of Australian teachers and others. Conferences of this type were held in 1937, 1946, 1949 and 1951.

§ 10. Libraries.

1. General.—The Munn-Pitt Report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is seen in the rapid development of libraries in all States, all of which have now passed legislation to increase library services, and in the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia, its functions now including the promotion and improvement of libraries and library services. The Association conducts annual examinations for which students are prepared by courses of instruction in all States. Formal library schools exist in the National Library, Canberra, and the Public Libraries at Sydney and Melbourne.

2. Commonwealth.—(i) *Commonwealth National Library.* This library was created as the Commonwealth Parliamentary Library in 1901. The library of Congress was chosen in 1903 as the model upon which its collections and services should be developed and it has therefore assembled a great reference collection with special emphasis on Australian material and rendering services on a national basis.

While the provision of a reference service to members of Parliament and to Government Departments remains a primary responsibility, the National Library now offers research facilities to University institutions in the Australian Capital Territory and to students of Australian history and affairs, publishes basic bibliographies in the field of Australiana and serves as a free public library for residents of the Australian Capital Territory.

In 1953 it contained about 400,000 volumes, together with many tens of thousands of pamphlets, pictures, prints, maps, manuscripts and historical objects, scores of thousands of feet of microfilm, about two and a half million feet of moving picture films and 100,000 cubic feet of archives. It is particularly strong in the social sciences, in its holdings of Government publications, Australiana, and material relating to countries of the Pacific and adjacent regions.

The rapid growth of its Australiana, strengthened by the acquisition of the Petherick collection of 16,500 items in 1911, and the notable collection of Cook manuscripts in 1923, caused the Library Committee in the latter year to adopt the title of "Commonwealth National Library".

The National Library's activity in the field of Australiana was substantially advanced when, following the posting of a Liaison Officer to London in 1944, arrangements were concluded to microfilm, in association with the Public Library of New South Wales, original records relating to Australia in the Public Record Office and elsewhere.

The operation of the Commonwealth Publications Exchange Agency, established in 1947, brings substantial sets of official publications of overseas countries as well as those of research institutions and learned societies throughout the world. Under the Copyright Act 1912 the publisher of every book, pamphlet, etc., printed in Australia is required to deposit a copy in the Library.

The National Library is the Archival Authority for the records of all Commonwealth Departments and Agencies and repositories have been established in Canberra, Melbourne, Sydney, Brisbane and Adelaide. The National Library is also the central library of documentary and educational films, and is the non-theatrical film distributing agency in Australia for the Australian National Film Board. The film collection contains about 4,000 titles, together with Australian historical films and a great number of film strips.

The National Library is also responsible for providing and servicing the Australian reference libraries at all Commonwealth Government establishments overseas. Library services for Commonwealth Territories began in 1936 and are now established in Papua-New Guinea and the Northern Territory, as well as in Norfolk Island and Nauru. The National Library selects, purchases and provides and catalogues the major part of the book stocks, assists in meeting reference needs, and provides the Chief Librarian in the Northern Territory.

(ii) *Patent Office Library.* The library of the Commonwealth Patent Office, Canberra, contains over 56,000 volumes. Patent specifications of inventions are received from the principal countries of the world, and a wide range of technical literature and periodicals is available.

(iii) *The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting Services, collected during and after both world wars. This mass of material is constantly being augmented by the addition of books, periodicals and other records covering contemporary trends and events in the field of military history and science, as well as records of earlier wars in which Australian troops participated.

The printed records section contains approximately 50,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings of war leaders and personalities, war posters and postage stamps. Many personal collections by distinguished soldiers and historical documents relating to the wars have also been placed in the Memorial's custody.

Written records comprise correspondence files of head-quarters and units of both world wars, and the original war diaries compiled from day to day by each unit during its existence.

The collection of official war photographs covering 1914-18 and 1939-45 Wars numbers over 250,000, and a similar collection of official motion picture film depicting Australia at war totals about 4 million feet.

Facilities for public research are not yet fully developed, but all requests for information are met where practicable.

(iv) *Other Departmental Libraries.* The following Commonwealth authorities in Canberra have specialized collections in their own fields, and in addition draw largely on the National Library :—Attorney-General's Department, Commonwealth Bureau of Census and Statistics, Commonwealth Forestry and Timber Bureau, Department of Commerce and Agriculture, Department of External Affairs, Department of Territories, Department of Health, Department of National Development, Commonwealth Public Service Board, Department of Trade and Customs, Department of Works, and News and Information Bureau of the Department of the Interior.

The Department of Labour and National Service has its main library in Melbourne, and branch libraries in Sydney and Adelaide. Other departmental libraries in Melbourne are those of the Department of Air, Department of Defence, Department of Social Services and Postmaster-General's Department. The library of the Commonwealth Office of Education was established in Sydney during 1945.

(v) *Commonwealth Scientific and Industrial Research Organization.* The head office in East Melbourne maintains a library covering all branches of science except the medical sciences. In addition, each division and section of the Organization has its own library; together, these form a series of specialist libraries covering such subjects as food preservation, horticulture, fisheries, entomology, botany, agriculture, veterinary science, animal husbandry, building research, dairy products, etc. There are 22 such branches, each with its own staff varying in number from one to sixteen, and also smaller collections under the care of research officers aided by visiting librarians. Ten of the branches are in Victoria, eight in New South Wales, two in South Australia, and one each in the Australian Capital Territory and Queensland. The Head Office Library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries, and small union catalogues are being developed among groups of branch libraries with similar interests. The collections are particularly strong in the publications of overseas scientific and technical research institutions, with many of which exchange relations exist. The general public may have access to these materials for reference purposes.

3. States.—(i) *Metropolitan Public Libraries.* In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favorably with similar institutions elsewhere in the world. The following statement gives the number of volumes in the Public Library of each capital city at 30th June, 1953 :—

METROPOLITAN PUBLIC LIBRARIES, 30th JUNE, 1953.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Canberra (a)	400,000	..	(b)	400,000
Sydney	(c) 480,631	(d)	140,814	621,445
Melbourne	607,380	85,196	37,540	730,116
Brisbane	110,500	..	20,612	131,112
Adelaide	175,673	34,278	(e) 56,501	266,452
Perth	192,907	..	2,938	195,845
Hobart	49,686	31,099	(f) 158,462	239,247

(a) Commonwealth National Library, including Parliamentary Section. (b) Books are lent to libraries or students throughout Australia whenever necessary for research work. (c) Includes 153,922 volumes in the Mitchell Library. (d) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. In 1953, books in this library numbered 122,788. (e) Includes 7,256 volumes in the Children's Branch. (f) Includes 103,241 volumes in the Children's Branch.

(ii) *New South Wales.* The Free Library Movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the Library Act 1939, which was fully proclaimed as from 1st January, 1944. The Library Board was fully constituted in 1944, and came into effective operation in September of that year. One hundred and twenty-seven Councils have adopted the Library Act and during 1952-53 spent £263,499 on their libraries from rates, as well as £149,917 received in subsidy. There are 130 libraries, containing 847,354 volumes, being operated by 123 councils.

New South Wales departmental libraries are staffed by officers seconded from the State Library, which also provides a central book-buying and master cataloguing service for departmental libraries, and municipal and shire libraries constituted under the 1939 Act. The State Library also manages the libraries of the University Tutorial Classes and the Workers' Educational Association.

The Country Circulation Department forwards books on loan to State schools, to Schools of Arts and to individual students. During 1953-54, 111,101 books were lent to small State schools, 38,199 to Schools of Arts and small country libraries, 306 to the Far Western Division, and 11,007 Special Loans lent for extended periods to shire and municipal libraries and to Lord Howe Island, while 29,340 reference works were lent to individual country students.

The Mitchell Library in Sydney of more than 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia and the Southern Pacific, and valued at £100,000, was bequeathed to the trustees of the Public Library in 1905 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as possible, hence the library is the resort of specialists. There are now 153,922 volumes in the library, in addition to valuable manuscripts, collections of Australian postage and fiscal stamps, and various pictures, coins, etc.

In Newcastle, Dr. Roland Pope has given his collection, worth £10,000, which is being housed temporarily at the School of Arts.

Other important libraries in New South Wales are the Australian Museum, 33,450 volumes; Teachers' Colleges, 130,572; Technical Education Branch, 87,626; Public Schools, 1,213,691; Railways Institute, 142,369; Road Transport and Tramways Institute, 48,663; Cooper Library of the New South Wales Public School Teachers' Federation, 17,467; and the Library at the National Herbarium, 10,000 volumes. At 30th June, 1953 the Parliamentary Library contained 111,462 volumes.

(iii) *Victoria.* Until the establishment of the Free Library Service Board in 1947, the only public library facilities available in Victoria except from the State Public Library and one or two Metropolitan Municipal Libraries were those offered by about 200 out-moded Mechanics' Institute Libraries situated in country areas all over the State. The Board's policy has been to substitute for these inadequate services an efficient system of adequately stocked, modern public libraries controlled by local Municipal Councils and subsidized by the Board. Since the Board's inception 56 municipalities, comprising 934,000 of the State's population, have established libraries. Of these, 15 are in the city, serving 616,000 people, and 41 in the country, serving 318,000 people. The amount of £96,000 was paid to the Councils in library subsidy for the year 1952-53 and a total of £173,435 was expended in Municipal Library Service for the same year. There are 435,745 books available to the communities in which libraries are established and combined circulation figures were 2,794,600 as at 30th September, 1952.

(iv) *Queensland.* Prior to 1945 Queensland's library needs were met by the State Public Library, established in 1902 and administered by the Chief Secretary's Department, and by Schools of Arts or similar libraries in metropolitan and country districts supported by members' subscriptions. The Libraries Act 1943 constituted a Library Board "to attain efficient co-ordination and improvement of the library facilities of the State with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally throughout the State".

The control and management of the Public Library has been entrusted to the Board, which had built up the book collection to 131,112 volumes in 1952-53. The Libraries Act Amendment Act of 1949 provides for the deposit in the Public Library of a copy of all books, pamphlets, maps and other printed material published in Queensland. A country extension service for people residing outside the metropolitan area is now operating on a limited scale. Its book collection numbered 20,612 in 1952-53.

The Board endeavours to encourage the establishment of new library services and the extension of existing facilities by subsidizing local bodies on a £1 for £1 basis for the purchase of books and the cost of library space and equipment. The number of local bodies subsidized was 93 in 1952-53.

The Act empowers local authorities to establish library facilities. In 1953, 26 local authorities were conducting library services, and several others have indicated that they will do so in the near future. The Brisbane City Council has established nine libraries, of which five have separate children's collections, and hopes to increase the number to 28.

The Oxley Memorial Library was established in 1926 to promote the study of Australian literature, literature relating to Australia and Queensland historical material. Since 1946 it has been administered as a department of the Public Library, and the collection kept segregated. During the year 1952-53 its holdings in volumes increased from 16,272 to 16,710. A valuable addition in 1950 was the L'Estrange collection of Queensland stamps.

The library of the Parliament of Queensland was established in 1860. It contained in 1952 approximately 80,000 volumes, consisting of official publications and books devoted largely to history and the social sciences. The cataloguing and reclassification of the library commenced in 1948. An amendment to the Act in 1949 entitles the library to a copy of every book published in Queensland.

(v) *South Australia.* Following the Price Report of 1937, the Public Library of South Australia was separated from the Museum and Art Gallery early in 1940 and became a government department, administered by a Principal Librarian and a Libraries Board.

In the Reference department there are about 176,000 volumes and seating for 300 readers. Most of the books may be borrowed. Over 3,000 periodicals are filed, and the collection of newspapers includes every newspaper printed in South Australia. There are 34,000 volumes in the Lending Department available to persons living in the Metropolitan area, and the Country Lending Service has 49,000 volumes of which, more than half are suitable for children.

The Research Service specializes in scientific and technical inquiries, and supplements the resources of the Public Library by borrowing from other libraries and by obtaining microfilm copies of material not available locally. It has an extensive collection of trade catalogues.

The library of the Parliament of South Australia contains 65,000 volumes.

The Institutes Association in 1953 comprised 240 suburban and country libraries with 760,454 volumes.

(vi) *Western Australia.* The Library Board of Western Australia was constituted by Act of Parliament in 1951, to advise the Minister on matters of general policy, to approve of libraries to be registered as free libraries and to provide for their control, and to control and manage libraries and services and the training of librarians.

In 1945 an Archives Branch was established at the Public Library as a repository for the non-current records of the Government and other historical material relating to Western Australia, including the collection of the Western Australia Historical Society.

An Adult Education Library of 12,000 volumes of general reading and fiction provides for readers in metropolitan and country areas. The library is conducted by the Adult Education Board and requires no deposit from its readers. The Board pays outward freight for country readers.

(vii) *Tasmania.* Library service in Tasmania has expanded rapidly during the past few years. Under the Libraries Act 1943 the Tasmanian Library Board was constituted, and the State Library of Tasmania was established on 1st January, 1944. The Board, in addition to administering the State Library headquarters in Hobart, is responsible for the extension of library services throughout the State and for the control of State

aid. Municipalities adopting the Act spend the proceeds of local rates on library premises, salaries and maintenance, and books for permanent retention. State aid is provided in the form of books of a value equal to the amount collected in rates, which are exchanged at intervals. In Launceston State aid is given in cash. In 1952-53 the Launceston City Council contributed £5,560 and £5,114 was received in State aid.

Of the 49 municipalities in the State, 36 have adopted the Act and seven libraries have been established with the support of the Hydro-Electric Commission.

The State Library provides lending and reference services for the people of Hobart and operates a reference service for people throughout the State. In addition, it conducts screenings of documentary films, recitals of recorded music, summer schools, lectures, library weeks in country centres, puppetry demonstrations, etc.

The Parliamentary Library works in close collaboration with the State Library, which provides a reference officer to serve members during session, and undertakes to catalogue all new books added to the library as well as supplying recreational reading.

4. **University Libraries.**—The libraries of the Australian Universities provide material not only for the education of graduates and undergraduates, but also for scholars, research workers and practical investigators all over the continent. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialized than the public libraries. They lend to one another and to State and private institutions as well as to individual investigators. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professional staff. In size, the Library of the University of Sydney is the fourth library in Australia, and the Libraries of the Universities of Melbourne and Adelaide are respectively seventh and ninth. The following table shows the sizes and rates of growth and expenditure of the Australian university libraries; it is impossible to give borrowing statistics, as they differ too widely to be comparable without much explanation.

UNIVERSITY LIBRARIES, 1953.

University or College.	Volumes.	Accessions during year.	Expenditure.
	No.	No.	£
Sydney	349,931	7,031	45,994
Melbourne	196,680	12,233	53,617
Queensland	117,515	9,374	30,269
Adelaide	184,713	7,883	28,616
Western Australia	115,154	5,987	20,002
Tasmania	81,000	3,618	12,856
New South Wales University of Technology	45,488	2,163	25,439
New England University College	25,159	2,278	6,797
Canberra University College	16,232	3,055	8,629
Australian National University	91,702	3,618	44,984

The first books were bought for the Library of the University of Sydney as early as 1851; only since 1910, however, has it possessed a building of its own. It is named after the principal benefactor, Thomas Fisher, who bequeathed to it in 1885 the sum of £30,000. It contains an up-to-date bookstack of glass and steel and a fine reading room in which, since the beginning of 1941, about 18,000 volumes of the collection have been made available on open access shelves. In addition, members of the teaching staff and certain classes of undergraduates are admitted to the bookstacks; all readers are encouraged to borrow freely. The Library possesses a large number of periodicals, especially scientific, valuable collections of seventeenth-century pamphlets and

Elizabethan translations from the classics, and an extensive collection of Australian literature. Besides medical and law branches, there are a number of departmental libraries.

Early in 1854 the University of Melbourne made its first allocation for books, but the Library was housed in temporary quarters for a number of years. In recent years the university authorities have treated the Library generously, and there have been some welcome benefactions, but accommodation is insufficient and a new library building is a pressing need of the University. The W. L. Baillieu Trust has made available the first instalments of a £100,000 gift for building purposes. All the books are accessible on open shelves, and though the Library is intended primarily for reference purposes, borrowing, except of text-books and certain valuable volumes, is made as easy as possible. The Library is administered from the centrally situated general library; there is a large medical branch library specially rich in periodicals, and smaller branch libraries in some of the science departments.

The Library of the University of Queensland, founded in 1911, began with £3,000 worth of books, £2,000 having been raised by public subscription and £1,000 granted by the Government. The main library is now in its own building in the new University at St. Lucia.

The Adelaide University Library bears the title of its original benefactor, Robert Barr Smith, who, with members of this family in and after 1892, gave the University about £50,000 for library purposes. Some 20,000 volumes are shelved in the reading room and are available to the ordinary student. Up-to-date steel bookstacks provide accommodation for about 100,000 volumes. Borrowing facilities are available to all matriculated students, to country students and to graduates. There are medical and law departmental libraries. The medical library has on permanent loan the collection of the Institute of Medical and Veterinary Science, and also incorporates the library of the British Medical Association (South Australian Branch).

In the University of Western Australia the first permanent library staff was not appointed until 1927. Provision of permanent library accommodation was not possible when the University moved to its present site, and space and facilities have consequently been inadequate. Extensions to the temporary quarters were made in 1946. The whole collection, consisting of about 115,000 volumes, is accessible on open shelves, and there are several departmental libraries. A special feature is the use made of students' co-operation.

The Library of the University of Tasmania was founded in 1893, but for many years it comprised little more than a collection of text-books. In 1913 a substantial increase of funds was allotted and important gifts were received. In 1910 it was organized for the first time in accordance with modern library practice. A full-time librarian was appointed for the first time at the end of 1945, and the staff has increased from two to ten. The Library is now providing a cataloguing service for the library of the Royal Society of Tasmania.

The New England University Library was founded in 1938, and bears the name of its first benefactor, Sir William Dixon. At the end of 1953 it contained some 25,159 volumes mainly on open shelves.

The Canberra University College Library was established in 1938. At the end of 1953 it contained 16,232 volumes, which are on open shelves; reference books may be borrowed.

The library of the Australian National University is unique in that it is designed to serve the research staff of a wholly post-graduate institution. It specializes in the fields of the physical and medical sciences, excluding clinical materials. In the social sciences and Pacific studies consideration is given to the holdings of the Commonwealth National Library to avoid unnecessary duplication. The library was established in 1948 and operated in Melbourne until December, 1950, when it was transferred to Canberra. The collection comprises some 92,000 volumes, and in addition a special collection of 25,000 volumes in Oriental languages.

5. **Children's Libraries and School Libraries.**—(i) *General.* A survey conducted early in 1946 revealed that only a small proportion of children was being catered for by adequate library service. The effective use made of the few existing children's libraries is proof that the growing interest in this branch of library work will be well rewarded.

(ii) *New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. Three formerly independent children's libraries at Mosman, Wollongong and Moss Vale are now departments of municipal and shire libraries and have greatly increased budgets.

From 1937-38, school library work has been fostered by the State Library in co-operation with the Education Department. A "Model School Library" was established, and vacation classes for teacher librarians are held. In 1949 there were 63 district units under the central library scheme.

(iii) *Victoria.* Since 1943-44 children's libraries have shared a grant of £500 between them, the number participating in 1950 being 34.

The Education Department is making provision for libraries in new schools being erected. Where accommodation is available in existing schools, grants of up to £4 for £1 are provided to furnish and equip libraries. In addition, the Government subsidizes the purchase of approved books on the basis of £1 for £1, or £2 for £1, according to the size of the school, to a maximum grant of £60 per annum.

With the assistance of school committees and municipalities, subsidized by the Department, many country districts have established circulating group libraries. Boxes of books are circulated to all schools in the group, changes being made at the commencement of each school term. Financed by a bequest from the late William Gillies, a scheme of circulating libraries for small schools, particularly in remote areas, has been operating for some years. At present 441 schools benefit from this scheme.

The Department has a Library Services Officer with a small staff to advise and assist schools in the organization of libraries. A number of Education Department teachers have been trained at the Library School of the Public Library of Victoria, and an increasing number of schools have well-equipped library rooms with trained teacher-librarians in charge.

(iv) *Queensland.* The purchase of books in State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Public Instruction on a £1 for £1 basis. The subsidy was suspended from 1931 to 1943.

In 1937 a system of Circulating Supplementary Readers was commenced. Books are graded for age levels and are moved from school to school, sufficient copies of each book for a whole class being sent, and reading being done in school. There are 96,000 such books now in use, the distribution at present being confined to primary schools.

(v) *South Australia.* A Children's Library of 7,300 volumes is used by school classes and individual children living in the metropolitan area. Books of fiction are lent to children of fourteen years and over, while other books may be borrowed by children of any age.

(vi) *Western Australia.* For schools with more than two teachers, including high schools and technical schools, £1 for £1 subsidy up to £50 is granted each year. New primary schools are provided with a room for a library, while high schools and some technical schools have a teacher acting as librarian.

For schools with one or two teachers there are two services. Through the Small Schools Fixed Library Service reference books up to the value of £15 are supplied annually to be kept permanently in the school. The Charles Hadley Travelling Library provides recreational reading, and operates 250 boxes which can be exchanged every three months.

through a local school acting as distributing centre for a district. The Government grants £250 per annum for this service, and the participating schools contribute the commission received from the Commonwealth Bank for the teachers' services—about £200.

Children in isolated country areas are catered for by books sent out by the State Correspondence Schools Library. The children are kept in touch with the Library by means of radio talks and leaflets issued periodically. There is as yet no general scheme to serve children in the metropolitan area.

The Federation of Police and Citizens Boys' Clubs of Western Australia aims at establishing a system of circulating boxes of books at an estimated cost of £10,000. Books are in circulation to 44 centres, of which 15 are Police Boys' Clubs, 24 State Schools, and 5 Children's Libraries.

Western Australian Children's Book Council Inc. was incorporated in 1948 and receives a government grant to assist its work of interesting local authorities in establishing children's free libraries.

(vii) *Tasmania*. The Lady Clark Memorial Children's Libraries, at the State Library, Hobart, aim to serve all children in Tasmania with books. They work through the municipal authorities; at 30th June, 1952, 55 children's libraries had been established in 49 municipalities, including Hobart, and six special Hydro-electric districts, children's books being provided on a population basis.

Practically all State secondary schools in Tasmania have libraries, with full-time librarians in four of them. The libraries of the Friends' School, Hobart, and the Hobart High School are among the foremost of their kind in Australia.

A Schools' Library Service assists with loans of curriculum books, and provides advice and guidance in the use of books. In 1953 the number of schools receiving service was 115 and books issued was 7,924. The majority of primary schools have libraries; most area schools, in particular, have good ones.

The Education Department sends, each year, selected students or teachers to the Library School in Sydney.

6. **Special Libraries.**—Before the 1939–45 War the number of special libraries, apart from those maintained by government departments, was small, but during recent years many manufacturing, commercial, research and other firms, as well as statutory bodies, have found it necessary to establish special libraries to serve their specialist or other staff. These libraries, which are most numerous in Sydney and Melbourne, are being increasingly staffed by trained librarians.

7. **Microfilms.**—The following libraries supply microfilm or photostat copies of material, usually at a small charge (the letter "P" signifies photostat supplies and "M" microfilm supplied):—*Australian Capital Territory*—Australian War Memorial (P), Commonwealth National Library (PM), C.S.I.R.O. (M); *New South Wales*—Metropolitan Water Sewerage and Drainage Board (P), Public Library of New South Wales (M), Standards Association of Australia (P), School of Public Health and Tropical Medicine (M), Fisher Library, University of Sydney (PM); *Victoria*—Commonwealth Serum Laboratories (P), Technical Information Section, Munitions Supply Laboratories (PM), Public Library of Victoria (M), Standards Association of Australia (Melbourne Branch) (P), University of Melbourne (PM), C.S.I.R.O. (M); *Queensland*—Public Library (P); *South Australia*—Public Library of South Australia (PM), University of Adelaide (PM), Waite Agricultural Research Institute (P); and *Tasmania*—University of Tasmania (PM).

§ 11. Public Museums.

The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects found in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building to 30th June, 1953 was £87,660. The number of visitors to the institution during 1952-53 was 289,692, and the average attendance on week-days 580, and on Sundays 1,503. The expenditure for 1952-53 amounted to £57,968. A valuable library containing 33,450 volumes is attached to the Museum. Courses of evening popular lectures are delivered and lecturers also visit distant suburbs and country districts, and afternoon lectures for school children are provided. Nature talks are also broadcast by radio. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids to country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History and the Museum of Normal and Morbid Anatomy attached to the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a Museum of Applied Arts and Sciences in Sydney with branches in four country centres. Expenditure during the year 1952-53 was £42,942. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus and the gums, tanning materials, and other economic products of native vegetation generally.

The National Museum at Melbourne, devoted to natural history, geology and ethnology, is located in the eastern section of the Public Library Building. The National Art Gallery is situated in the same building. The Museum of Applied Science, also housed under the same roof, contained at 30th June, 1951, 23,423 exhibits which covered applied and economic aspects of all branches of science. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the School of Mines in the chief mining districts.

The Queensland Museum, founded in 1855, comprises exhibited and reference collections of zoology, geology and ethnology. It is entirely maintained by the State Government, and the cost of the building was £41,778. Expenditure for the year 1952-53 was £20,763. The collections are principally, but not exclusively, Australian; there is, for example, the excellent series of ethnological material formed by Sir William McGregor in New Guinea. The publication is *Memoirs of the Queensland Museum* which was preceded by the *Annals of the Queensland Museum*. The library is extensive and valuable, and of great assistance to research workers in the State. In 1953 continued enthusiasm was shown by both adults and children for the brief talks and showing of instructional films which have become a feature of school vacation periods. A second refresher course for school teachers was conducted in January, 1953.

The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

The South Australian Museum has considerable collections of most branches of natural history and was attended by 150,000 visitors in 1952-53. Cost of construction of the Museum building was returned as £65,000. In 1952-53 expenditure was £36,100.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 205,000 specimens, of an estimated value of £107,000. The Museum, Art Gallery, and Library are housed in one building, and the visitors to the combined institutions during the year reached 45,000. At 30th June, 1953, the structure was valued at £65,500.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Museums received aid from the Government during 1952–53 to the extent of £15,325. The cost of construction in each case is included in that of Art Galleries given below.

§ 12. Public Art Galleries.

The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £96,000. At the end of 1952 its contents comprised 1,147 oil paintings, 717 water colours, 1,956 black and white, 237 statuary and bronzes, and 1,057 ceramics, works in metal and miscellaneous. Since 1895, loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at 30th June, 1951 contained 2,214 oil paintings, 7,802 objects of statuary, bronzes, ceramics, etc., and 22,754 water colour drawings, engravings and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £439,000. Cost of purchases during 1950–51 was £56,742. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. There are provincial art galleries at Ballarat, Bendigo, Geelong, Castlemaine and Warrnambool, and periodically pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, Brisbane, maintained by the State Government, was founded in 1895. It was moved to the present temporary site on Gregory Terrace in 1929. A Director was appointed in 1950, in which year the interior of the Gallery was remodelled. More recently an Art Museum and a Print Room have been opened. At 30th June, 1953, there were on view 316 oil paintings, 188 water colours, 286 black and white, and 48 pieces of statuary, together with 142 various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £22,160. Visitors during the year averaged 960 on Sundays and 350 on week-days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir Thomas Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and valuable prints and £3,000 in 1907 from Mr. David Murray. In 1935 Mr. Alex Melrose gave £10,000 for the extension of the building. At 30th June, 1953 there were in the Gallery 1,516 paintings in oil and water colours, 571 drawings and black and white, and 97 items of statuary, the contents being valued at £99,000. The cost of construction of the Art Gallery amounted to £48,000. The expenditure during 1952–53 was £18,100.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 231 oil paintings, 153 water colours, 375 black and white, 276 statuary, and 1,438 ceramic and other art objects, the whole being valued at £33,500. Cost of construction of the buildings amounted to £10,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. At June, 1953 the contents consisted of 115 oil paintings, 60 water colours, 7 black and white, 3 statuary and 82 etchings, engravings, etc. The cost of construction of the building was £4,500. Expenditure in 1952–53 was £11,838.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At June, 1953 there were on view 48 oil paintings, 26 water colours, 4 black and white, and 3 engravings and miscellaneous exhibits. Expenditure in 1952-53 was £8,520.

§ 13. Scientific Societies.

1. **Royal Societies.**—In previous issues of the Official Year Book an outline was given of the origin and progress of the Royal Society in each State. The accompanying table contains the latest available statistical information regarding these institutions, the head-quarters of which are in the capital cities.

ROYAL SOCIETIES 1953.

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Canberra.
Year of Foundation	1800	1854	1884	1880	1914	1843	1930
Number of members	361	264	240	201	198	471	126
Vols. of transactions issued ..	87	97	63	75	37	87	..
Number of books in library ..	30,400	22,000	47,024	15,800	4,500	29,499	..
Societies on exchange list ..	415	355	279	280	202	272	..
Income £	2,241	1,629	1,001	2,100	152	976	63
Expenditure £	2,426	851	538	2,100	171	871	47

2. **The Australian and New Zealand Association for the Advancement of Science.**—This Association was founded in 1887. Its headquarters are at Science House, Gloucester Street, Sydney, and meetings are usually held biennially within the various States and in the Dominion of New Zealand. The next meeting is scheduled to take place in Melbourne in August, 1955.

3. **Other Scientific Societies.**—The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874. Sir William Macleay, who died in 1891, during his lifetime and by his will endowed the society to the amount of £67,000, which has been increased by investment to approximately £100,000. The Society maintains a research bacteriologist and offers annually to graduates of the University of Sydney, who are members of the Society and resident in New South Wales, research fellowships (Linnean Macleay Fellowships) in various branches of natural history. Two fellowships were awarded in 1954. The library comprises some 18,000 volumes, valued at about £9,000. Seventy-eight volumes of Proceedings have been issued, and the Society exchanges with about 290 kindred institutions and Universities throughout the world. The membership at the end of 1953 was 236.

The British Astronomical Society has a branch in Sydney, and in each of the States the British Medical Association has a branch.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

§ 14. State Expenditure on Education, Science and Art.

The expenditure in each State on education, science and art during the year 1952-53 is shown in the following table. Owing to the details not being available in all States, the figures exclude officers' pensions and superannuation, pay-roll tax, and interest and sinking fund on capital expended on buildings. The cost of the medical and dental inspection of school children is also excluded, as this service is more appropriately classified under Public Health, etc..

STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART, 1952-53.
(£'000.)

State.	Expenditure from—				Receipts.	Net Expendi- ture.
	Revenue.	Loan.	Other Funds.	Total.		
New South Wales ..	25,614	4,023	..	29,637	763	28,874
Victoria ..	16,182	3,439	..	19,621	(a) 215	19,406
Queensland ..	7,364	755	278	8,397	186	8,211
South Australia ..	5,632	1,119	..	6,751	228	6,523
Western Australia ..	5,097	1,806	..	6,903	108	6,795
Tasmania ..	2,528	616	..	3,144	12	3,132
Total ..	62,417	11,758	278	74,453	1,512	72,941

(a) In addition, fees in respect of technical education amounting to £304,794 were received and spent by the School Councils.

CHAPTER XII.

PUBLIC JUSTICE.

§ 1. Introduction.

Each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia (largely a Court of Appeal intermediate to the Privy Council although it has also original jurisdiction), the Commonwealth Court of Conciliation and Arbitration and the Federal Court of Bankruptcy. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution which appeared on page 18 of Official Year Book No. 39.

In considering the crime statistics of the various States, due allowance must be made for certain factors, such as the relative powers of the higher and lower courts. In the case of lower courts, the actual number of laws in each State whose breach renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws or laws connected with vagrancy or gaming, the views of the magistrates, and instructions issued to the police, may be responsible for considerable variations in the numbers. The strength and distribution of the police forces, and the age-constitution and distribution of the population of the States, also influence the results. Due weight should be given also to the prevalence of undetected crime, but information on this point is not available for all States.

§ 2. Lower (Magistrates') Courts.

1. Powers of the Magistrates.—(i) *New South Wales*. There is no general limit to the powers of the magistrates in regard to offences punished summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to twelve months. Imprisonment in default of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of liquidated debts and damages, whether liquidated or unliquidated, the amount is limited to £50 before a court constituted by a stipendiary magistrate. The amount in actions of debt before two or more Justices of the Peace is limited to £30 and in actions of damage to £10, but may extend to £30 with the consent of the defendant. Outside the Metropolitan Area of Sydney and certain other prescribed districts one justice of the peace may hear cases of debt, liquidated or unliquidated, or damage up to £5 and to £30 by consent of parties.

(ii) *Victoria*. The civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £50, and to actions arising out of torts or contracts. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

(iii) *Queensland*. Generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases, such as offences against sections 233, 344, and 445 of the Criminal Code (betting houses, aggravated assaults, and illegally using animals), sentences of twelve months may be imposed.

There is provision for applying cumulative sentences, but in practice not more than one sentence is generally made cumulative on a previous sentence.

Magistrates have no power to deal with habitual offenders, but there are such powers vested in the Supreme Court.

(iv) *South Australia.* In South Australia the power of special magistrates to impose fine and imprisonment is defined by the special act creating the offence and conferring jurisdiction. In the case of minor indictable offences, triable summarily, a maximum penalty of £100 fine or 2 years' imprisonment is fixed by the Justices Act 1921-1943. Magistrates also have power to hear certain civil actions in which the amount claimed is less than £750.

(v) *Western Australia.* The powers of magistrates and justices in regard to offences triable summarily are governed by the act creating the offence and giving them jurisdiction. Imprisonment in default of payment of a fine is regulated by a scale limiting the period according to the amount of the fine but not to exceed six months.

The civil jurisdiction of magistrates and courts is restricted in general to £250, but disputed actions, the subject matter of which exceeds £100, must be tried by a judge. By consent of the parties, any action that might be brought in the Supreme Court may be dealt with in a Local Court. Justices may act in the case of illness or absence of the magistrate.

Magistrates are coroners and justices may be appointed as acting coroners.

Magistrates have appellate jurisdiction under some statutes and in country districts act as Chairmen of the Courts of Session. They may be appointed as Commissioners of the Supreme Court.

On the goldfields, the magistrate is also the warden.

(vi) *Tasmania.* Magistrates may hear and determine in Courts of Petty Sessions all offences other than those punishable on indictment. Stealing and analogous crimes where the property involved does not exceed £10 in value may be dealt with by magistrates unless the defendant objects.

No general limit is fixed in respect of sentences, the statute creating the offence almost invariably laying down the penalty. Where this is not the case, the Contravention of Statutes Act 1889 provides that a fine of £50 may be imposed. Generally speaking, sentences which justices can impose are limited to six months, although in several cases sentences of up to two years may be imposed. The aggregate term of cumulative sentences cannot exceed two years.

The civil jurisdiction of magistrates is divided into two categories. A Commissioner of the Court of Requests, who must be a legal practitioner, and is invariably a police magistrate, may hear actions for the recovery of debts and damages not exceeding £100. The jurisdiction of these courts may be increased by proclamation to £250, and this has been done in five instances. Courts of General Sessions, constituted by at least two justices, exercise similar powers, but the jurisdiction cannot exceed £50. Only one court has the maximum jurisdiction, the others being limited to £30.

2. Cases Tried at Magistrates' Courts.—The total number of arrest and summons cases tried at Magistrates' Courts in each State is given below for 1939 and for the years 1948 to 1952 :—

CASES TRIED AT MAGISTRATES' COURTS.

State or Territory.	1939.	1948.	1949.	1950.	1951.	1952.
New South Wales ..	144,848	198,456	205,817	214,894	242,165	269,197
Victoria ..	82,858	76,516	80,511	97,201	109,066	129,091
Queensland(a) ..	32,501	36,149	40,503	43,932	49,849	44,868
South Australia ..	22,776	(a)25,376	(a)28,349	(a)31,964	(a)30,953	(a)33,688
Western Australia ..	24,111	26,257	27,373	29,521	31,985	40,674
Tasmania ..	9,498	9,060	11,713	12,403	14,649	16,964
Northern Territory(a)	1,494	1,548	1,190	1,269	1,178	1,657
Aust. Cap. Territory ..	284	777	1,018	1,237	1,500	1,610
Total ..	318,370	374,189	396,483	432,421	481,345	537,749

(a) Year ended 30th June following.

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or decrease of criminality should, therefore, be based upon a careful analysis of the detailed list of offences.

3. **Convictions at Magistrates' Courts.**—The figures given in the previous table include a number of people who were charged without sufficient reasons, and, statistically, are not of general importance. A classification of convictions of persons who appeared before the lower courts in each State during 1952 is given in the following table :—

CONVICTIONS AT MAGISTRATES' COURTS, 1952.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Against the Person ..	2,898	1,260	402	300	361	243	48	47	5,559
Against Property ..	14,794	6,319	2,510	1,640	3,085	881	101	126	29,456
Forgery and Offences against the Currency	166	23	4	5	..	2	..	..	200
Against Good Order ..	108,221	29,376	24,919	7,917	7,917	1,898	1,015	555	181,818
Other Miscellaneous ..	123,766	78,556	13,431	20,367	26,746	12,008	247	713	275,834
Total ..	249,845	115,534	41,266	30,229	38,109	15,032	1,411	1,441	492,867

(a) Year ended 30th June following.

The following table shows the number of convictions in 1939 and in each year from 1948 to 1952 :—

CONVICTIONS AT MAGISTRATES' COURTS.

State or Territory.	1939.	1948.	1949.	1950.	1951.	1952.
New South Wales ..	126,353	183,367	189,955	199,619	224,514	249,845
Victoria ..	72,186	68,243	72,416	87,873	98,369	115,534
Queensland(a) ..	28,920	33,469	38,601	41,492	46,436	41,266
South Australia ..	20,429	(a)22,834	(a)25,496	(a)28,675	(a)27,432	(a)30,229
Western Australia ..	22,539	24,360	25,388	27,315	29,763	38,109
Tasmania ..	8,722	7,701	10,206	10,961	12,765	15,032
Northern Territory(a)	1,394	1,516	1,127	1,145	980	1,411
Aust. Cap. Territory ..	260	714	917	1,151	1,442	1,441
Total ..	280,803	342,204	364,196	398,231	441,701	492,867

(a) Year ended 30th June following.

4. **Convictions for Serious Crime at Magistrates' Courts.**—(i) *General.* While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come under the heading of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts, for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency. Owing to the smallness of the population, the rates for the Northern and the Australian Capital Territories are subject to considerable variation.

(ii) *Number and Rates, Years 1939 and 1948 to 1952.*—The following table shows the number and rates of convictions for serious crime at magistrates' courts for the years 1939 and 1948 to 1952 :—

CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS.

State or Territory.	1939.	1948.	1949.	1950.	1951.	1952.
NUMBER.						
New South Wales ..	12,724	13,308	12,983	14,141	15,632	17,858
Victoria ..	5,727	4,964	4,675	5,204	6,495	7,602
Queensland(a) ..	2,402	2,434	2,481	2,699	3,041	2,916
South Australia ..	1,224	(a) 1,440	(a) 1,488	(a) 1,654	(a) 1,926	(a) 1,945
Western Australia ..	2,614	2,578	2,320	2,901	3,115	3,446
Tasmania ..	959	805	940	810	829	1,126
Northern Territory(a)	44	194	112	43	144	149
Aust. Cap. Territory ..	59	129	145	183	171	173
Total ..	25,753	25,852	25,144	27,635	31,353	35,215
Rate per 10,000 of population ..	36.91	33.44	31.66	33.66	37.09	40.60

(a) Year ended 30th June following.

(iii) *Rate of Convictions, 1881 to 1951.* The rate of convictions at ten-yearly intervals over a period of seventy years is shown below ; only the more serious offences particularized on the preceding page have been taken into consideration.

RATE OF CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS : AUSTRALIA.

Year	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.
Convictions per 10,000 persons	69.3	44.8	29.1	24.6	29.2	37.1	33.6	37.1

5. *Committals to Higher Courts.*—(i) *General.* In a previous paragraph it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, inasmuch as the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowances must be made for the want of uniformity in jurisdiction. A classification of the offences for which persons appearing in the lower courts were committed to higher courts in each State and Territory for the year 1952 is shown in the following table :—

COMMITTALS TO HIGHER COURTS, 1952.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Against the Person ..	972	252	224	159	92	39	12	11	1,761
Against Property ..	3,314	1,238	370	337	274	163	16	8	5,725
Forgery and Offences against the Currency ..	92	88	3	32	1	5	7	..	228
Against Good Order ..	49	14	2	4	1	7	..	2	79
Other Miscellaneous ..	77	79	6	22	5	5	..	2	196
Total	4,504	1,671	605	554	373	224	35	23	7,989

(a) Year ended 30th June following.

The following table shows the number of committals in 1939 and in each year from 1948 to 1952, with the rate of such committals per 10,000 of population :—

COMMITTALS TO HIGHER COURTS.

State or Territory.	1939.	1948.	1949.	1950.	1951.	1952.
NUMBER.						
New South Wales	2,288	3,113	3,776	3,513	3,706	4,504
Victoria	1,777	1,996	1,751	1,638	1,650	1,671
Queensland(a)	359	330	414	521	434	605
South Australia	259	(a) 326	(a) 393	(a) 362	(a) 480	(a) 554
Western Australia.. ..	129	160	186	211	209	373
Tasmania	82	72	137	195	197	224
Northern Territory(a) ..	12	23	12	9	28	35
Australian Capital Territory	18	9	24	38	30	23
Total	4,924	6,029	6,693	6,487	6,734	7,989
Rate per 10,000 of population	7.1	7.8	8.4	7.9	8.0	9.2

(a) Year ended 30th June following.

(ii) *Rate of Committals, 1881 to 1951.* The rate of committals for serious crime at ten-yearly intervals since 1881 is shown below :—

RATE OF COMMITTALS TO HIGHER COURTS : AUSTRALIA.

Year	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1951.
Committals per 10,000 persons	12	11	8	6	7	8	5	8

6. *Drunkenness.*—(i) *Cases and Convictions.* The number of arrest and summons cases of drunkenness and the convictions recorded during the year 1939 and the years 1949 to 1952 are given in the following table :—

DRUNKENNESS : CASES AND CONVICTIONS.

State or Territory	1939.		1949.		1950.		1951.		1952.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	32,472	32,405	78,401	78,206	78,727	78,477	83,178	82,837	79,217	79,086
Victoria	11,609	11,421	17,972	17,799	21,248	21,003	23,151	22,884	21,751	21,526
Queensland(a)	11,202	11,118	24,813	24,767	26,914	26,855	28,176	28,144	22,994	22,932
South Australia	2,607	2,597	(a) 5,393	(a) 5,360	(a) 5,861	(a) 5,846	(a) 5,902	(a) 5,890	(a) 6,317	(a) 6,307
Western Australia	2,681	2,658	5,424	5,383	6,113	6,046	6,035	5,974	6,107	6,042
Tasmania	411	407	724	705	655	639	718	693	834	816
Northern Terr.(a)	686	677	680	674	652	644	564	524	434	424
Aust. Cap. Terr.	114	114	437	435	430	426	477	476	545	541
Total	61,782	61,397	133,844	133,329	140,600	139,936	148,201	147,422	138,199	137,676
Rate per 10,000 of population..	88.0		167.9		170.5		174.4		158.7	

(a) Year ended 30th June following.

Under the heading "drunkenness" are included cases of ordinary drunkenness, drunkenness and disorderliness, and habitual drunkenness.

The number of convictions, as might naturally be expected, is almost identical with the number of cases.

(ii) *Convictions per 10,000 of Population.* In the twenties the convictions for drunkenness averaged approximately 100 per 10,000 of population, but the rate fell away considerably during the following years and was only 57.1 in 1931. Following that year, the average rose steadily to 84.1 in 1936 while the annual average for the period 1936 to 1939 was 82.7 and that for the years 1940 to 1945 was 90.8. Following an appreciable increase in the previous year the convictions per 10,000 rose very steeply in 1946 to 132.1 and increased to 170.5 in 1950 and to 174.4 in 1951, but declined to 158.7 in 1952.

The convictions for drunkenness taken by themselves are not altogether a satisfactory test of the relative sobriety of the inhabitants of each State as several important factors must be taken into consideration. The age and sex constitution of the people, for example, are by no means identical in all the States. Another factor is the distribution of the population. Arrest or summons for drunkenness obviously is more likely in the regions densely populated than in those sparsely populated. In addition, allowance must be made for the attitude of the magistracy, the police and the general public in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* The following table shows the consumption of spirits, wine and beer per head of population in Australia during the years 1938-39 and 1948-49 to 1952-53 :—

CONSUMPTION OF INTOXICANTS IN AUSTRALIA PER HEAD OF POPULATION.

Year.				Spirits.	Wine.	Beer.
				Proof Gals.	Gals.	Gals.
1938-39	..	..	..	0.22	0.65	12.13
1948-49	..	..	..	0.33	1.38	17.87
1940-50	..	..	..	0.32	1.50	18.23
1950-51	..	..	..	0.38	1.61	19.72
1951-52	..	..	..	0.32	1.80	20.46
1952-53	..	..	..	0.20	1.43	21.05

(iv) *Remedial Treatment of Drunkenness.* Legislation has been passed in each State providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows :—New South Wales, Inebriates Act 1912 ; Victoria, Inebriates Act 1928 ; Queensland, Inebriate Institutions Act 1896 ; South Australia, Inebriates Act 1908-1934, Convicted Inebriates Act 1913-1934 ; Western Australia, Inebriates Act 1912-1919 ; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management ; nevertheless, the results of remedial measures have been encouraging.

7. *First offenders.*—In all the States, statutes dealing with first offenders have been in force for many years. Existing legislation is as follows :—New South Wales, Crimes Act 1900 amended in 1924 and 1929, First Offenders (Women) Act 1919 as amended in 1929 ; Victoria, Crimes Act 1928 ; Queensland, Criminal Code Acts 1899 to 1945 ; South Australia, Offenders Probation Act of 1913-1951 ; Western Australia, Criminal Code Act 1913-1942 ; Tasmania, Probation of Offenders Act 1934. The method of procedure is practically the same in all cases, i.e., with regard to most first offenders convicted of a minor offence the magistrate or judge is empowered to allow the offender to go free on

recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those convicted under it having been found to relapse into crime.

8. **Children's Courts.**—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Queensland, Western Australia and Tasmania, while Children's Courts, although not under that title, are provided for by the Maintenance Act 1926–1950 in South Australia. The object of these courts is to avoid, as far as possible, the unpleasant associations of the ordinary police court.

§ 3. Higher Courts (Judges' Courts).

1. **Convictions at Higher Courts.**—The following table shows for each State and Territory during 1952 and in Australia as a whole in that and the previous year, the number of convictions at Higher Courts for each of the principal offences.

CONVICTIONS AT HIGHER COURTS, 1952.

Offence.	N.S.W. (a)	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Australia.	
									1952.	1951.
I. OFFENCES AGAINST THE PERSON.										
Murder ..	12	2	4	2	1	2	1	..	24	26
Attempted Murder ..	..	..	4	2	..	..	..	..	6	5
Manslaughter ..	15	9	4	1	2	..	..	..	31	42
Rape ..	..	6	11	2	..	1	..	1	21	19
Other Offences against Females ..	101	76	32	28	10	10	3	3	263	317
Unnatural Offences ..	110	52	22	16	21	6	..	..	227	200
Abortion and Attempts to Procure Bigamy ..	1	3	1	1	..	..	..	..	6	6
Suicide, Attempted ..	52	16	10	4	9	3	..	2	96	80
Assault, Aggravated ..	..	2	..	..	..	8	..	..	10	8
Assault, Common ..	87	25	16	8	7	3	5	..	151	165
Other Offences against the Person ..	30	8	9	5	..	1	1	2	56	38
Total ..	3	3	7	(b) 17	(c) 14	1	..	..	45	60
	411	202	120	86	64	35	10	8	936	960
II. OFFENCES AGAINST PROPERTY.										
Burglary and House-breaking ..	669	372	184	118	67	43	4	..	1,457	1,158
Robbery and Stealing from the Person ..	48	32	13	6	3	55	..	8	165	176
Embezzlement ..	51	3	12	10	14	1	1	..	92	82
Larceny, Other ..	204	133	31	52	40	..	4	..	464	379
Receiving ..	69	48	15	6	7	4	1	..	150	97
Fraud and False Pretences ..	84	19	14	12	4	15	2	..	150	98
Other Offences against Property ..	48	24	15	10	10	5	1	..	113	78
Total ..	1,173	631	284	214	145	123	13	8	2,591	2,068
III. FORGERY AND OFFENCES AGAINST THE CURRENCY										
..	8	18	5	14	1	6	1	..	53	57
IV. OFFENCES AGAINST GOOD ORDER										
..	24	8	6	1	..	6	1	..	46	35
V. OTHER MISCELLANEOUS										
..	13	24	4	13	3	1	1	..	59	53
Grand Total ..	1,629	883	419	328	213	171	26	16	3,685	3,173

(a) Year ended 30th June, 1953. (b) Includes 6 convictions for causing death by dangerous driving. (c) Includes 5 convictions for causing death by negligent driving.

2. **Convictions at Higher Courts, Years 1939 and 1948 to 1952.**—The number of convictions at higher courts and the rate per 10,000 of population for these years are given below.

CONVICTIONS AT HIGHER COURTS.

State or Territory.	1939.	1948.	1949.	1950.	1951.	1952.
NUMBER.						
New South Wales(a) ..	982	1,369	1,352	1,299	1,388	1,629
Victoria	690	806	669	722	761	883
Queensland(a)	214	250	313	346	336	419
South Australia	179	185	205	207	307	328
Western Australia	71	107	110	149	141	213
Tasmania	39	58	109	148	163	171
Northern Territory(a) ..	11	86	39	44	44	26
Australian Capital Territory	14	7	23	49	33	16
Total	2,200	2,868	2,820	2,964	3,173	3,685
Rate per 10,000 of population	3.2	3.7	3.5	3.6	3.7	4.2

(a) Year ended 30th June following.

3. **Habitual Offenders**—In most States judges have power to declare as habitual criminals persons who have a certain scheduled number of previous convictions. A summary of the methods adopted in each State was given on pp. 497-8 of the Official Year Book No. 40.

4. **Capital Punishment**.—There were fourteen executions in Australia during the period 1939 to 1952. One took place in New South Wales (in 1939), six in Victoria (two in 1939, one in 1942 and three in 1951), three in South Australia (one in 1944, one in 1946 and one in 1950), one in Western Australia (in 1952), one in Tasmania (in 1946), and two in the Northern Territory (in 1952).

Under the Criminal Code Amendment Act 1922 capital punishment was abolished in Queensland.

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' court. With the growth of settlement and the general improvement in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be stated that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loath to convict on this charge, owing to the uncertainty whether sentence of death will be carried out.

The average annual number of executions in Australia from 1861 to 1880 was 9; from 1881 to 1900, 6; from 1901 to 1910, 4; from 1911 to 1920, 2; from 1921 to 1930, 2; from 1931 to 1940, 1; and from 1941 to 1950, 0.5.

§ 4. Civil Courts.

1. **Lower Courts**.—The total number of plaints entered and the amounts awarded to plaintiffs during the year 1952 are shown in the following table. The figures represent the returns from the Small Debts Courts in New South Wales, Petty Session Courts in Victoria, Magistrates' Courts in Queensland, Local Courts of South Australia and Western Australia, Courts of Requests in Tasmania, Courts of Summary Jurisdiction in Northern Territory and Court of Petty Sessions in the Australian Capital Territory.

CIVIL CASES AT LOWER COURTS, 1952.

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	N. T.(a)	A.C.T.	Total.
Cases .. No.	42,771	51,058	6,388	22,140	18,217	14,282	373	282	155,511
Amount .. £	227,734	462,407	205,311	281,300	129,636	92,413	17,843	3,448	1,419,192

(a) Year 1952-53.

2. **Higher Courts.**—The following table shows the transactions on the civil side in the Higher Courts during the year 1952. The particulars given below include the number and amount of judgments entered by default or confession, or agreement, and differ from those in issues of the Official Year Book prior to No. 29, which related in most States only to causes actually tried during the year.

The New South Wales returns refer to judgments in the District Courts only, and exclude 3,282 judgments signed in the Supreme Court.

CIVIL CAUSES AT HIGHER COURTS, 1952.

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust. (b)	Tas.	N.T.(a)	A.C.T.	Total.
Causes .. No.	6,114	6,937	1,273	125	306	611	72	23	15,461
Amount .. £	(c)	1,009,687	224,687	89,662	185,438	166,825	(c)	21,373	(c)

(a) Year 1952-53.

(b) Judgments signed and entered.

(c) Not available.

3. **Divorces and Judicial Separations.**—(i) *Number of Petitions and Divorces granted.* The following table shows the number of petitions for divorce, nullity of marriage and judicial separation filed in each State during 1953, and the number of divorce and nullity of marriage decrees made absolute and judicial separations granted during the year:—

PETITIONS FOR DIVORCE, ETC., AND DIVORCES, ETC. GRANTED, 1953.

State or Territory.	Petitions for Divorce, Nullity of Marriage and Judicial Separation.			Decrees made Absolute for—		Judicial Separations Granted.
	By Husband.	By Wife.	Total.	Divorce.	Nullity of Marriage.	
New South Wales ..	1,838	2,476	4,314	3,725	21	6
Victoria ..	851	1,045	1,896	(a) 2,096	(a) 31	(a) 1
Queensland ..	331	399	730	725	5	..
South Australia ..	372	552	924	628	8	2
Western Australia ..	320	300	620	535	4	..
Tasmania ..	145	177	322	210	..	..
Northern Territory ..	18	13	31	12	..	..
Aust. Cap. Territory ..	19	26	45	31	..	1
Total ..	3,894	4,988	8,882	7,962	69	10

(a) Dissolution of marriage granted.

(ii) *Number of Divorces, etc., granted, Years 1939 and 1949 to 1953.* The number of divorces and judicial separations in each State and Territory for these years is shown in the following table. The figures refer, in the case of divorces, to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS.

State or Territory.	1939.		1949.		1950.		1951.		1952.		1953.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
N.S. Wales ..	1,545	8	2,655	5	3,450	6	3,328	4	3,362	7	3,746	6
Victoria(a) ..	801	4	1,778	2	1,602	2	1,729	1	1,613	3	2,127	1
Queensland ..	622	..	731	1	791	1	707	1	711	..	730	..
S. Australia ..	243	..	592	..	664	2	641	1	584	1	636	2
W. Australia ..	244	..	569	..	724	..	683	..	585	..	539	..
Tasmania ..	80	..	266	..	152	..	194	..	217	..	210	..
Nor. Territory ..	(b) 2	..	12	..	6	..	13	..	6	..	12	..
Aust. Cap. Ter.	6	1	19	..	25	..	25	..	17	..	31	1
Total ..	3,145	13	6,622	8	7,414	11	7,320	7	7,095	11	8,031	10

(a) Dissolution of marriage granted.

(b) Year ended 30th June following.

(iii) *Average Annual Number of Divorces granted, Years 1871 to 1950.* The average annual number of divorces and judicial separations in Australia for each decennial period from 1871 to 1950 was as follows :—

DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.

Year 1871-80.	1881-90.	1891-1900.	1901-10.	1911-20.	1921-30.	1931-40.	1941-50.
Average 29	70	358	399	744	1,699	2,521	6,192

(iv) *Grounds of Decree on which Divorce, etc., granted, Year 1953.* The grounds on which divorces, including nullity of marriage, were made absolute and judicial separations granted during 1953 in each State and Territory are shown in the following table :—

DIVORCES AND JUDICIAL SEPARATIONS : GROUNDS ON WHICH GRANTED, 1953.

Grounds on which Decrees were Granted.	N.S.W.		Vic.(a)		Qld.		S.A.		W.A.		Tas.		N.T.		A.C.T.		Aust.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
Adultery ..	783	4	557	1	204	..	240	..	212	..	44	..	7	..	10	1	2,057	6
Adultery and Desertion ..	..	..	43	..	3	..	..	..	2	..	1	..	..	..	..	..	49	..
Bigamy ..	12	..	12	..	2	..	2	..	4	..	..	..	..	..	..	..	32	..
Cruelty ..	119	1	9	..	..	..	107	1	..	..	2	..	..	..	..	..	237	2
Cruelty and Drunkenness ..	89	..	24	..	..	..	..	..	1	..	1	..	..	..	3	..	118	..
Desertion ..	2,655	1	1,437	..	514	..	255	1	146	..	161	..	5	..	18	..	5,191	2
Drunkenness ..	62	..	7	..	..	..	10	..	6	..	1	..	..	..	..	..	86	..
Gaol for Crime ..	16	..	3	..	..	..	..	..	2	..	..	..	..	..	..	..	21	..
Impotency ..	8	..	22	..	2	..	4	..	..	..	..	..	..	..	..	..	36	..
Insanity ..	..	..	12	..	3	..	3	..	..	..	..	..	..	..	..	..	18	..
Maintenance ..	..	..	..	..	..	..	3	..	11	..	..	..	..	..	..	..	14	..
Non-Consumma- tion ..	..	..	..	..	1	..	..	..	4	..	..	..	..	..	..	..	5	..
Separation for over 5 years ..	..	..	..	..	..	..	9	..	..	..	..	..	..	..	..	..	160	..
Other ..	2	..	1	..	1	..	3	..	151	..	..	..	..	..	..	..	7	..
Total ..	3,746	6	2,127	1	730	..	636	2	539	..	210	..	121	..	31	1	8,031	10

(a) Dissolution of marriage granted.

(v) *Ages of Husband and Wife at Time of Divorce.* The following table shows, in each age group at the time when the divorce decree was made absolute, the number of husbands and wives who were divorced during 1953.

DIVORCES : AGES OF PARTIES AT TIME OF DIVORCE, AUSTRALIA, 1953.

(NOTE.—Excludes nullity of marriage.)

Ages of Husbands (Years).	Ages of Wives (Years).											Total Husbands.
	Under 21.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 and over.	Not stated.	
Under 21 ..	2	1	..	..	..	..	..	..	..	..	..	3
21 to 24 ..	27	102	43	2	..	..	..	..	..	..	..	174
25 to 29 ..	22	367	706	129	34	5	1	..	..	..	1	1,266
30 to 34 ..	3	99	667	608	107	14	4	1	..	..	5	1,598
35 to 39 ..	..	16	196	628	578	117	17	..	..	1	1	1,554
40 to 44 ..	..	8	54	194	54	400	67	15	3	1	1	1,247
45 to 49 ..	..	4	17	65	170	334	238	45	6	..	..	879
50 to 54 ..	..	1	3	17	48	115	209	161	31	4	3	592
55 to 59 ..	..	2	3	6	13	31	69	117	59	26	..	326
60 and over ..	..	..	1	3	10	16	28	39	75	103	1	276
Not stated ..	..	1	2	1	1	1	1	..	2	..	38	47
Total Wives	54	601	1,692	1,743	1,465	1,033	634	379	176	135	50	7,962

(vi) *Divorces Granted—Duration of Marriage and Issue of Persons Involved.* The following table shows the number of divorce decrees made absolute in 1953, classified according to the legal duration of the marriage (i.e., the period from the date of marriage to the date when the decree nisi was made absolute) and the issue involved. In respect of 42 per cent. of the divorces finalized in that year the marriages had been celebrated within the previous 10 years. Of the couples divorced, 34 per cent. had no children, 30 per cent. had one child, 20 per cent. had two children, 9 per cent. had three children and 7 per cent. had four or more children.

DIVORCES : DURATION OF MARRIAGE AND ISSUE OF PARTIES, AUSTRALIA, 1953

(NOTE.—Excludes nullity of marriage.)

Duration of Marriage (Years).	Number of Children.											Total Divorces made absolute.	Total children.
	0	1	2	3	4	5	6	7	8	9	10	Over 10	
Under 1 year ..	1	..	..	..	..	..	..	..	..	..	..	1	..
1 and under 2 ..	24	2	..	..	..	..	..	..	..	..	..	26	2
2 " " 3 ..	95	23	1	..	..	..	..	..	..	..	..	119	25
3 " " 4 ..	123	46	5	1	..	..	..	..	..	..	..	175	59
4 " " 5 ..	231	110	13	1	..	..	..	..	..	..	..	355	139
5 " " 6 ..	276	187	46	5	1	..	..	..	..	..	..	515	298
6 " " 7 ..	255	215	76	13	1	..	..	..	..	..	..	560	410
7 " " 8 ..	236	219	95	16	10	1	..	..	..	..	..	577	502
8 " " 9 ..	182	189	81	23	3	2	1	..	..	..	..	481	448
9 " " 10 ..	158	160	110	22	10	1	..	..	..	..	..	461	491
10 " " 11 ..	166	151	94	32	5	..	1	..	..	..	..	449	461
11 " " 12 ..	158	174	106	38	10	3	1	1	..	..	..	491	568
12 " " 13 ..	130	129	102	42	15	3	1	..	..	..	..	422	540
13 " " 14 ..	109	115	74	36	10	2	2	..	..	..	..	348	433
14 " " 15 ..	71	79	85	28	15	2	2	1	..	..	..	283	422
15 " " 16 ..	53	71	74	39	15	5	4	..	..	..	..	261	445
16 " " 17 ..	59	75	70	34	12	5	1	..	..	..	..	256	396
17 " " 18 ..	65	49	61	33	14	3	4	1	..	..	..	230	372
18 " " 19 ..	42	48	68	35	7	1	3	3	..	..	1	208	372
19 " " 20 ..	45	43	45	31	7	7	4	1	1	..	..	184	328
20 " " 21 ..	21	38	48	31	11	6	1	2	..	1	..	159	330
21 to 24 years ..	83	130	148	82	46	21	10	5	6	1	1	535	1,146
25 to 29 " " ..	81	78	101	80	52	29	14	8	2	2	..	447	1,047
30 to 34 " " ..	42	57	57	50	37	14	10	3	4	..	2	277	683
35 to 39 " " ..	16	13	17	20	13	6	3	3	..	2	2	95	266
40 to 44 " " ..	7	3	3	8	6	4	2	2	..	2	..	39	139
45 years and over ..	1	..	1	1	2	1	1	1	..	..	..	8	31
Not stated ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Divorces ..	2,730	2,404	1,581	701	302	116	65	31	15	6	7	4	7,962
Total Children ..	..	2,404	3,162	2,103	1,208	580	390	217	120	54	70	45	10,353

(vii) *Number of Divorced Persons at Censuses 1891 to 1947.* The following table shows the number and proportions of divorced males and females in Australia at each Census from 1891 to 1947. A classification of these persons by age appeared in earlier issues of the

Official Year Book (see No. 39, page 269). Prior to 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made to extend beyond that date.

DIVORCED PERSONS AT CENSUS DATES: AGE DISTRIBUTION, AUSTRALIA.

Sex.	Number.						Proportion per 10,000, 15 years of age and over.					
	1891. (a)	1901. (a)	1911.	1921.	1933.	1947.	1891. (a)	1901. (a)	1911.	1921.	1933.	1947.
Males ..	332	1,234	2,368	4,233	10,298	25,052	3	10	15	23	42	89
Females ..	228	1,149	2,140	4,304	10,888	27,516	3	10	15	24	46	96

(a) Excludes South Australia.

4. Bankruptcies.—Particulars relating to bankruptcy in each State up to the end of 1927 were incorporated under this heading in issues of the Official Year Book prior to No. 23. Under the terms of the Bankruptcy Act 1924–1950 jurisdiction in bankruptcy and insolvency was taken over by the Commonwealth from 1st August, 1928. The Act made provision for the declaration of districts, and each State (except Queensland) and the Northern Territory have been declared bankruptcy districts. The bankruptcy district of New South Wales includes the Australian Capital Territory. Queensland has been divided into three districts corresponding to the three Supreme Court districts in that State. Operations under the Act for the year ended 31st July, 1953 are shown in the following table. For the purposes of comparison, the annual averages for five-yearly periods between the years 1929 and 1953 are appended to the table.

FEDERAL BANKRUPTCY ACT: OPERATIONS, 1952-53

Particulars,	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus- tralia.
Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Number.. 251	129	102	77	37	40	..	636
Liabilities £	598,981	262,764	293,762	194,389	138,393	33,541	..	1,521,830
Assets £	322,789	139,280	259,331	113,358	76,978	16,028	..	927,764
Compositions without Bankruptcy Part XI.	Number.. 1	3	..	17	20	..	..	41
Liabilities £	2,512	12,389	..	58,034	173,567	..	..	246,502
Assets £	719	13,594	..	56,503	189,989	..	..	260,805
Deeds under Part XI.	Number.. ..	1	..	6	7	..	..	14
Liabilities £	..	3,592	..	68,345	25,581	..	..	97,518
Assets £	..	3,708	..	32,155	26,890	..	..	62,753
Deeds of Arrangement, Part XII.	Number.. 46	51	14	..	..	4	..	115
Liabilities £	443,997	318,499	123,396	..	..	10,537	..	896,429
Assets £	361,889	226,512	123,399	..	..	9,460	..	721,260
Total, 1952-53	Number.. 298	184	116	100	64	44	..	806
Liabilities £	1,045,400	597,244	417,158	320,768	337,541	44,078	..	2,762,279
Assets £	685,397	383,094	382,730	202,016	293,857	25,488	..	1,972,582

FIVE YEARLY AVERAGES.

5 years ended 1952-53	Number.. 184	102	79	59	45	23	..	492
Liabilities £	493,208	286,421	229,258	172,537	151,078	26,792	1,811	1,361,105
Assets £	360,241	173,897	155,735	127,580	121,628	13,362	3,309	955,752
5 years ended 1947-48	Number.. 95	50	25	33	17	7	..	227
Liabilities £	163,417	100,174	27,584	86,490	26,288	3,946	..	407,899
Assets £	80,911	40,000	22,857	56,634	12,530	1,215	..	214,147
5 years ended 1942-43	Number.. 430	296	133	355	81	44	..	1,339
Liabilities £	661,001	297,571	219,236	995,722	235,944	27,937	406	2,437,817
Assets £	427,684	127,954	152,415	726,359	166,425	14,402	182	1,615,421
5 years ended 1937-38	Number.. 490	380	183	543	108	57	..	1,761
Liabilities £	700,657	595,056	259,592	1,565,025	228,624	55,870	931	3,405,755
Assets £	474,500	274,545	193,975	1,075,350	187,933	33,382	795	2,240,480
5 years ended 1932-33	Number.. 960	689	304	631	343	94	..	3,021
Liabilities £	1,920,031	1,419,060	605,707	1,032,299	871,133	114,901	260	5,063,391
Assets £	1,552,490	1,005,694	493,083	782,432	1,215,154	81,785	79	5,130,717

It is pointed out that the procedure in certain States has been influenced largely by the procedure in force prior to the passing of the Commonwealth Act, and that therefore, no particular significance attaches to the large number of compositions, etc., in South Australia and Western Australia.

The Bankruptcy Act 1930 created a Federal Court of Bankruptcy and provided for the appointment of a Judge or two Judges thereto. In 1930 a Commonwealth Judge in Bankruptcy was appointed, in addition to the State Judges, to deal with bankruptcy work in New South Wales and Victoria, as the Courts in these States were unable to cope with the business. All the bankruptcy cases in these States are now heard in the Federal Court which sits in Sydney and Melbourne alternately.

5. **High Court of Australia.**—Under the provisions of Section 71 of the Commonwealth Constitution, the judicial power of the Commonwealth is vested in a Supreme Court called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The High Court of Australia possesses both original and appellate jurisdiction. The powers of the Court are defined in the Commonwealth Constitution, and in the Judiciary Act 1903-1950. The Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The High Court functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for 1952 and 1953.

TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA.

Original Jurisdiction.	1952.	1953.	Appellate Jurisdiction.	1952.	1953.
Number of writs issued	151	173	Number of appeals set down for hearing ..	113	124
Number of causes entered for trial ..	39	48	Number allowed ..	40	35
Verdicts for plaintiffs ..	42	67	Number dismissed ..	63	64
Verdicts for defendants	15	16	Otherwise disposed of	10	18
Otherwise disposed of..	18	10			
Amount of judgments	£85,388	£1,006,978			

During 1952 and 1953 respectively the High Court dealt also with the following : Appeals from Assessments under Taxation Assessment Act, 53, 68 ; Special cases stated for the opinion of the Full Court, 16, 13 ; Applications for Prohibitions, etc., 37, 47. The fees collected amounted to £1,521 in 1952 and £8,633 in 1953.

6. **Commonwealth Court of Conciliation and Arbitration.**—Information regarding this Court, which was established under the Conciliation and Arbitration Act 1904-1952, will be found in Chapter VIII.—Labour, Wages and Prices, of this volume and in the *Labour Report* issued by this Bureau.

§ 5. Police and Prisons.

1. **General.**—Early issues of the Official Year Book (*see* No. 4, p. 918) contain a *résumé* of the evolution of the police force in Australia up to the passing of the Police Act 1862 (25 Vic. No. 16) in New South Wales.

2. **Duties of the Police.**—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by other officials. Much of the time of the several forces is taken up in extraneous duties not connected with the protection of life and property, while the cash value of the services rendered to other Government departments is considerable.

3. **Strength of Police Force.**—The strength of the police force including probationers, cadets, special constables and women police, in each State and Territory at the end of 1939 and the years 1948 to 1952 is shown in the following table.

The police forces (with the exception of the small body of Commonwealth police maintained in the Northern Territory and in the Australian Capital Territory) are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as acting as aliens registration officers, and policing the various regulations, etc.

STRENGTH OF POLICE FORCES.

State or Territory.	Area of State in Sq. Miles.	No. of Police.					
		1939.	1948.	1949.	1950.	1951.	1952.
New South Wales	309,433	3,907	4,333	4,382	4,449	4,527	4,688
Victoria.. ..	87,884	2,333	2,385	2,597	2,751	2,879	2,992
Queensland(a) ..	670,500	1,460	1,982	2,040	2,220	2,455	2,449
S. Australia(a) ..	380,070	905	975	996	972	1,055	1,091
W. Australia(a) ..	975,920	600	730	759	787	877	929
Tasmania(a) ..	26,215	296	340	363	392	420	418
Nor. Territory(a) ..	523,620	48	65	58	61	48	50
Aust. Cap. Terr. ..	939	17	40	43	45	57	60
Total ..	2,974,581	9,566	10,850	11,238	11,677	12,318	12,677
Population to each Police Officer ..	..	733	721	720	715	696	693

(a) 30th June of year following.

The figures for New South Wales for 1952 exclude 14 "black trackers" and cadet trackers (i.e., natives employed in detection of offenders chiefly in outlying districts) and 4 matrons, while the Victorian returns exclude one black tracker. For Queensland the figures exclude 24 black trackers, for South Australia 3 wardresses, for Western Australia 22 black trackers and 4 female searchers, and for the Northern Territory 28 black trackers. Women police are employed in all the States, the respective numbers for 1952 included in the table above being :—New South Wales 36, Victoria 29, Queensland 9, South Australia 18, Western Australia 8, Tasmania 5 and Australian Capital Territory 2. Their work is mainly preventive, relating particularly to females and neglected children. They also carry out escort duties in respect of female prisoners.

4. **Prison Accommodation and Prisoners, 1952.**—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners under sentence at the end of 1952 :—

PRISON ACCOMMODATION AND PRISONERS, 1952.

Particulars.	N.S.W. (a)	Vic.	Qld.(a)	S. Aust.	W. Aust. (a)	Tas.(a)	N.T.(a)	Total.
No. of Prisons ..	15	9	7	16	19	2	2	70
Accommodation in—								
Separate cells ..	2,285	1,203	593	681	504	154	12	5,432
Wards ..	..	347	145	202	207	..	19	920
Prisoners at end of year ..	2,231	1,248	538	437	374	154	44	5,026

(a) Year ended 30th June following.

The figures refer to prisoners under sentence and exclude aborigines and debtors. There are no gaols in the Australian Capital Territory, but there is a lock-up consisting of six cells attached to the police station at Canberra, and a similar lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by the Magistrate's Court.

5. Prisoners in Gaol, 1939 and 1948 to 1952.—The number of prisoners in gaol at 31st December in each of the years 1939 and 1948 to 1952 and the proportion per 10,000 of the population are shown in the following table. The figures refer to prisoners under sentence and exclude aborigines and debtors.

PRISONERS IN GAOL.

State or Territory.	1939.	1948.	1949.	1950.	1951.	1952.
NUMBER.						
New South Wales(a)	1,355	1,715	1,853	1,885	2,070	2,231
Victoria ..	1,144	912	993	981	1,048	1,248
Queensland ..	261	(a) 376	(a) 406	(a) 454	(a) 472	(a) 538
South Australia ..	199	230	234	261	316	437
Western Australia(a)	244	314	333	342	362	374
Tasmania(a)	108	93	122	114	142	154
Northern Territory ..	23	(a) 40	(a) 41	(a) 52	(a) 34	(a) 44
Total ..	3,334	3,580	3,982	4,089	4,444	5,026
Per 10,000 of population ..	4.8	4.7	4.9	4.9	5.2	5.7

(a) 30th June of year following.

In recent years the proportion of prisoners in gaol to the total population has remained about 5 per 10,000. This figure compares very favorably with that obtaining in 1891, when the proportion was a high as 16 per 10,000.

§ 6. Cost of Administration of Justice.

1. Expenditure by the States.—The table below shows the expenditure from Consolidated Revenue during 1952–53 in connexion with the administration of justice in each of the States.

Net costs are shown instead of gross expenditure as it is difficult to obtain comparable figures of the total costs of the various services under this heading. It will be noted that in South Australia the receipts for legal fees and registrations exceed the actual expenditure under "Justice".

NET EXPENDITURE ON ADMINISTRATION OF JUSTICE, 1952–53.

State.	Net Expenditure.			Per Head of Population.		
	Justice.	Police.	Prisons.	Justice.	Police.	Prisons.
	£	£	£	s. d.	s. d.	s. d.
New South Wales ..	888,898	4,861,020	781,228	5 1	28 5	4 7
Victoria ..	569,485	3,384,261	397,086	4 9	28 8	3 4
Queensland ..	298,119	2,550,408	176,269	4 9	40 10	2 10
South Australia ..	-22,295	1,172,732	163,730	-0 7	31 3	4 4
Western Australia ..	40,108	1,061,948	141,105	1 4	34 8	4 7
Tasmania ..	116,521	448,478	63,772	7 7	29 0	4 2
Total ..	1,890,836	13,478,847	1,723,190	4 4	31 0	4 0
1951–52 ..	1,599,109	12,011,760	1,560,028	3 9	28 4	3 8
1950–51 ..	979,263	9,361,578	1,177,452	2 5	22 7	2 10
1949–50 ..	755,785	7,758,518	1,006,421	1 11	19 4	2 6
1938–39 ..	315,881	3,499,202	417,679	0 11	10 1	1 2

2. **Commonwealth Expenditure.**—The expenditure shown in the previous table is that incurred by the State Governments only, and does not include expenditure of the Commonwealth Attorney-General's Department which is shown hereunder for the years 1938-39 and 1948-49 to 1952-53.

EXPENDITURE OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT.

(£.)							
Year.					Gross Expenditure.	Receipts.	Net Expenditure.
1938-39	..	..	..	..	281,497	111,036	170,461
1948-49	..	..	..	..	745,106	176,310	568,796
1949-50	..	..	..	..	820,560	183,398	637,162
1950-51	..	..	..	..	1,096,274	204,362	891,912
1951-52	..	..	..	..	1,348,721	238,676	1,110,045
1952-53	..	..	..	..	1,438,139	286,746	1,151,393

The expenditure for each year includes that in connexion with patents and copyright which amounted in 1952-53 to £333,762. The Commonwealth took over jurisdiction in bankruptcy in August, 1928, and the expenditure thereon in 1952-53 amounted to £96,573. Revenue of the Attorney-General's Department for the year 1952-53 amounted to £286,746, comprising £183,050 for patents, copyright, trade marks and designs, £31,323 for bankruptcy and £72,463 miscellaneous, including fees and fines.

In addition to the foregoing, during 1952-53, £118,545 was expended in the Northern Territory for the upkeep of the police force and prison services.

Expenditure in connexion with the Australian Capital Territory police in 1952-53 amounted to £74,492.

CHAPTER XIII.

PUBLIC HEALTH AND RELATED INSTITUTIONS.

A. PUBLIC HEALTH.

§ 1. State Public Health Legislation and Administration.

1. New South Wales.—The Department of Public Health comes under the jurisdiction of the Minister for Health, with an Under-Secretary as Permanent Head of the Department for administrative purposes.

There is also a Director-General of Public Health and Chief Medical Adviser to the Government, who is *ex-officio* President of the Board of Health and Chairman of the Nurses' Registration Board. He is assisted by a Deputy Director-General.

The Inspector-General of Mental Hospitals is responsible for the administration of that part of the Lunacy Act relating to the care and treatment of mental patients. There is also a Deputy Inspector-General.

The following statutory authorities are constituted under Acts administered by the Minister for Health:—Board of Health (Public Health Act), Hospitals Commission of N.S.W. (Public Hospitals Act), Milk Board (Milk Act), Dental Board (Dentists Act), Pharmacy Board (Pharmacy Act), Medical Board (Medical Practitioners Act), Board of Optometrical Registration (Opticians Act), Ambulance Transport Service Board (Ambulance Transport Service Act), Physiotherapists Registration Board (Physiotherapists Registration Act) and Nurses Registration Board (Nurses Registration Act).

The Department's activities extend over the whole of the State and embrace all matters relating to public health and the greater part of the general medical work of the Government. These include the following:—(a) Supervision of the work of local authorities (municipal and shire councils) in relation to public health matters connected with the following Acts—Public Health Act, Noxious Trades Act and Pure Food Act; (b) Scientific Divisions (Government Analyst, Microbiological Laboratory, and Division of Industrial Hygiene); (c) Tuberculosis and Social Hygiene Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst and Lismore; (e) State Hospitals and Homes and State Sanatoria; (f) Mental Hospitals; (g) Public Hospitals (Hospitals Commission); (h) Maternal and Baby Welfare (Baby Health Centres); (i) School Medical and Dental Services; and (j) Publicity, Nutrition and Library Services.

2. Victoria.—The Ministry of Health Act 1943 made the Minister of Health responsible for all Acts administered up to that time by the Department of Public Health, the Hospitals and Charities Acts, the Mental Hygiene Acts, and for all legislation and matters relating to the health and well-being of the people of the State.

The former Department of Public Health became the General Health Branch controlled by a Chief Health Officer. The latter also administers the Maternal and Child Hygiene Branch and the Tuberculosis Branch. These three with the Mental Hygiene Branch make up the four branches of the Department of Health.

The Mental Hygiene Authority Act 1950 provided for the establishment of an Authority of three members with a medical expert in mental illnesses at its head and established a pattern for the extension of the services of the Branch and for the improvement of treatment and accommodation of mental patients throughout the State.

The constant fight against infectious disease is actively carried on in the General Health Branch by seven District Health Officers and their staffs, in collaboration with the local health authorities. Where any specific infection is unduly prevalent, immunization is intensified and the success obtained over a period of years is illustrated by the following figures in respect of diphtheria :—Year 1927—cases, 3,254 ; deaths, 93 : Year 1952—cases, 201 ; deaths, 3.

The control and treatment of venereal disease is undertaken by a special division of the General Health Branch, and clinics for prophylaxis and treatment are attached to all hospitals receiving Government aid throughout the State.

The Poliomyelitis Division, formed during the outbreak of the disease in 1949 and expanded since that time, supervises treatment and after-care of patients throughout the State. The Division is staffed by three medical officers, fifteen physiotherapists and two visiting nurses.

The Industrial Hygiene Division supervises the environmental conditions of the 312,000 persons employed in industry in Victoria and consists of three medical officers, three special scientific officers and a number of inspectors.

Under the direction of a medical director, the Tuberculosis Branch comprises State sanatoria, tuberculosis clinics, tuberculosis bureaux and the Mass X-ray Survey Division. In order to exercise better control over the spread of tuberculosis in this State, power has been given, by special legislation, to the Chief Health Officer to require any individual or any group of persons to undergo radiological examination of the chest.

As with the Tuberculosis Branch, a medical director supervises the activities of the Maternal and Child Hygiene Branch. This Branch is concerned with pre-natal hygiene, infant health, pre-school child hygiene and school medical and dental services. An extensive State-wide correspondence scheme for women during their pregnancy and early motherhood supplies these women with all the latest advice and information.

Legislation which is the concern of the Minister of Health includes the following :—Anti-Cancer Council Act, Births Notification Acts, Cancer Institute Act, Cemeteries Acts, Dietitians Registration Act, Part V. of the Goods Act, Hairdressers Registration Acts, Health Acts, Hospitals and Charities Acts, Infectious Diseases Hospital Acts, Masseurs Acts, Medical Acts, Mental Deficiency Act, Mental Hygiene Acts, Midwives Act, Nurses Acts, Opticians Registration Act, Poisons Acts and Venereal Diseases Act.

3. *Queensland.*—(i) *General.* The Health Acts 1937 to 1949 are administered by the Director-General of Health and Medical Services subject to the Minister for Health and Home Affairs. A Central Staff controls the following Divisions :—

(a) *Division of Public Health Supervision.* This Division is controlled by the Deputy Director-General of Health and Medical Services and comprises separate sections of environmental sanitation, food and drug control, euthetic (venereal) diseases, hookworm control and Hansen's disease control. Qualified full-time officers are in charge of each section. Free treatment of venereal diseases is offered at the Department's male and female clinics in Brisbane, and at any public hospital. Two institutions (one at Peel Island in Moreton Bay for white patients and one at Fantome Island near Townsville for aboriginal patients) are maintained for the treatment of Hansen's disease. Modern therapy with sulphone drugs has caused a dramatic decline in numbers of patients at these institutions. Free immunization against diphtheria, whooping cough and tetanus is offered by most of the Local Authorities. A recent survey showed that 94 per cent. of school children in the Greater Brisbane area and 90 per cent. in the rest of the State had been immunized against diphtheria.

(b) *Division of Tuberculosis.* The Director, assisted by medical officers and nurses, exercises control of patients with tuberculosis. A central chest clinic in Brisbane offers Mantoux tests, X-ray examinations, and inoculations of Mantoux negative reactors free of charge and this service is extensively used. A mobile X-ray unit is being established to tour country districts.

(c) *Division of Industrial Medicine.* This Division exercises supervision over the health of workers in both primary and secondary industries, including control of leptospirosis (Weil's disease) and scrub typhus in the sugar-cane growing districts north of Ingham.

(d) *Division of Maternal and Child Welfare.* The Director, assisted by full-time and part-time health officers and a staff of qualified nurses, offers supervision and advice on the rearing of infants and pre-school children at baby health centres throughout the State. Outlying centres are visited by air or by special rail car. Homes for in-patient treatment of infants with feeding problems have been established at Brisbane, Toowoomba, Ipswich and Rockhampton.

(e) *Division of School Health Services.* This Division comprises the Chief Medical Officer, School Health Services, and a staff of medical officers, dentists and visiting school nurses.

(f) *Division of Mental Hygiene.* The Director is responsible for the care and treatment of mentally sick patients in the State's three mental hospitals, at Brisbane, Toowoomba and Ipswich. A new mental hospital is being erected at Charters Towers.

(g) *Division of Laboratory Services.* Two laboratories—the Laboratory of Microbiology and Pathology, and the Government Chemical Laboratory—are maintained to ensure the purity of a wide range of foodstuffs and materials. The former also offers a service in clinical pathology to country hospitals and private medical practitioners.

(ii) *Hospitals.* All public hospitals operate under the district system, which provides for the constitution of Hospitals Districts and Hospitals Regions and a Hospitals Board for each district. The State is divided into 11 Hospitals Regions with a base hospital for each region which comprises a number of Hospitals Districts. The purpose of the regional scheme is to co-ordinate the public hospitals in the region with the base hospital. The administration of the hospitals services, including public dental services, in each Hospitals District is vested in the Hospitals Board which comprises not less than four members nor more than eight members appointed by the Governor-in-Council and one member elected by the component Local Authorities. There are 54 Hospitals Boards controlling 121 public hospitals.

4. *South Australia.*—The Department of Public Health embraces the activities of the Central Board of Health, the School Medical Services, and the public health aspect of the control of tuberculosis, including the State X-ray Health Survey, under the control of the Director of Tuberculosis.

The Central Board of Health consists of five members, three of whom (including the chairman) are appointed by the Governor while one each is elected by metropolitan local boards and all other local boards. The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouses Registrations and Early Notification of Birth Acts. The Board is also concerned to some degree with Acts relating to local government, abattoirs and cremation. Other legislation administered by the Department of Public Health relates to venereal diseases and vaccination.

The Health Act, 1935-1952 constitutes every municipal council and every district council a local board of health for its municipality or district. There are 143 of these local boards under the general control and supervision of the Central Board. Under the Food and Drugs Act every local board is constituted the local authority for its respective district, except in the metropolitan area, for which the Metropolitan County Board is the local authority.

The medical staff of the Department includes the Director of Tuberculosis, a Senior Medical Officer and the Principal Medical Officer for Schools, six full-time medical officers, one temporary medical officer and six part-time medical officers. Four dentists, four dental assistants and six nurses are engaged in connexion with the School Medical Services. There are six full-time and fourteen part-time inspectors directly responsible to the Board. There is also a nurse inspector employed to advise and assist local boards in connexion with infectious diseases. Three nurses are engaged in the State X-ray Health Survey and one in B.C.G. vaccination. The inspectors appointed under the Health and Food and Drugs Acts periodically visit the local districts and see, generally, that the local boards are performing their duties.

5. **Western Australia.**—The legislation in this State is the Health Act 1911-1952. This was consolidated and reprinted in 1948 and amended in 1950 and 1952. The Central Authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The State is covered by Local Authorities which are constituted as Municipalities or Road Boards.

It is provided that a Local Board of Health may be set up in lieu of a Road Board, but this method of control is no longer used. In any emergency the Commissioner may exercise all the powers of a Local Health Authority in any part of the State.

Interesting features of recent legislation are as follows :—(a) Act No. 70 of 1948 gave compulsory power to control sufferers from tuberculosis and established a Tuberculosis Control Branch; (b) Act No. 71 of 1948 provided that within areas declared for the purpose all still-born infants must be submitted for post-mortem examination and all stillbirths must be notified to the Commissioner by the attending medical practitioner; and (c) Act No. 11 of 1952 gave wide powers to regulate the sale and use of pesticides.

6. **Tasmania.**—The Department of Public Health is under the jurisdiction of the Minister for Health, and the administration of the various services is controlled by the permanent head of the Department, the Director-General of Medical Services, who is also responsible for the administration of the Hospital and Medical section. Associated with the permanent head are the Director of Public Health, the Director of Tuberculosis, and the Director of Mental Hygiene.

The Hospital and Medical Services section is responsible for administration of the laws relating to hospitals and nurses' registration, and the following services: Government Medical Service, Cancer Clinics, Bush Nursing Service, and Institutions for the Aged and Infirm at St. John's Park and Cosgrove Park.

Public Health functions comprise administration of laws relating to public health, food and drugs, places of public entertainment, cremation, and the following services: School Medical and Dental, Maternal and Child Welfare, Infectious and Venereal Disease control, Analytical Laboratory, and Mothercraft Home. The Tuberculosis section is responsible for administration of the laws relating to tuberculosis, and for the management of chest clinics and chest hospitals at New Town and Perth. The Mental Hygiene section is responsible for administration of the laws relating to mental hospitals and mental defectives, and for the management of Lachlan Park Hospital (Mental Hospital) and Millbrook Psychopathic Home.

§ 2. The Commonwealth Department of Health.

1. **General.**—The Commonwealth Department of Health was created by an Order-in-Council of 3rd March, 1921. This Order specified the functions to be performed by the Department in addition to Quarantine. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services.

As part of the National Health Service the following benefits and services are provided under the National Health Act, 1953: a free general practitioner medical service to pensioners and their dependants, and pharmaceutical, hospital and medical benefits to the community generally.

Assistance to sufferers from tuberculosis is provided under the Tuberculosis Act 1948 and free milk for school children under the States Grants (Milk for School Children) Act 1950. Details of these services are provided in the following paragraphs.

The functions of the Department, apart from the National Health Service, are very widespread. They include Quarantine (Human, Animal and Plant), the fostering of medical research through the National Health and Medical Research Council, the provision of hospital and medical services in the Northern Territory, the manufacture of a large number of sera and pharmaceuticals by the Commonwealth Serum Laboratories, and the maintaining of fifteen Health Laboratories throughout Australia to provide X-ray, pathological and other services to the surrounding communities. A short description of these and other activities is provided below. (For additional information see Official Year Book No. 40, p. 515.)

2. **The National Health Service.**—(i) *Pharmaceutical Benefits.* Since September 1950, under the provisions of the Pharmaceutical Benefits Act 1947–1952 and the National Health Act 1953, certain life-saving and disease-preventing drugs have been provided free of charge to the general community. Such drugs are not supplied free unless they have been prescribed by a medical practitioner.

The number of drugs listed as available as general pharmaceutical benefits has steadily increased and at present 242 separate preparations are supplied. Before a drug is listed as being available it must first be approved by the Pharmaceutical Benefits Advisory Committee, a body appointed by the Minister for Health.

All drugs listed in the British Pharmacopoeia and other drugs as specified, are supplied free to eligible pensioners (i.e., those receiving age, invalid, widows' and service pensions and persons receiving a tuberculosis allowance) and their dependants.

Total expenditure on pharmaceutical benefits in the year 1953–54 was £9,229,413.

(ii) *Hospital Benefits.* The payment of hospital benefits to the States is authorized under Part V. of the National Health Act 1953. This Act continues the agreements entered into with the various States under the Hospital Benefits Act 1951. Under these agreements the Commonwealth pays the States certain sums of money which vary in accordance with variations in the number of occupied beds in public hospitals.

The rates of payment for occupied beds in public hospitals are determined by the category into which patients are grouped. Payment of 12s. per day is made for a patient who is a pensioner or a dependant of a pensioner. A payment of 8s. per day is made for all other qualified patients.

A payment of 8s. per day is also made for patients in approved private hospitals. This payment is made to the proprietor of the private hospital.

An additional payment of 4s. per day is made in the case of patients who are members of an approved hospital benefit fund. This payment is made through the benefit organization and is normally paid to the patient with the amount payable by the organization.

Australian citizens who are temporarily living overseas and their dependants who receive hospital treatment are eligible to receive the benefit of 8s. a day.

Total payments made for all types of hospital benefits (excluding patients in mental hospitals) in 1953–54 was £8,330,070.

(iii) *Medical Benefits.* A Medical Benefits Scheme commenced to operate as from July, 1953, being authorized under the National Health (Medical Benefits) Regulations. These Regulations were superseded by the passing of the National Health Act 1953. Generally the scheme may be described as a system whereby the Commonwealth supports registered insurance organizations and matches benefits paid by them to members. The objective is that the major part of medical expenses will be re-imbursed to members of these organizations.

In 1953–54 Commonwealth expenditure on medical benefits was £1,436,166.

(iv) *Pensioner Medical Service.* The Pensioner Medical Service which commenced on 21st February, 1951 was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the National Health Service Act 1948–49. The service has been continued under the provisions of the National Health Act 1953.

Under this scheme pensioners and their dependants, as defined in the section above describing pharmaceutical benefits, are provided with a free general practitioner service. Specialist services are not provided. A small fee may be charged by practitioners who attend qualified patients outside normal surgery or visiting hours. Practitioners in the scheme are remunerated on a fee-for-service basis by the Commonwealth.

At the 30th June, 1954 there were 4,239 medical practitioners enrolled in the Pensioner Medical Service to provide medical services to approximately 597,300 eligible persons. More than 96 per cent. of eligible persons have now been enrolled in the scheme and more than 80 per cent. of general practitioners are participating.

In the year ended 30th June, 1954 medical practitioners in the scheme made 4,168,410 visits or surgery consultations to persons enrolled in the scheme. For these services they were paid a sum of £2,115,485. The average number of medical services rendered by practitioners to enrolled persons in this period was 7.2.

(v) *Tuberculosis Act*. The main provisions of this Act, which was assented to on 25th November, 1948, are as follows :—(a) Section 5, which authorizes the Commonwealth to enter into an arrangement with the States for an effectual national campaign against tuberculosis; (b) Section 6, which empowers the Commonwealth to take over or provide specified facilities for the diagnosis, treatment and control of tuberculosis; (c) Section 8, which provides for the setting up of an Advisory Council to advise the Commonwealth Minister for Health on matters relating to the national campaign; and (d) Section 9, which authorizes the Commonwealth to pay allowances to sufferers from tuberculosis and their dependants to enable sufferers to give up work and undergo treatment, and thus minimize the spread of infection.

The Commonwealth has completed an arrangement with each State, whereby each State is required to conduct an effectual campaign against tuberculosis and to provide adequate facilities for that purpose. In consideration of this, the Commonwealth undertakes to reimburse the State for all approved capital expenditure in relation to tuberculosis on and after 1st July, 1948, and for net maintenance expenditure to the extent that it is in excess of net maintenance expenditure for the base year 1947-48. Thus, the States are required to carry out the actual physical or field work of the national campaign with the Commonwealth acting in an advisory, co-ordinating and financial capacity. For this reason, the Commonwealth has not found it necessary to make much use of its powers under Section 6.

An Advisory Council, known as the National Tuberculosis Advisory Council, has been set up and has already held six meetings. There are eleven members under the chairmanship of the Commonwealth Director-General of Health. The members are the Commonwealth Director of Tuberculosis, the six State Directors of Tuberculosis, the Consultant (Chest Diseases) of the Department of Repatriation, two specialist private practitioners, and the Chief Administrative Officer of the Commonwealth Department of Health.

A system of tuberculosis allowances has been drawn up and is an important factor in the campaign against the disease. Payments under the scheme were commenced on 13th July, 1950. The rates of allowance from 29th October, 1953 were £9 2s. 6d. a week for a married sufferer with a dependent wife, £5 12s. 6d. a week for a sufferer without dependants (reducible to £3 10s. when maintained free of charge in an institution), and 10s. a week for each dependent child under the age of sixteen (which is additional to child endowment). There is a means test, generous to the sufferer, which has regard only to income and not to property.

(vi) *Free Milk for School Children Scheme*. In 1950 the States Grants (Milk for School Children) Act was passed. The object of this Act was to improve the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending public or private primary schools, including nursery schools, kindergartens, crèches and aboriginal missions, are eligible to receive this issue. Wherever practicable the milk is given to the children in one-third of a pint bottles. The cost of the milk plus half the capital or incidental costs, including administrative expenses incurred in administering the scheme is reimbursed by the Commonwealth to the States. All States are now participants in the scheme, and at 30th June, 1954 approximately 874,000 children were receiving free milk.

In the years 1952-53 and 1953-54 the following amounts were reimbursed to the various States and Territories :— 1952-53, New South Wales £701,448, Victoria £433,766, Queensland £55,000, South Australia £175,400, Western Australia £92,996, Tasmania £60,000, Northern Territory £233, Australian Capital Territory £5,261, Total £1,524,104; 1953-54, New South Wales £881,600, Victoria £429,000, Queensland £204,600, South Australia £156,000, Western Australia £107,138, Tasmania £219,580, Northern Territory £552, Australian Capital Territory £6,891, Total £2,005,361.

3. *Other Activities of the Commonwealth Department of Health.*—(i) *Animal Quarantine.* Animal quarantine is authorized by the provisions of the Quarantine Act 1908–1950 and has as its objective the prevention of the introduction or spread of diseases of animals. This legislation covers the importation of all animals, raw animal products, biological cultures, etc., associated with animal diseases and goods associated with animals.

Domesticated animals, i.e., horses, cattle, pigs, sheep, goats, dogs, cats and poultry, are admitted from a limited number of countries depending on diseases present in the country of origin. All must be accompanied by health certificates which include prescribed tests. On arrival in Australia they are subject to quarantine detention.

Zoological specimens are imported into registered zoos where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a somewhat similar manner, animals for scientific purposes are imported to approved laboratories. All of these premises are kept under constant surveillance. Raw animal products such as hair, special types of wool, skins, hides, etc., are subjected to special treatment under quarantine control, whilst such items as raw meat, sausage casings and eggs, which cannot be sterilized, are admitted from very few countries. Other items such as harness, fittings, fodder, ship's refuse, etc., are appropriately treated to destroy possible infection.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine: formerly the full responsibility for this administration fell on the Director of Quarantine. The organization of the Division provides an excellent example of Commonwealth and State co-operation. The Central Administration is situated within the Health Department at Canberra, with a Director, an Assistant Director and Veterinary Officers. By provision in the Quarantine Act and by arrangement with the States, the Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of the State and members of his staff Quarantine Officers (Animals). These State officers, acting in their Commonwealth capacity, carry out the quarantine policy formulated by the Central Administration. Quarantine accommodation is provided at permanent animal quarantine stations at each Capital City.

The Division participates in world-wide international notification of the more serious contagious diseases of animals and maintains a census of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions, notably the Commonwealth Scientific and Industrial Research Organization. In matters of policy and the quarantine control of imports there is a close liaison with the Department of Trade and Customs.

The Division collaborates with the "General" and "Plant" Divisions of the Quarantine Service. Many diseases of animals are communicable to man and for this reason "Animal" and "General" quarantine administration are in some respects inseparable. Similarly the interests of "Animal" and "Plant" Divisions overlap, many items such as insects, fodder, straw, etc., being the subject of combined control.

(ii) *Plant Quarantine.* Since 1st July, 1909, the importation into Australia of all plants or parts of plants, cuttings, seeds and fruits, whether living or dead, has been subject to an increasingly stringent quarantine with the object of preventing the introduction of insect pests, plant diseases and weeds not yet established in this country. Under the Quarantine Act 1908–1950 general powers are held by which the quarantine inspectors are required to examine all plant material at the first port of entry and to release only such material as is free from diseases and pests. Everyone entering Australia is required to declare if he or she has any plant material in luggage or personal effects. Heavy penalties are laid down for those found deliberately evading the regulations. All plant material entering as cargo must also be declared.

When the Commonwealth became responsible for all plant quarantine, the State Governments agreed to co-operate by providing and maintaining inspection facilities and personnel for which they are reimbursed by the Commonwealth. In 1921 the administration of the regulations came under the newly-formed Department of Health, and in 1927 the Division of Plant Quarantine was created under a Director who is responsible for policy and legislation and for co-ordinating the work of the State Officers who carry out the detailed administration in their capacity as Commonwealth Officers.

Any plant material found carrying diseases or pests or suspected of doing so may be ordered into quarantine for remedial treatment, or if the treatment be impracticable, may be destroyed. Such treatments are paid for by the importer. Air transport has created many new problems in maintaining effective control. It is impossible in this summary to give details of regulations governing the different types of plants, but the following will indicate certain broad principles in them :—(a) The importation of plants likely to be infected with plant diseases, noxious fungi or poison plants is prohibited ; (b) Agricultural seed must conform to standards of purity ; (c) Many commodities such as hops, cotton, peanuts in shell, nursery stock, potatoes, certain crop seeds, vines and specified plants may only be imported by approved importers under special conditions ; (d) Certain plant products such as bulbs and timber (in logs or sawn), from specified areas may only be imported if accompanied by certificates showing that prescribed treatment has been given in the country of origin.

The regulations are constantly being amended in the light of experience, with the object of maintaining for Australia the freedom from a large number of serious diseases and pests of plants which ravage crops in other lands.

(iii) *The Commonwealth Serum Laboratories.* The laboratories were established in 1916 under the administration of the Quarantine Branch, Department of Trade and Customs (later the Commonwealth Department of Health, Order-in-Council, March, 1921). Work began in temporary quarters, but new buildings were erected and occupied in 1918 at Royal Park, Melbourne, where the Commonwealth had acquired 23 acres. In 1936, a farm of 325 acres was purchased for experimental and other purposes at Broadmeadows, 9 miles from Melbourne. The laboratories function as a Public Health Institute and are part of the Commonwealth Department of Health, conducting research and training of laboratory personnel. In addition, biological products are prepared on a large scale for use in the diagnosis, prevention and treatment of human and animal diseases.

Since their foundation 38 years ago, the laboratories have been greatly extended in size and scope. The number and variety of biologicals available for issue have thus been increased to the extent that Australia is practically independent of overseas supplies.

Continuous research is being conducted into all relevant aspects of Bacteriology and Immunology and related fields of work. New kinds of biological agents are prepared and tested as the growth of medical or scientific knowledge provides fresh means of diagnosis, prevention and treatment. Investigations are also made into other aspects of public health work. For the past 30 years the production of veterinary biologicals has been a feature of the work, and in recent years extensive development has occurred in this direction.

The result of increasing employment of veterinary products in the prevention of diseases of domestic animals and stock is reflected in the diminution of incidence of certain infectious diseases amongst stock with economic benefit to the community.

The laboratories also serve as a national centre for the maintenance in Australia of the International Standards of the Permanent Commission on Biological Standards (World Health Organization), and act as the regional reference centre for the World Health Organization in collating reports of prevalence of certain infectious diseases in Australia, and at the same time conduct laboratory investigations for the identification of diseases thus reported.

(iv) *The Commonwealth Health Laboratories.* The fifteen health laboratories of the Department are situated at strategic points throughout Australia. They are located at Canberra, Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Lismore, Bendigo, Launceston, Hobart, Port Pirie, Kalgoorlie, Tamworth, Wollongong and Albury. These laboratories were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide medical practitioners of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other hand, is essential to the efficient investigation of disease and the effective operation of control measures.

From this standpoint, the laboratories have already proved their value in the determination of leptospirosis and endemic typhus in North Queensland, in the investigation of special local problems at Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations close co-operation has existed with State and local health and hospital services; especially is this so in Queensland where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers previously unclassified in that State. In this investigational work, as well as in more routine activities, the laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the School of Public Health and Tropical Medicine, Sydney.

(v) *The School of Public Health and Tropical Medicine.* The Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney as from 4th March, 1930, for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The work of the school comprises both teaching and investigation. Courses are held for the University post-graduate diploma of public health and the diploma of tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social and school hygiene, lay officers and nurses in the tropical services, and missionaries. In addition to this work, all the resources of the School were made available during the war for the training of medical and hygiene officers and other ranks from all the Services of the Australian and Allied Forces.

Investigational work covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out not only in Australia but in co-operation with the local administrations in Papua, New Guinea, Norfolk Island and Nauru. Sections of Child Health and Occupational Disease have been established and suitable staff selected.

(vi) *Commonwealth Acoustic Laboratories.* The Department of Health established the first of the series of Acoustic Laboratories in January, 1947, in Sydney. The laboratory continued and expanded the work of the Acoustic Research Laboratory which was sponsored by the National Health and Medical Research Council during the years 1942-1946 for the purpose of investigating problems of noise and difficulties of intercommunication in aircraft and tanks. After the 1939-45 War the Acoustic Research Laboratory directed its attention to the problem of deafness in children, particularly the group whose affliction was caused by the mothers contracting rubella in the early months of pregnancy.

The taking over of the Acoustic Research Laboratory by the Department of Health was influenced by a request from the Repatriation Commission for technical assistance in the matter of providing hearing aids for deafened ex-servicemen. Arrangements for this purpose were completed and branch laboratories were established in all other State Capital Cities.

During 1948 the Acoustic Laboratories Act was passed to allow the expansion of activities on the following lines :—(1) To carry out the requirements of the Repatriation Commission for deafened ex-Service personnel and to provide a similar service for the Commonwealth Department of Social Services in respect of deafened ex-Service personnel whose disability was not caused by war service ; (2) to assist the Education Departments of the States in measuring deafness, fitting aids, and maintaining hearing aid equipment for school children ; (3) to act on behalf of various State and other authorities who desire to have independent tests made before assisting financially in the purchase of hearing aids for people under their care ; (4) to investigate problems associated with noise in industry ; (5) to make hearing tests on Civil Aviation aircrew as required by International agreement ; and (6) to give advice to the Armed Services on noise problems as required.

The laboratory in Sydney is responsible for the training of personnel for the whole Acoustic Service, the production of equipment, the calibration of hearing aids and audiometers and the technical administration of the branch laboratories.

(vii) *Commonwealth Bureau of Dental Standards.* The National Health and Medical Research Council sponsored the Dental Materials Research Laboratory during the years 1939–1946, for the purpose of assisting the Defence Services, the Medical Equipment Control Committee and other Government Departments in the selection and purchase of suitable dental equipment and materials. Valuable assistance was also given to Australian manufacturers of dental materials in relation to improvement of their products and the development of new materials.

Much of the work was of a routine nature and after the 1939–45 War the National Health and Medical Research Council decided to cease its sponsorship, but recommended that the Department of Health should take over the laboratory as it was serving a good purpose. This was done in January, 1947, and the laboratory was renamed the Commonwealth Bureau of Dental Standards and is at present situated in the grounds of the University of Melbourne.

The functions of the Bureau are as follows :—(1) Original research into dental equipment, materials, techniques and processes ; (2) the development, through the Standards Association of Australia, in consultation with a committee representative of the Commonwealth Department of Health, of the Australian Dental Association and of manufacturers and distributors, of specifications for dental materials and equipment ; (3) regular systematic surveys of dental materials on sale to the profession in Australia, and the reporting of the results of such investigations in recognized Australian scientific journals ; and (4) the provision of a consultative service and testing facilities for local manufacturers and distributors of dental materials with the view to assisting them in the improvement of existing products and the development of new materials.

(viii) *Commonwealth X-ray and Radium Laboratory.* The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Annual cancer conferences convened by the Department from 1928, onward provided an opportunity each year for those actively engaged in the campaign against the disease to meet for the discussion of problems and the determination of lines of action for further development. The tenth conference in this series met in New Zealand in February, 1939, and so marked an association which had been maintained between Australia and the Dominion since the inception of the conferences.

Although the cancer conferences were not held during the war years, and have not been revived, the Department continues to maintain liaison in this work. A total of 10 grams of radium, purchased in 1928 by the Commonwealth Government for use in treatment and research, has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all requiring it, irrespective of ability to pay. This work is co-ordinated by the

Department. From time to time portions of the original radium holding have been remounted by the Department in forms more suitable for the more modern techniques which have been developed.

Realizing the essential importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation actually delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health in 1935 extended the work of the Commonwealth Radium Laboratory, established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, known as the Commonwealth X-ray and Radium Laboratory, is situated by agreement with the University of Melbourne within the University grounds, and is maintained, controlled, and staffed by the Commonwealth Department of Health. It is accommodated in a building specially designed for work with X-rays and radium, and is amply provided with all necessary equipment for research work, including a 500,000 volt high tension generator.

The laboratory co-operates closely with the local physical services which have been developed in the other capital cities of Australia to provide local facilities for the production of radon, for the calibration of X-ray therapy equipment, and for the measurement of radiation exposure of X-ray and radium workers. The laboratory has continued to repair radium containers. It also undertakes investigations into physical problems arising in the use of X-rays and radium in treatment.

During the year 1953, a total of 101,386 millicuries of radon was prepared and issued from the laboratory in implants, needles and tubes, while 37,979 millicuries were issued by the associated centres in Sydney, Adelaide and Brisbane. The corresponding figures for 1952 were 101,380 and 35,260 millicuries respectively. The issues of radon from a few centres to serve hospitals all over the continent is a unique Australian development, and enables a very efficient use to be made of the radium available.

The development of atomic energy programmes overseas has made available supplies of artificial radio-isotopes which can be used either as an alternative to natural isotopes such as radium and radon, or may be applied internally when they are selectively secreted in a particular organ. All radio-isotopes in use in Australia in medicine, research and industry are subject to the approval of the laboratory and are imported by the laboratory. Regular supplies of radio-phosphorus and radio-iodine are obtained and are distributed free of charge for the treatment of patients throughout Australia according to a policy developed by the Committee on Radio-isotopes of the National Health and Medical Research Council. The laboratory has been responsible for the development of a scheme of physical measurements required in the use of radio-iodine which can be readily carried out in individual hospitals.

Close co-operation is maintained between the medical men engaged in the clinical investigation and treatment of the disease and research workers, physicists, and biochemists, so that problems are mutually investigated and treatment applied with the highest obtainable degree of scientific accuracy.

(ix) *The Northern Territory Medical Service.* As from 1st April, 1939, the Commonwealth Department of Health absorbed the Northern Territory Medical Service and became responsible for the medical and health services of that area. Military control of these services operated from 1942 to 1945 but civilian control was resumed over the whole area by May, 1946.

The Darwin Hospital has accommodation for 187 in-patients, Alice Springs Hospital 90, Katherine Hospital 25 and Tennant Creek Hospital 25. The existing leprosarium at Channel Island will be replaced by a new leprosarium on the mainland to accommodate 300 inmates. The new leprosarium is nearly completed and a pathologist has been appointed to the Health Laboratory. Dental services are available and two clinics have been established, one at Darwin and one at Alice Springs, whilst mobile road and aerial units of the dental and medical services serve the outback.

An aerial medical service, operated by the Department, is based on Darwin. De Havilland Drover and Dragon aircraft are used, the pilots being supplied by arrangement with Trans-Australia Airlines. Emergency and regular monthly routine visits and surveys are undertaken. At Alice Springs medical officers of the Northern Territory Medical Service provide free service for the Flying Doctor Service base.

The Commonwealth Department of Health maintains a quarantine station at Darwin which is a first port of entry for oversea aircraft. Public health services are provided at large centres and all other centres of population are visited periodically by the Senior Health Inspector.

(x) *National Fitness.* A national fitness movement was launched in Australia in 1939 following the world-wide movement for the advancement of physical fitness which preceded the last world war. In 1938, arising from a recommendation of the National Health and Medical Research Council, the Commonwealth Government agreed to appoint a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and Local Government authorities in the movement. Meetings of this Council are held at regular intervals, and an annual report submitted to Parliament. Autonomous State National Fitness Councils operate in all States, each sending one representative to the Commonwealth Council meetings. Following the recommendations of the first Commonwealth Council meeting in 1939, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education. In July, 1941 a National Fitness Act was passed by the Commonwealth Parliament to ensure greater permanence to the movement, and in June, 1942, the Commonwealth grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory. In 1951 the total grants were extended for a further period of three years. The movement continues to develop and to gain public interest and support throughout Australia, particularly through its physical and recreational activities with voluntary youth organizations and amateur sports organizations.

(xi) *The Pre-school Child.* Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the care of the infant and the welfare of the school child are already developed by State authorities as recorded in §§ 7 and 8 below. The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by making it possible to demonstrate what could be done and the practical methods which could be applied.

The Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and in order to achieve the best results in association with those who have had experience in this field, it has secured the co-operation of the Federal Organization of Kindergarten Unions, which is operating under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. Formerly the administration of these centres was under the direction of the local Kindergarten Union and the employment of staff was made with the approval of the Commonwealth Department of Health. Recently the local Lady Gowrie Child Centre Committees were given a greater degree of autonomy, so that while the technical supervision still rests with the Australian Association for Pre-school Child Development, the management of each centre, including staffing, is in the hands of the local Committee. This development is associated with a change in the method of financial control. An annual grant is made to each Committee towards the cost of the centre, the disbursement of these funds being at the discretion of the local Committee, subject to the general supervision of the Australian Association for Pre-school Child Development. This applies in so far as the educational side is concerned, and in this

field advantage is being taken of the opportunity to try new methods and to make systematic records of observations with the object of securing reliable knowledge of the educational technique of this pre-school period.

Along with this educational practice there proceeds also the study of physiological requirements of the child and of the interaction between physical and mental health under varying conditions. The children at these centres provide a considerable mass of human material for control and study, which is of great value in view of the importance of the study of growth and of nutrition of their age-period. Not only are routine measurements made of height, weight and other bodily data, but problems of nutrition are studied in detail. The medical work at each State centre is conducted on a uniform basis, according to a scheme formulated at, and directed from, the Australian Institute of Anatomy, Canberra, where parallel investigations on the laboratory side are being undertaken.

An annual grant of £30,000 is paid by the Department to the Australian Association for Pre-school Child Development to assist this body in its work.

(xii) *The Australian Institute of Anatomy.* Information concerning the Australian Institute of Anatomy at Canberra is given in previous issues of the Official Year Book (see No. 32, pp. 919-21). In 1931 the Institute became an integral part of the Commonwealth Department of Health.

A number of Health Department units are now concentrated within the Institute. These include the Museum and Medical Artistry Section; the Nutrition Section; the Diabetes and Enzyme Research Section; the Commonwealth Health Laboratory for the Australian Capital Territory; the Veterinary Laboratory; and the office of the Australian Pre-school Association.

The scientific research work of the Institute has now been concentrated on problems of nutrition. These take the form of field surveys of the dietary status of the Australian population and laboratory investigations into the biochemistry of nutrition and metabolism. In addition to the anatomical and biological displays, there is an extensive arrangement of valuable ethnological material illustrating the culture of the Australian aborigines and of New Guinea natives.

§ 3. The National Health and Medical Research Council.

In 1926 the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between Commonwealth and State Health Authorities". This Council held sessions each year except in 1932. In 1936 the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions :—

- To advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research.
- To advise the Commonwealth Government on the expenditure of money specifically appropriated to be spent on the advice of this Council.
- To advise the Commonwealth Government on the expenditure of money upon medical research and on projects of medical research generally.
- To advise Commonwealth and State Governments upon the merits of reputed cures or method of treatment which are from time to time brought forward for recognition.

The Council consists of the Commonwealth Director-General of Health (as Chairman), two officers of his Department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons the Royal Australasian College of Physicians,

the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Australian Dental Association, and (jointly) the four Australian Universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the Council.

The first session of the National Health and Medical Research Council met at Hobart in February, 1937. The thirty-seventh session met at Sydney in May, 1954.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to provide assistance :—(a) to Departments of the Commonwealth or of a State engaged in medical research ; (b) to Universities for the purpose of medical research ; (c) to institutions and persons engaged in medical research ; and (d) in the training of persons in medical research.

Approved research institutions under this system now number 51. During 1954 grants for projects numbered 55 in the following fields :—bacteriology, biochemistry, biophysics, clinical research, dental research, epidemiology, haematology, medical chemistry, neurology, neuro-physiology, obstetrics, pathology, physiology and pharmacology, tuberculosis and virus diseases. In certain instances, equipment and apparatus have been made available by the Council ; this has greatly facilitated some specialized lines of research. The wide scope of work being carried out is greatly assisted by the formation of committees which meet regularly and advise the Council in such subjects as industrial hygiene, public health, epidemiology, maternal and child welfare, radioactive isotopes, antibiotic distribution, tropical physiology and hygiene, tuberculosis and the latest developments in X-ray technology and application.

The research work being done under these grants is of a high standard, many of the individual investigators enjoying international reputation. Beyond this practical achievement, the original objectives of the Council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia.

An insurance benefit scheme for such medical workers on the lines of the Federated Superannuation System for Universities is now in operation.

§ 4. Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine ; Notifiable Diseases, including Venereal Diseases ; and Vaccination.

2. **Quarantine.**—The Quarantine Act is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows :—(i) Human quarantine which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease ; (ii) Animal quarantine which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports ; and (iii) Plant quarantine which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Federal action is necessary for the protection of any State or States ; in general, the administration of interstate movements of animals and plants is left in the hands of the States.

The Commonwealth controls stations in each State for the purposes of quarantine of humans, animals and plants.

3. **Notifiable Diseases.**—(i) *General.* (a) *Methods of Prevention and Control* Provision exists in the Health Acts of all the States for the observance of precautions against the spread and for the compulsory notification of infectious disease. When any

such disease occurs, the local authority must at once be notified, and in some States notification must be made also to the Health Department. The duty of making this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and, on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as smallpox and leprosy.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and Territory the diseases notifiable in 1953 and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

**DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY AND NOTIFICATIONS
FOR THE YEAR ENDED 31st DECEMBER, 1953.**

Disease.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Acute rheumatism ..	158	155	*	*	24	*	1	..	338
Amoebiasis ..	*	13	5	3	6	..	..	..	27
Ankylostomiasis† ..	47	..	85	..	2	..	58	..	192
Anthrax ..	*	..	1	..	..	..	..	..	1
Bilharziasis ..	..	..	..	..	..	..	..	..	..
Brucellosis ..	8	37	1	1	7	..	..	..	54
Chorea ..	22	14	*	*	6	*	..	..	42
Dengue ..	*	..	*	*	1	*	..	..	1
Diarrhoea, infantile ..	237	163	424	*	4	11	66	..	905
Diphtheria ..	499	201	187	6	170	23	..	1	1,087
Dysentery, bacillary ..	..	59	54	164	42	55	..	4	378
Encephalitis ..	20	30	1	23	3	5	1	..	83
Filariasis ..	*	..	..	..	..	..	..	..	..
Homologous serum jaundice ..	*	1	*	*	..	*	..	..	1
Hydatid ..	..	22	*	*	..	9	1	..	32
Infective hepatitis‡ ..	..	491	*	*	443	*	19	..	953
Lead poisoning ..	*	..	11	*	5	*	..	..	16
Leprosy ..	..	2	13	..	26	..	22	..	63
Leptospirosis ..	2	*	109	..	..	*	..	..	111
Malaria ..	..	3	11	..	25	9	8	..	56
Meningococcal infection ..	128	148	33	17	25	42	5	..	398
Ophthalmia ..	*	*	*	*	163	..	..	..	163
Ornithosis ..	3	4	*	..	..	*	..	..	7
Paratyphoid ..	10	2	..	..	1	2	..	..	15
Polioomyelitis ..	630	284	207	398	44	112	1	1	1,677
Puerperal fever ..	18	5	49	3	3	..	3	1	82
Rubella ..	..	1,192	21	*	1,053	..	6	8	2,280
Salmonella infection ..	..	*	*	*	17	*	1	..	18
Scarlet fever ..	646	2,469	299	157	93	45	..	13	3,722
Tetanus ..	..	9	37	*	12	*	..	..	58
Trachoma ..	*	..	*	*	1,201	*	1	..	1,202
Trichinosis ..	..	..	*	..	..	..	..	..	..
Tuberculosis ..	1,896	1,121	902	389	403	216	38	14	4,979
Typhoid fever ..	92	54	36	11	7	9	..	5	214
Typhus—flea, mite or tick borne ..	9	1	39	3	18	..	..	..	70

* Not notifiable. † Ankylostomiasis has been notifiable in New South Wales since November, 1953. ‡ Infective hepatitis has been notifiable in New South Wales since December, 1953.

NOTE.—No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified.

(ii) *Veneral Diseases.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. Under these Acts notification has been made compulsory in every State. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person and the employment of an infected person in the manufacture or distribution of foodstuffs.

4. *Vaccination.*—There is statutory provision for compulsory vaccination in all States except New South Wales. Jennerian vaccine for vaccination against smallpox is prepared at the Commonwealth Serum Laboratories in Melbourne. There has been a considerable increase in the demand for vaccination, especially by people about to travel overseas by air, so that they may conform with the quarantine requirements of countries to which they are travelling.

§ 5. Inspection and Sale of Food and Drugs.

Public Health legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all goods sold shall be wholesome, clean and free from contamination or adulteration; and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion see § 1. State Public Health Legislation and Administration, p. 455.

§ 6. Supervision of Dairies, Milk Supply, Etc.

1. *General.*—In earlier issues of the Official Year Book (see No. 22, p. 498) reference was made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. *Number of Dairy Premises Registered, 1953.*—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cows in milk thereon. In some States registration is compulsory within certain proclaimed areas only.

DAIRY PREMISES REGISTERED, AND COWS IN MILK THEREON, 1953.

Particulars.	N.S.W. (a)	Victoria.	Q'land. (a)	S. Aust.	W. Aust. (b)	Tasmania. (a)
Premises registered ..	16,278	26,733	21,500	10,238	607	7,256
Cows in milk thereon	578,833	788,787	627,700	99,349	22,212	94,170

(a) March, 1953.

(b) Dairies registered with the Milk Board for whole milk or sweet cream for table use.

§ 7. Medical Inspection of School Children.

1. *General.*—Medical inspection of school children is carried out in all the States and the Australian Capital Territory. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.

2. New South Wales.—(i) *School Medical Service.* A definite scheme of medical inspection of school children was established by the Department of Education during the years 1913–14. About the same time travelling Dental Officers were appointed, and inspection and treatment were carried out mainly in country districts.

The School Medical Services have gradually been extended since that time, additional services, such as Child Guidance Clinics, Speech Therapy Clinics and Hearing Clinics, having been introduced.

Up till the year 1946, the School Medical Service was attached to and under the control of the Department of Education, but since 1946 it has been under the control of the Department of Public Health. In 1947 the dental section was separated from the School Medical Service and a Division of Dental Services was formed.

The primary object of the service is the medical examination of children to discover any departure from normal in the health of a child, either physical or mental, and to notify the parent or guardian, in order that the child may be further investigated to determine the need for treatment. In many cases it is not possible to make a diagnosis of the conditions found at the time of the examination. This is due partly to the fact that only a limited time can be devoted to each individual examination, and also to lack of facilities within the Service for further investigation. Treatment is accepted as the responsibility of the practising medical profession.

The children attending all schools administered by the Department of Education are medically examined, as are also children attending the majority of other schools in the State. Medical officers annually visit schools in the metropolitan, Newcastle and Wollongong areas, and in five country towns (Armidale, Tamworth, Bathurst, Orange and Wagga), and examine children in kindergarten or 1st grade in primary schools and 1st and 4th years in secondary schools. Children in other classes are examined or reviewed, as necessary. The vision and hearing of pupils are tested in 4th grade.

Prior to the visit of the medical officer in Sydney, Newcastle and Wollongong areas, a school nurse visits the school to prepare the medical examination cards and to carry out some preliminary tests, for example, vision and hearing. Prior to the examination parents are required to fill in a card relating to the previous medical history of the children.

In country areas the object is for medical officers to visit schools every three years, and for all children attending to be examined. Owing to insufficient staff, the country portion of the programme cannot be completed each year.

When an abnormal condition has been found by the examining medical officer and it is not under effective treatment, the parent is informed in writing by the medical officer. If possible, the parent is called in for interview, with the examining medical officer. In the metropolitan, Newcastle and Wollongong areas school nurses follow up these cases with the object of persuading parents to seek medical advice.

It is considered that the full medical examination on entrance to school, on entrance to secondary school, and in 4th year, together with the referral of children to the school medical officer by parent, teacher or school nurse, will provide sufficient cover so that the great majority of children with defects, either physical or mental, will be seen by the medical officer.

During 1953, medical officers of this service examined 164,845 children. Of the total number, 128,542 children were fully examined, equalling 21.31 per cent. of the school population for the State. In addition, the cases of 36,303 children were reviewed during the year.

In the metropolitan area, 76,977 children were fully examined, and the cases of 29,941 were reviewed.

Defects of notifiable standard, including unhealthy mouths, were found in 32.1 per cent. of the children fully examined. Of the total 41,246 defects recorded, it was found necessary to notify 57.4 per cent. of them to parents or guardians, in order that further investigation and/or treatment could be effected.

Arrangements are made for oculists to visit schools in the more remote areas. As well as carrying out a full examination the oculists refract the eyes of children found to have defective eyesight and prescribe glasses where necessary.

Surveys—Various surveys of school children are undertaken from time to time, e.g. hookworm survey, height-weight survey, nutrition surveys, and investigations to determine the incidence of enlargement of the thyroid gland, defective vision, postural defects, etc.

Hearing surveys—In addition to the hearing tests carried out by the school nurses and medical officers in the course of the routine medical examination, audiometric surveys and follow-up tests are undertaken. Part-time ear, nose and throat specialists review the condition of children found to have any significant degree of deafness, give advice with regard to treatment, and if necessary, advise whether the use of a hearing aid is indicated.

Teachers' Colleges—Medical officers of the School Medical Service are attached to Teachers' Colleges. They lecture in school health and other subjects to students in the Colleges. These officers are also responsible for the health supervision of College students.

Child Guidance Clinics—Starting with the appointments of a psychiatrist and a psychologist in 1936, four child guidance clinics have now been established under the administration of the school medical service. They are all located in the metropolitan area. One clinic functions at the Yasmar Boys' Shelter and deals exclusively with cases before the Children's Courts.

Each clinic is now staffed by a psychiatrist, a psychologist and social workers.

Speech Therapy Clinics—The establishment provides for a staff of ten Speech Therapists. Treatment is undertaken in clinics in the metropolitan area.

The estimated expenditure for the School Medical Service for the financial year 1953-54 is £97,000.

(ii) *School Dental Service*. The School Dental Service provides dental treatment for school children. They are examined in the schools, and parents consent forms are given to those requiring treatment.

The number of clinics has never been sufficient to provide more than a limited service. It has been found necessary to restrict treatment to the ages of 6-8 years in the metropolitan area and 6-9 years in large country centres. In small outlying rural schools children of all ages are included.

In 1953 the School Dental Clinics working in both city and country districts examined 20,957 children. Of these 6.68 per cent. were found to have naturally sound mouths, whilst an additional 18.68 per cent. were found to have sound mouths as a result of treatment.

The clinics treated 13,227 children in 36,905 visits and 20,740 teeth were extracted, 22,955 permanent fillings and 30,024 other treatments including prophylaxis were provided.

3. *Victoria*.—Medical inspection of school children was established in 1909. Regular medical examination every three years is carried out within the limits of staffing, the object being not only to ascertain defects, but to ensure as far as possible adequate treatment and the suitable school placement of physically and mentally handicapped children. Frequent and regular inspection by school nurses establishes a high standard of cleanliness and every opportunity is taken to educate the child and his parents in the basic principles of hygiene.

All schools in the regions of Port Phillip, Glenelg, East Gippsland, Gippsland, Central Highlands and Goulburn are examined regularly and it is hoped to extend to Corangamite, Loddon and Upper Goulburn during 1954.

During the year ended 31st December, 1953, 109,399 children were examined in schools by the medical officers and 274,428 by the school nurses. Approximately 1,000 were referred for special examination at head-quarters for speech and hearing defects, admission to special schools and classes, etc., and 3,104 teachers were also examined. The cost of the School Medical Service for 1953 was £64,058.

The School Dental Service provides dental treatment for children attending primary schools and resident in institutions in certain parts of the State. The districts included are progressively extending as facilities and staff increase. Children from metropolitan schools in industrial suburbs are taken to the School Dental Centres by contract bus service. Country schools are visited by mobile dental units. Six dental vans and four semi-trailer (two surgery) units are operating in the mobile service. Former country

itineraries were resumed in 1952 and extended during 1953. This service now operates in the Mallee, Gippsland and East Gippsland regions, and parts of the Goulburn, Upper Goulburn and Port Phillip regions. The latest extension is in the Western District, and as further mobile units are obtained, new regions will be added. The Dental Division has a staff of 35 dentists and 34 dental attendants. During 1953, 33,500 children attending 355 schools received dental examination and all necessary treatment, including 38,359 extractions, 58,180 fillings and 15,254 other treatments. The cost for the year 1953 was £102,200.

4. **Queensland.**—The School Health Services Branch, under the direction of the Chief Medical Officer, consists of three sections known as the Medical, Dental and Nursing Sections.

Medical inspection of schools and school children is carried out by two full-time officers and one part-time officer under the general direction of the Chief Medical Officer, School Health Services. These officers examine as thoroughly as possible all children who have recently entered school and those children referred to them by the school nurses.

The nurses now number 16. Each nurse is assigned to a group of schools and in areas where Departmental medical officers are stationed, screens all children prior to the officer's visit. In other areas parents are notified direct of suspected defects found by the nurse who also reports on the sanitation, cleanliness and ventilation of the school, notifies the head teacher of all infectious or verminous children and advises regarding appropriate treatment. During 1952-53, school nurses examined 80,948 children. In the metropolitan area the nurses examine the teeth and report all eligible carious cases to the Dental Hospital for treatment.

The Department now has a staff of 23 dentists, and one part-time dental inspector. These officers are each assigned a district and visit schools in rotation. During 1952-53 41,975 children were examined; 38,010 extractions were performed; and 41,107 fillings and 67,361 other treatments were done.

In order to give the same medical and dental facilities to the children of the back country as are obtainable by city dwellers, four Rail Dental Clinics equipped on modern lines have been constructed. A motor car is carried on a railway wagon attached to each clinic for use at each stopping place to visit the surrounding villages served by the rail centre.

Local practitioners in Western Queensland act as part-time ophthalmic officers.

The work of hookworm control (dealing with *ankylostoma duodenale* and *meconium americanus* infestation) throughout the State is under the control of the Director-General of Medical Services. This activity has resulted in a marked reduction in the incidence of this dangerous menace on the northern coastal belt. Two sisters of the School Health Services are seconded for hookworm duty. The personnel consists of a microscopist, a health inspector and two trained sisters.

This service cost £79,300 in 1952-53.

5. **South Australia.**—Children in State schools are examined while in Grades 1, 4 and 7, in the primary schools and in their 2nd and 4th years in secondary schools. Country schools are visited every three or four years and all the children are examined. Students who wish to become teachers are examined before they enter the Teachers' College and before they begin teaching. Courses of lectures in hygiene and in first aid are given to all College students and, in addition, Domestic Arts students are lectured on home nursing.

The medical staff consists of a principal medical officer, 4 full-time and 2 part-time medical officers and 5 trained nurses. Four dentists and 4 dental assistants are attached to the Branch. On 1st July, 1951 the Medical Branch of the Education Department was transferred to the Department of Public Health. The Psychology Branch and Speech Therapist remain in the Education Department.

During 1953, 35,675 children were examined by medical officers and of these 2,413 required notices for defective vision, 599 for defective hearing, and 1,834 for their tonsils and adenoids.

Expenditure for the year 1952-53 was £27,577.

The Psychology Branch consists of a psychologist, 2 assistant psychologists, a senior guidance officer, 2 guidance officers, 2 social workers, an advisory teacher of

opportunity classes, an advisory teacher of hard-of-hearing children, a half-time speech therapist and a part-time consultant psychiatrist. The work of the Branch may be divided into three sections—clinical, educational and vocational.

Clinical. The clinical work involves examining difficult children of many types, including those with such problems as backwardness, truancy, delinquency, etc. In addition, the parents of all children examined are interviewed and their co-operation is sought.

Educational. In addition to supervising opportunity and special classes for children backward in school work, the Branch advises on questions of placement and types of education for ordinary children in schools.

Vocational. The guidance officers test and advise all children about to leave school. The guidance officers are also responsible for the supervision of record cards where used in primary schools.

The Branch also lectures to students of the Teachers' College as well as to other interested organizations such as mothers' clubs.

6. *Western Australia.*—Under the Health Act 1911–1952 the medical officers appointed by the local authorities became medical officers of schools and of school children. The principle aimed at is to examine every school child once every two years.

In the Health Department there are five full-time medical officers for schools. During 1953, 42,033 children were examined (metropolitan 23,647, country 18,386), of whom 21,188 were boys and 20,845 girls. There were 302 schools visited, comprising metropolitan, 75 State schools, 27 convents and 35 kindergartens, and country, 127 State schools 32 convents and 6 kindergartens. During 1953 the 10 full-time dental officers employed visited 16 metropolitan schools, 135 country schools, and 13 metropolitan and 11 country orphanages. The number of children examined was 9,368 of whom 6,280 with their parents' consent were treated. The cost of this service for 1952–53 was £45,170.

7. *Tasmania.*—During the year 1953, 2 full-time and 2 part-time medical officers were employed in the examination of school children. Some Government medical officers also performed routine examinations as part of their ordinary duties. One part-time and 12 full-time sisters visited homes and schools regularly. Of the 22,688 children examined by medical officers 12,716 were found to have defects, 9,975 requiring dental treatment.

There are static dental clinics at Hobart, Launceston and Devonport and six mobile clinics operated in various parts of the State. Each clinic has a full-time dental surgeon in charge. During the year 11,498 children were examined by school dentists.

The cost of the school medical and dental services for the year ended June, 1953 was £38,717.

8. *Australian Capital Territory.*—By arrangement, education facilities are provided by the Education Department of New South Wales. In 1930 the Commonwealth Department of Health took over from the State the medical inspection of school children and carried out examinations of entrants and those leaving in that year. From 1943 to 1951, all primary pupils of Government schools in the Territory had an annual medical examination.

During 1951, with the appointment of an Infant Welfare and Schools Medical Officer, a plan for triennial examinations of children in primary and secondary schools was introduced, more attention being paid to those children with defects who were marked for review.

In 1953, 1,416 children were fully examined and 676 were given review examinations. At Pre-School Play Centres and Nursery Schools all children are examined on entrance and reviewed in their second year of attendance. In 1952, approximately 1,000 examinations were made of children in this group and 767 in 1953.

The commonest defects are those of ears, eyes, nose and throat. Amongst children of school age examined during 1952, 4 per cent. had defective sight and 5 per cent. had defective hearing.

In 1953 the figure for children in this class was 5 per cent. for each of these defects.

§ 8. Supervision and Care of Infant Life.

1. *General.*—The number of infant deaths and the rate of infant mortality for the five years 1949 to 1953 are given in the following table, which shows that during this period 23,474 children died in Australia (excluding Territories) before reaching their first birthday. Further information regarding infant mortality will be found in Chapter X.—Vital Statistics.

INFANT DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1949.	1950.	1951.	1952.	1953.	1949.	1950.	1951.	1952.	1953.
NUMBER OF INFANT DEATHS.										
New South Wales	754	754	661	604	620	1,124	1,182	1,234	1,214	1,226
Victoria ..	518	511	549	610	544	508	490	594	588	589
Queensland ..	210	232	277	259	228	476	487	484	513	541
South Australia ..	233	235	218	210	196	211	181	210	203	179
Western Australia	149	180	185	179	180	208	206	240	205	198
Tasmania ..	53	52	56	50	51	117	120	140	122	126
Australia(a) ..	1,917	1,964	1,946	1,912	1,819	2,644	2,666	2,902	2,845	2,859
RATE OF INFANT MORTALITY.(b)										
New South Wales	25.19	25.44	22.89	20.71	21.45	28.91	28.18	28.57	26.96	26.66
Victoria ..	19.97	19.13	20.66	21.69	19.56	24.27	21.20	24.78	22.96	22.88
Queensland ..	21.38	31.98	26.83	23.73	21.02	26.55	22.37	25.04	25.60	27.14
South Australia ..	26.11	24.68	22.45	21.29	19.71	29.64	23.25	27.09	25.31	21.79
Western Australia	21.52	25.41	26.38	23.52	23.28	31.57	28.83	30.84	26.27	24.36
Tasmania ..	26.21	23.29	26.37	21.62	22.16	23.00	23.96	26.75	21.77	23.18
Australia(a) ..	22.94	23.82	23.00	21.73	20.78	27.39	24.97	27.06	25.38	25.23

(a) Excludes Territories.
registered.

(b) Number of deaths under one year of age per 1,000 live births.

During recent years greater attention has been paid to the fact that the health of mothers and infants depends largely on pre-natal attention as well as after-care. Government and private organizations, therefore, provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics, crèches, visits by qualified midwifery nurses, and special attention to the milk supply, etc.

2. *Government Activities.*—In all the States acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (*See also* in this connexion Chapter XIV.—Welfare Services.) Under the provisions of the Maternity Allowances, Part V. of the Social Services Act 1947–1954, from 1st July, 1947 a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born. Where there are one or two other children under 16 the amount payable is £16, and where there are three or more other children under 16 the amount payable is £17 10s. Where more than one child is born at a birth the amount of the allowance is increased by £5 in respect of each additional child born at that birth. Detailed particulars regarding Maternity Allowances are given in Chapter XIV.—Welfare Services.

3. *Nursing Activities.*—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Official Year Book (*see* No. 22, pp. 515–6) information may be found concerning the activities of institutions in each State

(iii) *Summary.* The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations :—

BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1953.

Heading.	N.S.W.	Vic.	Qld.(a)	S. Aust.	W. Aust.	Tas.	A.C.T. (a)	Total.
Baby Health Centres—								
Metropolitan .. No.	89	142	52	78	20	22	7	410
Urban-Provincial and Rural .. No.	214	(b) 361	162	146	24	(c) 70	..	977
Total .. No.	303	503	214	224	44	92	7	1,387
Attendances at Centres								
No.	1,100,709	1,090,349	372,326	232,910	191,491	144,222	21,001	3,153,008
Visits paid by Nurses								
No.	10,899	105,086	25,298	28,774	18,176	81,853	3,057	273,143
Bush Nursing Associations								
—Number of Centres ..	31	57	8	32	10	26	..	164

(a) Year ended 30th June, 1953.
mobile units which served 24 centres.

(b) Includes eight mobile units.

(c) Includes eight

In the last twenty years the number of attendances at the Baby Health Centres has more than trebled. The numbers of attendances, at five-yearly intervals, since 1930 were as follows :—1930, 919,893; 1935, 1,355,306; 1940, 2,035,299; 1945, 2,927,764; 1950, 3,049,375. During the year 1952 the number of attendances was 3,054,801.

§ 9. Disposal of the Dead by Cremation.

The disposal of the dead by cremation has been in existence in Australia for many years, as the first crematorium was opened in South Australia in 1903. The number of crematoria in New South Wales is five; the first was opened in 1925. There are two crematoria in Victoria; the first opened in 1905, but was closed in 1926 and re-opened in 1936, while the other one was opened in 1927. There are two crematoria in Queensland, the first being opened in 1934. In South Australia there is one crematorium which opened in 1903. In Western Australia there is one crematorium which opened in 1939. In Tasmania there are two crematoria; the first was opened in 1936.

The following table shows the number of cremations in each State for the five years 1949 to 1953 :—

CREMATIONS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.(a)	W. Aust.	Tas.	Aust.
1949	8,591	4,157 (a)	2,010	231	610	406	16,005
1950	9,170	4,425 (a)	2,155	225	726	421	17,122
1951	9,815	4,808 (a)	2,377	280	874	485	18,639
1952	10,165	5,338	2,569	347	929	532	19,880
1953	10,556	5,513	2,723	348	924	538	20,602

(a) Year ended 30th June.

B. INSTITUTIONS.

§ 1. General.

In Australia, institutions related to public health may be classified to three groups : (a) State; (b) public; and (c) private. To the first group belong those institutions wholly provided for by the State, such as the principal mental hospitals in the various States and the Government and leased hospitals in Western Australia. To the second group belong public institutions of two kinds, namely :—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the first of these two kinds belong such institutions as the principal metropolitan hospitals; in the second are included institutions established and endowed by individuals for the benefit of the needy generally. All institutions of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) general tabulation is impossible. Owing to differences in the dates of collection and tabulation it is impossible to bring statistics of some charitable institutions to a common year.

§ 2. Public Hospitals (other than Mental Hospitals).

1. General.—All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, tubercular patients, women, children, chronic diseases, etc.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially. The particulars for New South Wales in the following tables relate to public hospitals operating under the control of the Hospitals Commission.

2. Number, Staff and Accommodation, 1951-52.—Details regarding the number of hospitals, staffs and accommodation for the year 1951-52 are given in the following table :—

PUBLIC HOSPITALS : NUMBER, STAFF AND ACCOMMODATION, 1951-52.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Number of Hospitals ..	257	101	136	61	96	23	1	675
Medical Staff—								
Honorary	2,949	1,170	152	368	230	116	17	5,002
Salaried	735	453	415	122	66	92	4	1,887
Total	3,684	1,623	567	490	296	208	21	6,889
Nursing Staff	9,762	5,589	4,593	1,774	1,906	855	77	24,556
Accommodation—								
Number of beds and cots	18,762	10,429	8,551	3,448	4,156	1,798	184	47,338

(a) Year ended 31st March, 1952.

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in out-door or verandah sleeping places.

3. In-Patients (Cases) Treated.—The following table furnishes particulars of in-patients treated (newborn are excluded).

PUBLIC HOSPITALS : IN-PATIENTS (CASES) TREATED, 1951-52.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
In-Patients at beginning of year—								
Males	5,861	2,918	3,071	1,053	1,208	472	72	14,655
Females	7,759	3,944	3,205	1,263	1,341	709	86	18,307
Total	13,620	6,862	6,276	2,316	2,549	1,181	158	32,962
Admissions and Re-admissions during year—								
Males	143,951	64,240	76,666	24,415	33,097	12,004	1,381	355,754
Females	218,772	105,315	92,222	32,643	37,212	18,478	2,662	507,304
Total	362,723	169,555	168,888	57,058	70,309	30,482	4,043	863,058
Total in-patients (Cases) treated—								
Males	149,812	67,158	79,737	25,468	34,305	12,476	1,453	370,409
Females	226,531	109,259	95,427	33,906	38,553	19,187	2,748	525,611
Total	376,343	176,417	175,164	59,374	72,858	31,663	4,201	896,020
Discharges—								
Males	137,177	60,191	73,297	23,131	31,843	11,459	1,340	338,438
Females	213,759	101,887	90,097	31,641	36,511	18,162	2,618	494,675
Total	350,936	162,078	163,394	54,772	68,354	29,621	3,958	833,113
Deaths—								
Males	6,542	3,872	3,231	1,317	1,265	528	52	16,807
Females	4,694	2,907	2,102	988	825	379	44	11,939
Total	11,236	6,779	5,333	2,305	2,090	907	96	28,746
In-Patients at end of year—								
Males	6,093	3,095	3,209	1,020	1,197	489	61	15,164
Females	8,078	4,465	3,228	1,277	1,217	646	86	18,997
Total	14,171	7,560	6,437	2,297	2,414	1,135	147	34,161
Average Daily Number Resident	13,648	7,337	6,335	2,370	2,589	1,137	136	33,552

(a) Year ended 31st March, 1952.

In addition to those admitted to the hospitals there are large numbers of out-patients. During 1951-52 there were 1,046,507 out-patients (cases) treated in New South Wales, 422,851 in Victoria, 495,402 in Queensland, 114,359 in South Australia, 109,323 (estimated) in Western Australia, 86,210 in Tasmania and 11,531 in the Australian Capital Territory, making a total for Australia of 2,286,183.

4. **Revenue and Expenditure.**—Details of the revenue and expenditure for the year 1951-52 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme which operated in Victoria, Queensland, Western Australia and Tasmania from 1st January, 1946, in South Australia from 1st February, 1946, and in New South Wales and the Australian Capital Territory from 1st July, 1946.

PUBLIC HOSPITALS : REVENUE AND EXPENDITURE, 1951-52.

(£.)

Particulars.	N.S.W.(a)	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Revenue—								
Government Aid ..	13,139,649	6,692,291	5,272,268	1,869,305	2,537,968	1,039,476	173,989	33,601,401
Commonwealth Hospital Benefits, etc.		1,009,964	880,241	433,981	346,500	183,427	22,342	
Municipal Aid ..		86,627	..	98,424	591	..	..
Public Subscriptions, Legacies, etc.	128,788	1,014,819	..	171,858	103,173	1,834	63	1,420,535
Fees ..	1,856,780	1,299,129	383,726	331,844	221,836	53,804	7,195	4,159,314
Other ..	249,853	151,572	52,243	149,723	12,814	5,440	256	621,901
Total ..	15,375,070	10,254,402	6,593,478	3,055,135	3,222,882	1,283,981	203,845	39,988,793
Expenditure—								
Salaries and Wages	10,193,249	4,637,275	3,675,402	1,706,211	1,572,811	830,911	86,547	22,702,406
Upkeep and Repair of Buildings and Grounds ..	571,866	235,928	161,544	137,884	72,979	20,901	11,187	1,212,249
All Other Ordinary Capital(d)	5,459,239	3,539,984	2,785,797	987,373	1,052,419	437,180	64,172	14,276,164
	(e)	3,018,208	1,418,949	221,795	435,856	..	42,073	(f) 5,136,881
Total ..	16,174,354	11,431,395	8,041,652	3,053,263	3,134,065	1,288,992	203,979	43,327,700

(a) Excludes loan receipts and expenditure. (b) Year ended 31st March, 1952. (c) Included in "Other". (d) Includes such items as Purchases of Land, Cost of New Buildings and Additions to Buildings. (e) Not available. (f) Incomplete.

5. **Summary, 1938-39 and 1948-49 to 1951-52.**—A summary, for the years 1938-39 and 1948-49 to 1951-52, of the number of public hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue, and expenditure is given in the following table. The figures relate to both general and special hospitals.

PUBLIC HOSPITALS : AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
Hospitals ..	563	624	648	664	675
Medical Staff ..	4,059	5,476	5,917	6,424	6,889
Nursing Staff ..	13,582	21,360	22,235	23,055	24,556
Beds and cots ..	35,711	44,509	45,559	46,417	47,328
Admissions during year ..	527,055	700,321	792,699	835,022	863,058
Total in-patients (cases) ..					
treated ..	552,051	730,009	823,395	867,721	896,020
Out-patients (cases) (a) ..	1,272,147	1,836,122	2,034,317	2,206,499	2,286,183
Deaths ..	23,372	24,699	27,057	28,648	28,746
Average daily no. resident ..	25,608	28,942	31,885	33,050	33,552
Revenue .. £	7,106,642	19,465,458	24,943,591	31,439,976	39,988,793
Expenditure .. £	6,351,055	20,661,275	26,205,194	32,582,450	43,327,700

(a) Partly estimated.

§ 3. Leper Hospitals.

Isolation hospitals for the care and treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland); Western Australia (Derby); and the Northern Territory (Channel Island, near Darwin). At the end of 1953 there were 6 cases in residence at Little Bay, 27 at Peel Island, 67 at Fantome Island, 262 at Derby, 191 at Channel Island, 6 in Victoria and 4 cases at Wooroloo, Western Australia. Of the 563 cases, 474 were full-blood aborigines, 43 half-caste aborigines, 1 Asian and 45 Europeans.

§ 4. Mental Hospitals.

1. **General.**—The methods of compiling statistics of mental diseases are fairly uniform throughout the States, but there is an element of uncertainty about possible differences in diagnosis in the early stages of the disease. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals.

2. **Hospitals, Staff, etc., 1951-52.**—Particulars regarding the number of hospitals, the medical and nursing staffs, and accommodation are given in the following table for the year 1951-52 :—

MENTAL HOSPITALS : NUMBER, STAFF, ACCOMMODATION, 1951-52.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of Hospitals	13	9	4	2	4	1	33
Medical Staff—							
Males	58	75	{ 9 1	7 1	6 ..	2 ..	167
Females	8						
Total	(c) 66	75	10	8	6	2	167
Nursing Staff and Attendants—							
Males	959	782	495	200	171	90	2,697
Females	966	636	322	197	73	94	2,288
Total	1,925	1,418	817	397	244	184	4,985
Accommodation—							
Number of beds and cots ..	12,189	6,510	4,191	2,427	1,506	750	27,573

(a) The figures relate to years ended as follows :—New South Wales, Queensland, South Australia and Tasmania—30th June, 1952; Victoria and Western Australia—31st December, 1951. (b) Includes the Epileptic Home. (c) In addition there are 39 visiting specialists who are paid for their services.

3. **Patients, 1951-52.**—Information regarding patients treated, deaths, etc., for 1951-52 is given in the following table :—

MENTAL HOSPITALS : PATIENTS, DEATHS, ETC., 1951-52.(a)

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of distinct persons treated during year(c)—							
Males	7,244	3,988	2,732	1,407	1,083	450	16,904
Females	7,569	4,713	2,568	1,430	725	531	17,536
Total	14,813	8,701	5,300	2,837	1,808	981	34,440

(a) See footnote (a) to previous table.
transfers to other institutions.

(b) Includes the Epileptic Home.

(c) Excludes

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1951-52(a)—*continued*.

Particulars.	N.S.W.	Vic.	Q'land. (b)	S. Aust.	W. Aust.	Tas.	Total.
Number of patients at beginning of year—							
Males	6,138	3,420	2,221	1,183	940	315	14,217
Females	6,367	4,052	2,074	1,228	627	367	14,715
Total	12,505	7,472	4,295	2,411	1,567	682	28,932
Admissions and re-admissions (excluding absconders retaken and transfers from other hospitals)—							
Males	1,106	563	511	224	143	135	2,687
Females	1,202	661	494	202	98	164	2,821
Total	2,308	1,229	1,005	426	241	299	5,508
Discharges (including absconders not retaken)—							
Males	497	260	317	121	48	108	1,351
Females	538	310	263	107	17	120	1,360
Total	1,035	570	585	228	65	228	2,711
Deaths—							
Males	447	269	164	82	83	25	1,070
Females	458	294	163	102	61	18	1,096
Total	905	563	327	184	144	43	2,166
Number of patients at end of year—							
Males	6,300	3,459	2,251	1,204	952	317	14,483
Females	6,573	4,109	2,137	1,221	647	393	15,080
Total	12,873	7,568	4,388	2,425	1,599	710	29,563
Average daily number resident—							
Males	5,585	2,998	2,155	1,171	915	330	13,154
Females	5,650	3,519	2,000	1,187	602	377	13,335
Total	11,235	6,517	4,155	2,358	1,517	707	26,489
Number of patients at end of year per 1,000 of population—							
Males	3.69	3.00	3.56	3.27	3.12	2.03	3.35
Females	3.91	3.61	3.52	3.29	2.26	2.69	3.56
Total	3.80	3.30	3.55	3.28	2.70	2.35	3.46
Average number of patients resident in mental hospitals per 1,000 of population—							
Males	3.30	2.63	3.45	3.22	3.06	2.15	3.06
Females	3.39	3.11	3.35	3.24	2.13	2.60	3.18
Total	3.35	2.87	3.40	3.23	2.61	2.37	3.13

(a) See footnote (a) to previous table.

(b) Includes the Epileptic Home.

Persons who are well advanced towards recovery are allowed to leave the hospitals and live with their relatives or friends, but they are under supervision and their names are kept in the records.

4. Revenue and Expenditure, 1951-52.—The revenue of Government mental hospitals is small in comparison with their cost, and consists chiefly of patients' fees, and mental institution benefits. The agreements made between the Commonwealth and the States under the 1948 Mental Institution Benefits Act, lapsed in the latter half of 1954. The proportion of expenditure borne by the State amounts to about 90 per cent. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals:—

MENTAL HOSPITALS : FINANCES, 1951-52.

(£.)

Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	Total.
Revenue (excluding Government Grants)—							
Fees of Patients	125,329	115,902	8,595	18,783	24,325	7,834	300,768
Mental Institution Benefits	203,505	149,384	..	34,200	17,527	3,702	408,318
Other	87,851	19,431	3,139	30,869	9,411	1,296	151,997
Total	416,685	284,717	11,734	83,852	51,263	12,832	861,083
Expenditure—							
Salaries and Wages	1,657,148	1,111,077	617,717	355,405	277,961	152,446	4,171,754
Upkeep and Repair of Buildings, etc.	77,887	151,034	5,994	41,382	25,889	8,394	310,580
All Other	1,305,894	1,041,377	460,497	244,775	173,110	96,603	3,322,316
Capital (b)	340,766	401,125	111,832	47,497	43,317	..	944,537
Total	3,381,695	2,704,613	1,196,040	689,059	520,277	257,503	8,749,187
Expenditure per Average Daily Resident	£300/19/11	£415/0/2	£287/17/1	£292/4/5	£342/19/3	£364/4/5	£330/5/11

(a) Includes the Epileptic Home. (b) Capital expenditure includes Purchases of Land, Cost of New Buildings, and Additions to Buildings.

5. Summary for Australia, 1938-39 and 1948-49 to 1951-52.—The following table gives a summary relating to mental hospitals in Australia during 1938-39 and for each of the years 1948-49 to 1951-52:—

MENTAL HOSPITALS : SUMMARY, AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
Hospitals	35	33	33	33	33
Medical Staff	92	116	128	138	167
Nursing Staff and Attendants	4,922	4,487	4,694	4,826	4,985
Beds	25,654	27,272	27,397	27,512	27,573
Admissions	3,757	4,289	4,587	5,325	5,508
Discharged as recovered, relieved, etc.	1,800	2,089	2,202	2,356	2,711
Deaths	1,632	1,991	1,886	1,959	2,166
Patients at end of year	26,509	27,425	27,922	28,932	29,563
Average daily resident	24,063	24,973	25,319	25,996	26,489
Revenue (excluding Government Grants)	£ 262,817	593,601	725,405	811,495	861,083
Expenditure—Total	£ 1,903,817	4,484,879	5,390,526	6,449,862	8,749,187
" —Per Average daily resident.. .. .	£79/2/4	£179/11/9	£212/18/1	£248/2/2	£330/5/11

6. Number of Mental Patients, 1938-39 and 1948-49 to 1951-52.—The total number returned as under treatment shows slight increases during the period but the proportion to total population shows a slight decline. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an actual increase in mental diseases.

MENTAL PATIENTS IN HOSPITALS.

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
NUMBER.					
New South Wales	11,678	11,825	12,023	12,505	12,873
Victoria	7,326	7,120	7,203	7,472	7,568
Queensland(a)	3,650	4,068	4,153	4,295	4,388
South Australia	1,747	2,213	2,310	2,411	2,425
Western Australia	1,477	1,537	1,547	1,567	1,599
Tasmania	631	662	686	682	710
Australia	26,509	27,425	27,922	28,932	29,563
PER 1,000 OF POPULATION.					
New South Wales	4.25	3.80	3.73	3.77	3.80
Victoria	3.92	3.38	3.33	3.35	3.30
Queensland(a)	3.59	3.54	3.51	3.55	3.55
South Australia	2.93	3.29	3.30	3.35	3.28
Western Australia	3.16	2.94	2.84	2.73	2.70
Tasmania	2.66	2.46	2.46	2.34	2.35
Australia	3.81	3.50	3.45	3.46	3.46

(a) Includes the Epileptic Home.

The difference between States in the number of mental patients in hospitals per 1,000 of population may to some extent be the result of differences in classification.

CHAPTER XIV.

WELFARE SERVICES.

A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

§ 1. Introduction.

Commonwealth social service benefits are provided under the Social Services Act 1947-1954 which came into operation on 1st July, 1947. This Act provided for the repeal of the existing laws relating to age and invalid pensions, maternity allowances, child endowment, widows' pensions and unemployment and sickness benefits, and for the immediate re-enactment of the necessary provisions for the grant and payment of these benefits under a unified law. Its more important effects were the elimination of obsolete provisions and of anomalies, the amalgamation of like provisions, and the modernizing and grouping of the legislation so that it presented a symmetrical part of a well-defined pattern of social security.

§ 2. Commonwealth Expenditure on Social and Health Services.

The Commonwealth expenditure in each State on Social and Health Services for the year 1952-53 is shown in the following table:—

COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES, 1952-53.
(£'000.)

Social and Health Services.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
Age and Invalid Pensions ..	30,533	17,476	10,723	6,308	4,842	2,542	72,424
Funeral Benefits ..	112	70	37	24	18	9	270
Maternity Allowances ..	1,195	872	497	305	249	128	(c) 3,248
Child Endowment ..	20,012	13,996	8,343	4,770	4,053	2,059	d 53,244
Widows' Pensions ..	2,630	1,535	1,059	486	404	220	6,334
Unemployment and Sickness Benefits	3,395	1,435	911	283	222	99	6,255
Community Rehabilitation ..	87	167	54	85	53	8	454
National Health Services—							
Hospital Benefits ..	2,842	1,805	1,136	630	551	259	7,223
Pharmaceutical Benefits ..	2,470	1,835	854	636	505	138	(e) 6,487
Medical Benefits to Pensioners ..	808	404	208	169	119	32	1,740
Medicines for Pensioners ..	365	139	97	65	49	14	729
Nutrition of Children ..	706	433	55	175	92	60	1,521
Miscellaneous ..	46	26	54	13	17	13	(g) 183
Tuberculosis Campaign(f) ..	1,519	1,662	541	389	600	165	4,876
Mental Institution Benefits ..	209	151	99	36	18	10	523
Total	66,839	42,006	24,668	14,374	11,792	5,756	165,511

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Includes payments overseas, £2,000. (d) Includes payments overseas, £11,000. (e) Includes administration, £49,000. (f) Includes allowances and reimbursements to States for the maintenance of Hospitals. (g) Includes administration, £14,000.

The amount of Commonwealth expenditure on Social and Health Services, excluding cost of administration, during the years 1938-39 and 1948-49 to 1952-53 for Australia, is shown in the following table.

2233/54.—15

COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES.

(£'000.)

Social and Health Services.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Age and Invalid Pensions ..	15,992	41,694	44,557	49,520	59,788	72,424
Funeral Benefits ..	..	253	216	254	276	270
Maternity Allowances ..	436	2,839	3,008	3,057	3,157	3,248
Child Endowment ..	..	24,323	30,337	43,585	46,625	53,444
Widows' Pensions ..	..	4,389	4,421	4,828	5,615	6,334
Unemployment and Sickness Benefits ..	..	1,070	2,506	1,037	1,008	6,255
Community Rehabilitation ..	..	34	219	310	361	454
National Health Services—						
Hospital Benefits ..	..	5,880	6,320	6,536	6,683	7,223
Pharmaceutical Benefits ..	..	149	305	2,930	7,327	6,487
Medical Benefits to Pensioners ..	..	..	..	75	1,036	1,740
Medicines for Pensioners ..	..	..	..	..	358	729
Nutrition of Children ..	..	..	..	36	815	1,521
Miscellaneous ..	..	..	91	131	162	183
Tuberculosis Campaign(a) ..	..	156	534	2,275	3,879	4,876
Mental Institution Benefits ..	..	..	256	406	518	523
Rental Rebates under Housing Agreement ..	..	..	1	3	..	..
Total	16,428	80,777	92,804	114,983	137,608	165,511

(a) Includes allowances and reimbursements to States for the maintenance of Hospitals.

§ 3. Age and Invalid Pensions.

Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who have resided in Australia continuously for at least 20 years which need not be immediately prior to the date of claim for pension. Absence in a Territory of the Commonwealth does not break continuity of residence. Any periods of absence during which a person's home remained in Australia, and absences in certain other circumstances, and in the case of a claimant who has had at least 18 years' residence, occasional absences aggregating up to 2 years plus 6 months for every year of residence in excess of 18 years are counted as residence.

Invalid pensions are payable to persons, 16 years of age and over, who have resided in Australia for a continuous period of five years, and who are permanently incapacitated for work or permanently blind. For the purpose of the residential qualification, the position in regard to absences is the same as for age pensioners. The degree of permanent incapacity has to be not less than 85 per cent. and the claimant must have become permanently incapacitated or permanently blind while in Australia or during a temporary absence from Australia, but this condition is waived if he has resided in Australia for not less than 20 years (continuous or otherwise), which may be partly before or partly after the occurrence of the permanent incapacity or blindness.

All permanently blind persons qualified in other respects, are eligible for a pension of £3 10s. a week free of the means test, and any blind pensioner who has a child under 16 years of age is entitled to receive a child's allowance of 11s. 6d. per week in addition to the pension.

A pension is not payable to:—an alien (except a woman who, prior to marriage, was a British subject); a person who has directly or indirectly deprived himself of property or income in order to qualify for a pension; a person in receipt of income of

£364 per annum (£728 per annum for a married couple); a person who owns property, apart from his permanent home and other exempt property, to the net value of more than £1,750 (£3,500 for married persons); a person who is not deserving of a pension; a person who is not of good character or who has deserted his wife (or her husband) or children for six months immediately preceding the date of the claim (age pension only).

Pensions may be granted to aboriginal natives of Australia who have been granted exemption from State control laws, or who, in any State where exemption is not provided for, are considered suitable persons to receive pensions.

The maximum rate of pension from 29th October, 1953, is £182 per annum.

Permissible income is £182 per annum. Any income in excess of this amount is deducted from the pension. The income of a married person is deemed to be half the total income of husband and wife except where they are legally separated or in certain other circumstances. A married couple where only one is a pensioner may have an income of £7 a week between them without reduction of the pension. "Income" does not include gifts or allowances from children or parents, benefits from friendly societies, payments in respect of illness, infirmity or old-age from any trade union, the value of State food relief, child endowment or other payments for or in respect of children, Commonwealth Hospital Benefits, Pharmaceutical Benefits and interest on Commonwealth war gratuities.

The rate of pension is reduced by £1 per annum for every complete £10 of the value of property which exceeds £200 up to £1,750. The value of property of a married person is deemed to be half the total value of property of husband and wife.

The value of a home, furniture and personal effects, the surrender value (up to £750) of any life assurance policies, the capital value of any life interest, annuity or contingent interest, the value of any property from the estate of a deceased person which has not been received and the amount of any Commonwealth war gratuity are disregarded in the computation of property.

A person receiving a war pension may be granted an age or invalid pension in addition to the war pension, but the total amount payable in respect of the two pensions must not exceed £292 10s. per annum. In the case of a married couple where husband and wife each receive a civil pension (age or invalid, or service pension), the total amount which may be received in respect of war pensions and civil pensions is £500 10s. per annum; in the case of a married couple (where husband receives a civil pension and wife receives a wife's allowance) the limit is £500 10s.; and in the case of a married person (whose husband does not receive a civil pension or whose wife does not receive a civil pension or a wife's allowance) the limit is £429. Where the war pension (or pensions) and the civil pension (or pensions) together exceed the appropriate limit, the civil pension (or pensions) is (or are) reduced by the amount of the excess, but the pensioner is permitted to have other income to bring the total war pension and civil pension payments, plus the other income, up to the appropriate limit of income plus pension, £292 10s. per annum for a single person or £585 per annum for a married couple, both qualified for pensions.

A pensioner who is an inmate of a benevolent home is paid £63 14s. per annum of his pension and the balance of the pension is paid to the institution for his maintenance.

An allowance, not exceeding £91 per annum, may be granted to the wife of an invalid pensioner (or an age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her husband and is not receiving an age or invalid pension or a service pension. The rate of the allowance is affected by income and property on the same basis as an age or invalid pension.

An allowance of £29 18s. per annum in respect of one child under the age of 16 years may be granted to the wife of an invalid pensioner (or age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her

husband and is not receiving a service pension. This child's allowance is additional to the wife's allowance and may also be granted where the wife is ineligible for a wife's allowance on account of income or property. The allowance may also be granted to any invalid pensioner who has the custody, care and control of a child under the age of 16 years, but where both husband and wife are invalid pensioners (living together) the child's allowance is payable only to the wife.

The rehabilitation service has been set up to help persons who are too disabled to work or who have had to give up their employment because of sickness or injury. It aims at restoring disabled persons so they can earn a living and lead useful lives. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and where there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The benefits are available to invalid pensioners, persons receiving unemployment or sickness benefits or tuberculosis allowances. The treatment of certain other disabled persons may also be approved by the Director-General of Social Services. During the treatment stage of rehabilitation the payment of pension or benefit is continued. If, however, vocational training is provided the pension or benefit is suspended and the trainee is paid instead a rehabilitation allowance equivalent to the amount of invalid pension for which he is qualified, or which would be payable if he were qualified, together with the amount of any wife's and child's allowances, plus a training allowance of £1 5s. per week.

Living-away-from-home allowances, where necessary, are paid by the Commonwealth. Fares and living expenses (including those of an attendant where required) incurred in connexion with treatment, training or attendance for an interview or for medical examination may also be paid. A person receiving treatment or training may be provided, free of charge, with necessary artificial replacements, surgical aids and appliances. He may also be provided with books, equipment and tools of trade, costing not more than £30. If these are retained by him, he is required to pay the cost, but payments may be made by small instalments after he has commenced employment.

If the treatment or vocational training does not result in the trainee being able to engage in employment, his right to the continuance of his pension or benefit is not prejudiced.

The number of persons receiving benefits who were examined, accepted, trained and placed in employment during the year 1952-53 are shown in the following table :—

REHABILITATION SERVICE : OPERATIONS, AUSTRALIA, 1952-53.

Type.	Examined.	Accepted.	Completed Training.	Placed in Employment.	
				After Training.	Without Training.
Invalid Pensioners	9,406	314	91	80	78
Unemployment and Sickness Beneficiaries	8,395	841	94	88	498
Recipients of Tuberculosis Allowances	498	236	135	128	35

From 1st July, 1943 a funeral benefit of up to £10 has been payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a claimant who, but for his death, would have been granted an age or invalid pension. This provision has been extended to include payment in respect of the death of a person who at the time of his death was receiving, or was a claimant for, a tuberculosis allowance, if he was otherwise qualified to receive an age or invalid pension. Where the cost of the funeral has been partly met by payment from a contributory funeral benefit fund of an organization other than a friendly society, funeral benefit is payable to the extent of the amount (not above £10) by which the cost of the funeral exceeded the amount paid from the fund. A funeral benefit is not payable to a person administering a contributory funeral benefit fund.

The following statement shows the rates of pension at 1st July, 1909 and the rates as they have been varied since that date and are subject to income and property qualifications :—

MAXIMUM RATES OF PENSION PAYABLE.

Date from which Operative.	Maximum Pension Payable.		Limit of Income (including Pension) per Annum.	Date from which Operative.	Maximum Pension Payable.		Limit of Income (including Pension) per Annum.
	Per Week.	Per Annum.			Per Week.	Per Annum.	
1st July, 1909	s. d.	£ s.	£ s.	1st October, 1912(b)	s. d.	£ s.	£ s.
12th October, 1916	10 0	26 0	52 0	7th January, 1943(b)	25 6	66 6	98 16
1st January, 1920	12 6	32 10	58 10	1st April, 1943(b)	26 0	67 12	100 2
13th September, 1923	15 0	39 0	65 0	19th August, 1943(b)	26 6	68 18	101 8
8th October, 1925	17 6	45 10	78 0	25th November, 1943(b)(d)	27 0	70 4	102 14
23rd July, 1931	20 0	52 0	84 10	25th November, 1943(d)	26 6	68 18	101 8
13th October, 1932(a)	17 6	45 10	78 0	5th July, 1945	27 0	70 4	102 14
13th October, 1933	15 0	39 0	71 10	13th August, 1946	32 6	84 10	117 0
14th July, 1935(b)	17 6	45 10	78 0	3rd July, 1947	32 6	84 10	117 0
14th September, 1936	18 0	46 16	79 6	21st October, 1948	37 6	97 10	149 10
9th September, 1937	19 0	49 8	81 18	2nd November, 1950	42 6	110 10	188 10
26th December, 1940	20 0	52 0	84 10	1st November, 1951	50 0	130 0	208 0
3rd April, 1941(b)	21 0	54 12	87 2	2nd October, 1952	60 0	156 0	234 0
11th December, 1941	21 6	55 18	88 8	26th October, 1953	67 6	175 10	253 10
2nd April, 1942(b)	23 6	61 2	93 12	14th October, 1954	70 0	182 0	286 0
2nd April, 1942(c)	24 0	62 8	94 18		70 0	182 0	364 0
	25 0	65 0	97 10				

(a) Additional pension of £6 10s. per annum (2s. 6d. per week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. per week were paid additional pension of 2s. 6d. less the amount of income.

(b) Variation according to rise in retail price index-number. (c) Increase paid on 6th July, 1942, retrospective to 2nd April, 1942. (d) Rate restored to £70 4s. per annum under National Security (Supplementary) Regulation 112A—Statutory Rule 315 of 1943.

NOTE.—Provision for variations according to retail price index-numbers was repealed on 6th April, 1944.

At 30th June, 1952, there were 352,049 age pensions in force. During 1952–53, 51,075 age pensions claims were granted and 3,440 pensioners were transferred from the invalid pension list, while 31,773 pensions expired through cancellations and deaths. The net increase for the year was 22,742 and the number in force at 30th June, 1953 was 374,791.

Of the age pensioners at 30th June, 1953, 126,122 (or 34 per cent.) were males, and 248,669 (or 66 per cent.) were females :—

AGE AND INVALID PENSIONS, 1952–53.

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
Age Pensioners—							
Male	54,521	28,493	18,966	10,478	9,401	4,263	126,122
Female	100,415	64,860	35,270	23,729	16,278	8,117	248,669
Persons	154,936	93,353	54,236	34,207	25,679	12,380	374,791
Masculinity (c)	54.30	43.93	53.77	44.16	57.75	52.52	50.72
Invalid Pensioners—							
Male	18,652	8,281	5,860	2,233	2,129	1,312	38,467
Female	14,804	6,738	4,831	2,145	1,867	1,290	31,765
Persons	33,546	15,019	10,691	4,378	3,996	2,602	70,232
Masculinity (c)	125.23	122.90	121.30	104.10	114.03	101.71	121.10
Age and Invalid Pensioners—							
Total Payments .. £'000.(d)	30,533	17,476	10,723	6,308	4,842	2,542	72,421
Annual Liability at 30th June, 1953—							
Age Pensioners	£'000. 25,630	15,665	9,157	5,726	4,283	2,053	62,514
Invalid Pensioners	5,713	2,537	1,839	749	674	440	11,952
Total	£'000. 31,343	18,202	10,996	6,475	4,957	2,493	74,466

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Number of males to each 100 females. (d) Includes amounts paid to Benevolent Homes for the maintenance of 6,309 pensioners and 18,354 allowances to wives of invalid pensioners.

The recorded ages of the 51,075 persons (20,346 males and 30,729 females) to whom age pensions were granted during the year 1952-53 varied considerably, ranging from 7,642 at age 60 to one at age 104, but 36,295 were in the 60-69 group. The conjugal condition of these new pensioners was as follows:—Males—single, 2,429; married, 14,576; and widowed, 3,341: Females—single, 4,256; married, 16,119; and widowed, 10,354.

The number of invalid pensioners increased from 67,963 in 1951-52 to 70,232 in 1952-53, an increase of 2,269. Total pensions granted during the year were 11,168 while 5,459 pensions ceased through cancellations or deaths and 3,440 were transferred to the age pension list.

Of the 70,232 persons in receipt of invalid pensions at 30th June, 1953, 38,467 (or 55 per cent.) were males and 31,765 (or 45 per cent.) were females.

The recorded ages of the 11,168 persons (6,710 males and 4,458 females) to whom invalid pensions were granted during 1952-53 varied from 16 to 98, 5,117 (or 46 per cent.) being in the 45-59 years age-group.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 2,346; married, 3,898; and widowed, 466: Females—single, 2,001; married, 1,762; and widowed, 695.

The actual sum disbursed in age and invalid pensions in 1952-53, including the amount paid to Homes for the maintenance of pensioners and allowances to wives of invalid pensioners, was £8 5s. 7d. per head of population as compared with £7 in the previous year.

The following table gives details of age and invalid pensions for the years 1938-39 and 1948-49 to 1952-53:—

AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensioners at End of Year.				Amount Paid in Pensions.	Total Payment to Pensioners and Institu- tions.(b)	Average Fortnightly Pension as at 30th June.		
	Age.		Invalid.	Total.			Age.	Invalid.	Total.
	No.	Rate per 1,000 persons eligible on age qualifi- cation. (a)							
			No.	No.	£	£	s. d. (c)	s. d. (c)	s. d. (c)
1939 ..	232,836	376	88,812	321,648	15,798,038	15,991,782	81 2	82 6	81 5
1949 ..	321,327	392	76,056	397,383	41,535,907	41,693,680	80 10	82 0	81 5
1950 ..	334,923	396	73,494	408,417	44,354,253	44,557,161	95 5	96 8	95 7
1951 ..	342,806	396	68,918	411,724	49,307,690	49,520,285	114 2	116 4	114 6
1952 ..	352,049	397	67,963	420,012	59,512,514	59,788,003	128 4	130 11	128 9
1953 ..	374,791	410	70,232	445,023	72,087,074	72,423,900			

(a) Based on an estimate of the aggregate of males aged 65 and over and females aged 60 and over at 30th June of each year. (b) Includes allowances to wives of invalid pensioners payable from the 8th July, 1943, but excludes funeral benefits in respect of deaths of pensioners, £252,479 in 1948-49; £245,822 in 1949-50; £243,058 in 1950-51; £275,850 in 1951-52; and £270,448 in 1952-53. (c) Not available.

§ 4. Maternity Allowances.

A maternity allowance is payable to a woman who, at the date of giving birth to a child, is residing in Australia or is in Australia and intends to remain. The allowance is payable in respect of a birth which occurs in Australia or on board a ship proceeding from a port in Australia or a Territory of the Commonwealth to another port in Australia or a Territory of the Commonwealth, or on board a ship proceeding to Australia, provided the mother receives no maternity benefit in respect of the birth from the country whence

she came. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the period of intra-uterine life of the child was at least $5\frac{1}{2}$ calendar months. There is no means test.

Payment may be made to an alien mother if she was a British subject prior to her marriage, or if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child. Payment in respect of a birth which occurs within twelve months of the mother's arrival in Australia may be made at the end of that time, but may be made immediately if the mother is likely to remain in Australia, and to Australian residents who are temporarily abroad.

The allowances may be paid only to those aboriginal natives of Australia who have been granted exemption from State control laws or who, in any State where exemption is not provided for, are considered suitable persons to receive the allowance.

From 1st July, 1947, the amount of a maternity allowance has been £15 where there are not other children; £16 where there are one or two other children; and £17 10s. where there are three or more other children. "Other children" means children under the age of sixteen years who were in the custody, care and control of the claimant on the date of the birth in respect of which the claim is made. The amount payable is increased by £5 in respect of each additional child born at a birth. Payment of £5 on account of a maternity allowance may be made available, upon application, within a period of four weeks prior to the expected date of birth. The balance is payable immediately after the birth.

The following table gives details of the maternity allowance claims paid and rejected and of the amount paid for the years 1938-39 and 1948-49 to 1952-53 and since the inception of maternity allowances in 1912-13:—

MATERNITY ALLOWANCES : SUMMARY, AUSTRALIA.

Particulars.		1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	Aggregate 1912-13 to 1952-53.
Claims Paid ..	No.	80,916	177,955	189,733	191,587	195,722	203,042	5,180,666
Claims Rejected ..	"	6,272	235	283	306	180	190	111,479
Amount Paid ..	£	436,614	2,828,849	1,007,900	1,057,519	1,156,992	3,248,305	45,217,290

NOTE.—The means test was abolished from 1st July, 1943.

The following table shows the number of maternity allowance claims paid in each State during the years 1938-39 and 1948-49 to 1952-53:—

MATERNITY ALLOWANCES : NUMBER OF CLAIMS PAID IN EACH STATE.

Year ended 30th June—	N.S.W. (a)	Vic.	Q'land.	S.A. (b)	W.A.	Tas.	Oversea.	Total.
1939 ..	30,860	20,819	12,880	7,204	5,213	3,940	..	80,916
1949 ..	67,534	46,309	27,570	16,381	13,107	6,984	70	177,955
1950 ..	73,566	49,035	28,652	17,273	13,759	7,408	40	180,733
1951 ..	72,003	50,210	29,155	17,464	14,986	7,250	119	191,587
1952 ..	72,688	52,144	30,737	17,380	15,074	7,626	71	195,722
1953 ..	74,011	55,297	31,058	19,068	15,535	7,983	90	203,042

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

The following table shows the number of claims paid in each State at the several rates of maternity allowances during the year 1952-53 :—

MATERNITY ALLOWANCES : NUMBER OF CLAIMS PAID AT EACH RATE, 1952-53.

State.	Single Births.			Multiple Births.						Total Claims Paid.
	£15.	£16.	£17 10s.	Twins.			Triplets.			
				£20.	£21.	£22 10s.	£25.	£26.	£27 10s.	
New South Wales(a) ..	25,609	35,191	12,279	254	469	203	1	4	1	74,011
Victoria ..	18,818	27,041	8,685	207	381	160	1	3	1	55,297
Queensland ..	9,820	14,388	6,470	117	160	101	2	..	..	31,058
South Australia(b) ..	6,021	9,618	3,178	73	129	47	..	1	1	19,068
Western Australia ..	4,603	7,851	2,807	46	93	45	..	..	..	15,535
Tasmania ..	2,509	3,653	1,727	14	51	26	..	2	1	7,983
Oversea ..	41	44	5	..	..	..	..	..	..	90
Total ..	67,511	97,786	35,151	711	1,283	582	4	10	4	203,042

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

§ 5. Child Endowment.

Any person who is resident in Australia and has the custody, care and control of one or more children under the age of sixteen years, and an approved institution of which children are inmates shall be qualified to receive an endowment in respect of each child. There is a twelve months residential requirement in respect of a claimant and a child who were not born in Australia, but this is waived if the claimant and the child are likely to remain permanently in Australia. A child born during the mother's temporary absence from Australia is deemed to have been born in Australia. There is no means test.

Endowment may be paid in respect of a child whose father is not a British subject if—the child was born in Australia; the mother is a British subject; and the child is likely to remain permanently in Australia. Endowment is also payable to aboriginal natives of Australia unless they are nomadic, or unless the child concerned is wholly or mainly dependent on the Commonwealth or a State and also to children of members of the Naval, Military or Air Forces of the United Kingdom who are serving with the Australian Forces from the time of arrival of the children in Australia.

From 20th June, 1950, the rate of endowment payable has been (a) where the endowee has the custody of one child only—5s. per week; (b) where the endowee has the custody of two or more children—in respect of the elder or eldest child 5s. per week and in respect of each other child 10s. per week; and (c) in the case of an approved institution the rate is 10s. per week for each child inmate. From 1st July, 1941, the rate of endowment was 5s. per week for each child in excess of one in a family, and for each child under sixteen years in an approved institution. The rate was increased to 7s. 6d. per week from 25th June, 1945, and to 10s. per week from 9th November, 1948. There are provisions to meet cases of families divided by reason of divorce, separation, unemployment, death of a parent or other circumstances.

During the year 1952-53, 86,712 claims were granted, cancellations amounted to 45,147 and the number of endowed family group claims in force at 30th June, 1953 was 1,246,986 an increase of 41,565 or 3.4 per cent. during the year. The following table shows particulars of the operations in each State and Australia during 1952-53 and in Australia for earlier years :—

CHILD ENDOWMENT : SUMMARY, 1952-53.

State.	Family Groups.					Total Payments to Endowees and Institutions.
	Claims in force at end of year.	Endowed Children.		Annual Liability at 30th June, 1953.		
		Total.	Average per claim.	Total.	Average Liability per claim.	
	No.	No.	No.	£	£	£
New South Wales(a)	491,848	1,005,887	2.05	19,759,038	40.17	20,012,263
Victoria	328,561	672,525	2.05	13,214,357	40.22	13,995,987
Queensland	178,760	393,539	2.20	7,908,134	44.24	8,343,100
South Australia(b) ..	113,529	234,582	2.07	4,623,255	40.72	4,769,439
Western Australia ..	89,671	192,991	2.15	3,852,043	42.96	4,052,859
Tasmania	44,202	98,619	2.23	1,989,468	45.01	2,058,559
Oversea	415	883	2.13	17,563	42.32	11,515
Total—1952-53 ..	1,246,986	2,599,026	2.08	51,363,858	41.19	53,243,722
1951-52	1,205,421	2,493,246	2.07	49,153,923	40.78	46,625,052
1950-51	1,150,847	2,365,177	2.06	46,533,591	40.43	43,584,614
1949-50	662,949	1,813,925	2.74	38,543,713	58.14	30,337,363
1948-49	620,819	1,083,994	1.75	28,183,844	45.40	24,323,413

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

In addition to the children endowed in families, child endowment benefits were paid in respect of children in approved institutions during 1948-49 to 1952-53 as follows :— 1948-49, 21,305 ; 1949-50, 22,397 ; 1950-51, 23,753 ; 1951-52, 24,623 ; and 1952-53, 24,951.

The following table shows, as at 30th June, 1953 the number of claims in force and the number of endowed children classified according to the number of endowed children in the family :—

CHILD ENDOWMENT : NUMBER OF CHILDREN(a), 30th JUNE, 1953.

Size of Family.	Claims in force.	Number of endowed children.	Size of Family.	Claims in force.	Number of endowed children.
One child ..	473,168	473,168	Nine children ..	833	7,497
Two children ..	424,242	848,484	Ten children ..	340	3,400
Three children ..	210,272	630,816	Eleven children ..	65	715
Four children ..	85,265	341,060	Twelve children ..	27	324
Five children ..	32,753	163,765	Thirteen children ..	8	104
Six children ..	12,674	76,044	Fourteen children ..	2	28
Seven children ..	5,075	35,525			
Eight children ..	2,262	18,096			
			Total ..	1,246,986	2,599,026

(a) Under 16 years of age.

§ 6. Widows' Pensions.

Widows' pensions and the rates in each class, as from 20th October, 1953, have been payable to the following classes of women :—

Class "A"—A widow who has the custody, care and control of one or more children under the age of 16 years. Rate £195 per annum.

Class "B"—A widow, not less than 50 years of age, who has no children under 16 years of age in her custody, care and control. Rate £149 10s. per annum.

Class "C"—A widow, under 50 years of age, who has no children under the age of 16 years in her custody, care and control, but is in necessitous circumstances within 26 weeks after the death of her husband. Rate £2 17s. 6d. per week for not more than 26 weeks. If at her husband's death, a widow is with child, this period will be extended until the birth of the child. She would then, of course, become eligible for an "A" class widow's pension.

Class "D"—A woman whose husband has been serving a term of imprisonment for at least six months, if she has the custody, care and control of one or more children under the age of 16 years or is not less than 50 years of age. Rate £149 10s. per annum.

The term "widow" includes :—a "dependent female" (i.e. a woman, who, for not less than three years immediately prior to the death of a man, was wholly or mainly maintained by him as his wife on a permanent and bona fide domestic basis); a deserted wife (i.e. a woman deserted by her husband for not less than six months); a divorcee (i.e. a woman whose marriage has been dissolved and who has not remarried); and a woman whose husband is an inmate of a mental hospital.

The residential qualification is five years' continuous residence in Australia immediately prior to the date of lodgment of the claim. This period is reduced to one year where the claimant and her husband were residing permanently in Australia when the husband died.

A widow's pension is not payable to :—a woman who is not a British subject unless she was a British subject before her marriage; a woman who is in receipt of an age or invalid pension, tuberculosis allowance, or a war widow's pension under the Repatriation Act in respect of the death of her husband; a woman who has deprived herself of property or income in order to qualify for a pension; a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband; a woman who is not of good character; a woman who is not deserving of a pension; a woman in Class "A" in receipt of income of £377 per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £1,750 or a woman in Classes "B" or "D" in receipt of income of £331 10s. per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £1,750.

Widows' pensions may be granted to aboriginal native women of Australia under the same conditions as age pensions.

Permissible income is £182 per annum. Any income in excess of this amount is deducted from the pension. "Income" has the same meaning as for age pensions. Any amount in excess of 15s. per week received by a deserted wife, or a divorcee from her husband or former husband, for the maintenance of a child is taken into account in the claimant's income.

The rate of pension for women in Classes "B" and "D" is reduced by £1 per annum for every complete £12 of the value of property which exceeds £200 up to £1,750. Property disregarded for pension is the same as for age pensions.

A widow cannot receive, in respect of the death of her husband, both a war widow's pension under the Repatriation Act and a civil widow's pension. A widow, however, may receive a civil widow's pension in addition to a war pension (as distinct from a war widows' pension) but the amount payable in respect of the two pensions must not exceed £312 per annum in the case of a Class "A" widow or £260 per annum in the case of a widow coming within Classes "B", "C" or "D". Where the war pension and the widow's pension together exceed the limit the widow's pension is reduced by the amount of the excess. The widow is permitted to have, in addition, other income to bring her total war pension and widow's pension payments up to the appropriate limit of income plus pension, £377 per annum for a Class "A" widow, £331 10s. for a Class "B" or "D" widow.

The pension payable to a Class "A" widow may be continued after her child reaches 16 years and until the age of 18 years is reached if the child continues with full-time education at a school or university and is still dependent on the widow and is not in employment.

The number of widows' pensions current at 30th June, 1953, was as follows:—Class "A", 17,080; Class "B", 22,757; Class "C", 114; Class "D", 177; total, 41,028. The amount paid in pensions during 1952-53 was £6,333,689. The following table shows details of widows' pensions paid in each State in the year 1952-53 and for Australia for each of the years 1948-49 to 1952-53:—

WIDOWS' PENSIONS AT 30th JUNE, 1953.(a)

State.	Pensions Current.(b)		Children for whom Pensions Payable.	Average Fortnightly rate of Pension.	Amount paid in Pensions during 1952-53.	
	Number.	Per 10,000 of Population.			Amount.	Per head of Population. (c)
			No.	£ s. d.	£	s. d.
New South Wales(d) ..	16,812	48	7,815	6 0 3	2,630,192	15 3
Victoria	10,173	43	3,844	5 18 8	1,534,582	13 0
Queensland	6,814	54	3,158	6 2 2	1,058,670	16 11
South Australia(e) ..	3,163	41	1,331	5 18 8	485,809	12 8
Western Australia ..	2,686	43	1,127	5 18 5	404,072	13 2
Tasmania	1,380	44	702	6 1 1	220,364	14 3
Total—1952-53 ..	41,028	46	17,080	6 0 0	6,333,039	14 6
1951-52 ..	40,758	47	17,424	5 8 2	5,614,768	13 2
1950-51 ..	41,092	50	17,717	4 10 10	4,828,086	11 7
1949-50 ..	42,804	52	17,760	3 19 3	4,420,566	11 0
1948-49 ..	43,251	55	17,891	3 19 8	4,388,468	11 3

(a) The Commonwealth Government commenced to pay widows' pensions from 1st July, 1942.
 (b) Excludes sixteen (1952-53), eleven (1951-52), nine (1950-51), fourteen (1949-50) and eleven (1948-49), pensions in respect of pensioners in Benevolent Homes.
 (c) Based on mean population for the financial year.
 (d) Includes Australian Capital Territory.
 (e) Includes Northern Territory.

§ 7. Unemployment and Sickness Benefits.

From 1st July, 1945, men over 16 and under 65 years of age, and women over 16 and under 60 years of age and who were qualified in other respects, have been eligible to apply for an unemployment benefit or a sickness benefit. There is a twelve months' residential requirement but this is waived if the claimant is likely to remain permanently in Australia. A person in receipt of an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the Repatriation Act or a tuberculosis allowance is ineligible to receive a benefit.

To qualify for an unemployment benefit a person must establish that he is unemployed and that his unemployment is not due to his being a direct participant in a strike ; that he is capable and willing to undertake suitable work ; and that he has taken reasonable steps to obtain such work. Registration with the local Commonwealth District Employment Officer is necessary.

To qualify for a sickness benefit a person must establish that he is temporarily incapacitated for work by reason of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.

A married woman is not qualified to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances. In exceptional cases a married woman may qualify for an unemployment benefit in her own right.

A benefit may be paid only to those aboriginal natives of Australia who are considered suitable, by reason of character, standard of intelligence and social development.

The maximum weekly rates of benefit payable and permissible income from 22nd September, 1952, are as follows :—

A married claimant can receive £2 10s. and £2 for a dependent spouse and 5s. for one child under 16 years of age with other income of £1. The amount for an unmarried claimant 21 years of age or over is £2 10s. with other income of £1, for those between 18 years and under 21 years £2 with other income of 15s., for those 17 years and under 18 years £1 10s. with other income of 10s., and for those 16 years and under 17 years £1 10s. with other income of 5s.

Where an unmarried claimant has the custody, care and control of a child under the age of sixteen years, the total benefit may be increased by 5s. per week.

Additional benefit of up to £2 per week may be paid in respect of a claimant's housekeeper where no such benefit is payable in respect of his wife, provided there are one or more children under 16 years of age in the home and the woman is substantially dependent on the claimant but is not employed by him.

Any income in excess of the permissible income is deducted from the rate of benefit. For unemployment benefit purposes, the incomes of the claimant and his spouse are taken into account, but where the claimant and his spouse are permanently separated any income received by the spouse may be disregarded. For sickness benefit purposes, the income of claimant only is taken into account, while up to £2 per week is disregarded of any payment received from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable. "Income" does not include child endowment, or other payments in respect of children, the Commonwealth hospital benefits and pharmaceutical benefits, or a tuberculosis allowance or an amount paid in reimbursement of medical, dental or similar expenses actually paid.

Where a person qualified for sickness benefit receives or is entitled to receive (in respect of the same period and the same incapacity for which sickness benefit is payable) any payment by way of compensation (including workers' compensation), damages, or otherwise under any law (except payments for which he has contributed), the amount of the compensation, etc., is not taken into account as income but is deducted from the rate of sickness benefit otherwise payable.

There is a waiting period of seven days in respect of which unemployment or sickness benefit is not payable. A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not in receipt of an age, invalid or widow's pension or a service pension, if by reason of age, physical or mental disability or domestic circumstances, or for any other reason, he is unable to earn a sufficient livelihood for himself and his dependants. Unemployment and sickness beneficiaries are eligible to participate in the Commonwealth rehabilitation scheme under the same conditions as invalid pensioners. Payment of an unemployment or sickness benefit may be refused if the claimant or beneficiary, on being required, fails to undergo a medical examination or to receive treatment or undertake training or to do any suitable work. See Division A, § 3, para. 12, Rehabilitation.

UNEMPLOYMENT AND SICKNESS BENEFITS, 1952-53.

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total
Persons on benefit at end of year—							
Unemployment—							
Males	12,044	5,056	3,017	595	626	304	21,552
Females	2,585	883	669	150	65	19	4,362
Persons	14,629	5,939	3,677	635	691	323	25,914
Sickness—							
Males	2,500	1,565	910	549	403	213	6,140
Females	913	494	277	179	94	38	1,995
Persons	3,413	2,059	1,187	728	497	251	8,135
Special—(c)							
Males	652	80	94	59	20	7	912
Females	422	303	186	45	50	67	1,073
Persons	1,074	383	280	104	70	74	1,985
Total —							
Males	15,196	6,701	4,021	1,113	1,049	524	28,604
Females	3,920	1,686	1,123	374	209	124	7,430
Persons	19,116	8,381	5,144	1,487	1,258	648	36,034
Admissions to benefits—							
Unemployment—							
Males	76,668	34,689	27,326	5,923	7,092	1,814	153,512
Females	11,972	4,283	3,827	886	399	203	21,570
Persons	88,640	38,972	31,153	6,809	7,491	2,017	175,082
Sickness—							
Males	15,435	8,466	7,067	3,994	2,977	1,626	39,565
Females	4,692	2,580	1,606	924	637	321	10,760
Persons	20,127	11,046	8,673	4,918	3,614	1,947	50,325
Special—(c)							
Males	640	383	620	244	91	31	2,009
Females	247	451	151	56	37	38	980
Persons	887	834	771	300	128	69	2,989
Total —							
Males	92,743	43,538	35,013	10,161	10,160	3,471	195,086
Females	16,911	7,314	5,584	1,866	1,073	562	33,310
Persons	109,654	50,852	40,597	12,027	11,233	4,033	228,396
Benefits Paid—							
Unemployment	2,686,297	923,732	662,090	132,042	123,732	41,845	4,569,747
Sickness	546,432	370,354	208,890	133,783	84,682	49,154	1,393,294
Special (d)	72,932	140,566	40,177	17,328	13,683	7,745	292,431
Total	3,305,661	1,434,652	911,165	283,153	222,097	98,744	6,255,472

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Excludes migrants. (d) Includes payments to migrants.

The following table shows the number of persons who were admitted to benefit, the number receiving benefit at the end of the year and the amount paid for each benefit for Australia during the years 1948-49 to 1952-53.

SUMMARY : AUSTRALIA.

Year.	Number Admitted to Benefit.			Persons on Benefit at end of Year.			Amount Paid in Benefits.		
	Un-employment.	Sick-ness.	Special. (a)	Un-employment.	Sick-ness.	Special. (a)	Un-employment.	Sick-ness.	Special. (b)
1948-49 ..	12,126	68,864	2,416	1,151	7,501	598	£ 138,846	£ 795,826	£ 135,754
1949-50 ..	161,101	63,842	4,660	1,226	7,491	908	1,266,072	816,014	424,339
1950-51 ..	11,004	61,410	2,785	604	7,044	921	62,444	745,716	229,053
1951-52 ..	27,486	51,043	2,786	8,294	6,378	1,148	187,011	709,887	110,759
1952-53 ..	175,082	50,325	2,969	25,914	8,135	1,985	4,569,747	1,393,294	292,431

(a) Excludes migrants.

(b) Includes payments to migrants.

§ 8. Reciprocal Agreements with Other Countries.

1. **New Zealand.**—An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 1st July, 1949.

The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment and unemployment and sickness benefits, and apply to both permanent and temporary change of residence.

Residence in one country counts as residence in the other country in relation to entitlement to benefits in which a residential qualification applies.

Persons from one country taking up permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country.

Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country. These payments are made on an agency basis by the appropriate authority of the country in which the person is temporarily resident.

2. **United Kingdom.**—The Governments of the United Kingdom and Australia signed a reciprocal agreement on social services in London on 8th June, 1953.

The agreement covers age and invalid pensions, widows' pensions, child endowment, and unemployment and sickness benefits. Under the agreement former residents of the United Kingdom over pension age—65 years for men and 60 years for women—who were in the National Insurance Scheme when they left the United Kingdom will be eligible to receive Australian pensions without having to complete 20 years' residence in Australia.

Subject to the means test, these persons so entitled have any United Kingdom pensions they receive supplemented by Australia to bring the total payments in most cases to the maximum pension rate for Australians—at present £3 10s. od. per week.

Similar principles apply to widows' pensions. Australian residential requirements will be waived for these pensions, also for invalid pensions, child endowment and unemployment and sickness benefits.

With few exceptions, all these benefits will be payable to former residents of the United Kingdom at the same rates as are payable to Australian citizens.

Persons from Australia going to the United Kingdom for permanent residence will be treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits.

Families who go from one country to another will be able to qualify for child endowment, or family allowances, as soon as they arrive in their new country.

There is also provision for the safeguard of social service rights for Australians going to the United Kingdom for temporary residence, and vice versa.

The agreement came into operation in both countries on 7th January, 1954.

B. OTHER SERVICES.

§ 1. Benevolent Homes.

1. *General.*—The public provisions for the care of indigent old people have been a feature of the social development of recent years in most countries. Numerous establishments exist in Australia for the housing and protection of persons no longer able to provide for themselves. These homes are supported by Government and municipal aid, public subscriptions, bequests, etc.; while in many cases relatives of poor and afflicted persons contribute to their maintenance.

An entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially difficult in the case of benevolent institutions, because the services provided by these institutions are not always identical.

2. *Principal Institutions.*—Particulars respecting the accommodation and the number of inmates of the principal institutions were published in earlier issues of the Official Year Book (*see* No. 22, p. 485).

3. *Revenue and Expenditure.*—Details regarding revenue and expenditure for the year 1951–52 are given in the following table.

BENEVOLENT HOMES: REVENUE AND EXPENDITURE, 1951–52.

(£.)

Particulars.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	Total
Revenue—							
Government Aid	565,125	502,769	289,679	67,641	115,961	82,199	1,623,374
Municipal Aid ..	..	1,050	..	..	..	..	1,050
Public Subscriptions, Legacies	..	45,455	33,355	..	745	..	79,555
Fees (c) ..	242,421	82,902	123,048	20,437	72,583	47,056	631,815
Other ..		12,843	26,513	2,891	234	887	
Total ..	807,546	645,019	472,595	90,969	189,523	130,142	2,335,794
Expenditure—							
Salaries and Wages ..	341,733	348,522	207,665	57,726	108,919	74,020	1,138,585
Upkeep and Repair of Buildings ..	30,118	20,312	19,612	8,355	11,275	1,606	91,278
All Other ..	307,921	186,617	237,899	20,388	56,698	54,516	864,039
Capital (d) ..	127,774	209,471	20,901	4,500	12,631	..	375,277
Total ..	807,546	764,922	486,077	90,969	189,523	130,142	2,469,179

(a) These figures relate to the three State hospitals and homes only. (b) Year ended 31st March, 1952. (c) Includes Commonwealth Hospital Benefits and Age and Invalid Pension receipts. (d) Includes such items as purchase of land, cost of new buildings and additions to buildings.

§ 2. Orphanages, Industrial Schools, etc.

1. *General.*—The methods of caring for orphans and neglected children differ extensively, inasmuch as some of the children are more or less segregated in orphanages and industrial schools, while others are boarded out with their mothers or female relatives or with approved foster-mothers. The children in orphanages and similar institutions

may receive, in addition to primary education, some craft training. In all cases employment is found for the children on their discharge from the institution, and they remain for some time under the supervision of the proper authorities. The conditions under which orphans, neglected children and children boarded out live are subject to frequent departmental inspections.

2. **Principal Institutions.**—Particulars concerning the principal institutions in each State were published in earlier issues of the Official Year Book (*see* No. 22, p. 486).

3. **Transactions of State Departments.**—The following table summarizes the transactions of State Departments during 1951-52 in connexion with children under their control or supervision. In addition to neglected children, the figures include uncontrollable and convicted children who are wards of a Government authority, as well as poor children whose parents obtain assistance from the Government without giving up the legal right of custody.

CHILDREN UNDER GOVERNMENT AUTHORITY : SUMMARY, 1951-52.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<i>A. Children maintained or subsidized by the State.</i>							
In State shelters, industrial schools, reformatories, etc.(b)	668	335	1,091	226	47	48	5,261
In licensed or approved institutions	667	1,466					
Boarded out—							
With own mothers ..	5,251	1,919	3,014	46	24	..	10,254
With licensed foster-mothers, guardians, relatives and friends	1,407	419	312	3,053	266	106	5,563
Total children maintained or subsidized by the State	7,993	4,139	4,417	3,378	785	366	21,078
<i>B. Children not maintained or subsidized by the State.</i>							
In licensed or approved institutions	1,566	..	..	24	666	..	2,256
Boarded out	268	..	..	1,468	269	..	2,005
On probation (from Institutions or Children's Courts)	2,989	630	179	283	477	..	4,558
In service or apprenticed	78	184	281	159	126	..	828
Adopted or otherwise placed	413	114	..	651	83	..	1,261
Total children not maintained or subsidized by the State	5,314	928	460	2,585	1,621	..	10,908
Total children under State control or supervision ..	13,307	5,067	4,877	5,963	2,406	366	31,986
<i>Gross cost of children's relief</i>	£ 810,622	£ 269,558	£ 270,113	£ 241,020	£ 80,501	£ 18,585	£ 1,690,399
<i>Receipts from parents' contributions, etc. ..</i>	57,913	25,251	21,288	30,374	12,756	1,983	149,565
<i>Net Cost to State ..</i>	752,709	244,307	248,825	210,646	67,745	16,602	1,540,834

(a) Year ended 31st December, 1951.

(b) Includes inmates of hospitals.

The total expenditure on children's relief in the foregoing table shows considerable variation amongst the States owing to the different methods of treating assistance to mothers with dependent children. In South Australia, Western Australia and Tasmania large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate amounts for allowances made in respect of the dependent children only.

§ 3. Protection of Aborigines.

For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where these people are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, while others only rarely come near the stations. The aboriginal native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1952-53 was as follows (figures in brackets are for year 1951-52):—New South Wales, £143,652 (£126,084); Victoria, £9,534 (£9,628); Queensland, £489,654 (£407,543); South Australia, £44,049 (£40,785); Western Australia, £176,296 (£164,238); Northern Territory, £278,492 (£286,041); Australian Capital Territory, £2,739 (£2,933); total for Australia, £1,149,416 (£1,037,252).

§ 4. Royal Life Saving Society.

In each of the State capitals, "centres" of the Royal Life Saving Society have been established, and in some States sub-centres have also been established in the larger provincial districts. In 1934 an Australian Federal Council of this Society was formed with headquarters at Melbourne, and each State centre, or branch, as it is now called, is controlled by this organization. Saving of life from drowning and other forms of asphyxiation is the object of the Society, and its immediate aims are (a) educative and (b) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, warning provisions, and other first-aid appliances on ocean beaches, wharves and other suitable places. Numerous certificates of proficiency in various grades are issued annually after examination throughout Australia, the number for the individual States for 1952-53 being:—New South Wales, 19,718 (1951-52); Victoria, 8,701; Queensland, 2,380; South Australia, 2,781; Western Australia, 1,088; and Tasmania, 2,855.

§ 5. Royal Humane Society.

The Royal Humane Society of Australasia at 188 Collins-street, Melbourne has as its main object the granting of awards to all who with bravery, skill and perseverance promptly risk their own lives in saving or attempting to save those of their fellow creatures. The classes of awards are (a) Gold Medal; (b) Silver Medal; (c) Bronze Medal; and (d) Certificate of Merit. The Clarke Medal is awarded for the outstanding case of the year, and the Rupert Wilks Trophy is awarded for the most outstanding bravery by a child under 13 years of age. About 75 awards are made annually.

§ 6. Other Charitable Institutions.

Owing to the variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not so particularized include homes for the deaf, dumb and blind, infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, rescue homes for females, free kindergartens, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fire, flood and mining accident relief funds, etc.

CHAPTER XV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—Statistics of local government operations are not entirely satisfactory, as they are incomplete, and not sufficiently comparable and up to date. Those on local government financial operations were improved, prior to the 1939–45 War, through the use by the State Statisticians of standard forms in supplying information on their respective States to the Commonwealth Statistician. The presentation of the statistics thus made available was still being developed when the war made it necessary to discontinue the returns. However, since the war these returns have been recommenced and efforts are being made, as opportunity and circumstances permit, to widen the range of information presented on local government activities beyond the purely, or primarily, financial.

2. **Local Government Authorities.**—In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and which covers such matters as the upkeep and construction of roads, streets and bridges, water, sewerage and drainage systems and health and sanitary services, the supervision of building and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions there are also a large number which may be performed by a local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 914, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as municipal corporations and district councils; in Western Australia as municipalities and road districts; and in Tasmania as municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity supply and water, sewerage and drainage—e.g., the county councils. Within shires there are also some municipal units known as urban areas. In Western Australia there are local health boards, whose personnel in most cases coincide with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Commonwealth Territories, practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2 following are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

3. **Semi-Governmental Authorities.**—In addition to local government authorities, there is a large number of authorities set up to control specific activities, which are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.

Sections 4 to 7 following, dealing with roads and bridges, water supply and sewerage, harbours and fire brigades, include particulars of the more important of these authorities which operate within the range covered by this chapter.

4. **Roads, Bridges, etc.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a Government department whose duties relate to the construction and maintenance of "main" and "developmental" roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of "Local Government", they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 4 are those of the Government only, relating either to the supervisory board or commission in the State or to direct activities of a department. In § 2 some information is given of the revenue and expenditure of local government authorities in respect of roads.

5. **Water Supply and Sewerage.**—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

6. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested, or are appointed by the Government. In a few instances, however, they are directly controlled by the Government.

7. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. These Boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the Government. Occasionally volunteer or country fire brigades are represented.

8. **Other Local or Semi-Governmental Activity.**—The activities referred to above are not the only forms of local or semi-governmental undertakings. There are others, the most important being tramways and omnibus services and electricity and gas undertakings, which are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter VI.—Transport and Communication contains information on municipal transport services, and Chapter XXV.—Electric Power Generation and Distribution deals with the various types of electricity undertakings in each State. In addition, particulars of municipal electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry.

§ 2. Local Government Authorities.

1. **New South Wales.**—For purposes of local government the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1951 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

All local government authorities in the State are subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 35 county councils and the Grafton and South Grafton Water Board at 31st December, 1951.

2. **Victoria.**—Local government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island (42,000 acres) in Westernport Bay, Julia Percy Island (650 acres) off Port Fairy, and Tower Hill (1,350 acres) adjacent to the Borough of Koroit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act. The law relating to local government was consolidated by the Local Government Act 1946.

As from 1st January, 1947, the metropolitan area for statistical and health purposes was redefined by the inclusion of the Cities of Nunawading and Sunshine, the Borough of Ringwood, the Broadmeadows and Campbellfield Ridings of the Shire of Broadmeadows, the Doota Galla Riding of the Shire of Keilor, and the Shire of Mulgrave.

3. **Queensland.**—The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments. In June, 1949, the State Government rearranged the boundaries of the local authorities to the south of Brisbane, reducing their number by ten. The towns of Coolangatta and Southport were absorbed by the new town of South Coast; two new shires were created and eleven were abolished, being absorbed by the new shires and existing cities, towns and shires.

4. **South Australia.**—The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

5. **Western Australia.**—In this State, local government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincide with those of the municipalities and district road boards.

6. **Tasmania.**—The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts.

7. **Area, Population, Dwellings and Value of Ratable Property.**—The area, population, dwellings and value of ratable property in the incorporated areas of each State are shown in the table below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value in the aggregate is considerable. In this table, particulars of dwellings in New South Wales, Queensland and Tasmania, are in accordance with the definition used in the 1947 Census, and are the results of information collected on the Census Schedules. Occupied dwellings include individual private houses, flats and tenements, and dwellings other than private (boarding houses, hotels, caretakers' quarters, hospitals, educational establishments, etc.). Also included are portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. Unoccupied dwellings include "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1951-52.

Local Bodies.	Number.	Area.	Popula- tion.	Dwellings.		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000 Acres.	'000.	No.	No.	£'000.	£'000.	£'000.
NEW SOUTH WALES.(a)								
Metropolitan—				(b)	(b)			(c)
Capital City	1	7	212	51,934	539	70,556	238,153	12,551
Other	31	702	1,658	372,706	3,876	168,842	602,771	40,651
Outside Metropolitan Area ..	268	117,110	1,467	318,267	12,740	214,865	(d)	(d)
Total	213	117,819	3,337	712,937	17,155	454,263	(d)	(d)
VICTORIA.(e)								
Metropolitan—				(f)	(f)			
Capital City	1	8	101	24,132	7	(d)	144,103	7,205
Other(g)	22	328	1,305	338,428	6	(d)	536,260	27,323
Outside Metropolitan Area(h)	165	55,857	940	256,138	283	(d)	495,910	25,104
Total	109	50,113	2,346	618,698	296	(d)	1,176,279	59,632
QUEENSLAND.(i)								
Capital City(j)	1	246	(b)	(h)	(b)	26,396	(d)	(d)
Outside Metropolitan Area ..	133	428,871	402	99,771	1,475	8,071	74,784	(d)
Total	134	129,117	1,099	271,171	9,546	101,180	(d)	(d)
SOUTH AUSTRALIA.(i)								
Metropolitan—					(b)			
Capital City	1	4	35	8,200	68	12,084	44,000	2,185
Other	20	99	414	112,600	696	(d)	134,000	6,709
Outside Metropolitan Area ..	122	34,402	274	2,055	2,689	(d)	163,000	8,136
Total	143	34,505	723	107,855	3,453	(d)	311,000	17,030
WESTERN AUSTRALIA.(k)								
Metropolitan—				(l)				
Capital City	1	14	107	25,356	(d)	48,400	2,436	
Other	19	107	235	56,577	(d)	(d)	1,026	
Outside Metropolitan Area ..	126	621,169	259	67,129	(d)	(d)	1,217	
Total	146	624,590	601	140,062	(d)	(d)	4,679	
TASMANIA.(i)								
Metropolitan—				(b)	(b)			
Capital City	1	18	61	13,507	56	6,277	20,881	1,378
Other(m)	2	99	28	4,560	331	2,945	12,027	688
Outside Metropolitan Area ..	46	16,661	210	41,327	1,964	22,491	60,020	3,647
Total	10	16,778	299	62,484	2,351	31,713	93,828	5,713

(a) Year ended 31st December, 1951. (b) As at Census, 30th June, 1947. (c) Nine-tenths annual rental value of land with improvements thereon. (d) Not available. (e) Year ended 30th September, 1952. (f) Particulars of occupied and unoccupied dwellings are based on returns furnished by municipalities. These figures refer to number of units in all habitable dwellings. (g) Includes the whole of the Cities of Heidelberg and Sunshine, the Borough of Ringwood, and the whole of the Shires of Broadmeadows, Keilor and Mulgrave, whose parts do not all lie within the metropolitan area. (h) Excludes Yallourn area under the jurisdiction of the State Electricity Commission. (i) Year ended 30th June, 1952. (j) City of Greater Brisbane. (k) Municipalities—Year ended 31st October, 1952; Road Districts—Year ended 30th June, 1952. (l) Particulars of unoccupied dwellings are not available separately. (m) Comprises the whole of the Municipalities of Clarence and Glenorchy.

8. Finances.—(i) General. The following tables show the latest available financial statistics for local government authorities. The figures relate to the year 1951-52 except for New South Wales where they relate to the year 1951.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1951-52 in the following table, the proceeds from loans and expenditure thereof have been excluded, as have the operations of business undertakings controlled by the various local government authorities. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

**LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE
AND EXPENDITURE. 1951-52.**

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (e)	W. Aust. (d)	Tas. (f)	Total.
Number of Local Government Authorities ..	243	199	134	143	146	40	914

REVENUE (EXCLUDING LOAN RECEIPTS). (£.)

Taxation—							
Rates (net) ..	14,276,670	9,639,594	6,638,220	2,343,001	1,592,290	958,145	35,549,996
Penalties ..	71,989	29,659	63,890	41,435	35,758	428	19,300
Licences ..	293,271	67,311	101,422	212,004	108,530	12,977	1,642,679
Total ..	14,641,930	9,736,564	6,702,110	2,384,436	1,628,048	968,873	30,061,971
Public Works and Services—							
Sanitary and Garbage Services ..	1,700,938	684,076	1,197,612	58,201	273,824	62,462	3,977,113
Council Properties ..	1,349,819	1,409,924	1,402,475	213,905	510,468	159,450	5,046,101
Street Construction ..	679,972	527,578	101,422	212,004	108,530	12,977	1,642,679
Other ..	1,135,289	312,793	66,551	71,084	24,733	21,553	1,632,003
Total ..	4,866,018	2,934,371	2,768,060	555,450	917,555	256,442	10,777,896
Government Grants—							
Roads ..	3,791,891	137,505	1,880,156	1,269,687	651,652	201,841	7,932,732
Other ..	869,566	302,271	631,783	19,360	28,283	34,841	1,885,104
Total ..	4,661,457	439,776	2,511,939	1,289,047	679,935	236,682	9,817,836
Profits from Business Undertakings ..		243,158	4,338		43,871		291,367
Fees and Fines ..		38,935		61,769	773,579	128,398	1,814,718
All Other ..		110,880	486,454	99,391	115,312		1,814,718
Total Revenue ..	24,169,405	13,503,694	12,471,001	4,390,093	4,158,300	1,590,395	60,283,788

EXPENDITURE (EXCLUDING LOAN EXPENDITURE). (£.)

General Administration ..	1,768,456	2,060,44	1,070,235	420,551	549,878	193,500	6,075,065
Debt Services (excluding Business Undertakings)—							
Interest ..	789,828	443,999	822,056	29,703	92,883	47,126	2,226,495
Redemption ..	1,833,593	673,877	1,218,773	269,502	228,914	87,652	4,314,311
Exchange ..	21,560		178,716			508	200,814
Other ..		4,999	5,558			18	10,585
Total ..	2,644,981	1,122,875	2,226,043	299,205	321,797	135,304	6,750,205
Public Works and Services—							
Roads, Streets and Bridges ..	10,849,062	4,706,488	4,969,427	2,638,763	1,434,194	703,959	25,391,893
Health Administration ..	471,036	559,221	184,715	109,937	126,705	37,563	1,489,177
Sanitary and Garbage Services ..	2,359,938	1,250,092	1,073,293	257,435	374,362	79,484	5,394,604
Street Lighting ..	614,648	310,720	171,157	99,872	68,136	36,271	1,300,813
Council Properties ..	3,613,625	2,193,250	1,758,462	375,336	1,168,019	205,905	9,224,597
Other ..	685,466	766,324	786,655	54,423	38,368	24,873	2,355,109
Total ..	18,593,775	9,786,104	8,943,709	3,553,766	3,209,784	1,088,055	45,157,193
Grants—							
Fire Brigades ..	156,691	252,399	123,586	72,414	50,298	26,713	682,101
Hospitals and Ambulances ..							
Other Charities ..	84,554	55,742	1,802	103,944	3,551	1,784	1,392,863
Other ..	336,606	660,440	975	6,634	5,613	2,228	1,392,863
Total ..	577,851	968,581	118,879	7,175		2,636	1,392,863
All Other ..	581,807	91,111	245,242	190,467	59,462	33,361	2,074,964
Total Expenditure ..	24,166,870	14,010,124	12,614,022	4,451,992	4,270,946	1,604,932	61,140,986

(a) Figures for New South Wales relate to the year ended 31st December, 1951, and are on an income and expenditure basis as distinct from those of other States, which are on a cash basis. (b) Year ended 30th September, 1952. (c) Year ended 30th June, 1952. (d) Municipalities—Year ended 31st October, 1952; Road Districts—Year ended 30th June, 1952. (e) Includes £70,629 reimbursement from Highways Department for work done. (f) Includes £338,732 for sewerage and drainage. (g) Includes £272,027 for sewerage, mosquito control and drainage. (h) To Main Roads Department. (i) Includes £324,502 to Country Roads Board.

The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1947-48 to 1951-52 :—

LOCAL GOVERNMENT AUTHORITIES : ORDINARY SERVICES—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	10,657,409	6,070,551	4,177,632	1,578,688	1,447,154	518,755	24,450,189
1947-48 ..	11,587,287	7,270,196	6,399,888	2,162,229	2,066,424	766,819	30,252,843
1948-49 ..	13,524,992	8,190,347	7,035,155	2,526,530	2,436,790	895,920	34,609,734
1949-50 ..	16,293,311	9,454,755	8,291,960	2,917,606	2,858,147	1,050,930	40,866,718
1950-51 ..	18,591,800	11,044,520	10,182,127	3,460,747	3,581,714	1,214,430	48,075,338
1951-52 ..	24,169,405	13,503,694	12,471,901	4,390,093	4,158,300	1,590,395	60,283,788
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	10,790,271	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,990
1947-48 ..	12,372,821	7,792,221	6,884,567	2,174,857	2,099,953	817,365	32,141,784
1948-49 ..	13,815,846	8,548,147	7,579,954	2,525,528	2,420,541	910,926	35,800,942
1949-50 ..	15,923,965	9,737,254	8,379,575	2,965,857	2,808,053	1,049,961	40,864,665
1950-51 ..	18,520,494	11,658,885	9,995,576	3,491,448	3,424,844	1,237,117	48,328,364
1951-52 ..	24,166,870	14,040,324	12,614,922	4,451,992	4,270,946	1,604,932	61,149,986

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

(iii) *Business Undertakings.* The table hereunder shows, for 1951-52, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1951-52.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
Water Supply and Sewerage—							
Rates	1,044,577	..	29,632	..	7,404	312,818	1,385,431
Charges for Services ..	300,593	75,257	2,033,548	1,912	2,742	68,065	2,482,117
and Sales of Products ..	(a) 36,000	22,359	1,050,453	..	..	28,069	1,462,917
Other (including Grants) ..	1,707,000	97,616	3,104,633	1,912	10,146	408,952	5,330,465
Total	3,058,169	195,231	4,203,514	3,824	20,292	498,844	7,480,070
Electricity and Gas—							
Rates	135,739	..	11,565	567	..	..	147,871
Charges for Services and							
Sales of Products	23,074,642	5,701,450	4,203,514	327,094	400,962	..	33,707,662
Other (including Grants) ..	548,837	60,000	242,734	33,048	7,717	..	892,336
Total	23,758,218	5,761,450	4,457,813	360,709	408,679	..	34,747,869
Railways, Tramways and Omnibuses—							
Rates .. .. .	..	..	..	..	..	40,249	40,249
Charges for Services and							
Sales of Products .. ..	..	3,195	2,730,777	..	..	593,312	3,327,284
Other (including Grants) ..	..	..	50,364	..	..	6,515	65,879
Total .. .. .	..	3,195	2,790,141	..	..	640,076	3,433,412
Other—							
Rates	(b)	(c)	(d)	(e)	(f)	(g)	
Charges for Services and							
Sales of Products	1,327,491	429,649	48,026	16,731	16,922	38,277	1,877,096
Other (including Grants) ..	6,000	17,432	16,672	224	..	926	44,344
Total	1,336,581	447,081	83,022	16,955	17,326	39,257	1,940,222
Grand Total	26,803,005	6,309,342	10,435,609	379,576	436,151	1,088,285	45,451,968

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—
REVENUE AND EXPENDITURE, 1951-52—*continued*.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
Water Supply and Sewerage—							
Working Expenses ..	886,054	61,061	1,173,258	1 874	9,150	182,815	2,314,212
Depreciation ..	(h) 49,659	7,441	..	..	..	..	— 42,216
Debt Charges ..	556,885	15,084	918,254	15	6,113	172,580	1,668,931
Other (including Transfers to General Revenue and Construction) ..	..	14,947	988,199	..	..	53,097	1,056,243
Total ..	1,393,280	98,533	3,079,711	1,889	15,263	408,492	4,997,166
Electricity and Gas—							
Working Expenses ..	21,472,857	4,932,641	3,808,997	339,164	351,415	..	30,905,074
Depreciation ..	(h) 984,703	230,274	..	..	29,950	..	1,253,927
Debt Charges ..	2,202,416	285,283	533,027	15,968	27,025	..	3,063,710
Other (including Transfers to General Revenue and Construction) ..	..	246,849	284,752	20,631	16,776	..	569,008
Total ..	24,659,976	5,704,047	4,626,776	375,763	425,166	..	35,791,726
Railways, Tramways and Omnibuses—							
Working Expenses ..	..	7,288	2,522,966	..	..	494,456	3,024,710
Depreciation ..	..	..	..	..	..	..	..
Debt Charges ..	..	404	369,713	..	..	92,985	463,102
Other (including Transfers to General Revenue and Construction) ..	..	57	53,780	..	..	35,902	89,739
Total ..	..	7,749	2,946,459	..	..	623,343	3,577,551
Other—	(b)	(c)	(d)	(e)	(f)	(g)	
Working Expenses ..	1,298,470	378,545	57,451	16,864	13,420	26,187	1,790,937
Depreciation ..	(h) 6,185	6,642	..	..	..	..	12,827
Debt Charges ..	23,517	35,336	754	..	114	7,755	67,476
Other (including Transfers to General Revenue and Construction) ..	..	17,299	23,660	..	..	4,696	45,655
Total ..	1,328,172	437,822	81,865	16,864	13,534	38,638	1,916,895
Grand Total ..	27,381,428	6,248,151	10,734,811	394,516	453,063	1,070,473	46,283,342

(a) Includes Government grant, £272,676, for part of cost of new works borne by Government.
 (b) Abattoirs and ice-works. (c) Abattoirs and hydraulic power undertakings. (d) Municipal markets, amusement parks, hotels, and cinemas. (e) Quarries. (f) Quarries, ice-works and abattoirs. (g) Abattoirs. (h) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—For years to which particulars relate, see preceding table. Minus sign (—) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1947-48 to 1951-52.

LOCAL GOVERNMENT AUTHORITIES : BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(e)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	6,405,010	1,813,796	3,373,966	113,132	962,470	528,461	13,196,835
1947-48 ..	11,929,432	3,270,875	4,604,268	207,830	1,495,123	663,411	22,260,939
1948-49 ..	14,294,306	3,667,290	5,658,198	229,896	(e) 733,538	750,963	25,334,191
1949-50 ..	16,337,869	4,520,750	6,608,009	272,369	523,054	795,929	29,059,186
1950-51 ..	20,773,694	5,094,127	7,923,664	328,840	550,538	927,257	35,598,120
1951-52 ..	26,803,005	6,309,312	10,135,609	379,576	436,151	1,088,285	45,451,968
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1947-48 ..	11,704,990	3,272,629	4,869,383	229,604	1,452,802	698,264	22,227,672
1948-49 ..	14,394,433	3,597,041	5,701,314	258,702	(e) 755,793	736,647	25,443,950
1949-50 ..	16,659,960	4,494,128	6,655,037	202,237	533,287	797,887	29,435,136
1950-51 ..	20,556,981	5,219,901	7,917,019	339,556	585,938	926,330	35,545,821
1951-52 ..	27,381,428	6,248,151	10,734,811	394,516	453,903	1,070,473	46,283,342

(a)-(d) See notes to corresponding table on Ordinary Services (page 506). (e) Electricity undertaking taken over by State Electricity Commission on 20th December, 1948. Includes trading from 1st November, 1948 to 19th December, 1948.

(iv) *Loan Expenditure.* The table below shows particulars for 1951-52 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS, 1951-52.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
ORDINARY SERVICES.							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage	1,607,633	750,624	3,118,029	487,229	347,119	467,938	12,041,639
Council Properties	1,672,926	734,421	2,127,788	24,937	277,152		
Parks, Gardens and Recreational Reserves	286,318	141,784		..	32,961		
Other	(a) 598,714	73,885	166,505	..	35,676	..	..
Total	4,255,591	1,700,714	4,412,322	512,166	692,908	467,938	12,041,639
BUSINESS UNDERTAKINGS.							
Water Supply	1,070,259	19,159	1,668,088	..	..	811,166	20,310,418
Sewerage	325,141	..	468,823	..	..
Electricity and Gas	10,337,339	1,794,214	2,801,759	100,873	46,884		
Railways, Tramways and Omnibuses .. .. .	..	..	486,634	..	..	..	..
Abattoirs	320,717	27,695	..	..	..
Other	24,167	..	7,500	..	..
Total	12,077,623	1,841,068	5,432,804	100,873	46,884	811,166	20,310,418
Grand Total	16,333,214	3,541,782	9,845,126	613,039	739,792	1,279,104	32,352,057

(a) Includes advances for homes, £86,759.

NOTE.—For years to which particulars relate, see next table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1947-48 to 1951-52 :—

LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS.
(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
ORDINARY SERVICES.							
1938-39 ..	1,757,704	662,986	1,316,651	43,479	117,172	39,481	3,937,473
1947-48 ..	1,911,795	522,443	1,669,617	185,095	278,638	79,046	4,646,634
1948-49 ..	2,614,670	712,378	2,326,484	189,792	356,977	189,497	6,389,798
1949-50 ..	2,769,996	924,630	2,737,791	331,047	500,995	315,439	7,579,808
1950-51 ..	3,242,674	1,194,723	3,546,437	280,704	586,386	347,347	9,198,271
1951-52 ..	4,255,591	1,700,714	4,412,322	512,166	692,908	467,938	12,041,639
BUSINESS UNDERTAKINGS.							
1938-39 ..	1,481,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1947-48 ..	1,842,304	418,186	1,327,630	..	58,782	95,664	3,742,566
1948-49 ..	4,038,922	654,619	2,109,218	16,900	36,794	196,499	7,052,982
1949-50 ..	6,356,107	680,481	2,811,709	8,044	71,005	396,297	10,323,643
1950-51 ..	8,950,059	1,185,122	3,311,223	74,864	64,087	449,703	14,035,058
1951-52 ..	12,077,623	1,841,068	5,432,804	100,873	46,884	811,166	20,310,418

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June.

§ 3. Local and Semi-Governmental Authorities' Debt.

1. **General.**—Statistics of local and semi-governmental debt for the years 1938-39 and 1948-49 to 1951-52 are given in the following paragraph. The information covers all local government authorities and those semi-governmental authorities responsible for the provision of the following services :—

New South Wales. Water Supply, Sewerage and Drainage, Electricity Supply, Fire Brigades, Banking. County Councils are included among these authorities.

Victoria. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity and Gas Supply, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, Banking, Housing.

Queensland. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Roads and Bridges, Trading Activities, n.e.i., Fire Brigades, Universities, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), Industry Assistance, Miscellaneous.

South Australia. Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, Miscellaneous.

Western Australia. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Housing.

Tasmania. Harbours.

A detailed list of the authorities included is shown in *Finance Bulletin* No. 44, 1952-53.

2. **Local and Semi-Governmental Authorities' Debt.**—The following table provides a summary of new money loan raisings, provisions for the redemption of debt, debt outstanding and interest payable of local and semi-governmental authorities for the year ended 30th June, 1952. For greater detail see *Finance Bulletin* No. 44, 1952-53.

**LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES : NEW MONEY LOAN
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1951-52.**

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL GOVERNMENT AUTHORITIES.							
New Money Loan Raisings—							
From Government ..	264	50	2,473	381	7	..	3,175
From Public ..	8,231	2,583	5,338	249	703	1,277	18,381
Total ..	8,495	2,633	7,811	630	710	1,277	21,556
Funds Provided for Redemption—							
Government Loans ..	20	10	694	207	3	8	942
Loans due to Public ..	2,405	886	1,476	64	246	274	5,351
Total ..	2,425	896	2,170	271	249	282	6,293
Accumulated Sinking Fund Balance ..	5,404	1,723	1,840	..	234	341	9,542
Debt—							
Due to Government ..	1,340	321	10,719	813	75	106	13,374
Due to Banks (Net Overdraft) ..	84	752	1,444	70	5	212	2,567
Due to Public Creditor (a) ..	44,133	16,453	40,117	841	2,945	5,120	100,609
Total (a) ..	45,557	17,526	52,280	1,724	3,025	5,438	125,550
Maturing Overseas (a)(b) ..	1,812	..	2,317	..	..	100	4,229
Annual Interest Payable (a) ..	(c)	639	1,841	38	112	188	(c)

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

New Money Loan Raisings—							
From Government ..	30	12,366	4,622	15,219	4,836	..	37,073
From Public ..	14,023	35,216	3,827	1,506	41	438	56,041
Total ..	14,053	47,582	8,449	16,815	4,877	438	93,114
Funds Provided for Redemption—							
Government Loans ..	235	518	382	277	245	11	1,668
Loans due to Public ..	2,388	956	547	3	35	30	3,959
Total ..	2,623	1,474	929	280	280	41	5,627
Accumulated Sinking Fund Balance ..	10,178	5,538	..	388	11	4	16,119
Debt—							
Due to Government ..	19,929	49,234	18,567	40,279	19,301	102	147,412
Due to Banks (Net Overdraft) ..	2,943	4,791	1,307	48	53	..	9,142
Due to Public Creditor (a) ..	120,121	155,677	16,352	12,811	379	1,709	307,049
Total (a) ..	142,993	209,702	36,226	53,138	19,733	1,811	163,603
Maturing Overseas (a)(b) ..	8,591	3,900	..	767	..	..	13,267
Annual Interest Payable (a) ..	(c)	6,956	1,308	1,820	728	65	(c)

(a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (b) Included in debt figures above. (c) Not available.

In this and the following tables, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts and loans raised for conversion or redemption

of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

In the following table a summary is given of new money loan raisings, provisions for the redemption of debt and debt outstanding of local and semi-governmental authorities for the years 1938-39 and 1948-49 to 1951-52.

LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES, AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT.

(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.
LOCAL GOVERNMENT AUTHORITIES.					
New Money Loan Raisings—					
From Government	371	841	1,498	1,970	3,175
From Public	7,060	11,242	13,843	16,502	18,381
Total	7,431	12,083	15,341	18,472	21,556
Funds provided for Redemption—					
Government Loans	2,141	675	506	748	942
Loans due to Public	2,995	3,740	4,163	4,777	5,351
Total	5,136	4,414	4,669	5,525	6,293
Accumulated Sinking Fund Balance ..	(a)	9,050	9,334	9,826	9,542
Debt—					
Due to Government	13,207	9,051	10,032	11,110	13,374
Due to Banks (Net Overdraft)	1,544	435	537	1,163	2,567
Due to Public Creditor(b)	76,582	73,766	83,908	97,038	109,609
Total(b)	91,333	83,252	94,477	109,311	125,550
Maturing Overseas(b)(c)	17,893	6,775	4,838	4,429	4,229

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

New Money Loan Raisings—					
From Government	1,524	10,740	15,749	23,205	37,073
From Public	7,038	18,046	32,674	54,140	56,041
Total	8,562	28,786	48,423	77,345	93,114
Funds provided for Redemption—					
Government Loans	600	1,239	1,075	1,616	1,668
Loans due to Public	1,146	5,101	5,466	5,415	3,959
Total	1,845	6,340	6,571	7,031	5,627
Accumulated Sinking Fund Balance ..	(a)	13,139	13,462	14,583	16,119
Debt—					
Due to Government	(d)44,817	76,055	89,919	111,676	147,412
Due to Banks (Net Overdraft)	2,006	2,793	3,423	4,718	9,142
Due to Public Creditor(b)	118,506	173,768	203,100	253,160	307,049
Total(b)	165,329	252,616	296,541	369,553	463,603
Maturing Overseas(b)(c)	12,088	14,655	12,991	12,923	13,267

(a) Not available. (b) Includes debt in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (c) Included in debt figures above. (d) Approximate only.

§ 4. Roads and Bridges.

1. **Commonwealth Government Grants.**—The following table shows particulars of allocations to the several States from the Commonwealth Consolidated Revenue Fund under the several Commonwealth Aid Roads and Works Acts, for road construction, maintenance, repair and other works connected with transport during the years 1938–39 and 1947–48 to 1952–53. Allocations for the construction and maintenance of strategic roads and for the promotion of road safety practices made in the years 1947–48 to 1952–53 are excluded. The aggregate amounts payable under the relevant Acts from 1922–23 to 1952–53 for the purposes outlined above are also shown. Further particulars of these grants appear in Chapter XVII.—Public Finance and in *Finance Bulletins*.

ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS BY COMMONWEALTH GOVERNMENT.

(£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total
1939	1,199	747	815	474	819	213	4,267
1948	2,017	998	1,102	631	1,102	287	6,137
1949	2,003	1,236	1,363	781	1,363	355	7,101
1950	2,172	1,526	1,683	965	1,683	438	8,767
1951	3,819	2,357	2,600	1,190	2,600	677	13,543
1952	4,131	2,549	2,812	1,611	2,812	732	14,647
1953	4,260	2,629	2,900	1,662	2,900	756	15,107
Aggregate, years 1922–23 to 1952–53	34,550	21,623	23,516	13,687	23,651	6,160	123,187

In addition to the foregoing amounts, financial assistance from loan fund has been granted by the Commonwealth Government to the States for road construction. Such assistance has not been granted in recent years. At 30th June, 1953 the aggregate amount was £249,686.

2. **New South Wales.**—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. This authority (now organized as the Department of Main Roads) exercises control over Governmental activities in connexion with road works, these activities embracing works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works, principally bridges and vehicular ferries, constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways.

In the metropolitan district the whole cost of the construction and maintenance of main roads is paid from the funds of the Main Roads Department, while in the country districts assistance in respect of road works may be granted for any area through which a main road passes. The cost of constructing developmental roads and works is borne in full by the Main Roads Department, but local councils are required to maintain them in satisfactory condition. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and re-construction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The general system of road communication throughout the State is made up of main roads classified into State highways, trunk roads and ordinary main roads. There are also secondary roads (metropolitan area) and developmental roads.

Public roads, except those within the City of Sydney, may be proclaimed as main roads on the recommendation of the Commissioner for Main Roads, who takes into consideration representations made by councils concerned, availability of funds for construction and maintenance purposes, and the value as connecting links between centres of population or business.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1953, according to class of road:—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30th JUNE, 1953.
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,201	2,874	9,687	17,762	(a) 75	2,911	20,748
Western ..	1,325	1,351	2,88c	5,56c	..	..	(b) 5,566
Total ..	6,536	4,225	12,567	23,328	75	2,911	26,314

(a) Metropolitan area.
Department.

(b) Excludes 2,620 miles of unclassified roads, the responsibility of the

During 1952-53, 39 miles of new developmental roads were proclaimed. There were no main roads proclaimed during the year.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1953 (excluding the Western Division) was 2,757 miles (15 per cent.), while the length maintained by councils was 15,080 miles (85 per cent.). The proportions of the several classes of main roads maintained by the Department and councils respectively were:—State highways, 40 per cent., 60 per cent.; trunk roads, 2 per cent., 98 per cent.; ordinary main roads, 6 per cent., 94 per cent. Secondary roads were wholly maintained by councils. In the County of Cumberland (the metropolis and adjoining areas) the Department maintained 55 per cent. of the roads (504 miles).

(b) *Composition of Roads.* In 1951, the latest year for which details are available, the total length of all roads in New South Wales was estimated at 126,624 miles, including 7,911 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows:—cement concrete, 390 miles; asphaltic concrete, 197 miles; tar or bituminous macadam, 4,187 miles; surface water-bound macadam, 4,679 miles; water-bound macadam, 2,068 miles; gravel or crushed rock, 35,076 miles; formed only, 27,390 miles; cleared or natural surface only, 52,637 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Main Roads Department plan for main road development in the metropolis and the balance of the County of Cumberland. This plan is now incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act 1951. Surveys and designs have been advanced, and the acquisition of land is proceeding, in connexion with the planned Newcastle and District Arterial Road System and Wollongong-Port Kembla District Main Roads System.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. The acquisition of land required to implement approved schemes has been proceeding.

During 1952-53, 29 new bridges were completed on main roads by the Department and councils including a new steel and reinforced concrete bridge over the Hunter River at Hexham (length 840 feet). Major bridge works under construction include steel

and concrete bridges over Iron Cove between Balmain and Drummoyne, Sydney (length 1,536 feet), over Middle Harbour at the Spit, Sydney (length 745 feet), and over the Clyde River at Bateman's Bay (length 1,008 feet).

(b) *Receipts and Payments.* The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth Aid Roads and Works Acts (*see* Chapter XVII.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and para. 1 of this section for particulars of the amounts paid in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1949–50 to 1952–53 compared with the income and expenditure for 1938–39 are shown below.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938–39. (a)	1949–50.	1950–51.	1951–52.	1952–53.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees	2,018,556	2,744,617	3,586,260	5,046,392	6,381,289
Commonwealth Aid Roads and Works Acts	1,176,039	1,777,500	2,560,447	2,881,122	2,916,757
Councils' Contributions	250,679	285,478	328,983	396,766	486,352
Consolidated Revenue (State) .. ..	..	..	350,000	300,000	100,000
Loans from State Government	302,643	..	215,000	225,000	150,000
Grants and Contributions from State Government and Departments, etc.	13,549	9,909	26,470	58,545	64,177
Commonwealth Funds for Special Works .. ..	..	142,000	133,140	192,566	365,574
Hire of Plant and Motor Vehicles .. ..	..	340,016	393,224	479,048	618,913
Suspense Accounts .. ..	..	1,080	..	..	39,685
Other	54,782	149,415	149,679	171,562	271,362
Total	3,816,248	5,450,015	7,743,293	9,751,001	11,394,109
PAYMENTS					
Roads and Bridges—					
Construction	1,736,898	2,303,637	2,276,055	3,625,036	4,330,600
Maintenance	1,519,929	2,856,578	3,787,059	4,921,350	4,554,406
Other Works .. ..	..	9,134	..	..	..
Debt Charges—					
Interest, Exchange, etc.	152,460	121,895	120,702	123,297	122,651
Debt Redemption	200,591	40,861	25,875	27,776	(d) 129,472
Repairs and Expenses, Plant and Motor Vehicles .. ..	..	220,007	253,405	367,940	510,867
Purchase of Assets .. ..	..	292,081	435,885	816,649	548,167
Suspense Accounts .. ..	..	19,538	98,259	92,528	..
Administration, etc.	100,583	246,226	279,622	348,652	3,956,630
Other	914	97,600	97,181	139,341	131,218
Total	3,711,384	66,207,490	7,374,043	10,462,569	10,723,011

(a) Income and expenditure. (b) Excludes £500,000 transferred from the County of Cumberland Main Roads Fund to the Country Main Roads Fund. (c) Excludes £250,000 transferred from the Country Main Roads Fund to the County of Cumberland Main Roads Fund. (d) Includes £100,000 repayment to Treasury of funds specially provided by the State Government in earlier years from Consolidated Revenue.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1953 receipts amounted to £126,015,579 and payments to £124,178,665. Particulars of the individual funds are—County of Cumberland, receipts £33,255,124, payments £32,292,078; Country, £88,478,383, £87,814,228; Developmental, £4,282,072, £4,072,359.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938-39 and 1948-49 to 1951-52 was, respectively, £8,894,099, £10,479,716, £12,394,814, £15,063,845, and £20,009,994. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1953, was £9,725,507, but this amount will be reduced by approximately £260,000 on the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years ending approximately in 1985. The accumulated balance of the Bridge Account at 30th June, 1953, showed a surplus of £10,529, after the transfer of sums totalling £655,000 to a reserve account. Annual income, after a decline to less than £300,000 during the 1939-45 War, has risen from about £400,000 in 1938-39 to £773,008 in 1952-53; expenditure over the same period has risen from about £430,000 to a little over £500,000. In 1952-53 income included road tolls £596,261, railway passenger tolls £136,365, and tram and omnibus passenger tolls £26,057. Expenditure amounted to £503,650, including interest, exchange, etc., £241,786, sinking fund, £65,156 and maintenance and improvement £122,033. During 1952-53, 24,737,000 rail travellers, 23,764,000 tram and omnibus travellers, and 26,342,000 road travellers in 16,383,000 road vehicles crossed the bridge, contributing respectively, 18 per cent., 3 per cent., and 79 per cent. of the total toll revenue.

3. *Victoria.*—(i) *General.* With the object of improving the main roads of the State the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Victoria at 30th June, 1953, was 14,448 miles, classified as follows:—State highways, 3,849 miles; main roads, 9,792 miles; tourists' roads, 432 miles; forest roads, 375 miles. The total length of the surface treated (black) system included in the foregoing totals was 7,361 miles or 51 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,448 miles of classified roads as above, there were 90,200 miles of unclassified roads at 30th June, 1953. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1948) provides the following information:—Wood or stone, 62 miles; portland cement concrete, 150 miles; asphaltic concrete and sheet asphalt, 202 miles; tar or bitumen surface seal, 10,241 miles; water-bound macadam, gravel, sand and hard loam pavements, 28,418 miles; formed only, 23,901 miles; surveyed only, 38,437 miles; total 101,411 miles.

(iii) *Country Roads Board.* (a) *General.* During 1952-53 1,066 miles of declared roads under the Board's control were treated with bitumen. In addition, 28 miles of undeclared roads, for which the Board contributed funds, were similarly treated. Work for other authorities carried out by the Board's plant amounted to 137 miles. The total length of bitumen treatment carried out in 1952-53 was 1,231 miles. Of the work on the roads under the Board's control, 587 miles related to State highways.

During 1952-53, 169 bridge projects with a total value of £429,876 were initiated. Of these new projects, 29 with a total value of £129,285 were supervised by the Board and 140 with a total value of £300,591, were supervised by municipalities.

The Swan-street Bridge, Melbourne, for which the Country Roads Board was the constructing authority, was opened for traffic in August, 1952.

(b) *Receipts and Payments.* The funds of the Country Roads Board are derived principally from motor vehicle registration fees, drivers' licence fees, contributions from the Commonwealth Government under Commonwealth Aid Roads and Works Acts and payments from municipalities. In addition loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways and restoration of flood and bush fire damage. During the year ended 30th June, 1953, loan receipts and payments each amounted to £1,191,509, and expenditure included £426,509 for restoration of flood and bush fire damage. The total loan expenditure to 30th June, 1953 was £8,856,004. This figure does not include loan expenditure from the Developmental Roads Loan Account, which fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan money raised on this account was exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

Total receipts and payments during each of the years 1938–39 and 1949–50 to 1952–53 are shown below :—

COUNTRY ROADS BOARD, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938–39.(a)	1949–50.	1950–51.	1951–52.	1952–53.
RECEIPTS.					
Motor Vehicle Registration Fees ..	1,690,962	2,555,812	3,015,82c	3,694,c12	3,7c2,131
Drivers' Licence Fees (b) ..	..	131,678	143,291	159,950	159,402
Municipalities' Payments ..	318,878	189,788	187,109	283,391	344,320
Commonwealth Aid Roads and Works Acts (c) ..	716,019	1,370,528	1,988,662	2,501,150	2,446,029
Loans from State Government ..	57,972	391,867	715,956	1,046,621	1,191,509
Stores and Materials ..	233,104	..	..	..	..
Hire of Plant ..	53,724	..	..	..	..
Other ..	117,341	20,958	3,521	4,222	2,092
Total ..	3,188,000	4,660,631	6,054,359	7,689,346	7,845,483
PAYMENTS.					
Construction and Maintenance of Roads and Bridges—					
State Highways ..	453,708	1,340,588	2,077,175	2,158,205	2,250,803
Main Roads ..	1,027,210	1,265,457	2,059,075	2,626,675	2,492,855
Tourist Roads ..	77,694	149,841	212,398	196,512	232,778
Forest Roads ..	..	44,174	63,333	69,150	113,895
Unclassified Roads ..	468,122	378,179	937,692	773,384	918,946
Roads adjoining Commonwealth Properties ..	13,321	735	709	1,099	..
Other ..	(d) 58,729	6,022	11,641	10,775	13,843
Relief to Municipalities ..	240,170	..	..	..	..
Plant, Stores and Materials ..	310,332	211,661	578,273	701,760	840,258
Interest, Debt Redemption, etc. ..	427,445	531,213	526,845	537,870	570,001
Administration Expenditure ..	230,125	251,117	310,706	450,351	449,030
Other ..					
Total ..	3,306,856	4,333,487	7,188,700	7,815,252	7,882,409

(a) Figures for 1938–39 are not directly comparable with those of succeeding years owing to a change in the method of compilation adopted by the Country Roads Board. (b) Prior to 1st July, 1949 drivers' licence fees were paid into Consolidated Revenue Fund. From that date until 31st December, 1950 the fees were credited to the funds of the Country Roads Board. Since then one half of the fees have been credited to the funds of the Country Roads Board while the remaining half have been credited to the Municipalities Assistance Fund. (c) Excludes portion of Commonwealth Aid Roads and Works Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc. (d) Includes £54,662 expenditure on unemployment relief works.

4. *Queensland.*—(i) *General.* Under the Main Roads Act 1920 a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925 the Board was abolished and its powers conferred upon a single Commissioner. The Main Roads Commission was constituted a Department under the name of the Department of Main Roads in February, 1951, with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads and tourist tracks, and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is subsidized by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Queensland at 30th June, 1953 was 20,954 miles, comprising State highways, 7,772 miles ; main roads, 11,120 miles ; developmental roads, 245 miles ; secondary roads, 638 miles ; mining access roads, 567 miles ; farmers' roads, 312 miles ; tourist roads, 298 miles ; tourist tracks, 2 miles. During 1952-53, 64 miles were added to the list. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1952 to 30th June, 1953 was 11,764 miles (56 per cent.). At that date, also, 832 miles of new road construction and 520 miles of stage construction work were proceeding.

(b) *Composition of Roads.* The total length of roads and streets in Queensland at 30th June, 1953 was :—Concrete, 90 miles ; bitumen, 5,250 miles ; macadam, 11,565 miles ; other formed, 42,943 miles ; unconstructed, 72,349 miles ; total, 132,197 miles.

(iii) *Department of Main Roads.* (a) *General.* During 1952-53 (1951-52 in parentheses), the Department completed 1,479 (1,364) miles of roads including new construction and stage construction. Bridges of all types to a length of 7,808 (4,756) linear feet were constructed, bringing the total constructed by the Department at 30th June, 1953 to 165,901 feet. In addition, at 30th June, 1953, 7,363 feet were under construction. These figures exclude particulars of the Fitzroy River and Burdekin River bridges which are special projects.

The first of these projects, the Fitzroy River Bridge (length 1,210 feet), was constructed jointly by the Main Roads Department and the Rockhampton City Council and was opened for traffic in September, 1952. The second project is a combined road and rail bridge over the Burdekin River, with an overall length, including approaches, of 3,620 feet, originally estimated to cost about £1,900,000. Work on the substructure was completed during 1953 and a start has been made on fabricating the superstructure. Expenditure, which was adversely affected by floods in earlier years, totalled £1,253,063 to 30th June, 1953.

(b) *Receipts and Payments.* The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads and Works Acts and loans, grants and advances from the State Government. The total receipts and

payments, including amounts for defence works, during each of the years 1938-39 and 1949-50 to 1952-53 are shown below :—

DEPARTMENT OF MAIN ROADS, QUEENSLAND : RECEIPTS AND PAYMENTS.
(£.)

Item.	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.
RECEIPTS.					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	1,165,888	1,936,656	2,573,971	3,573,958
Loans from State Government ..	392,225	700,000	587,500	1,313,000	825,000
Grants, Advances, Refunds, etc. from State Government ..	579,775	594,471	553,768	305,013	103,855
Commonwealth Aid Roads and Works Acts ..	806,218	1,693,567	2,458,763	3,141,560	3,135,034
Maintenance Repayments—Local Authorities ..	98,154	258,673	258,709	317,437	308,178
Hire, Rent, Sales of Plant, etc. ..	288,330	81,169	84,840	108,276	107,468
Other ..		125,469	130,999	68,572	386,210
Total ..	3,102,929	4,619,237	6,011,235	7,827,829	8,389,703
PAYMENTS.					
Permanent Road Works and Surveys ..	2,045,900	2,146,692	2,943,923	5,226,719	4,113,945
Maintenance of Roads ..	331,734	1,063,255	1,434,319	1,421,304	1,180,788
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	402,744	576,845	1,133,565	666,963
Loans—Interest ..	38,861	189,836	200,258	221,271	265,074
Redemption ..	78,153	183,406	201,451	218,053	239,066
Payments to State Consolidated Revenue ..	340,244	..	..	..	..
Payments to Local Authorities ..	27,418	1,769	1,625	1,625	1,625
Commonwealth and Allied Works and Services ..	..	12,313	..	..	..
Other Works and Services ..	..	4,000	22,293	94,188	..
Administration, etc. ..	149,950	458,730	505,544	634,733	682,729
Other ..	1,750	25,173	..	..	..
Total ..	3,087,642	4,487,918	5,885,958	8,951,458	7,450,190

5. *South Australia.*—(i) *General.* The Highways Act 1926-1949 created a Commissioner of Highways and provided for a Highways Fund. The Commissioner is virtually empowered to determine upon which main roads he will spend the moneys available; in doing which he has to take into account the availability of funds for main roads, the service the road is intended to render, and the present or future adequacy of railway facilities in the area through which it passes.

The Highways Fund is credited with the receipts from State motor taxation, fees, fines and licences, after deduction of the costs of collection, and all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Commonwealth Aid Roads and Works Acts are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic at 30th June, 1953 was as follows :—Within district council and corporation boundaries; blocks (wood or stone), 6 miles; bituminous concrete (asphalt and premix), 600 miles; cement concrete and cement penetration, 5 miles; penetration or surface dressed (bitumen or tar), 2,914 miles; metalled (gravelled or rubbled), 16,829 miles; formed, but little or no metal, 12,391 miles; surveyed, used by traffic, but little or no improvement, 22,270 miles; total, 55,015 miles; outside districts (main roads only), 565 miles; grand total, 55,580 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,575 miles.

(iii) *State Highways and Local Government Department.* (a) *General.* The Department's programme for the acquisition of land for road improvement in the metropolitan and rural areas was continued during 1952-53 when approximately 34,000 linear feet of frontages in the metropolitan area were acquired and set back. This brought the total acquisition since the inception of the metropolitan widening scheme to 122,000

linear feet. In rural areas the policy of widening roads and improving the alignments was continued in order to provide for an expected future increase in the volume of traffic.

Construction and reconstruction works on main roads were carried out in the following areas:—Northern and Eyre Peninsula, Mid-Northern, Central, Metropolitan, Murray Lands, Upper South-Eastern and Lower South-Eastern. In other areas local authorities carried out the works under departmental supervision.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1938–39 and 1949–50 to 1952–53, of funds controlled by the Highways and Local Government Department.

**HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA :
RECEIPTS AND PAYMENTS.
(£.)**

Item.	1938–39. (a)	1949–50.	1950–51.	1951–52.	1952–53.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	690,849	1,144,454	1,286,677	1,409,510	1,497,227
Commonwealth Aid Roads and Works Acts . . .	479,922	1,009,574	1,448,845	1,650,993	1,682,961
Loans from State Government . .	200,000	..	100,000	450,000	360,000
Recoups—Local and Semi-governmental Authorities . .	1,531	4,646	33,398	26,018	38,267
Other		115,386	149,013	211,483	(b)864,480
Total	1,372,302	2,274,060	3,017,933	3,748,004	4,442,935
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . .	1,150,082	1,018,157	1,142,010	1,475,602	1,786,777
Maintenance		298,550	384,939	538,634	666,239
Recoups to Consolidated Revenue Fund—Interest, Debt Redemption and Exchange . .	(d)178,273	141,783	139,796	139,811	148,651
Grants and Advances to Local and Semi-governmental Authorities . .	(e)	750,043	646,903	1,033,519	670,460
Administration		100,938	141,614	199,915	231,542
Stores, Plant, Machinery, Suspense Accounts, etc. . .		198,148	175,063	531,060	252,135
Other		12,960	18,126	19,578	48,506
Total	1,374,108	2,520,579	2,648,451	3,938,119	3,804,310

(a) Figures for 1938–39 are not completely comparable with those for following years. (b) Includes special contribution of £620,000 from Consolidated Revenue for roads for war service land settlement and developmental roads. (c) Roads, plant, etc. (d) Interest and sinking fund payments. (e) Not separately available; included elsewhere.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938–39 and 1949–50 to 1951–52 was, respectively, £1,966,000, £3,166,000, £3,384,000, and £4,596,000.

6. *Western Australia.*—(i) *General.* Under the Main Roads Act 1930–1939 the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was appointed. His duties relate to the determination of main roads after consideration of the funds available and the services to be rendered by the roads, the declaration and provision of developmental roads, the construction and maintenance of main roads, and the carrying out of surveys, investigations and experiments connected with roads and road materials. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on those Trust Accounts which are used for funds made available under the Commonwealth Aid Roads and Works Acts.

(ii) *Length of Roads and Streets.* The total known lengths of roads and streets in existence in the various municipalities at 31st October, 1953 and in road districts at 30th June, 1953, were as follows:—Bituminous, 4,573 miles; gravel water-bound, 13,200 miles; other constructed surfaces, 1,466 miles; formed only, 32,349 miles; unprepared, 28,478 miles (incomplete); total 80,066 miles.

The lengths of declared roads at 30th June, 1953, were :—Main roads, 3,154 miles ; important secondary roads, 6,930 miles ; developmental roads, 8,346 miles ; other classified roads, 24 miles ; total, 18,454 miles. No new main roads were declared during the years 1951-52 and 1952-53.

(iii) *Main Roads Department.* During the year 1952-53 (1951-52 in parentheses) the activities of the Department included :—clearing, 1,376 (1,267) miles ; forming 1,592 (1,407) miles ; gravelling, 1,049 (1,113) miles ; reconditioning 2,537 (2,721) miles ; sanding, 175 (75) miles ; side drains, 119 (109) miles. In addition, lengths of tar and bitumen work performed aggregated 677 (550) miles. Bridges constructed numbered 30 (21). Work on the new Perth Causeway Bridges over the Swan River was completed in September, 1952. The construction consists of two steel and reinforced concrete bridges each seventy feet wide. The eastern bridge is 725 feet long while the western is 376 feet. Construction of the Marble Bar-Port Hedland road was completed in 1951-52 and the Wyndham-Ord River-Nicholson Road was continued during 1951-52 and 1952-53.

(iv) *Receipts and Payments—Combined Road Funds.* The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, and the Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1950 to 1953.

ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1949-50.	1950-51.	1951-52.	1952-53.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. ..	218,962	346,246	394,887	427,432	472,477
Commonwealth Aid Roads and Works Acts	823,162	1,740,482	2,476,903	2,861,389	2,886,672
Recoups from Local Authorities, etc.	1,958	110,370	82,467	209,352	210,777
Other		29	2,396	22,572	43,129
Total	1,044,082	2,197,127	2,956,653	3,520,745	3,613,055
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges ..	922,756	1,507,873	2,203,645	2,527,612	3,079,210
Maintenance		133,474	180,996	245,558	258,289
Grants to Local Authorities, etc. .	143,544	230,492	243,492	260,492	273,796
Transfer to State Consolidated Revenue .. ..	..	67,711	76,337	70,272	70,000
Interest, Debt Redemption and Exchange—State Consolidated Revenue	7,616	8,842	7,396	7,396	7,396
Administration	52,176	38,380	41,951	44,682	68,703
Plant, Machinery, etc. ..	..	..	..	277,660	502,444
Other	19,181	..	..	415,359	640,478
Total	1,145,273	1,986,772	2,753,817	3,249,031	4,900,316

(a) Figures not completely comparable with those for following years. Includes Transport Co-ordination Trust Account.

7. *Tasmania.*—(i) *General.* Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Commonwealth Aid Roads and Works grants, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads is borne by the Transport Commission. It is also responsible for a proportion of the cost of maintenance of main and secondary roads. Except in special cases, municipal councils bear the cost

of maintaining country roads and a proportion of the cost of main and secondary roads. The cost of construction of roads and bridges in Tasmania is borne almost entirely by the State Government. The expenditure of the Public Works Department (the construction and maintenance authority for the Transport Commission) during 1952-53 (1951-52 in parentheses) on roads, tracks and bridges amounted to £1,591,898 (£1,389,801), of which £1,056,449 (£807,598) was charged to road funds, £29,917 (£47,647) to revenue, £406,112 (£532,601) to loan and £99,420 (£1,955) to other funds.

As from 1st July, 1951 certain functions with respect to the construction and maintenance of roads and the vesting and control of certain plant were transferred from the Transport Commission to the Minister for Lands and Works. The existing Road Account and Commonwealth Aid Roads and Works Account in the books of the Transport Commission were closed and a new Fund—the State Highways Trust Fund—was opened in the Treasury books.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1953 were as follows:—State highways, 1,162 miles; main roads, 651 miles; secondary roads, 186 miles; tourist roads, 45 miles; developmental roads, 49 miles; subsidized roads, 92 miles; total 2,185 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were:—State highways, 565 miles (49 per cent.); main roads, 174 miles (27 per cent.); secondary and other roads, 11 miles (6 per cent.); total, 750 miles (34 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).

(b) *Composition of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1953, was as follows:—Bituminous, 938 miles; concrete, 20 miles; granite, limestone, etc., water-bound, 8,620 miles; surfaces of lower grade, 3,098 miles; total, 12,676 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of combined Road Funds and Commonwealth Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1949-50 to 1952-53:—

ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1939-40. (a)	1949-50.	1950-51.	1951-52.	1952-53.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc.	193,165	327,475	364,708	305,352	432,738
Commonwealth Aid Roads and Works Acts	220,241	450,930	640,824	739,989	745,985
Recoups from Local Authorities, etc. . . . .	..	8,966	9,176	9,249	11,539
State Loan Fund . . . . .	..	60,689	495,914	577,931	494,125
Hire of Plant . . . . .	..	237,899	400,214	551,202	553,678
Other	719	179,481	57,364	98,071	152,556
Total	414,125	1,265,440	1,968,200	2,281,794	2,390,621

PAYMENTS.

Construction and Reconstruction of Roads and Bridges	130,924	219,118	621,905	689,370	716,223
Maintenance	113,199	549,241	620,288	627,785	768,395
Jetties, etc.	22,457	..	..	..	..
Other works connected with Transport	5,748	20,988	29,928	21,870	15,566
Grants to Local Authorities, etc. . . . .	..	2,037	4,663	2,256	2,762
Administration	15,053	67,726	73,646	51,979	58,736
Purchase, Hire and Maintenance of Plant	(b)	203,539	539,673	600,344	586,409
Other	31,894	191,342	71,246	156,358	120,925
Total	319,285	1,253,991	1,961,349	2,149,962	2,269,016

(a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Not available, included with other.

8. Summary of Roads used for General Traffic.—(i) *Proclaimed or Declared Roads.*

The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1953. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points:—availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main. The absence of a particular class from the following data for any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, manpower or materials etc., construction or maintenance may not keep pace with gazettals of mileages, and that therefore the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS : LENGTHS, 30th JUNE, 1953.

(Miles.)

Class of Road.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.				
State highways	6,536	3,849	7,772	8,140	3,154	1,162 651	68,968				
Trunk roads	4,225	9,792	11,120								
Ordinary main roads	12,567										
Total Main Roads	23,328	13,641	18,892	8,140	3,154	1,813	68,968				
Secondary roads	75	..	638	..	6,930	186	7,829				
Developmental roads	2,911	..	245	..	8,346	49	11,551				
Tourist roads .. ..	..	432	298	..	..	45	775	
Other roads .. ..	..	(a) 375	(b) 881	..	24	(c) 92	1,372			
Total Other Roads	2,986	807	2,062	..	15,300	372	21,527				
Grand Total	26,314	14,448	20,954	8,140	18,454	2,185	90,495				

(a) Forest roads.
tourist tracks, 2 miles.

(b) Includes mining access roads, 567 miles; farmers' roads, 312 miles;
(c) Subsidized roads.

(ii) *Composition of Roads.* The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad composition groups. The results are not entirely satisfactory, (i) because it is doubtful whether the whole of Australia is covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable for the States and Territories. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table for the States are obtained from the State Government Statisticians, and are derived mainly from local government sources. Unincorporated areas in some States are probably excluded and the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent that it was considered preferable to show here only major divisions.

Groups 1-4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; water-bound gravel ; gravel or crushed rock ; metalled (gravel or rubble) ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

ALL ROADS USED FOR GENERAL TRAFFIC : LENGTHS.
(Miles.)

Composition of Road.	N.S.W. 30th June, 1951.	Vic. 30th Sept., 1948.	Q'land. 30th June, 1953.	S. Aust. 30th June, 1953.	W. Aust. 1953. (a)	Tas. 30th June, 1953.	N. Terr. 30th June, 1953.	A.C.T. 30th June, 1953.	Total.
1. Wood or stone	..	62	..	6	..	..	..	..	68
2. Concrete	587	352	90	605	..	20	..	3	1,657
3. Bituminous	8,866	10,241	5,250	2,914	4,573	938	1,258	155	34,195
4. Macadam and other	37,144	28,418	11,565	16,829	14,666	8,620	170	161	117,573
5. Formed only	27,390	23,901	42,943	12,956	32,349	3,098	8,817	215	367,460
6. Cleared, or natural surface, only	52,637	38,437	72,349	22,270	28,478		1,620	..	
Total	126,624	101,411	132,197	55,580	80,066	12,676	11,865	534	520,953

(a) Municipalities, 31st October and Road Districts, 30th June.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia have actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.01 ; group 2, 0.32 ; group 3, 6.56 ; group 4, 22.57 ; groups 5 and 6, 70.54. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 37 ; Victoria, 39 ; Queensland, 13 ; South Australia, 37 ; Western Australia, 24 ; Tasmania, 76 ; Northern Territory, 12 ; Australian Capital Territory, 60. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. *Summary of Expenditure on Roads and Bridges.*—(i) *General.* Figures showing the total expenditure on roads and bridges in all States are not available. Such totals are very difficult to obtain, not only because of the number of States, but also because of the number of authorities concerned. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local

government bodies. Both State Government and local government bodies operate through revenue and loan funds, and payments may be made by the State Government direct from either fund, or through the funds of other authorities. The expenditure of the central road authority may also be direct or indirect. Consequently the problem of duplication caused by inter-fund payments arises. On the other hand, some expenditure may be omitted because separate particulars are not available. Ignorance of the precise nature of items may cause either incorrect inclusion or omission. To produce accurate figures would entail more research than can at present be undertaken.

The two paragraphs following therefore represent only : (a) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (b) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Paragraph 8, Finance, of § 2, Local Government Authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (see pages 505 and 508).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1948-49 to 1952-53, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included. In some instances expenditure on works other than roads and bridges is included. Figures are not completely comparable as between States, and, in some States, as from year to year.

ROADS AND BRIDGES : AGGREGATE EXPENDITURE FROM ROAD FUNDS.
(£'000.)

Year ended 30th June—	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939 ..	3,257	2,339	2,405	(b) 1,150	1,067	(c) 250	10,468
1949 ..	4,224	2,639	2,708	1,499	1,614	610	13,294
1950 ..	5,160	3,185	3,212	2,067	1,872	791	16,287
1951 ..	6,063	5,362	4,380	2,174	2,628	1,277	21,884
1952 ..	8,546	5,836	6,650	3,048	3,034	1,341	28,455
1953 ..	8,885	6,023	5,296	3,123	3,611	1,503	28,441

(a) Excludes Sydney Harbour Bridge.
1939-40.

(b) Includes expenditure on plant.

(c) Year

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain such information additions must be made on account of (a) State Government expenditure from revenue and loan through Departments or authorities other than the Central Road Authority and (b) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for inter-fund payments (see (i) above.)

(iii) *State Net Loan Expenditure.* In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures of their financial operations in the foregoing sections. Gross loan expenditure by all State Governments during 1951-52 amounted to about £4,000,000 and to about £2,500,000 in 1952-53. Net expenditure during both years was about £400,000 less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1953 amounted to the following approximate sums :—New South Wales, £21,000,000; Victoria, £17,000,000; Queensland, £11,000,000; South Australia, £5,000,000; Western Australia, £3,000,000; Tasmania, £8,000,000; total, £65,000,000.

§ 5. Water Supply, Sewerage and Drainage.

NOTE.—See also Chapter XXVI.—Water Conservation and Irrigation.

1. New South Wales.—(i) *General*. The two largest domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal and shire councils.

(ii) *Water Supply—to 30th June, 1953.* (a) *Metropolitan*. The storage reservoirs of the metropolitan system, with a combined available capacity of 124,892 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and building has commenced on a dam to have an overall height of 415 feet (greatest depth of water 340 feet) having a storage capacity of 460,000 million gallons and giving a net safe draught estimated at 263 million gallons per day and in addition 11 million gallons per day for riparian purposes. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1953 there were 103 service reservoirs in use with a combined capacity of 542.8 million gallons. Rating for water for 1952-53 was 10d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 9d. per 1,000 gallons.

(b) *Newcastle*. The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 106 million gallons. Water rating for 1952-53 was 1s. 6d. in the £1 on assessed annual value. The price of water to domestic and industrial consumers is 2s. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1938-39 and 1948-49 to 1952-53 :—

WATER SUPPLY, SYDNEY(a) : SERVICES.

Year.	Improved Properties for which Water Main available.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Property.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39	350,161	1,466,000	106.3	38,790	304	72.5	4,539	126,754
1948-49	414,893	1,800,000	131.3	47,925	316	73.5	4,894	132,566
1949-50	428,392	1,870,000	130.8	47,735	305	72.1	4,992	196,121
1950-51	442,913	1,940,000	138.9	50,689	314	71.6	5,114	208,712
1951-52	461,294	2,000,000	155.9	57,069	338	80.0	5,252	227,850
1952-53	478,598	2,032,000	149.6	54,621	313	73.6	5,357	246,383

(a) Includes part of South Coast.

WATER SUPPLY, NEWCASTLE : SERVICES.

Year.	Pro- perties Supplied.	Esti- mated Popu- lation Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.		Length of Mains.
					Per Pro- perty.	Per Head of Esti- mated Popu- lation.	
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.
1938-39.. .. .	48,370	193,480	11.9	4,331	245	61.3	936
1948-49.. .. .	61,215	241,036	19.0	6,951	310	79.0	1,202
1949-50.. .. .	63,289	247,992	19.6	7,176	310	79.3	1,215
1950-51.. .. .	65,445	261,780	22.3	8,131	340	85.1	1,234
1951-52.. .. .	67,122	268,488	25.1	9,144	373	93.1	1,257
1952-53.. .. .	69,244	276,976	23.9	8,719	345	86.3	1,262

(iii) *Sewerage and Drainage*—to 30th June, 1953. (a) *Metropolitan*. The Sydney sewerage systems consist mainly of outfall systems discharging into the Pacific Ocean. At 30th June, 1953 there were six outfalls and seven treatment works, serving a population of 1,427,000 over a length of sewers of 3,055 miles.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 174 miles long. Sewerage rating for 1952-53 was 10½d. in the £1 of assessed annual value and drainage rating 7½d. in the £1.

(b) *Newcastle*. The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed.

Sewerage rates for 1952-53 were 1s. 5d. in the £1 of assessed annual value and drainage rates (on certain areas served) 2d. in the £1.

(c) *Particulars of Services*. The following table supplies, for the Sydney system, details of sewerage services and stormwater drains as at 30th June, 1939 and 1949 to 1953.

SEWERAGE AND DRAINAGE, SYDNEY(a) : SERVICES.

At 30th June—				Improved Properties for which Sewer Available.	Estimated Population Served.	Length of Sewers.	Length of Stormwater Channels.
				No.		Miles.	Miles.
1939	..	..	..	254,632	1,066,000	2,561	87
1949	..	..	..	294,822	1,282,000	2,855	153
1950	..	..	..	298,996	1,306,000	2,899	154
1951	..	..	..	303,508	1,380,000	2,951	173
1952	..	..	..	309,995	1,400,000	3,000	176
1953	..	..	..	316,439	1,427,000	3,055	174

(a) Includes part of South Coast.

At 30th June, 1953, 48,307 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 625 miles, and the length of drains was 41 miles.

(iv) *Finances, Sydney and Newcastle Systems.* The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for each of the services of water supply, sewerage and drainage during 1952-53 and for the three services combined during the years 1938-39 and 1948-49 to 1951-52.

WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY AND NEWCASTLE : FINANCES.

(£.)

Year.	Capital Debt at 30th June.	Revenue.	Expenditure.				Surplus(+) or Deficit(-).
			Working Expenses. (a)	Interest and Exchange.	Debt Redemption.	Total.	

SYDNEY.(b)

1952-53—							
Water ..	52,261,715	4,122,413	1,976,777	1,772,926	372,378	4,122,081	+ 332
Sewerage ..	23,590,491	2,430,471	1,448,778	802,863	174,254	2,425,895	+ 4,576
Drainage ..	1,265,460	119,693	68,909	42,841	7,803	119,553	+ 140
Total, 1952-53	77,117,666	6,672,577	3,494,464	2,618,630	554,435	6,667,529	+ 5,048
1951-52	70,670,899	6,199,094	3,313,807	2,343,923	540,680	6,198,410	+ 684
1950-51	64,350,326	5,410,637	2,740,266	2,190,333	475,552	5,406,171	+ 4,516
1949-50	59,918,417	5,051,876	2,488,623	2,092,890	435,660	5,017,173	+ 34,703
1948-49	54,796,901	4,653,312	2,199,159	2,025,395	403,465	4,628,019	+ 25,293
1938-39	43,769,741	2,926,694	957,422	1,727,708	241,564	2,926,694	..

NEWCASTLE.

1952-53—							
Water ..	6,507,534	746,080	491,579	196,452	40,953	728,984	+ 17,096
Sewerage ..	2,775,720	348,139	219,556	93,411	17,622	330,589	+ 17,550
Drainage ..	148,115	25,556	15,002	4,006	1,172	21,080	+ 4,476
Total, 1952-53	9,431,369	1,119,775	726,137	294,769	59,747	1,080,653	+ 39,122
1951-52	8,794,710	858,729	572,382	278,211	55,888	906,481	- 47,752
1950-51	8,139,512	765,790	442,239	275,875	52,479	770,593	- 4,803
1949-50	7,767,366	695,548	359,508	285,145	50,766	695,419	+ 129
1948-49	7,529,877	648,869	325,657	277,879	47,811	651,347	- 2,478
1938-39	4,574,880	385,732	167,620	188,185	20,886	376,691	+ 9,041

(a) Includes provision for renewals, long service leave, loss on exchange, etc. (b) Includes part of South Coast. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£2,199,223 at 30th June, 1953.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1951, country water supply services were conducted or under construction by 65 municipalities, 58 shires and 6 county councils, and country sewerage services by 58 municipalities and 17 shires. The capital indebtedness of these schemes was £10,911,069 at 31st December, 1951, namely, £7,387,317 for water and £3,523,752 for sewerage. Of the foregoing amounts, Government advances amounted to £376,814. Debt of the municipalities amounted to £6,902,640, shires to £1,953,431 and county councils to £2,054,998. Aggregate income and expenditure, respectively, amounted to £1,707,206 and £1,393,280 in 1951.

(vi) *Other Water Supply and Sewerage Systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1952 was £2,723,963. Income and expenditure, respectively, amounted to £126,487 and £568,327 in 1952. The abnormal expenditure incurred in 1952 was due to the necessity to rail water from the Darling River for the first four months of the year.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £2,838,800 at 31st December, 1952.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

2. Victoria.—(i) *Melbourne and Metropolitan Board of Works—to 30th June, 1953.*

(a) *General.* The metropolis, for water supply, sewerage and drainage and river improvement purposes, comprises all that land within a radius of 13 miles of the Post Office at the corner of Bourke and Elizabeth Streets, Melbourne, and the remaining portions of the Cities of Moorabbin, Mordialloc, and Nunawading and the Shire of Mulgrave and certain portions of the remainder of the Shires of Eltham, Doncaster and Templestowe, and Dandenong, but excludes a portion of the Shire of Werribee within such radius. This territory has an area of 450 square miles and comprises 27 cities and one shire and parts of one other city and 9 other shires. The Board comprises 48 members, including the chairman, who is elected every four years by the other members. These members, or commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system; to provide the metropolis with an efficient system of main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolis.

(b) *Water Supply.* There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,605 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,274 million gallons (4,855 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); total 23,351 million gallons (21,273 million gallons). Service reservoirs number 25, with a total capacity of 262 million gallons. Two major projects are under construction. One is a 23-mile conduit to carry water from the Upper Yarra catchment to the Silvan Reservoir and its estimated cost is £2,697,000. At 30th June, 1953, the laying of the pipeline was almost complete. The other project, approved by the Board in 1946, consists of a dam, 293 feet high, which will impound 44,000 million gallons of water, on the River Yarra, immediately upstream from the confluence of the Yarra and Doctors Creek, and work on the project is proceeding. This work is estimated to cost £12,628,000.

The water rate levied by the Board in 1952–53 was 7d. in the £1 on the net annual value of the property served, and from 1st July, 1950, the charge for water supplied by measure in excess of the quantity which, at 1s. per 1,000 gallons, would produce an amount equal to the water rate payable on the property, was increased from 1s. to 1s. 3d. The following table shows particulars of Melbourne metropolitan water supply services for the years 1938–39 and 1948–49 to 1952–53.

WATER SUPPLY, MELBOURNE : SERVICES.

Year.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Aqueducts, etc., Mains and Reticulation.	Number of Meters.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938–39 ..	285,408	1,133,000	66.9	24,408	234	59.0	3,234	189,617
1948–49 ..	328,843	1,307,000	93.9	34,280	286	71.9	3,771	224,352
1949–50 ..	342,742	1,363,000	91.7	33,452	267	67.3	3,875	229,238
1950–51 ..	354,415	1,409,000	102.0	37,225	288	72.4	3,966	236,883
1951–52 ..	364,248	1,488,000	107.4	39,293	295	74.2	4,075	256,462
1952–53 ..	378,439	1,505,000	102.6	37,471	271	68.2	4,134	264,916

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1938-39 and 1948-49 to 1952-53 are shown below. The rate levied in 1952-53 in respect of sewerage was 1s. 1d. in the £1 on the net annual value of the property served. The drainage rate was 1d. in the £1.

SEWERAGE AND DRAINAGE, MELBOURNE : SERVICES.

Year.	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.	Length of Main Drains.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	Miles.
1938-39 ..	269,411	1,070,000	48.2	17,601	179.0	45.1	2,586	97
1948-49 ..	308,772	1,228,000	62.5	22,801	202.4	50.9	2,844	125
1949-50 ..	320,006	1,272,000	66.4	24,251	207.5	52.2	2,880	126
1950-51 ..	321,548	1,278,000	67.1	24,491	208.7	52.5	2,927	128
1951-52 ..	329,872	1,311,000	67.1	24,490	203.4	51.2	2,958	128
1952-53 ..	338,314	1,345,000	73.1	26,692	210.1	54.3	2,989	131

The metropolitan sewerage system consists of the Main system (serving an area of 67,433 acres) and three subsidiary systems—the Sunshine system (serving an area of 941 acres), the Kew system (serving an area of 103 acres) and the South-eastern system (serving an area of 2,292 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,073 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 95 per cent. of the sewage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) of the Farm to 30th June, 1953 was £2,455,509. Revenue during 1952-53 (1951-52 in parentheses) amounted to £95,751 (£110,976), cost of sewage disposal £179,347 (£150,514), trading expenses £88,155 (£91,157), interest £91,243 (£83,977), and net cost of sewerage purification £262,994 (£214,672). These financial particulars are included in the sewerage items of the summary below.

(d) *Finances.* The following table provides a summary, for the years 1951-52 and 1952-53 of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works.

MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES, 1951-52 and 1952-53.

(£.)

Service, etc.	Capital Cost at 30th June. (a)	Revenue.	Expenditure.				Surplus (+) or Deficit (—).
			Working Expenses.	Interest and Exchange.	Debt Redemption.	Total.	
1951-52.							
Water ..	21,250,124	1,674,096	814,230	747,038	..	1,561,268	+ 112,828
Sewerage ..	19,178,003	1,783,727	858,069	723,027	..	1,581,096	+ 202,631
Drainage ..	2,678,578	132,748	47,459	69,944	..	117,403	+ 15,345
General (b) ..	..	..	291,507	9,000	93,398	393,905	— 393,905
Total ..	43,106,705	3,590,571	2,011,265	1,549,009	93,398	3,653,672	— 63,101
1952-53.							
Water ..	23,256,444	1,741,760	897,690	843,347	..	1,741,037	+ 723
Sewerage ..	20,048,442	1,968,281	972,435	757,097	..	1,729,532	+ 238,749
Drainage ..	3,408,207	152,007	59,798	82,289	..	142,087	+ 9,920
General (b) ..	..	..	300,508	8,880	101,564	410,952	— 410,952
Total ..	46,713,093	3,862,048	2,230,431	1,691,613	101,564	4,023,608	— 161,560

(a) Includes depreciation, £408,031. Total loan indebtedness—1951-52, £37,359,220; 1952-53, £41,458,570.

(b) Statutory and general expenditure not distributed over Services.

The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1948-49 to 1952-53:—

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES.

(£.)

Year.	Capital Cost at 30th June.	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Exchange.	Debt Redemption.	Total.	
1938-39	27,598,603	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1948-49	34,312,587	2,713,926	1,432,727	1,268,743	69,840	2,771,310	- 57,384
1949-50	36,453,892	2,921,329	1,616,903	1,324,342	73,785	3,015,030	- 90,701
1950-51	39,244,030	3,278,641	1,782,356	1,422,196	81,607	3,286,159	- 75,18
1951-52	43,106,705	3,590,571	2,011,265	1,549,009	93,398	3,653,672	- 63,101
1952-53	46,713,093	3,862,048	2,230,431	1,691,613	101,564	4,023,608	- 161,560

(ii) *Geelong Waterworks and Sewerage Trust.* (a) *General.* The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910. It was further reconstituted in September, 1950 to include a Government nominee (Chairman) and provision was made for a commissioner to be elected by the ratepayers of the Shire of Corio, making a total of seven commissioners instead of five as formerly. The amount of loan money which may be raised is limited to £1,500,000 for water supply undertakings, £1,250,000 for sewerage undertakings, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 72,100. This and other general information relates to 30th June, 1953.

(b) *Water Supply.* The catchment area is about 16,000 acres. There are five storage reservoirs and nine service basins whose total storage capacity is 2,746 million gallons. The length of water mains and reticulation is 380 miles. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. The total expenditure on water supply to 30th June, 1953 was £1,186,761. Expenditure for 1952-53 (1951-52 in parentheses) comprised £67,776 (£61,035) for working expenses and £61,212 (£47,540) for interest, redemption and reserves, while revenue amounted to £135,979 (£115,344). The sinking fund appropriations at June, 1953 amounted to £135,338 (£128,179 at June, 1952). The replacement and contingencies reserve amounted to £215,569 (£196,727 at June, 1952). There is a water rate of rs. 5d. in the £1 (with minima of 5s. for unbuilt-on land and £1 for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 177 miles of main and reticulation sewers. The sewerage area is 9,638 acres, and the number of buildings within the sewered areas is 15,062 of which 14,971 have been connected. The number of buildings within the drainage area is 16,345. The total expenditure to 30th June, 1953 on sewerage works was £821,918, and on the cost of sewerage installation under deferred payment conditions £259,511, of which £547 was outstanding. The revenue in 1952-53 (1951-52 in parentheses) amounted to £83,620 (£69,658) and the expenditure comprised £38,628 (£30,736) on working expenses and £40,051 (£38,497) on interest, redemption and reserves. Sinking fund appropriations at June, 1953 were £116,947 (£112,472 at June, 1952). Replacement and contingencies reserve amounted to £184,054 (£167,611 at June, 1952). A general rate of rs. 4d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority.* (a) *General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number eight, three (one of whom is chairman) being appointed by the Government, four being elected by the Council of the City of Ballarat and one being elected by the Councils of the Borough of Sebastopol and the Shires of Ballarat, Bungaree, Bunninyong and Grenville. General information is at 31st December, 1953, and financial information is given for the years 1952 and 1953.

(b) *Water Supply.* The Water Supply District embraces an area of about 65 square miles, containing a population of about 50,000. The total storage capacity of the seven reservoirs is 5,520 million gallons and the catchment area is 18,695 acres.

The capital cost of construction of the waterworks was £2,041,956 to 31st December, 1953. The liabilities amounted to £1,087,938 at 31st December, 1953 including loans due to the Government totalling £1,067,938. The revenue for the year 1953 was £106,217 (£91,267 in 1952). Working expenses during 1953 amounted to £55,471 (£39,546 in 1952) and interest and other charges to £50,229 (£50,700 in 1952). A rate of 1s. 3d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of £1 per annum for land on which there is a building or water supply.

(c) *Sewerage.* The Ballarat sewerage district embraces the City of Ballarat and parts of the Shires of Ballarat and Bungaree and the Borough of Sebastopol. Work was commenced in 1922 and up to 31st December, 1953 the Authority had constructed a disposals works, a nightsoil depot, an ejector station and more than 100 miles of sewers. The capital cost of sewerage construction works to 31st December, 1953 was £627,410. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and twenty-nine sewered areas had been declared as at 31st December, 1953. Assessments in the sewerage district numbered 14,709, while those in sewered areas numbered 11,346. There were 10,020 buildings connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1953, amounted to £490,058, redemption payments at that date totalling £192,041. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1953 (1952 in parentheses) amounted to £63,679 (£54,943) and expenditure, including £27,888 (£27,212) on interest and redemption, to £59,182 (£52,966).

A sewerage rate of 1s. 5d. in the £1, with a minimum rate of £2 4s., is levied on the net annual value of any ratable sewered property on which there is a building and £1 on any ratable sewered property on which there is no building.

(iv) *Sewerage Authorities.* At 30th June, 1953, 59 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works and the Geelong Waterworks and Sewerage Trust, and systems were in operation in 30 districts (including five partly operating) serving a population of 188,100 persons.

In addition, sewerage authorities were constituted in a further 29 districts at this date, but their operations had either been suspended or had not commenced.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1953, included 37 large reservoirs and 241 subsidiary reservoirs and service basins with a total storage capacity of 646,234 million gallons (2,373,680 acre feet). Length of channels was 14,906 miles (irrigation, 4,789 miles, domestic and stock 8,031 miles, drainage and flood protection, 2,086 miles) and of pipe lines 1,198 miles. The quantity of water delivered to water users during 1952-53 was 771,286 acre feet (748,702 acre feet in 1951-52). The Commission administered 64 rural districts during 1952-53 (28 irrigation districts, 31 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 130 urban districts. In addition, 123 urban districts were administered by waterworks trusts and 15 by local governing bodies. The population served in these groups of urban districts numbered, respectively, 162,040, 295,140 and 88,200 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1938-39 and 1948-49 to 1952-53.

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA : FINANCES.(a)
(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Debt Redemption.	Total.
1938-39 ..	24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1948-49 ..	31,226,345	1,186,313	1,319,291	39,208	60,553	1,989	1,421,041
1949-50 ..	35,041,827	1,433,561	1,519,659	38,117	66,441	3,055	1,627,272
1950-51 ..	41,318,382	1,592,333	1,810,264	37,950	97,425	1,383	1,947,022
1951-52 ..	51,082,707	1,871,810	2,292,995	47,547	92,573	1,497	2,434,612
1952-53 ..	57,464,776	1,989,289	2,669,419	26,555	90,024	3,284	2,789,282

(a) Excludes waterworks and river improvement trusts and local governing bodies.

The total loan capital expenditure of waterworks and river improvement trusts and local governing bodies at 30th June, 1953 was £7,944,414, making a grand total of £65,409,190 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,920,711 was £63,488,479.

The financial operations of the State Rivers and Water Supply Commission form part of the Consolidated Revenue Fund, but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1952-53 was £2,551,960 (£2,118,132 in 1951-52).

3. Queensland.—(i) *Brisbane City Council—to 30th June, 1952.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Greater Brisbane. Prior to 1928, water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council, which also supplies, in bulk, the whole of the water used by the City of Ipswich and the Town of Redcliffe.

(b) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in parentheses):—Somerset Reservoir, 32,000 million gallons (32,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 8.3 million gallons (8.3 million gallons); Enoggera Reservoir, 1,000 million gallons (631 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are eleven service reservoirs with a capacity of approximately 35.8 million gallons. The Somerset reservoir is under the control of Stanley River Works Board and is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating at 30th June, 1952 was 5d. in the £1 of unimproved capital value for improved properties, and 3d. in the £1 for vacant lands, with a minimum of £3 10s. and £2 6s. 8d. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1938-39 and 1947-48 to 1951-52 :—

WATER SUPPLY, BRISBANE(a) : SERVICES.

Year.	Services Connected.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Trunk and Reti-culation Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	(b)
1938-39 ..	81,389	345,903	15.9	5,791	195	45.9	1,169	
1947-48 ..	103,846	425,769	22.9	8,365	220	53.7	1,330	52,699
1948-49 ..	108,671	445,551	24.2	8,826	223	54.3	1,344	52,755
1949-50 ..	111,363	445,897	26.1	9,540	235	58.6	1,376	52,807
1950-51 ..	117,904	472,145	27.9	10,193	237	60.8	1,429	52,691
1951-52 ..	124,992	489,266	32.4	11,860	259	66.2	1,479	52,496

(a) Includes Ipswich and Redcliffe.

(b) Not available.

(c) *Sewerage.* The sewage treatment works are situated at Luggage Point on the north bank at the entrance to the Brisbane River. The treatment plan is the activated sludge system, but this has not been put into operation, and since the commencement of pumping operations in 1923 a sedimentation plant only has been used. Sewerage rating at 30th June, 1952 was 4½d. in the £1 of unimproved capital value for improved properties, and 3½d. in the £1 for vacant lands, with a minimum of £3 15s. and £3 5s. respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1947-48 to 1951-52 :—

SEWERAGE, BRISBANE : SERVICES.

Year.	Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc., Sewers.
	No.		Mill. gals.	Miles.
1938-39	33,248	149,616	(a)	484
1947-48	43,485	178,289	4,696	567
1948-49	44,901	184,094	4,697	580
1949-50	46,330	189,953	4,967	590
1950-51	47,808	196,013	5,351	608
1951-52	49,368	197,472	4,663	615

(a) Not available.

(d) *Finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1938-39 and 1947-48 to 1951-52 :—

WATER SUPPLY AND SEWERAGE, BRISBANE : FINANCES.

(£.)

Service and Year.	Gross Capital Cost at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit(—).
			Working Expenses.	Interest Redemption, etc. Charges.	Total.	
Water Supply—						
1938-39	4,849,732	606,244	129,219	280,827	422,366	+ 183,878
1947-48	7,156,116	765,936	255,430	335,307	633,982	+ 131,954
1948-49	7,356,335	815,673	307,130	338,963	703,092	+ 112,581
1949-50	7,579,798	866,366	353,805	276,796	700,237	+ 166,129
1950-51	8,116,654	926,954	383,700	333,210	805,903	+ 121,051
1951-52	8,915,401	1,036,944	494,136	347,000	979,916	+ 57,028
Sewerage—						
1938-39	5,992,936	240,963	52,792	403,386	485,974	— 245,011
1947-48	7,048,086	254,777	63,998	246,983	343,259	— 88,482
1948-49	7,526,302	285,194	76,098	248,341	346,120	— 60,926
1949-50	8,117,835	412,833	87,100	264,972	379,299	+ 33,534
1950-51	8,821,671	483,854	105,928	313,308	472,725	+ 11,129
1951-52	9,794,052	499,935	127,417	302,252	467,774	+ 32,161

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane there were, at 30th June, 1952, 103 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1952, there were 13 cities and towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Hughenden, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. A sewerage system was in course of construction in Mt. Isa.

(c) *Finances.* The receipts (other than loan) of water undertakings controlled by the cities and towns referred to above amounted to £1,007,940 in 1951-52. Expenditure amounted to £1,048,302, including £270,024 for debt charges. In addition, loan expenditure amounted to £658,726.

Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.

(ii) *South Australian Waterworks.* (a) *Services.* The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country waterworks for the years 1938-39 and 1948-49 to 1952-53 :—

WATERWORKS, SOUTH AUSTRALIA : SERVICES.

Year.	Assessments.(a)		Area of Districts Supplied. (a)	Capacity of Reservoirs, Tanks, etc.	Length of Mains.	Number of Meters.
	Number.	Annual Value.				
		£	Acres.	Mill. gals.	Miles.	
1938-39 ..	185,625	6,302,445	11,857,968	23,814	6,384	97,074
1948-49 ..	206,904	7,694,428	11,953,235	23,941	7,056	104,649
1949-50 ..	210,808	8,113,905	11,956,885	23,942	7,125	107,092
1950-51 ..	216,989	8,556,078	11,968,452	23,943	7,203	109,433
1951-52 ..	227,082	12,202,222	11,974,297	23,984	7,368	114,222
1952-53 ..	234,269	13,366,875	11,976,503	24,009	7,478	119,349

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) *Finances.* Figures for 1938-39 and 1948-49 to 1952-53 are shown in the following table.

WATERWORKS, SOUTH AUSTRALIA : FINANCES.

(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Deficit.
			Working Expenses.	Interest and Debt Redemption.	Total.	
1938-39 ..	14,649,052	654,688	242,528	651,972	894,500	239,812
1948-49 ..	20,399,213	978,339	670,447	695,547	1,365,994	387,655
1949-50 ..	21,247,004	1,016,078	817,696	705,700	1,523,396	507,318
1950-51 ..	22,591,460	1,098,360	1,068,102	720,250	1,788,352	689,992
1951-52 ..	25,718,681	1,301,075	1,279,742	747,386	2,027,128	726,053
1952-53 ..	28,573,826	1,415,713	1,377,212	789,517	2,166,729	751,016

(iii) *Adelaide Waterworks.* At 30th June, 1953 the Adelaide waterworks supplied a district of 144,480 acres. The capacity of its five reservoirs was 14,466 million gallons and there were 1,792 miles of mains.

Two major projects are in hand—(i) the construction of a large reservoir on the South Para River to provide additional storage to serve the lower northern areas of the State and to make some additional provision for the metropolitan area, and (ii) bringing River Murray water into Adelaide to supplement the metropolitan and Warren system areas and to serve country areas en route. The capacity of the new reservoir will be about 10,000 million gallons and the pipeline from the Murray near Mannum will deliver about 12,000 million gallons per annum.

Particulars of finances for the years 1938-39 and 1948-49 to 1952-53 are shown below :—

ADELAIDE WATERWORKS : FINANCES.

(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Surplus
			Working Expenses.	Interest and Debt Redemption.	Total.	
1938-39 ..	4,676,110	446,459	111,347	202,279	313,626	132,833
1948-49 ..	6,248,465	607,718	246,951	210,898	457,849	149,869
1949-50 ..	6,665,805	630,765	310,382	218,737	529,119	101,646
1950-51 ..	7,814,093	680,275	400,600	230,821	631,421	48,854
1951-52 ..	10,101,923	860,492	507,444	260,752	768,196	92,296
1952-53 ..	11,849,046	908,177	534,074	313,252	847,326	60,851

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 100 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 3,990 million gallons during 1952-53. Other particulars for 1938-39 and 1948-49 to 1952-53 are shown hereunder :—

ADELAIDE METROPOLITAN SEWERAGE : SUMMARY.

Year.	Length of Sewers.	Number of Con-nexions.	Invested Capital at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
					Working Expenses.	Interest and Debt Redemption.	Total.	
	Miles.		£	£	£	£	£	£
1938-39 ..	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1948-49 ..	1,048	98,948	4,324,787	333,572	182,874	148,754	331,628	+ 1,944
1949-50 ..	1,092	102,782	4,629,510	352,631	209,410	154,959	364,369	- 11,738
1950-51 ..	1,133	107,634	4,855,351	371,835	255,000	160,253	415,262	- 43,427
1951-52 ..	1,163	113,432	5,372,988	515,303	358,002	161,780	519,782	- 4,479
1952-53 ..	1,206	120,510	5,860,255	551,843	399,327	162,015	561,342	- 9,499

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1953 comprised an area of 11,832,023 acres, and the capacity of the reservoirs was 10,540 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

Construction work is proceeding on the scheme for the augmentation of the Tod River District supplies, and for the supply of other areas not already served, by utilizing water from the Uley-Wanilla sub-artesian basin. During 1952-53, 249 million gallons were pumped from the basin, meeting all the needs of Port Lincoln and augmenting the reservoir. At 30th June, 1953, £4,555,918 had been invested in the Tod River District.

At the request of the Commonwealth, the Engineering and Water Supply Department undertook the construction above ground of a 10-in. pipeline, together with service reservoirs, pumping stations, etc., from Port Augusta to the Guided Missile Range at Woomera, a distance of about 110 miles. This project was completed in June, 1949.

To bring a permanent supply of water to the Yorke Peninsula, contracts were let for 76 miles of steel pipes for the enlargement of the main between the Bundaleer and Clinton Reservoirs, but shortage of steel plate has delayed progress.

The following table gives financial information on country waterworks for 1938-39 and 1948-49 to 1952-53 :—

COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(a)
(£.)

Year.	Invested Capital at 30th June.	Revenue.	Expenditure.			Deficit.
			Working Expenses.	Interest.	Total.	
1938-39 ..	10,015,613	207,569	130,523	449,691	580,214	372,645
1948-49 ..	11,616,857	286,646	395,717	402,809	798,526	511,880
1949-50 ..	12,056,803	298,256	508,759	405,355	914,114	615,858
1950-51 ..	12,289,918	319,396	647,994	407,810	1,055,804	736,408
1951-52 ..	13,123,855	339,155	727,174	405,334	1,132,508	793,353
1952-53 ..	14,018,673	407,944	757,727	394,750	1,152,477	744,533

(a) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1953 being £2,510,572. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in (ii) above. During 1952-53 the water used from the system between Hanson and Whyalla amounted to 1,289 million gallons. Revenue for the year 1952-53 was £192,114, working expenses, etc. £177,933, interest charges, £81,515 and deficit, £67,334. Corresponding figures for 1951-52 were, respectively, £193,886, £138,388, £81,300, and £25,802.

5. *Western Australia.*—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories :—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District; (b) Country Areas (previously Goldfields) Water Supply; (c) Water Supply of other towns, etc.; (d) Agricultural Water Supply, and (e) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman's Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about 5,000 million gallons more than that of the Mundaring Reservoir to which it is linked by a pipeline.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) *Water Supply.* The following table shows particulars of water supply services for 1938-39 and 1948-49 to 1952-53 :—

METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.

Year.	Number of Services.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39 ..	61,467	248,248	14.1	5,147	229	56.8	953	40,014
1948-49 ..	76,562	290,962	27.2	9,918	355	93.5	1,173	47,073
1949-50 ..	79,835	297,123	29.1	10,618	364	97.9	1,224	49,370
1950-51 ..	84,926	303,422	28.4	10,354	334	93.5	1,271	52,277
1951-52 ..	90,436	309,854	31.0	11,337	343	100.0	1,327	61,146
1952-53 ..	96,155	316,423	30.7	11,201	319	97.0	1,422	69,262

Water rating for 1952-53 was 1s. 6d. in the £1 on annual valuation, with a minimum of 10s.

(c) *Sewerage and Drainage.* Some particulars of the metropolitan sewerage and drainage services for 1938-39 and 1948-49 to 1952-53 are shown below :—

METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year.(a)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1938-39.. ..	36,652	162,457	1,030	444	31
1948-49.. ..	47,446	199,273	2,273	569	34
1949-50.. ..	48,909	205,418	2,326	588	34
1950-51.. ..	50,480	212,016	3,809	605	34
1951-52.. ..	52,171	224,000	3,080	626	34
1952-53.. ..	54,467	229,700	3,333	648	34

(a) Aggregate of quantities pumped by the various stations.

Sewerage rating for 1952-53 was 1s. 6d. in the £1 on annual valuation, with a minimum of 7s. 6d. Stormwater drainage rating was 5d. with a minimum of 2s. 6d.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1938-39 and 1948-49 to 1952-53 :—

METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES.
(£.)

Service and Year.	Capital Cost at 30th June.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Debt Redemption.	Total.	
Water Supply—						
1938-39	4,898,167	285,313	50,975	228,527	279,502	+ 5,811
1948-49	5,899,578	416,817	136,499	253,244	389,743	+ 27,074
1949-50	6,200,980	452,956	186,219	224,958	411,177	+ 41,779
1950-51	6,771,509	488,396	228,442	243,807	472,249	+ 16,147
1951-52	7,665,863	543,872	288,525	284,820	573,345	- 29,473
1952-53	8,817,351	618,603	364,638	324,107	688,745	- 70,142
Sewerage and Drainage—						
1938-39	3,497,938	174,950	30,630	149,714	180,344	- 5,394
1948-49	4,359,547	259,597	59,182	206,264	265,446	- 5,849
1949-50	4,567,278	274,113	84,988	196,234	281,222	- 7,109
1950-51	4,884,224	288,598	119,125	206,701	325,826	- 37,228
1951-52	5,169,227	339,917	156,507	238,599	395,106	- 55,189
1952-53	5,449,248	402,808	182,184	252,256	434,440	- 31,632

(iii) *Country Areas Water Supply (Previously Goldfields Water Supply).* The source of supply for Kalgoorlie, Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, whose capacity is 15,100 million gallons. This scheme is linked by pipeline with the Canning Dam.

Work is proceeding for a comprehensively reticulated water scheme at an estimated cost of approximately £4,300,000 to serve an area of about 4,500,000 acres of farm lands and some 23 agricultural towns, including the principal towns on the Great Southern Railway. The supply to the Eastern Goldfields will be increased to permit expansion of the gold-mining industry, the already increased capacity of the Mundaring Reservoir being part of this scheme. It is also planned to increase the storage capacity of the Wellington Dam to 38,000 million gallons. Financing of the scheme is being shared by the Commonwealth and the State Governments on a £1 for £1 basis. Expenditure on this work to 30th June, 1953 totalled £1,664,456.

The following table shows details of the Country Areas Water Supply for 1938-39 and 1948-49 to 1952-53 :—

COUNTRY AREAS WATER SUPPLY(a), WESTERN AUSTRALIA : SUMMARY.

Year.	Number of Services.	Total Consumption.	Length of Water Mains.	Number of Meters.	Capital Cost.	Revenue.	Expenditure. (b)	Surplus (+) or Deficit (-).
		Mill. gals.	Miles.		£	£	£	£
1938-39 ..	13,670	1,735	1,720	10,872	5,527,890	331,457	298,531	+ 32,926
1948-49 ..	15,669	2,131	1,773	13,639	6,614,390	341,052	533,851	- 192,799
1949-50 ..	16,063	2,208	1,777	13,991	6,803,271	346,660	566,614	- 219,954
1950-51 ..	16,229	2,162	1,793	14,180	7,461,331	359,468	673,318	- 313,850
1951-52 ..	16,598	2,314	1,802	14,640	7,916,564	366,755	806,398	- 439,643
1952-53 ..	17,124	2,374	1,810	15,289	8,314,816	398,057	1,010,036	- 611,979

(a) Previously Goldfields Water Supply.

(b) Includes interest and debt redemption.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1952-53 (1951-52 in parentheses) water supplied to other towns and districts, excluding minor water supplies, amounted to 884 (795) million gallons, including service to adjacent mines, 15 (11) million gallons, and railways 61 (64) million gallons. Estimated population served numbered 54,111 (50,918).

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1953 (1951-52 in parentheses) was 213 (308) million gallons. In addition, 344 (397) million gallons were obtained from other sources, mainly the Country Areas Water Supply and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1952-53 (1951-52 in parentheses) approximately 390 (323) million gallons of water were supplied to an estimated population of 17,010 (15,598).

(v) *Agricultural Water Supply.* During the forty-nine years from 1st July, 1904 to 30th June, 1953, 584 tanks were built, 1,159 wells sunk, and 5,149 bores put down. Of the bores put down, 785 yielded fresh, and 452 stock, water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1953 the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (inclusive of operations by Defence Services) was 455 ranging in depth from 21 to 4,006 feet.

6. *Tasmania.*—(i) *Waterworks.* At the end of 1952-53 (1951-52 in parentheses) there were 38 (37) municipal waterworks in Tasmania. The capacity of the reservoirs was 887 (881) million gallons, the estimated population served was 210,291 (201,281), the number of properties assessed was 66,857 (64,088) and the length of aqueducts, mains and reticulation was 1,199 (1,122) miles. Costs of construction amounted to £3,038,190 (£2,538,256). The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1952-53 of 578 million gallons, and 161 miles of reticulation and 92 miles of aqueduct and main.

(ii) *Sewerage.* Sewerage in Tasmania also is the concern of local authorities.

§ 6. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1938-39 and 1947-48 to 1950-51 are shown in Chapter VI.—Transport and Communication, A. §3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1950-51 are shown in A. §6 of the same chapter.

1. *New South Wales.*—(i) *Maritime Services Board of New South Wales.* (a) *General.* The Maritime Services Board of New South Wales is a corporate body of five Commissioners, three of whom are full-time members and two, representing shipping and

commercial interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935 in order to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers; is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities; imposes and collects rates and charges on goods and vessels; and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales such work is undertaken by the Department of Public Works on behalf of the Board.

(b) *Port of Sydney.* The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 43 feet deep (low water ordinary spring tides) and the Eastern Channel 40 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated in close proximity to the business centre of the city, about four or five miles from the Heads. Excluding ferry wharves and jetties used for private purposes, there are 62,963 feet of wharfage controlled by the Maritime Services Board and 8,710 feet of commercial wharfage privately owned. Ferry berths cover 3,470 feet, and the total for all purposes is 75,143 feet. Depth of water at wharves is up to 40 feet. Some of the principal wharves are leased to shipping companies whose vessels engage regularly in the trade of the port; the remainder are reserved for vessels which visit the port occasionally. Special facilities for the storage and handling of staple products such as wheat, wool, etc., are provided and modern plant has been installed for replenishing ships' bunkers with oil or coal.

The docking facilities comprise five large graving docks, four floating docks and eight patent slips. The Captain Cook Graving Dock, opened in March, 1945, is capable of accommodating the largest vessel afloat.

The following table shows particulars of the finances of the Board in respect of the Port of Sydney for 1938-39 and 1948-49 to 1952-53:—

MARITIME SERVICES BOARD : FINANCES OF THE PORT OF SYDNEY.

(£.)

Year.	Total Capital Debt at 30th June.	Revenue.			Expenditure.			Surplus(+) or Deficit(-).
		Wharfage and Transhipment Rates.	Tonnage Rates and Berthing Charges.	Total.	Administration and Maintenance.	Interest, Debt Redemption, Exchange, etc.	Total. (a)	
1938-39..	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	+238,726
1948-49..	11,334,338	821,376	182,360	1,569,157	923,656	517,715	1,441,371	+127,786
1949-50..	11,571,669	925,144	229,092	1,658,203	957,510	526,171	1,483,681	+174,522
1950-51..	11,779,317	1,032,685	333,902	1,955,073	1,155,004	528,928	1,683,932	+271,141
1951-52..	12,194,585	1,107,933	334,530	2,354,154	1,455,711	533,401	1,989,112	+365,042
1952-53..	12,562,700	971,553	254,637	2,021,121	1,529,050	546,590	2,075,640	- 54,519

(a) Excludes capital expenditure (1938-39, £28,576; 1948-49, £221,227; 1949-50, £287,211; 1950-51, £384,911; 1951-52, £495,443; 1952-53, £465,764) and expenditure on renewals and replacements (1948-49, £123,651; 1949-50, £159,935; 1950-51, £196,102; 1951-52, £291,454; 1952-53, £299,286).

(c) *Port of Newcastle.* Newcastle Harbour is administered by the Maritime Services Board and an Advisory Committee consisting of five members appointed by the Governor. In regard to volume of shipping entered, Newcastle ranks second in importance in New South Wales and fifth in Australia. It is primarily a coal-loading port, and the proximity to the coal field has led to the establishment of important industries, including iron and steel works, in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 25 feet 6 inches at low water, is 350 feet wide. Wharfage accommodation amounts to 19,900 feet, the Maritime Services Board controlling 6,720 feet, the Railways Department 7,000 feet, the Public Works Department 200 feet, and private shipping companies 2,600 feet, while tie-up berths and ferry and depot wharves comprise 3,400 feet.

(d) *Port Kembla.* As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department continues however to be the constructing authority in respect of works, dredging and maintenance. In respect of volume of shipping entered, Port Kembla ranks third in the ports of New South Wales, and about seventh in those of Australia. It has an area of approximately 330 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation has been provided for large ocean-going vessels. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong.

(e) *Other Ports.* In addition to the ports of Sydney, Newcastle and Port Kembla, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £2,966,238 in 1952-53 and to £3,084,378 in 1951-52. These figures include the Port of Sydney revenue (*see* table above) and State navigation service collections (£945,117 in 1952-53 and £730,224 in 1951-52). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia, amounted to £221,639 in 1952-53 and to £243,086 in 1951-52.

2. *Victoria.*—(i) *Melbourne Harbor Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 *et seq.* At 31st December, 1953, the sheds available for wharfage accommodation had a length of 21,244 feet, covering an area of 1,506,083 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 62,703 feet, giving an area of over 58 acres of wharfage, and 54,787 feet of effective berthing space. During 1953, work was continued on the new berths at Appleton Dock (ultimately to have eighteen berths), Victoria Dock, South Wharf and at Williamstown. The depth of water (low water ordinary spring tide) of main channels and at principal wharves is about 30 feet, the maximum being about 36 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1939 and 1949 to 1953 :—

MELBOURNE HARBOR TRUST : FINANCES.

(£.)

Year.	Gross Loan Indebtedness at 31st December.	Revenue.		Expenditure.				Surplus(+) or Deficit(—).
		Wharfage and Tonnage Rates.	Total.	Administration and Maintenance.	Interest, Debt Redemption, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a)	
1939 ..	4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	+ 6,322
1949 ..	3,766,678	1,118,059	1,471,221	460,955	190,056	121,798	1,015,421	+455,800
1950 ..	3,972,029	1,293,923	1,771,074	675,839	187,582	162,883	1,301,687	+469,387
1951 ..	5,883,857	1,493,423	2,129,432	1,036,842	235,881	175,263	1,768,105	+361,327
1952 ..	7,914,146	1,256,581	1,941,252	1,204,863	292,485	179,047	1,947,085	— 5,833
1953 ..	9,581,933	1,423,345	2,052,272	1,230,195	381,914	98,182	2,013,554	+ 38,718

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbor Trust :—1939, £155,234; 1949, £242,612; 1950, £275,383; 1951, £320,119; 1952, £270,690; 1953, £303,263. Excludes capital expenditure :—1939, £128,567; 1949, £623,396; 1950, £1,589,392; 1951, £2,058,921; 1952, £2,246,097; 1953, £1,255,613.

(ii) *Geelong Harbor Trust.* The Geelong Harbor Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbor Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. The port dredging programme was continued during the year and on completion in December, 1954, will provide a minimum depth of water throughout approaches and at all berths of 32 feet (mean low water spring tides).

Revenue for the year 1953 (1952 in parentheses) was £224,601 (£179,488), and revenue expenditure was £210,038 (£180,821). Payments made in respect of capital works amounted to £880,150 in 1953 (£1,434,899 in 1952), and loans outstanding at the end of the year amounted to £2,302,010 (£1,649,044 at the end of 1952).

(iii) *Other Ports.* Portland is the only Victorian port other than Melbourne and Geelong of more than minor importance.

3. *Queensland.*—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 32 feet in the North-West channel to 20 feet in

the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 23 and 29 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1938-39 and 1947-48 to 1951-52 are shown below :—

BRISBANE HARBOUR : FINANCES.

(£'000.)

Year.	Loan Indebtedness at 30th June.	Receipts.		Payments.	
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).
1938-39	1,179	165	173	36	112
1947-48	1,219	153	222	126	209
1948-49	1,256	190	209	162	250
1949-50	1,325	219	299	168	260
1950-51	1,572	221	253	237	329
1951-52	1,862	276	326	348	463

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by harbour boards.

(iii) *Harbour Boards.* Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year 1952 are shown below, together with a summary for the years 1939 and 1948 to 1952.

HARBOUR BOARDS, QUEENSLAND : FINANCES.

(£.)

Harbour Board.	Loan Indebted- ness at 31st December.	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit (-).
		Wharf- age and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redem- ption).	
Bowen	337,265	22,099	27,895	12,470	28,413	— 518
Bundaberg	43,299	4,437	7,943	5,023	9,731	— 1,788
Cairns	186,636	124,933	173,012	149,970	179,474	+ 6,462
Gladstone	223,882	22,776	133,345	78,990	110,689	+ 22,656
Mackay	342,735	113,348	125,189	26,760	51,416	+ 73,773
Rockhampton	559,849	38,660	57,346	33,528	45,249	+ 12,097
Townsville	365,414	129,424	188,582	134,043	271,871	— 83,289
Total, 1952	2,050,080	455,677	713,312	440,784	606,843	+ 16,469
" 1951	1,780,774	402,903	599,505	370,040	534,095	+ 65,410
" 1950	1,611,241	378,949	510,719	284,896	408,561	+ 102,158
" 1949	1,523,644	347,843	464,450	307,716	431,359	+ 33,091
" 1948	1,477,076	280,360	371,987	213,700	364,118	+ 7,869
" 1939	1,548,144	249,510	401,439	139,752	343,083	+ 58,356

4. *South Australia.*—*The South Australian Harbours Board.* All South Australian harbours are controlled by the South Australian Harbours Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the 5 deep sea ports of Adelaide, Pirie, Wallaroo, Lincoln and Thevenard. At several ports, the wharves or jetties are privately controlled, the principal of these being Whyalla (controlled by the Broken Hill Pty. Co. Ltd. under a Private Act of Parliament) and Augusta (controlled by the Commonwealth Railways) whilst at Ardrossan the Broken Hill Pty. Co. Ltd. has installed a bulk loading plant for handling dolomite and grain. Maximum depths of water (low water ordinary spring tide) at the wharves of the main ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1938-39 and 1948-49 to 1952-53 :—

SOUTH AUSTRALIAN HARBORS BOARD : FINANCES.

(£.)

Year.	Capital at 30th June. (a)	Revenue.	Expenditure from Revenue.				Surplus (+) or Deficit (—)
			Working Expenses.	Interest.	Debt Redemption.	Total.	
1938-39 ..	8,026,441	664,915	205,848	326,719	50,000	582,567	+ 82,348
1948-49 ..	8,281,524	938,797	503,563	281,110	30,356	815,029	+ 123,768
1949-50 ..	8,545,084	1,050,742	583,965	281,691	33,327	898,983	+ 151,759
1950-51 ..	8,896,281	1,141,174	784,191	281,657	..	1,065,848	+ 75,326
1951-52 ..	9,581,786	1,336,504	1,039,801	280,872	..	1,320,673	+ 15,831
1952-53 ..	10,469,523	1,240,679	1,078,507	286,456	..	1,364,963	— 124,284

(a) State Treasurer's Funds and Reserve employed.

5. *Western Australia.*—(i) *Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five Commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 30 feet, and at the wharves 33 feet. The length of wharf berth accommodation is 10,495 feet.

Gross earnings for the year 1952-53 amounted to £1,815,520, working expenses to £1,430,592, interest £142,006, debt redemption £40,964, renewals fund £2,000, and payment of surplus cash to Consolidated Revenue £19,166. Corresponding figures for 1951-52 were £1,923,402, £1,354,466, £124,592, £36,960, £2,000 and £121,961 respectively. There was also a special loan repayment from revenue during 1952-53 amounting to £201,433. The total amount debited to loan capital account at 30th June, 1953 was £4,035,606.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1952-53 were £29,468, working expenses £60,557, and interest £50,398. Corresponding figures for 1951-52 were £21,159, £49,579, and £40,090. The total amount debited to loan capital account at 30th June, 1953 was £1,332,846.

(iii) *Other Ports.* Only the ports of Fremantle, Bunbury and Albany in Western Australia are under the control of trusts, the remainder are Government operated. Of these, Carnarvon, Geraldton and Onslow have the largest amount of shipping movement.

6. *Tasmania.*—There are seven marine boards and two harbour trusts in Tasmania. The marine boards control the ports of Hobart, Launceston, Circular Head, Burnie and Table Cape, Devonport, Strahan, and King Island (Currie), and the harbour trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1952-53 were £712,960 and expenditures £724,393, including loan charges £107,793. Corresponding figures for 1951-52 were £624,470, £571,326 and £87,791. The total receipts of the Hobart Marine Board during 1952-53 were £339,002, loan charges amounted to £34,409 and total expenditure to £358,556.

Corresponding figures for 1951-52 were £302,917, £20,811 and £277,574. Launceston Marine Board receipts during 1952-53 amounted to £163,893, loan charges to £13,948 and total expenditure to £165,177. The figures for 1951-52 were, respectively, £140,421 £9,893 and £114,575. Loan indebtedness of all marine boards and trusts at 30th June, 1953 was £1,992,193, of which £718,311 was in respect of Hobart and £119,526 in respect of Launceston.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable overseas shipping. Depths of water at wharves vary, in general, between 16 and 34 feet (low water ordinary spring tide), but at Hobart there is a depth of water of from 30 to 52 feet.

§ 7. Fire Brigades.

1. *New South Wales.*—(i) *General.* A Board of Fire Commissioners, consisting of eight members, operates under the Fire Brigades Act 1909-1949, and 155 fire districts had been constituted at the end of 1952. Up to the end of 1949, the cost of maintenance of fire brigades was borne in proportions of one quarter, one quarter, and one half respectively by the Government, the municipalities, and the insurance companies concerned, the expenditure so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from $\frac{1}{4}$ d. in the £1 rate on the unimproved capital value of rateable land in the fire district. In June, 1949 legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils, and (iii) altering the basis of contributions so that from 1st January, 1950, local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation, introduced in September, 1949 to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services, provided for the establishment of Fire Regions and a Bush Fire Fighting Fund to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of rateable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909-1949.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1953 the authorised strength of the Fire Brigade throughout the fire districts of New South Wales was 294 officers and 823 permanent and 2,203 volunteer firemen. Corresponding figures for the Sydney Fire District were 242, 774 and 345. The revenue for the year 1953 (1952 in parentheses) was £1,864,649 (£1,624,295) made up as follows :—From the Government, £230,009 (£200,654); municipalities and shires, £230,009 (£200,654); fire insurance companies and firms, £1,380,054 (£1,203,924); and from other sources, £24,577 (£19,063). The disbursements for the year were £1,714,591 (£1,629,488).

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944 the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten.

(ii) *Metropolitan Fire Brigades Board.* Since 1st October, 1952, the Metropolitan Fire Brigades Board has received contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. Prior to 1st October, 1952, the Board received contributions in equal proportions from the Treasury, the municipalities and the insurance companies. On 30th June, 1953 the Board had under its control 43 stations, 637 permanent staff, 72 special service and clerical, etc. staff, and 15 part-time firemen. The total receipts for 1952-53 (1951-52 in parentheses) were £1,040,474 (£879,115), comprising contributions, £839,981 (£727,715), receipts for services, £101,787 (£73,859), and interest and sundries, £98,706 (£77,541). The expenditure was £900,725 (£894,242).

(iii) *Country Fire Authority.* This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority has received contributions in the proportion of two-thirds from the Treasury and one-third from insurance companies as from 1st January, 1951. Prior to that date, contributions were received in equal proportions from the Treasury, municipalities and insurance companies. At 30th June, 1953 there were 145 insurance companies included in the operation of the Act, and 196 urban and 996 rural fire brigades. The effective registered strength of the brigades was 88,119 members.

The receipts for the year 1952-53 (1951-52 in parentheses) amounted to £292,702 (£229,220). Total expenditure other than loan amounted to £279,171 (£231,744).

3. *Queensland.*—(i) *General.* The Acts of 1920-1931 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1952, the latest year for which figures are available, there were 67 Fire Brigades Boards. The total number of stations was 109, and full-time staff numbered 456, including 11 administrative, 87 officers and 358 firemen. Workshop staff numbered 17. Part-time staff numbered 601, including 68 administrative, 82 officers and 451 firemen. Volunteers numbered 373. The total revenue for the year 1951-52 was £491,505 received mainly from the following sources—Government £124,790, local authorities £124,790, insurance companies £186,726 and loans (Government and other) £28,604. The total expenditure for the year was £483,130 the chief items being salaries and wages £320,649 and interest and redemption of loans £27,940.

4. *South Australia.*—The Fire Brigades Act 1936-1944 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury (subject to certain limits when the contribution exceeds £10,000), five-ninths by insurance companies, and two-ninths by the municipalities concerned. At 30th June, 1953 there were altogether 37 fire brigade stations, of which 12 were metropolitan and 25 country.

The authorized strength of the permanent staff was 371, including 267 officers and men and 84 country auxiliary firemen. The total revenue for the year 1952-53 (1951-52 in parentheses) was £296,307 (£279,610), made up as follows:—insurance companies £179,505 (£169,979), Treasury £45,000 (£41,640), and municipalities £71,802 (£67,991). The Treasury contribution includes an additional grant of £33,120 (£30,000).

5. *Western Australia.*—In 1942 certain municipal and road board districts were constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 32 at 30th September, 1953. The contribution to the Board is made in the proportion of two-ninths from the Government, two-ninths from local government authorities, and five-ninths from insurance companies. The number of local government authorities and insurance companies who contributed numbered 56 and 125 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1953 numbered 48, with a staff of 1,425, including 208 permanent officers and firemen and 1,191 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1953 was £260,686 and the expenditure £225,989. Corresponding figures for the year ended 30th September, 1952, were £231,634 and £225,316.

Under the Bush Fires Act a Rural Fires Prevention Advisory Committee, consisting of ten members, four of whom are nominated by the Road Board Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 1,105 at 30th June, 1953 and the establishment of bush fire brigades, the number of which was 523 at 30th June, 1953.

6. *Tasmania*.—The Fire Brigades Act 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of the 22 existing fire brigades boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of five members nominated or elected by the fire brigades boards and one member nominated by the Minister. Contributions towards the cost of operations are on the basis of one-third each from the Treasury, the municipalities and the insurance companies concerned. The cost for the year 1951-52 amounted to £78,356, and for 1952-53 to £90,718. There were at 30th June, 1953, 30 stations amongst the 23 brigades, and their aggregate staffs numbered 425, including 86 permanent officers and 321 part-time firemen, including officers.

CHAPTER XVI.

PRIVATE FINANCE.

NOTE.—This chapter, for convenience, has been subdivided into eight sections as follows :—

Currency; Banking, including Savings Banks; Companies; Insurance; Friendly Societies; Probates and Letters of Administration; State Lotteries and Betting; and Government, Semi-Governmental and Parliamentary Pension and Superannuation Schemes.

A. CURRENCY.

§ 1. General.

The Australian monetary system is based on the British system, of which the unit is the pound (£) divided into 20 shillings (s.) each of 12 pence (d.). When the Australian currency was introduced in 1909 the Australian pound was specified as equivalent to 123.27447 grains of gold $11\frac{1}{12}$ ths fine or 113.002 grains of fine gold and, until the depression in 1930, was identical with the pound sterling. There was a gradual depreciation of the Australian pound in terms of sterling from the beginning of 1930 until 3rd December, 1931, when it was stabilized at the rate of £125 Australian = £100 sterling. This relationship has been maintained until the present time. Following the depreciation, no action was taken to define the value of the Australian pound in terms of gold until 5th August, 1947, when the Australian Government advised the *International Monetary Fund*, in terms of the membership agreement, that the par value of the Australian pound was 2.86507 grammes (44.2148 grains) of fine gold. From 19th September, 1949 this was reduced to 1.99062 grammes (30.720 grains) of fine gold.

When the Commonwealth was established in 1901, the currency in Australia consisted of United Kingdom gold, silver and bronze coins, notes issued by the banks, and Queensland Treasury notes. Queensland Treasury notes were in circulation in Queensland only, having superseded bank notes in that State after the 1893 crisis. Under the Commonwealth Constitution the control of currency, coinage and legal tender and the issue of paper money were vested in the Commonwealth. The Commonwealth assumed these powers by enacting the Coinage Act 1909 and the Australian Notes Act 1910.

Imperial gold coins of the specified weight and fineness and Australian notes are legal tender in Australia for any amount. Australian silver coins are legal tender for any amount not exceeding forty shillings and Australian bronze coins are legal tender for any amount not exceeding one shilling.

§ 2. Coinage.

1. *Coins in Circulation.*—Brief historical notes relating to the Australian Coinage are given in Official Year Book No. 37, pages 557 and 558. For weight, metal, composition, etc., of Australian coins in circulation *see* Official Year Book No. 39, page 697.

The silver coins issued prior to July, 1947 have a millesimal fineness of 925 (thirty-seven fortieths silver and three fortieths alloy) and those issued since 1st July, 1947 (dated 1946 and later) have a millesimal fineness of 500 (one-half silver and one-half alloy).

From 1910 to 1916 Australian coins were minted in England by the Royal Mint, London, and the Mint, Birmingham Ltd., and in 1916 and 1917 by the Indian Mints. The minting of Australian coins was undertaken by the Australian Mints in 1916 and coins have been minted at the Melbourne branch of the Royal Mint from 1916 to the present time, at the Sydney branch from 1919 until that Mint closed in 1926 and at the Perth branch in 1922 and since 1940.

During the 1939-45 War the two Australian mints were unable to meet the demand for Australian coins and some coins were minted in the United States of America and India. Details of Australian coins obtained from each mint to 30th June, 1954, are as follows:—Melbourne, £35,789,000; Perth, £1,178,000; Sydney, £488,000; United Kingdom Mints, £3,016,000; United States Mints, £6,000,000; Indian Mints, £169,000; Total, £46,640,000.

2. **Issues of Australian Coins.**—The net issues of Australian silver and bronze coins from 1910 to 30th June, 1954 were:—Crown (5s.), £276,000; Florin (2s.), £17,141,000; Shilling (1s.), £6,741,000; Sixpence (6d.), £4,119,000; Threepence (3d.), £4,859,000; Total silver coins, £33,136,000; Penny (1d.), £2,089,000; Half-penny (½d.), £605,000; Total bronze coins, £2,694,000. No allowance has been made for £52,000 silver coin, for which no denominations are available, withdrawn since 1910.

3. **Profits on Coinage of Silver and Bronze.**—Australian silver and bronze coins are token coins and, as the face value of the coins is greater than the value of the bullion they contain, a profit is made from their issue. This profit forms part of the Commonwealth Consolidated Revenue. In the following table details are given of the value of coins issued, the cost of bullion, the cost of minting and sundry expenses connected with the issue, and the profits made on the issue of coins during the years 1938-39 and 1949-50 to 1953-54.

AUSTRALIAN SILVER AND BRONZE COINS : PROFITS FROM ISSUE.

(£.)

Year.	Coin Issued.	Cost of Bullion.	Loss on Coin Withdrawn. (a)	Gross Profit.	Cost of Minting and Sundry Charges.	Net Profit. (b)
SILVER COIN.						
1938-39 ..	219,600	81,314	(c)	138,286	18,459	119,827
1949-50 ..	1,078,200	592,900	d - 523,275	1,008,575	117,879	890,696
1950-51 ..	1,553,200	860,019	348	692,833	158,457	534,376
1951-52 ..	3,003,600	1,663,384	..	1,340,216	316,970	1,023,246
1952-53 ..	1,709,600	971,471	..	738,129	180,608	557,521
1953-54 ..	2,469,536	1,381,163	..	1,088,373	233,151	855,222
BRONZE COIN.						
1938-39 ..	41,800	7,838	(c)	33,962	26,025	7,937
1949-50 ..	149,490	63,487	71	85,932	122,660	— 36,728
1950-51 ..	208,066	100,875	47	107,144	142,848	— 35,704
1951-52 ..	249,639	125,514	..	124,125	251,991	— 127,866
1952-53 ..	327,620	413,263	..	— 85,643	161,640	— 247,283
1953-54 ..	61,368	71,421	..	— 10,053	94,963	— 105,016
TOTAL.						
1938-39 ..	261,400	89,152	(c)	172,248	44,484	127,764
1949-50 ..	1,227,690	656,387	d - 523,204	1,094,507	240,539	853,968
1950-51 ..	1,761,266	960,894	395	799,977	301,305	498,672
1951-52 ..	3,253,239	1,788,898	..	1,464,341	568,961	895,380
1952-53 ..	2,037,220	1,384,734	..	652,486	342,248	310,238
1953-54 ..	2,530,904	1,452,584	..	1,078,320	328,114	750,206

(a) Face value of coin less value of bullion recovered. (b) Minus sign (—) denotes a loss.
(c) Included with Cost of Minting and Sundry Charges. (d) In 1947-48 and 1948-49 silver in coin withdrawn was brought to account as bullion at a nominal value. In 1949-50 an adjustment was made to bring this value to the face value of the coin withdrawn. This adjustment and a consequent adjustment for an increase in the cost of bullion in coin issued during 1947-48, 1948-49 and 1949-50 are included in this figure.

4. **Australian Mints.**—(i) *General.* Soon after the discovery of gold in Australia a branch of the Royal Mint was established in Sydney. The formal opening took place on 14th May, 1855. The Melbourne branch was opened on 12th June, 1872, and the Perth Branch on 20th June, 1899. The States of New South Wales, Victoria and Western Australia provided an annual endowment in return for which the mint receipts were paid to the respective State Treasuries. Owing to losses incurred in its operations, the Sydney branch was closed at the end of 1926.

Since their establishment, the Australian branches of the Royal Mint have been primarily concerned with the refining of gold, minting of Imperial gold coins and the production of bars and ingots of gold bullion for export. The minting of Imperial gold coins was discontinued in September, 1931. In 1916 the Melbourne branch took over the minting of Australian silver and bronze coins from the Royal Mint, London. Australian coins were also minted at the Sydney Mint from 1919 to 1926 and at the Perth Mint in 1922 and from 1940 to the present time. The Melbourne branch has also minted token coins for the Territory of New Guinea and for New Zealand.

(ii) *Gold Receipts and Issues.* (a) *Receipts.* The receipts of gold at Australian mints during 1953 amounted to 983,000 fine ounces (Melbourne, 170,000 fine ounces; Perth, 813,000 fine ounces) making the aggregate received to the end of 1953 123,875,000 fine ounces, (Melbourne, 42,933,000 fine ounces, Perth, 44,035,000 fine ounces, and Sydney, until 1926 when it was closed, 36,907,000 fine ounces).

(b) *Issues.* The Australian mints issue gold bullion for the use of local manufacturers (jewellers, dentists, etc.), and for export. Since September, 1931, when the United Kingdom departed from the gold standard, the minting and issue of gold coins by Australian mints has ceased. Australian exports of gold are mainly in the form of 400-oz. ingots, but in earlier years a considerable amount of gold was shipped to India in 10-oz. bars. Since early in the 1939-45 War, all gold has been acquired by the Commonwealth Bank and the export and use of gold has been subject to regulation by the Commonwealth Government. From December, 1951 export of a proportion of newly-mined gold for sale on premium markets overseas was permitted (*see para. 5 following*). The issues from Australian mints during 1953 (valued at £3 17s. 10½d. per standard ounce) amounted to £4,174,000 (Melbourne, £717,000, Perth, £3,457,000) making the aggregate issues of bullion and coin to the end of 1953 £526,249,000 (Melbourne, £182,370,000, Perth, £187,088,000, and Sydney, £156,791,000).

5. **Price of Gold.**—The following table shows the average prices of gold and the average value of the sovereign in London and Australia for the years 1938-39 and 1949-50 to 1953-54. The average price of gold in Australia is based on the Commonwealth Bank's buying price for gold lodged with the mints.

PRICE OF GOLD : LONDON AND AUSTRALIA.

Period.	London.		Australia.			
	Average price per fine oz.	Average value of Sovereign.	Average price per fine oz.	Sovereign.		Equivalent to a premium of—
				Average value.		
	£stg. s. d.	£stg. s. d.	£A. s. d.	£A. s. d.	%	
1938-39 ..	7 6 9	1 14 7	9 2 9	2 3 0	115.0	
1949-50 ..	11 11 2	2 14 5	14 8 10	3 7 3	236.3	
1950-51 ..	12 8 0	2 18 5	15 9 10	3 12 0	260.0	
1951-52 ..	12 8 0	2 18 5	15 9 10	3 12 0	260.0	
1952-53 ..	12 8 0	2 18 5	15 9 10	3 12 0	260.0	
1953-54 ..	12 8 3	2 18 5	15 10 4	3 12 1	260.4	

In December, 1951, arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on oversea premium markets. Under the arrangements, gold is acquired by the Commonwealth Bank in the usual

manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. The gold can only be sold against payment in United States dollars. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Commonwealth Bank. Until August, 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats ($\frac{11}{12}$ ths.).

The average prices in Australian currency (f.o.b.) obtained for gold exported under this scheme for each month during 1953-54 were:—July, £16 1s. 7d.; August, £16 1s. 1d.; September, £15 19s. 6d.; October, £15 18s. 7d.; November, no sales; December, £15 10s. 9d.; January, £15 10s. 6d.; February, £15 10s. 8d.; March, £15 10s. 2d.; April, £15 10s. 4d.; May, £15 10s. 3d.; June, £15 10s. 2d.

From 1st May, 1954 the Commonwealth Bank increased its buying price for gold from £15 9s. 10d. to £15 12s. 6d. per fine ounce. The previous gold price was a realization price based upon the price for which the Commonwealth Bank could sell gold abroad in official markets, less costs of movement. Changes affecting gold abroad, including the reopening of the London gold market on 22nd March, 1954, made it necessary to review the Australian price of gold. The new price of £15 12s. 6d. per fine ounce reflects the "parity" value of Australian currency as established by the International Monetary Agreements Act, 1947.

§ 3. Notes.

1. *General*.—Brief historical notes relating to the circulation and issue of notes in Australia are given in Official Year Book No. 37, pages 561 and 562. The issue of notes intended for circulation as money by any person, bank or State other than by the Commonwealth Bank is prohibited.

2. *The Australian Note Issue*.—(i) *General*. Notes in circulation in Australia are issued by the Commonwealth Bank through the Note Issue Department. The Bank is authorized to issue Australian notes in denominations of 5s., 10s., £1, £5, £10 and any multiple of £10. The Commonwealth Bank is not required to hold a specific reserve in gold against the note issue, but the assets of the Note Issue Department must be held or invested in gold, on deposit with any bank or in securities of the Government of the United Kingdom, the Commonwealth or a State. All profits of the Note Issue Department, with the exception of an amount not exceeding £500,000 each year which may be paid to the other departments or divisions of the Commonwealth Bank, are paid to the Commonwealth Consolidated Revenue Fund.

Australian notes are legal tender to any amount within Australia and have been issued in denominations of 10s., £1, £5, £10, £20, £50, £100 and £1,000.

(ii) *Australian Notes in Circulation*. Particulars of the average values of notes in circulation for the years 1938-39 and 1949-50 to 1953-54 are given in the following table:—

AUSTRALIAN NOTE ISSUE.

(£'000.)

Denomination.	Average of monthly statements for year—					
	1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
10s. ..	4,141	8,496	8,919	9,454	9,738	9,936
£1 ..	21,124	65,695	67,841	69,399	68,286	69,038
£5 ..	11,718	90,561	106,003	132,432	152,679	168,032
£10 ..	5,126	57,871	70,671	83,131	88,257	91,911
£20 ..	111	8	8	7	6	6
£50 ..	1,259	69	65	59	55	51
£100 ..	2,238	81	69	63	60	57
£1,000 ..	2,855	220	447	572	649	683
Held by Banks	15,454	27,895	32,478	37,745	36,400	38,996
Held by Public	33,118	195,106	221,605	257,372	283,330	300,718
Total ..	48,572	223,001	254,083	295,117	319,730	339,714

(iii) *Commonwealth Bank—Note Issue Department.* The following statement shows particulars of liabilities and assets of the Note Issue Department of the Commonwealth Bank as at 30th June, 1953 and 1954.

NOTE ISSUE DEPARTMENT : LIABILITIES AND ASSETS, 30th JUNE.
(£'000.)

Liabilities.	1953.	1954.	Assets.	1953.	1954.
Notes on Issue(a) ..	326,613	343,827	Gold and Balances held abroad (including money at short call) ..	88,208	120,736
Special Reserve—Premium on gold sold ..	4,755	4,755	Government Securities (including Commonwealth Treasury Bills) ..	245,867	231,002
Other Liabilities(a) ..	2,771	3,204	Other Assets ..	64	48
Total Liabilities ..	334,139	351,786	Total Assets ..	334,139	351,786

(a) Notes of a denomination not exceeding one pound which have been on issue for more than twenty years, and notes of a denomination exceeding one pound which have been on issue for more than 40 years are not included in the item "Notes on Issue" but are included in the item "Other Liabilities".

In 1953–54 the net profits of the Note Issue Department amounted to £6,206,697 of which £5,706,697 was paid to the Commonwealth Treasury and £500,000 to the Capital Accounts of sections of the Commonwealth Bank and the Commonwealth Trading Bank as follows:—Mortgage Bank Department £143,000, Rural Credits Department £71,500, Industrial Finance Department £143,000, and the Commonwealth Trading Bank £142,500. For the basis of distribution of the net profits of the Note Issue Department see page 555.

§ 4. Legal Tender Extant.

Accurate information regarding the amount of legal tender in circulation is not available, but the estimated amount extant about the middle of the years 1939 and 1950 to 1954, is as follows:—1939, £58 millions; 1950, £263 millions; 1951, £307 millions; 1952, £336 millions; 1953, £360 millions; and 1954, £378 millions. Details of the amounts of coin and notes in circulation are shown in §2 and §3 of this chapter.

B. BANKING.

§ 1. Cheque-Paying Banks.

1. *Banking Legislation.*—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money". The principal Commonwealth Acts at present in force relating to Banking are—

- (a) The Commonwealth Bank Act 1945–1953 which provides for the constitution and management of the Commonwealth Bank, Commonwealth Trading Bank and Commonwealth Savings Bank and the management of the Australian note issue; and
- (b) The Banking Act 1945–1953, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth.

The Banking Act 1945 was assented to on 3rd August, 1945, and came into operation on 21st August, 1945. It applies to all banks, except State banks, operating in Australia or Territories of the Commonwealth. The objects of the Act are:—(a) To provide a legal framework, uniform throughout Australia, for regulating the banking system; (b) to safeguard depositors of the banks from loss; (c) to provide for the co-ordination of banking policy under the direction of the Commonwealth Bank; (d) to control the volume of credit in circulation and bank interest rates; (e) to mobilize and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the Act is given in Official Year Book No. 37, page 565.

The Banking Act 1953, assented to on 1st April, 1953, amended the Banking Act 1945. Details of the main amendments are given in Official Year Book No. 40, page 616.

(ii) *State Legislation.* State banking legislation relates to the incorporation of banks and the constitution and management of State banks. The Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales by Act of Council 1817, The Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a *Companies Act of the States or the United Kingdom*. This is also the case with those banks which were reconstructed after the crisis of 1893. State banks, constituted under State Acts, transacting general banking business are the Rural Bank of New South Wales, The State Bank of South Australia and The Rural and Industries Bank of Western Australia.

2. **Royal Commission on Monetary and Banking Systems.**—A Royal Commission was appointed by the Commonwealth Government in November, 1935 to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report on 15th July, 1937, and a summary of the recommendations appears in Official Year Book No. 31, p. 1010.

3. **Presentation of Banking Statistics.**—Because of the different purposes they serve in the Australian financial system, Australian banks have been divided for statistical purposes, into four groups and a separate series is presented for each. These groups are:—

- (a) *The Commonwealth Bank.* This is the Central Bank. It also provides special banking facilities through the Rural Credits, Mortgage Bank and Industrial Finance Departments. It transacted general banking business through a General Banking Division up to 3rd December, 1953, when that business was transferred to the Commonwealth Trading Bank of Australia. Statistics of the Central Banking Business (including the Note Issue Department), and Rural Credits, Mortgage Bank and Industrial Finance Departments are presented in separate series.
- (b) *The Commonwealth Trading Bank of Australia.* This bank commenced operations on 3rd December, 1953. On that date, under the provisions of the Commonwealth Bank Act, 1953, it took over the business of the General Banking Division of the Commonwealth Bank. The statistics presented in the Commonwealth Trading Bank series include averages for the General Banking Division of the Commonwealth Bank up to 3rd December, 1953.
- (c) *Private Trading Banks.* This group was formerly known as the Nine Trading Banks but the number of banks included has been reduced to seven by amalgamations. With the Commonwealth Trading Bank, these banks provide the major part of the general banking facilities in Australia. The banks included in this group are—the Bank of New South Wales,

The Commercial Banking Company of Sydney Ltd., The National Bank of Australasia Ltd. (which has absorbed the Queensland National Bank Ltd.), The Commercial Bank of Australia Ltd., the Bank of Adelaide, the Australia and New Zealand Bank Ltd. (an amalgamation of the Bank of Australasia Ltd. and The Union Bank of Australia Ltd.), and The English, Scottish and Australian Bank Ltd.

- (d) *Other Banks.* This group consists of (i) three State Government Banks—The Rural Bank of New South Wales, The State Bank of South Australia and The Rural and Industries Bank of Western Australia which, in their general banking business, specialize mainly in financing rural industries, (ii) two joint stock banks—The Ballarat Banking Co. Ltd. and The Brisbane Permanent Building and Banking Co. Ltd. which have specialized business in two districts only, and (iii) branches of three overseas banks—the Bank of New Zealand, Comptoir National d'Escompte de Paris and the Bank of China which transact limited business in Australia and are mainly concerned with financing trade, etc., between Australia and overseas countries.

In addition to the series mentioned above, a series for all cheque-paying banks is presented. This series covers the Commonwealth Trading Bank, the Private Trading Banks and the other cheque-paying banks included in the fourth group.

Unless otherwise stated, the statistics presented are averages of weekly returns. Averages of liabilities and assets are the averages of the liabilities and assets of the banks on the several weekly balance days during the period concerned. Averages of bank clearings and debits to customers' accounts are the averages of transactions for weeks ended on the balance days during the period.

4. *Banks Transacting Business in Australia.*—(i) *Number of Branches.* At 30th June, 1954 the 16 banks operating in Australia transacted all classes of banking business at 3,201 branches and 1,196 agencies. The Commonwealth Trading Bank and the Private Trading Banks have branches throughout the Commonwealth. The Rural Bank of New South Wales, State Bank of South Australia and Rural and Industries Bank of Western Australia, being State Government banks specializing mainly in financing rural industries, have branches only in those States. Two banks, the Ballarat Banking Company Ltd. and the Brisbane Permanent Building and Banking Co. Ltd., transact business only in Ballarat and Brisbane respectively. The remaining three banks are branches of overseas banks.

CHEQUE-PAYING BANKS : NUMBER OF BRANCHES(a) AT 30th JUNE, 1954.

Banks.	New South Wales.	Vic-toria.	Q'land.	South Aust.	West. Aust.	Tas-mania.	Nor. Terr.	Aust. Cap. Terr.	Total.
Commonwealth Trading Bank of Australia ..	251	55	67	18	45	7	2	2	447
Private Trading Banks ..	865	768	427	246	203	61	7	5	2,582
Other Cheque-paying Banks ..	106	4	1	28	33	..	..	..	172
All Cheque-paying Banks—									
Metropolitan areas ..	461	357	101	94	98	14	..	..	1,125
Elsewhere ..	761	470	394	198	183	54	9	7	2,076
Total ..	1,222	827	495	292	281	68	9	7	3,201

(a) Includes Head Offices. Excludes agencies, 1,196.

(ii) *Capital Resources, Profits and Dividends.* The paid-up capital of cheque-paying banks (excluding the three overseas banks, the Bank of New Zealand, the Bank of China and the Comptoir National d'Escompte de Paris), together with their reserve funds, their profits and the amount of their last dividends, are shown in the following table. The information relates to the balance-sheet last preceding 31st October, 1953. All amounts are expressed in Australian currency.

CHEQUE-PAYING BANKS: CAPITAL RESOURCES, PROFITS AND DIVIDENDS.
1952-53.
(£'000.)

Bank.	Paid-up Capital.	Re-serves.	Balance of Profit and Loss Account. (a)	Total Share-holders' Funds.	Reserve Liability of Share-holders. (b)	Net Profit for year.	Net Dividends. (c)
Commonwealth Bank of Australia—							
Central Banking Business ..	4,000	3,351	..	7,351	..	2,892	..
Note Issue Department ..	..	(d) 4,755	..	4,755	..	5,361	..
General Banking Division ..	4,572	1,585	..	6,157	..	457	..
Rural Credits Department ..	2,286	735	..	3,021	..	160	..
Mortgage Bank Department ..	4,571	319	..	4,890	..	52	..
Industrial Finance Department ..	4,571	1,372	..	5,943	..	292	..
Total ..	20,000	12,117	..	32,117	..	9,214	..
Private Trading Banks—							
Australia and New Zealand Bank Ltd. ..	10,668	7,530	1,464	19,662	10,667	750	587
The Bank of Adelaide ..	1,250	1,250	132	2,632	1,250	125	113
Bank of New South Wales ..	8,780	7,250	658	16,688	8,780	1,215	746
The Commercial Bank of Australia Ltd. ..	4,117	2,250	322	6,689	..	421	285
The Commercial Banking Co. of Sydney Ltd. ..	4,739	4,700	404	9,843	4,739	471	379
The English, Scottish and Australian Bank Ltd. ..	3,765	3,765	606	8,136	2,510	319	256
The National Bank of Australasia Ltd. (e) ..	6,726	5,500	605	12,831	1,800	669	538
The Queensland National Bank Ltd. (in vol. liq.) (e) ..	..	..	130	130	..	..	..
Total ..	40,045	32,245	3,211	76,611	29,746	3,970	2,904
Other Cheque-paying Banks—							
The Ballarat Banking Co. Ltd. ..	159	162	13	334	141	14	11
The Brisbane Permanent Building and Banking Co. Ltd. ..	1,000	275	54	1,329	..	71	70
The Rural Bank of New South Wales ..	17,074	8,255	..	25,329	..	85	..
State Bank of South Australia ..	2,530	936	..	3,466	..	87	..
Rural and Industries Bank of Western Australia ..	7,447	145	..	7,592	..	23	..
Total ..	28,210	9,773	67	38,050	141	280	81
Grand Total ..	88,255	54,135	4,388	146,778	29,887	13,464	2,985

(a) Includes dividends declared but not paid at date of balance-sheet. (b) Includes uncalled capital. (c) Dividends paid and payable out of profits earned during 1952-53. (d) Special Reserve—Premium on gold sold. (e) The business of the Queensland National Bank Ltd. was taken over by the National Bank of Australasia Ltd. in January, 1948.

5. **Commonwealth Bank.**—(i) *General.* An account of the progress and development of the Commonwealth Bank is given in earlier issues of the Official Year Book (see No. 37, pages 570 to 573). The general functions of the Bank are set out in section 8 of the Commonwealth Bank Act 1945-1953 which states—

“8. It shall be the duty of the Commonwealth Bank, within the limits of its powers, to pursue a monetary and banking policy directed to the greatest advantage of the people of Australia, and to exercise its powers under this Act and the Banking Act 1945 in such a manner as, in the opinion of the Bank, will best contribute to :—

(a) the stability of the currency of Australia ; (b) the maintenance of full employment in Australia ; and (c) the economic prosperity and welfare of the people of Australia.”

In addition to its functions as a Central Bank, the Bank controls the Australian note issue through a Note Issue Department and provides special services through the Rural Credits Department, Mortgage Bank Department and Industrial Finance Department. The Commonwealth Bank also provided general banking facilities through the

General Banking Division up to 3rd December, 1953. In accordance with the provisions of the Commonwealth Bank Act, 1953, the Commonwealth Trading Bank, on that date, took over the business of the General Banking Division of the Commonwealth Bank. The Commonwealth Savings Bank, a separate institution providing for small depositors, is controlled by the Commonwealth Bank Board and is operated in conjunction with the Commonwealth Bank.

(ii) *Management.* Under the Commonwealth Bank Act 1911 the Bank was managed by a Governor. From 1924 to August, 1945 it was controlled by a Board of Directors. Under the Commonwealth Bank Act 1945 control was vested in a Governor, assisted by an Advisory Council. Since 21st August, 1951, under the Commonwealth Bank Act 1951, the policy of the Commonwealth Bank and the Commonwealth Savings Bank has been determined by the Commonwealth Bank Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary of the Department of the Treasury and seven other members appointed by the Governor-General. The Bank is managed by the Governor who shall act in accordance with the policy of the Bank and with any directions of the Board. The Board is required to inform the Government of the monetary and banking policy of the Bank. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank. The Commonwealth Trading Bank is managed by a General Manager under the Governor of the Commonwealth Bank and its policy is determined by the Commonwealth Bank Board.

(iii) *Central Banking Business.* Under the powers it possessed under the Commonwealth Bank Act 1911-1943 and under its war-time powers under the National Security Regulations, the Commonwealth Bank had gradually assumed the functions of a Central Bank. Part III. of the Commonwealth Bank Act 1945 formally constituted the Commonwealth Bank as a Central Bank and granted the Bank the necessary powers to carry on the business of a Central Bank. The capital for the Central Banking Business is £4,000,000 and such other sums as are transferred from the Reserve Fund. Since 1951 the profits of the Commonwealth Bank have been distributed as follows :—(a) One-half to the National Debt Sinking Fund ; (b) for a period of five years, an amount not exceeding £500,000 per annum may be paid to the capital of the several departments of the Bank and the Commonwealth Trading Bank, this amount to be distributed as follows :—Commonwealth Trading Bank (General Banking Division prior to 3rd December, 1953), Mortgage Bank Department and Industrial Finance Department each two-sevenths and the Rural Credits Department one-seventh ; and (c) the balance to be paid to the Commonwealth Bank Reserve Fund.

(iv) *Note Issue Department.* This Department was established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank. The Bank may, through this department, issue, re-issue and cancel Australian notes. Until 30th June, 1951, all profits of this Department, with the exception of £2,000,000 paid to the Capital Account of the Rural Credits Department and £1,200,000 paid to the Capital Account of the Mortgage Bank Department, were

paid to the Commonwealth Consolidated Revenue Fund. In 1951 provision was made for an amount, not exceeding £500,000 per annum for five years, to be paid to the Capital Accounts of the Commonwealth Trading Bank (General Banking Division prior to 3rd December, 1953) and the Rural Credits, Industrial Finance and Mortgage Bank Departments of the Commonwealth Bank. This amount is payable only if a similar amount is paid from the profits of the Central Banking Business and is to be distributed to the various sections in the same proportions as the amount payable from the profits of the Central Banking Business. The balance of the profits is to be paid to the Commonwealth Consolidated Revenue Fund.

(v) *General Banking Division.* Under the Commonwealth Bank Act 1911-1943 no provision was made for the separation of the general banking business of the bank from its central banking business. Under the Commonwealth Bank Act 1945 the General Banking Division was set up to carry on the general banking business of the Bank. The accounts and transactions of this division were kept separate and distinct from the other accounts of the Bank. The capital of the General Banking Division was £4,000,000, and such other sums as were transferred from the General Banking Division Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department. Transfers from each of these two sources increased the total capital to £4,572,000 at 30th June, 1953. The profits of the General Banking Division were distributed as follows :—(a) one-half was credited to the General Banking Division Reserve Fund, and (b) one-half was paid to the National Debt Sinking Fund. Under the Commonwealth Bank Act 1953 the business of the General Banking Division was transferred to the Commonwealth Trading Bank on 3rd December, 1953. See also para. 6 below—Commonwealth Trading Bank of Australia.

(vi) *Rural Credits Department.* The Rural Credits Department was established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce. The Bank may, through this department, make advances, upon the security of primary produce placed under the legal control of the Bank or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or of a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not be more than one year. The capital of the Rural Credits Department is £2,000,000 and such amounts as are transferred from the profits of the Central Banking Business and the Note Issue Department. Transfers from each of these two sources have increased the total capital to £2,429,000 at 30th June, 1954. Profits are distributed as follows :—(a) one-half is credited to the Rural Credits Department Reserve Fund, and (b) one-half is credited to the Rural Credits Department Development Fund for the promotion of primary production.

(vii) *Mortgage Bank Department.* The Mortgage Bank Department was established in 1943 for the purpose of making long-term loans to primary producers. Through this Department the Bank may make a loan to any person engaged in farming, agricultural, horticultural, pastoral or grazing operations or other form of primary production, upon the security of a mortgage to the Bank of an estate or interest in land in the Commonwealth owned by the borrower. The term of the loan shall not be less than five years nor more than forty-one years. The capital of the Department is £4,000,000 plus any amount transferred from the profits of the Central Banking Business and the Note Issue Department. Transfers from each of these two sources have increased the total capital to £4,857,000 at 30th June, 1954. Profits are credited to the Mortgage Bank Department Reserve Fund.

(viii) *Industrial Finance Department.* The functions of the Industrial Finance Department established in January, 1946 are :—(a) to provide finance for the establishment and development of industrial undertakings ; (b) to assist in the establishment

and development of industrial undertakings; and (c) to provide advice on the operations of industrial undertakings with a view to promoting the efficient organization and conduct thereof. To exercise these functions the Bank may, through the Industrial Finance Department, lend money and purchase and sell shares or securities in an industrial undertaking. The capital of this department is £4,000,000 plus any amount transferred from the profits of the Central Banking Business and Note Issue Department. Transfers from each of these two sources have increased the total capital to £4,857,000 at 30th June, 1954. The Treasurer, the Bank and the Savings Bank may advance money to the Industrial Finance Department. The amount that may be advanced by the Bank is limited to £1,000,000. The profits of the Department are credited to the Industrial Finance Department Reserve Fund.

(ix) *Housing Loans.* Provision is made for the Bank, through the General Banking Division (Commonwealth Trading Bank from 3rd December, 1953), to make loans to individuals or building societies for the erection or purchase of homes or for the discharge of mortgages on homes. These loans must be made at the lowest possible rate of interest. Loans to individuals are to be on *crédit foncier* terms, to be secured by first mortgage on an estate or interest in land owned by the borrower and to be repaid in periods of not less than five years nor more than 35 years. Loans to building societies are to be made on such security and on such terms and conditions as the Bank determines.

(x) *Liabilities and Assets—All Departments.* Liabilities and assets of each Department of the Commonwealth Bank at 30th June, 1954 are shown in the following table. The Commonwealth Trading Bank and the Commonwealth Savings Bank, which are operated as separate institutions, are not included (*see* § 1, para. 6 (ii) and § 2, para 8 (ii) following) :—

COMMONWEALTH BANK : LIABILITIES AND ASSETS, 30th JUNE, 1954.
(£'000.)

Item.	Central Banking Business.	Note Issue Depart- ment.	Rural Credits Depart- ment.	Mortgage Bank Depart- ment.	Industrial Finance Depart- ment.	Total.(a)
LIABILITIES.						
Capital	4,000	..	2,429	4,857	4,857	16,143
Reserve Funds	4,810	..	821	378	1,717	7,726
Special Reserve—Premium on gold sold .. .. .	..	4,755	..	..	..	4,755
Development Fund .. .. .	..	..	112	..	..	112
Notes on Issue .. .. .	..	343,827	..	..	..	343,827
Deposits, bills payable and other liabilities—						
Special Accounts of Trading Banks	351,920	..	..	..	..	351,920
Other deposits of Trading Banks	54,405	..	..	..	..	54,405
Other (including provision for con- tingencies)	277,309	3,204	51,867	467	19,665	302,322
Total Liabilities	692,444	351,786	55,229	5,702	26,239	1,081,210
ASSETS.						
Gold and balances held abroad (in- cluding money at short call)	384,678	120,736	..	..	..	505,414
Australian notes and coin and cash balances	2,357	..	..	161	553	3,071
Cheques and bills of other banks	13,552	..	..	..	..	13,552
Commonwealth Government securities (including Commonwealth Treasury Bills)	185,208	231,002	..	548	1,785	418,543
Securities of other Governments, and of local and semi-governmental authori- ties	41,263	..	..	..	..	41,263
Bills receivable and remittances in transit	7,084	..	..	..	..	7,084
Bank premises at cost less amounts written off	559	..	..	..	..	559
Loans, advances, bills discounted, and other assets (after deducting debts considered bad or doubtful)	57,743	48	55,229	4,993	23,901	91,724
Total Assets	692,444	351,786	55,229	5,702	26,239	1,081,210

(a) Inter-departmental accounts totalling £50,190,000 have been offset in the combined figures.

(xi) *Profits.* Net profits of the various Departments of the Commonwealth Bank for the years ended 30th June, 1939 and 1950 to 1954 were as follows :—

COMMONWEALTH BANK : NET PROFITS.
(£'000.)

Year ended 30th June—	General Bank Department.	Central Banking Business. (a)	Note Issue Department.	General Banking Division. (a) (b)	Rural Credits Department.	Mortgage Bank Department. (c)	Industrial Finance Department. (d)	Total.
1939	356	..	767	..	32	..	..	1,155
1950	970	4,333	436	95	42	250	6,126
1951	1,282	3,544	445	85	47	287	5,690
1952	2,274	3,881	352	97	49	290	6,943
1953	2,892	5,361	457	160	52	292	9,214
1954	3,918	6,207	..	171	59	346	10,701

(a) Created 21st August, 1945. Previously combined under General Bank Department. (b) From 3rd December, 1953 business transferred to Commonwealth Trading Bank. (c) Commenced business 27th September, 1943. (d) Commenced business 2nd January, 1946.

The distribution of these profits for the years ended 30th June, 1950 to 1954 is given in the following table :—

COMMONWEALTH BANK : DISTRIBUTION OF PROFITS.
(£'000.)

To—	1950.	1951.	1952.	1953.	1954.
National Debt Sinking Fund	703	863	1,313	1,675	1,959
Commonwealth Consolidated Revenue Fund ..	4,182	3,394	3,381	4,861	5,707
Commonwealth Trading Bank Capital Account ..	..	..	..	..	285
Commonwealth Bank Reserve Fund	243	345	637	946	1,459
General Banking Division—					
Capital Account .. ..	..	..	286	286	..
Reserve Fund	218	222	176	229	..
Rural Credits Department—					
Capital Account .. ..	..	..	143	143	143
Reserve Fund	48	43	48	80	85
Development Fund ..	48	43	48	80	86
Mortgage Bank Department—					
Capital Account	393	446	285	286	286
Reserve Fund	41	47	50	51	59
Industrial Finance Department—					
Capital Account .. ..	..	..	286	285	286
Reserve Fund	250	287	290	292	346
Total	6,126	5,690	6,943	9,214	10,701

(xii) *Central Banking Business—Average Liabilities and Assets.* The average liabilities and assets of the Central Banking Business and Note Issue Department of the Commonwealth Bank for the years ended June, 1950 to 1954 are shown in the two tables which follow.

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE
ISSUE DEPARTMENT)—AVERAGE LIABILITIES.

(£'000.)

Year ended June—	Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Li- abilities.	Total Li- abilities
1950	9,898	222,198	379,632	30,661	200,345	842,734
1951	10,127	251,770	503,248	31,696	238,230	1,038,071
1952	10,450	293,649	468,800	31,112	270,937	1,074,938
1953	11,023	318,193	212,890	45,447	287,361	874,913
1954	11,906	338,223	306,820	41,731	283,397	982,077

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE
ISSUE DEPARTMENT)—AVERAGE ASSETS.

(£'000.)

Year ended June—	Gold and Balances held Abroad.	Aus- tralian Coin.	Cheques and Bills of other Banks.	Govern- ment and other Securities (including Common- wealth Treasury Bills.)	Bills Receiv- able and Remit- tances in Transit.	Other Assets.	Total Assets.
1950	434,018	3,795	4,102	348,965	81	51,773	842,734
1951	596,276	3,370	5,791	366,570	105	65,959	1,038,071
1952	470,644	2,161	6,321	503,089	85	92,635	1,074,938
1953	363,576	2,538	6,595	434,771	130	67,303	874,913
1954	512,615	2,105	6,895	407,979	2,514	49,969	982,077

6. Commonwealth Trading Bank of Australia.—(i) *General.* The Commonwealth Trading Bank was established under the Commonwealth Bank Act, 1953. On 3rd December, 1953, it took over the business of the General Banking Division of the Commonwealth Bank of Australia. The Commonwealth Trading Bank is a body corporate with its own General Manager who is appointed by the Governor-General on the recommendation of the Commonwealth Bank Board for a term of seven years. The General Manager, under the Governor of the Commonwealth Bank, is responsible for the administration of the Commonwealth Trading Bank in accordance with policy determined by the Commonwealth Bank Board. Under the Banking Act, 1945-1953 the Commonwealth Trading Bank is subject to the same central banking controls as the private trading banks and is required to maintain a Special Account with the Commonwealth Bank on the same basis as those of the private trading banks. The capital of the Commonwealth Trading Bank is the total of the capital of the General Banking Division of the Commonwealth Bank immediately before 3rd December, 1953 and such other sums as are transferred from the Commonwealth Trading Bank of Australia Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department. The net profits of the Commonwealth Trading Bank are divided as follows:—(a) one-half placed to the credit of the Commonwealth Trading Bank of Australia Reserve Fund, and (b) one-half paid into the National Debt Sinking Fund.

(ii) *Liabilities and Assets.* The liabilities and assets of the Commonwealth Trading Bank of Australia at 30th June, 1954 are shown in the following table :—

COMMONWEALTH TRADING BANK OF AUSTRALIA : LIABILITIES AND ASSETS, 30TH JUNE, 1954.

(£'000.)

Liabilities.	Assets.
Capital 4,857	Coin, bullion, notes and cash at bankers 18,817
Reserve Fund 1,860	Money at short call in London 1,850
Deposits, bills payable and other liabilities (including provision for contingencies) 210,286	Special Account with Commonwealth Bank 38,650
Balances due to other banks 241	Cheques and bills of other banks and balances with and due from other banks 1,863
	Treasury bills 10,000
	Public securities of Australian Governments 35,078
	Bills receivable and remittances in transit 26,974
	Bank premises (at cost less amounts written off) 2,950
	Loans, advances and bills discounted (after deducting provision for debts considered bad or doubtful) 78,812
	Other assets 2,250
Total 217,244	Total 217,244

(iii) *Average Liabilities and Assets within Australia.* The average liabilities^(a) and assets within Australia of the General Banking Division of the Commonwealth Bank for the years ended 30th June, 1950 to 1953, and of the Commonwealth Trading Bank of Australia for the year ended 30th June, 1954 are shown in the tables below.

COMMONWEALTH TRADING BANK OF AUSTRALIA^(a)—AVERAGE LIABILITIES WITHIN AUSTRALIA.^(b)

(£'000.)

Year ended June—	Inter-minable Deposits or Deposit Stock.	Deposits.			Notes in Circulation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1950	62,530	14,775	77,305	..	2,724	6,557	86,586
1951	89,234	19,405	108,639	..	3,014	7,950	119,603
1952	90,595	20,093	110,688	..	2,644	8,524	121,856
1953	96,664	22,817	119,481	..	3,820	8,569	131,870
1954	120,885	35,352	156,237	..	2,034	11,766	170,037

(a) General Banking Division of Commonwealth Bank prior to 3rd December, 1953. Territories of Papua and New Guinea.

(b) Includes

**COMMONWEALTH TRADING BANK OF AUSTRALIA(a)—AVERAGE ASSETS
WITHIN AUSTRALIA.(b)**
(£'000.)

Year ended June—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with other Banks. (c)	Australian Public Securities.		Other Securities.	Loans, Advances, and Bills Discounted.	All other Assets.	Total Assets.
				Treasury Bills.	Other.				
1950	6,166	..	512	1,962	35,353	..	45,308	1,877	91,178
1951	7,176	..	820	24,049	26,868	..	62,491	2,348	123,752
1952	6,581	..	994	26,392	13,274	2	76,407	3,230	126,880
1953	8,784	21,731	1,600	17,239	25,840	92	59,492	3,984	138,762
1954	11,000	34,800	787	23,404	29,924	1,284	69,204	4,360	174,763

(a) General Banking Division of Commonwealth Bank prior to 3rd December, 1953. (b) Includes Territories of Papua and New Guinea. (c) Includes notes, cheques and bills of other banks.

(iv) *Profits.* The net profits of the Commonwealth Trading Bank of Australia for the year ended 30th June, 1954 were £660,778. These profits were distributed as follows :—£110,320 was applied to writing off bank premises ; £275,229 was appropriated to the Commonwealth Trading Bank of Australia Reserve Fund ; and £275,229 was paid to the National Debt Sinking Fund.

7. *Private Trading Banks.*—(i) *Average Liabilities and Assets in Australia.* The average liabilities and assets within Australia of the Private Trading Banks (see page 552 for list of banks) for the years ended June, 1939 and 1950 to 1954 are shown in the following tables :—

PRIVATE TRADING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.
(£'000.)

Year ended June—	Inter-minable Deposits or Deposit Stock.	Deposits.			Notes in Circulation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Liabilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1939	2,644	118,868	198,793	317,661	167	921	(b) 3,005	324,398
1950	729	685,587	224,477	910,064	158	33,227	13,323	957,501
1951	729	896,499	247,727	1,144,226	158	50,259	18,240	1,213,612
1952	729	963,524	238,217	1,201,741	158	61,527	14,970	1,270,125
1953	226	943,747	218,699	1,162,446	158	10,628	14,247	1,187,705
1954	14	1,035,707	239,774	1,275,481	158	3,360	14,980	1,293,993

(a) Includes other Liabilities. (b) Excludes other Liabilities.

PRIVATE TRADING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.
(£'000.)

Year ended June—	Cash and Cash Balances.	Special Account with Commonwealth Bank.	Balances with other Banks. (a)	Australian Public Securities.		Other Securities.	Loans, Advances and Bills Discounted.	All other Assets.	Total Assets.
				Treasury Bills.	Other. (b)				
1939	33,597	..	3,938	21,533	20,477	(c)	288,109	(e) 9,421	377,075
1950	51,960	377,006	17,683	26,502	83,813	536	403,890	18,272	979,662
1951	59,333	500,317	23,761	36,887	90,244	1,126	479,322	18,988	1,209,978
1952	60,589	465,991	29,140	32,402	68,416	1,124	621,435	33,151	1,312,248
1953	74,712	211,737	22,580	123,059	86,513	2,313	638,092	29,693	1,188,699
1954	71,244	285,226	17,346	99,368	130,306	3,588	658,534	36,549	1,302,161

(a) Includes notes, cheques and bills of other banks. (b) Government and Municipal Securities. (c) Included with Loans, Advances and Bills Discounted. (d) See footnotes (c) and (e). (e) Landed and House Property only. Other assets included with Loans, Advances and Bills Discounted.

(ii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for the Private Trading Banks, the ratios of certain assets and liabilities to total deposits for the years ended June, 1939 and 1950 to 1954. The ratios are based on the average liabilities and assets for the years shown.

PRIVATE TRADING BANKS: RATIOS OF AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS.
(Per cent.)

Year ended June—	Cash and Cash Balances.	Treasury Bills.	Government and Municipal Securities. (a)	Special Account with Commonwealth Bank.	Advances.	Deposits.	
						Not Bearing Interest.	Bearing Interest.
1939	10.6	6.8	6.5	..	90.7	37.4	62.6
1950	5.7	2.9	9.2	41.4	44.4	75.3	24.7
1951	5.2	3.2	7.8	41.7	41.9	78.4	21.6
1952	5.0	2.7	5.7	38.8	51.7	80.2	19.8
1953	6.4	10.6	7.4	18.2	54.9	81.2	18.8
1954	5.6	7.8	10.2	22.4	51.6	81.2	18.8

(a) Excludes Treasury Bills.

(iii) *Proportion of Non-Interest Bearing to Total Deposits.* The following table shows, for each State, the proportion of non-interest bearing deposits to total deposits with the Private Trading Banks for each of the years ended June, 1939 and 1950 to 1954. The ratios are based on the average deposits for the years shown.

PRIVATE TRADING BANKS: PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS.
(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939	43.5	30.3	45.4	26.1	45.7	36.5	61.1	23.2	37.4
1950	77.9	73.7	77.9	64.9	77.9	70.1	83.9	68.7	75.3
1951	81.3	75.8	80.9	69.8	80.5	74.6	83.2	76.2	78.4
1952	83.1	77.8	82.5	72.0	83.1	75.6	84.7	78.4	80.2
1953	84.3	79.2	82.5	72.4	84.4	78.5	87.0	82.6	81.2
1954	83.9	79.6	82.7	72.3	83.1	79.7	89.5	88.2	81.2

(a) Includes Papua and New Guinea for 1950 and following years.

(iv) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits, for each State for the years ended June, 1939 and 1950 to 1954, is shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

PRIVATE TRADING BANKS: RATIO OF ADVANCES TO TOTAL DEPOSITS.
(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939	104.5	71.6	99.2	77.6	155.5	57.0	24.5	37.7	90.7
1950	44.5	47.6	46.4	29.6	39.4	48.5	35.0	22.1	44.4
1951	41.9	43.0	49.0	28.3	36.4	44.0	30.5	21.3	41.9
1952	54.5	52.1	60.0	33.0	41.5	48.4	29.6	26.4	51.7
1953	60.2	52.8	63.7	35.2	46.1	54.0	24.0	27.6	54.9
1954	56.4	47.8	59.7	32.2	52.7	57.3	30.0	35.6	51.6

(a) Includes Papua and New Guinea for 1950 and following years.

8. *Other Cheque-paying Banks.—Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of "Other Cheque-paying Banks" (see page 553 for list of these banks) for the years ended June, 1950 to 1954 are shown in the following tables.

OTHER CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.
(£'000.)

Year-ended June—	Inter- minable Deposits or Deposit Stock.(a)	Deposits.			Notes in Cir- culation.	Bal- ances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Lia- bilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
1950	20,206	23,025	10,080	33,105	..	174	1,245	54,730
1951	20,056	31,947	12,421	44,368	..	194	1,594	66,212
1952	19,336	37,115	13,169	50,814	..	504	1,478	72,132
1953	19,286	35,848	15,302	51,150	..	622	525	71,583
1954	19,734	39,408	15,309	54,717	..	664	454	75,599

(a) Inscribed stock and debentures, Rural Bank of New South Wales and State Bank of South Australia.

OTHER CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.
(£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks. (a)	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All other Assets. (b)	Total Assets.
				Trea- sury Bills.	Other.				
1950	4,039	2,620	1,183	1,048	13,135	225	46,236	3,890	72,387
1951	4,852	3,271	1,760	3,087	12,375	185	56,604	4,613	86,717
1952	5,104	2,612	1,800	2,925	14,880	111	61,816	5,123	94,671
1953	4,640	1,153	2,176	3,911	13,874	149	64,731	3,792	94,426
1954	5,091	1,090	2,409	7,326	13,977	432	65,982	3,815	100,122

(a) Includes notes, cheques and bills of other banks. (b) Includes Rural and Industries Bank of Western Australia and State Bank of South Australia accounts with State Treasuries.

9. All Cheque-paying Banks.—Average Liabilities and Assets within Australia. Particulars of the average liabilities and assets within Australia of all cheque-paying banks in Australia for the years ended 30th June, 1950 to 1954 are shown in the following tables. The series includes the Commonwealth Trading Bank of Australia (General Banking Division of the Commonwealth Bank to 3rd December, 1953), but the Central Banking business of the Commonwealth Bank of Australia is excluded.

ALL CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.(a)
(£'000.)

Year ended June—	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Bal- ances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Lia- bilities
		Not Bearing Interest.	Bearing Interest.	Total.				
1950	20,935	771,142	249,332	1,020,474	158	36,125	21,125	1,098,817
1951	20,785	1,017,680	279,553	1,297,233	158	53,467	27,784	1,399,427
1952	20,065	1,091,564	271,679	1,363,243	158	64,675	24,972	1,473,113
1953	19,512	1,076,259	256,818	1,333,077	158	15,070	23,341	1,391,158
1954	19,748	1,196,000	290,435	1,486,435	158	6,058	27,200	1,539,599

(a) Includes Territories of Papua and New Guinea.

ALL CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.(a)
(£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks.	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All other Assets.	Total Assets.
				Trea- sury Bills.	Other.				
1950	62,165	379,632	19,383	29,512	132,301	701	495,434	24,039	1,143,277
1951	71,361	503,588	26,341	64,023	129,487	1,311	598,417	25,949	1,420,477
1952	72,274	468,603	31,934	61,719	96,570	1,237	759,655	41,804	1,533,799
1953	88,136	234,621	26,356	144,209	126,227	2,554	762,315	37,469	1,421,887
1954	87,335	321,116	20,542	130,098	174,207	5,304	793,720	44,724	1,577,046

(a) Includes Territories of Papua and New Guinea.

10. **Classification of Advances within Australia.—Commonwealth Trading Bank and Private Trading Banks.**—(i) *States, June, 1954.* A dissection of advances made by the Commonwealth Trading Bank and the Private Trading Banks at the end of June, 1954, is shown in the following table. Business advances, which have been classified according to the main industry of the borrower, are those made mainly for business purposes and include all loans to corporate bodies other than public authorities. Advances made to public authorities are those made to Commonwealth and State Governments, Government Agencies and Local and Semi-governmental Authorities irrespective of the purpose of the advance or the industry in which the authority is engaged. Personal advances, which have been classified according to purpose, include advances to persons in their private capacity for such purposes as the purchase of a house or of household equipment, repayment of personal debts, etc.

**COMMONWEALTH TRADING BANK AND PRIVATE TRADING BANKS :
CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a)—STATES, END
OF JUNE, 1954.**

(£'000.)

Classification.	N.S.W. (b)	Vic.	Q'land. (a)	S. Aust. (c)	W.Aust.	Tas.	Total Aust. (a)	Pro- portion of Total.
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A. BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.

1. Agriculture, Dairying and Grazing ..	69,747	42,165	50,377	11,224	14,439	4,388	192,340	24.3
2. Manufacturing ..	56,267	48,312	18,033	8,042	5,309	3,351	139,314	17.6
3. Transport, Storage and Communication ..	5,638	5,218	2,970	1,106	1,209	549	16,692	2.1
4. Finance and Property ..	39,000	25,693	10,503	4,070	2,853	2,356	84,475	10.7
5. Commerce								
Retail Trade ..	28,979	20,927	11,115	4,645	6,199	2,996	74,861	9.4
Wholesale Trade ..	27,019	16,932	3,562	6,161	2,646	1,358	57,678	7.3
Total Class 5 ..	55,998	37,859	14,677	10,806	8,845	4,354	132,539	16.7
6. Miscellaneous(d) ..	19,117	14,919	9,755	2,571	4,407	1,691	52,460	6.6
7. Not elsewhere specified	3,466	3,023	1,959	593	650	183	9,874	1.2
Total ..	249,233	177,189	108,274	38,412	37,712	16,872	627,692	79.2

B. ADVANCES TO PUBLIC AUTHORITIES.

Public Authority Advances (including Government, Semi-Governmental and Municipal Bodies) ..	3,607	4,686	1,315	95	65	103	9,871	1.2
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C. PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.

1. Advances for building or purchasing own home (Individuals) ..	46,706	28,391	13,480	3,348	8,708	2,239	102,872	13.0
2. All other (including Personal Loans) ..	22,651	15,915	5,775	2,692	3,964	1,086	52,083	6.6
Total ..	69,357	44,306	19,255	6,040	12,672	3,325	154,955	19.6

TOTAL ADVANCES.

Grand Total ..	322,197	226,181	128,844	44,547	50,449	20,300	792,518	100.0
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(a) Includes Papua and New Guinea. (b) Includes Australian Capital Territory. (c) Includes Northern Territory. (d) Includes (i) fishing, hunting, trapping and forestry; (ii) mining and quarrying; (iii) legal and other professions, religious, charitable and benevolent institutions, hospitals, schools and industrial and trade associations; (iv) amusements, wireless broadcasting, sporting associations and promoters; and (v) hotels, boarding houses and restaurants, laundries, social clubs, etc.

(ii) *Australia, June, 1951 to June, 1954.* The following table provides a dissection of advances within Australia (including Papua and New Guinea). The figures for June, 1954 include advances made by the Commonwealth Trading Bank of Australia, and the

earlier years include advances made by the General Banking Division only of the Commonwealth Bank. As the Commonwealth Trading Bank took over the business of the General Banking Division on 3rd December, 1953, the figures are comparable from year to year.

**COMMONWEALTH TRADING BANK(a) AND PRIVATE TRADING BANKS :
CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(b)—AMOUNT AND
PROPORTION OF EACH CLASS TO TOTAL.**

Classification.	At End of—							
	June, 1951.		June, 1952.		June, 1953.		June, 1954.	
	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.
BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.								
1. Agricultural, Dairying and Grazing ..	125,056	21.4	143,908	19.1	148,279	22.1	192,340	24.3
2. Manufacturing ..	114,018	19.5	193,344	25.7	141,481	21.1	139,314	17.6
3. Transport, Storage and Communication ..	12,771	2.2	13,285	1.8	12,710	1.9	16,690	2.1
4. Finance and Property	65,829	11.2	70,394	9.3	64,615	9.6	84,475	10.7
5. Commerce—								
Retail Trade ..	45,719	7.8	62,857	8.3	50,433	7.6	74,861	9.4
Wholesale Trade ..	41,957	7.2	78,424	10.4	59,132	8.8	57,678	7.3
Total Class 5 ..	87,676	15.0	141,281	18.7	109,565	16.4	132,539	16.7
6. Miscellaneous(c) ..	33,857	5.8	40,570	5.4	42,618	6.4	52,460	6.6
7. Not elsewhere specified	4,901	0.8	7,239	1.0	9,345	1.4	9,874	1.2
Total ..	444,108	75.9	610,021	81.0	528,613	78.9	627,692	79.2

ADVANCES TO PUBLIC AUTHORITIES.

Public Authority Advances (including Government, Semi-Governmental and Municipal Bodies) ..	9,477	1.6	15,919	2.1	13,551	2.0	9,871	1.2
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PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.

1. Advances for Building or purchasing own home (Individuals) ..	94,427	16.1	87,591	11.6	86,587	12.9	102,872	13.0
2. All other (including Personal Loans) ..	37,357	6.4	39,955	5.3	41,325	6.2	52,083	6.6
Total ..	131,784	22.5	127,546	16.9	127,912	19.1	154,955	19.6

TOTAL ADVANCES.

Grand Total ..	585,369	100.0	753,486	100.0	670,076	100.0	792,518	100.0
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(a) Prior to 3rd December, 1953, General Banking Division of the Commonwealth Bank.
(b) Includes Papua and New Guinea. (c) Includes (i) fishing, hunting, trapping and forestry;
(ii) mining and quarrying; (iii) legal and other professions, religious, charitable and benevolent institutions,
hospitals, schools and industrial and trade associations; (iv) amusements, wireless broadcasting, sporting
associations and promoters; and (v) hotels, boarding houses and restaurants, laundries, social clubs, etc.

**11. Interest on Deposits: Rates—Cheque-Paying Banks.—Particulars of interest rates
for fixed deposits since 1944 are shown hereunder.**

**BANK FIXED DEPOSIT RATES: AUSTRALIA.
(Per cent. per annum.)**

Dates from which Rates Operated.	Deposits for—			
	Three Months.	Six Months.	Twelve Months.	Two Years.
17th January, 1944.. ..	1	1½	1½	2
11th August, 1944	½	¾	1½	1½
1st December, 1945	½	¾	1	(a) 1½
29th July, 1952	1	1½	1½	(b) 1½

(a) On first £10,000; rate on amount in excess of £10,000 is 1 per cent.
rate on amount in excess of £10,000 is 1½ per cent.

(b) On first £10,000;

12. **Clearing House Returns—Average Weekly Clearings.**—The average weekly clearings in each capital city for the years ended June, 1939 and 1950 to 1954 are shown in the following table.

BANK CLEARINGS(a) : AVERAGE WEEKLY CLEARINGS.
(£'000.)

Year ended June—	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1939	17,832	15,415	4,212	2,953	2,055	623	43,090
1950	64,909	61,003	13,278	11,604	7,458	2,116	160,368
1951	88,588	82,022	18,046	15,957	10,809	2,885	218,307
1952	92,557	86,022	17,478	17,226	11,425	2,980	227,688
1953	88,557	78,965	17,886	16,794	11,441	2,985	216,628
1954	97,191	87,505	20,736	18,027	13,249	3,393	240,101

(a) Excludes transactions connected with the issue and redemption of Treasury Bills.

13. **Debits to Customers' Accounts—All Cheque-Paying Banks.**—Statistics of debits to customers' accounts have been collected since September, 1945. Generally they represent the total of all cheques drawn by the customers of the banks. In the following table are shown the average weekly debits to customers' accounts of all cheque-paying banks for each State for the years ended June, 1950 to 1954. In this table debits to accounts of Australian Governments in capital cities are excluded as they are subject to abnormal influences and are not uniform for each State.

AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS : ALL CHEQUE-PAYING BANKS.

(Excluding Debits to Australian Government Accounts in Capital Cities.)
(£'000.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total
1950	104,876	97,758	29,482	19,326	13,744	5,605	265	271,056
1951	145,110	134,925	39,011	26,844	19,250	7,370	373	372,883
1952	156,602	142,358	41,516	30,792	21,810	8,872	471	402,421
1953	151,938	131,998	43,796	30,063	22,091	8,850	580	389,316
1954	171,709	154,885	51,032	32,802	25,339	9,938	775	446,480

14. **Rates of Exchange.**—(i) *Oversea Exchange Rates.* In the following table the par of exchange (based on par values agreed with the International Monetary Fund) and average telegraphic transfer selling rates of exchange for Sydney on a number of oversea countries are shown. Generally the averages which are averages of daily quotations are based on rates quoted by the Commonwealth Bank of Australia, but where these were not available rates issued by the Department of Trade and Customs have been used.

OVERSEA EXCHANGE RATES: PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEA COUNTRIES.

Country.	Basis of Quotation.	Par of Ex- change.(a)	Selling Rate 1953-54.	Country.	Basis of Quotation.	Par of Ex- change.(a)	Selling Rate 1953-54.
Belgium ..	Francs to £A.1 ..	112.00	110.88	Netherlands ..	Florins to £A.1 ..	8.5120	8.3385
Canada ..	Dollars to £A.1 ..	(b)	2.1932	New Zealand ..	£A. to £NZ.100 ..	(c)	124.54
Ceylon ..	Pence A. to Rupee ..	22.500	22.813	Norway ..	Kroner to £A.1 ..	16.000	15.829
Denmark ..	Kroner to £A.1 ..	15.472	15.343	Pakistan ..	Pence A. to Rupee ..	32.384	32.688
Egypt ..	Piastres to £A.1 ..	78.006	77.490	Portugal ..	Escudos to £A.1 ..	(c)	63.678
Fiji ..	£A. to £F.100 ..	112.61	113.00	Singapore ..	Pence A. to Dollar ..	35.000	35.302
Finland ..	Marks to £A.1 ..	515.20	509.96	South Africa ..			
France ..	Francs to £A.1 ..	(b)	777.96	Union of ..	£A. to £SA.100 ..	125.00	125.79
French Oceania	Francs to £A.1 ..	(b)	138.65	Sweden ..	Kroner to £A.1 ..	11.588	11.485
Germany, Fed.	Deutsche marks to			Switzerland ..	Francs to £A.1 ..	(c)	9.6899
Rep. of ..	£A.1 ..	9.408	9.273	United Kingdom	£A. to £Eng.100 ..	125.00	125.50
Hong Kong ..	Pence A. to Dollar ..	18.750	18.827	United States of			
India ..	Pence A. to Rupee ..	22.500	22.761	America ..	Dollars to £A.1 ..	2.2397	2.2384
Indonesia ..	Rupiahs to £A.1 ..	(c)	25.252	U.S.S.R. ..	Roubles to £A.1 ..	(c)	8.924
Japan ..	Yen to £A.1 ..	806.40	803.06				

(a) As at 30th June, 1954, established under International Monetary Fund Agreement.

(b) No par value established.

(c) Not a member of International Monetary Fund.

(ii) *Interstate Exchange Rates.* Exchange rates between the capital cities and towns of each of the States and other States or parts thereof at 30th June, 1954, are shown below. Rates varied from 2s. 6d. per £100 between the nearer locations to 10s. per £100 between those more widely separated.

INTERSTATE BANK EXCHANGE RATES, 30th JUNE, 1954.(a)
(s. d. per £100.)

Between—	And—					
	Victoria.	Brisbane and adjacent towns.	South Australia.	Perth and all but distant towns.	Tasmania.	Australian Capital Territory.
Sydney and New South Wales towns ..	2 6	2 6	5 0	7 6	5 0	2 0
Melbourne and Victorian towns	5 0	2 6	5 0	2 6	2 0
Brisbane and adjacent towns	7 6	10 0	7 6	2 6
Adelaide and South Australian towns	2 6	5 0	5 0
Perth and all but distant towns	7 6	7 6
Hobart and Tasmanian towns	5 0

(a) Unchanged since 1st January, 1940.

There is no charge for transfers within a city or a town. In all States excepting Queensland and Western Australia, the exchange for transfers between towns in the same State is 2s. per £100. Queensland and Western Australia are divided into zones. The exchange rate for transfers between towns in the same zone is 2s. per £100, with higher rates for inter-zone transfers.

The exchange rate between Papua and New Guinea and the mainland is 10s. per £100 for all points.

§ 2. Savings Banks.

1. *General.*—The inauguration of Savings Banks in Australia dates from 1819, when a private Savings Bank was opened in Sydney. In 1832 the legislature created "The Savings Bank of New South Wales" under the control of trustees, and shortly after its establishment the funds of the private Savings Bank were transferred to the new institution. In the other States provision for placing deposits with savings banks dates from 1841 in Victoria; 1854 in Queensland; 1840 in South Australia; 1863 in Western Australia (a Savings Bank was opened in 1856 but was closed a year later); 1835 in Launceston; and 1845 in Hobart. These early banks functioned as Trustee Savings Banks, but, with the exception of the Hobart and Launceston institutions, were later absorbed by, or amalgamated with, Government Savings Banks.

Post Office Savings Banks were established in all States from 1864 onwards. These were separate Government institutions except in South Australia, where the Post Office acted as agent for the Savings Bank. Since the federation of the Australian States in 1900, post offices have been controlled by the Commonwealth Government, but they continued to act as savings bank agencies for the State institutions until the establishment of the Commonwealth Bank in 1912. They now act as agents for the Commonwealth Savings Bank.

Savings banks at present operating are the Commonwealth Savings Bank (all States and Territories); State Savings Bank of Victoria; Savings Bank of South Australia; and the two Trustee Banks—Hobart and Launceston.

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, deposits of one shilling and upwards being accepted; nevertheless, the facilities offered, while preserving the original object, have led to developments in another direction. Although depositors may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account and in addition receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

Commencing with July, 1931, monthly returns of statistics have been furnished by savings bank authorities. The information given in the following paragraphs relates to the deposits at 30th June in each year. For convenience of reference the information has been grouped under the following headings:—

- (i) Commonwealth Savings Bank; (ii) State Savings Banks (including Trustee Banks in Tasmania); and (iii) All Savings Banks.

2. **Number of Accounts.**—The following table shows the number of savings bank accounts in existence at 30th June, 1953 and 1954. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

SAVINGS BANKS: NUMBER OF ACCOUNTS.(a)

Bank.	30th June, 1953.		30th June, 1954.	
	Operative.	Inoperative. (b)	Operative.	Inoperative. (b)
Commonwealth Savings Bank ..	4,410,123	2,084,314	4,495,323	2,165,141
State Savings Bank of Victoria ..	1,496,183	577,041	1,513,109	585,108
Savings Bank of South Australia ..	557,942	(c) 163,440	572,838	(c) 167,806
Hobart Savings Bank ..	91,691	(c) 33,584	93,430	(c) 34,221
Launceston Bank for Savings ..	77,493	24,150	80,821	23,436
Total	6,633,432	2,882,529	6,755,521	2,975,712

(a) Excludes special purpose and school bank accounts. (b) Inoperative accounts are those accounts with balances of less than £1 which have not been operated on for a period of over two years. (c) Estimated.

3. **Business Transacted.**—The following table shows details of the business transacted in Australia by savings banks during the years ended 30th June, 1953 and 1954:—

BUSINESS TRANSACTED IN AUSTRALIA.

(£'000.)

State or Territory.	Year ended 30th June, 1953.				Year ended 30th June, 1954.			
	Deposits During Year.	With- drawals During Year.	Interest Added During Year.	Amount on Deposit at 30th June, 1953.	Deposits During Year.	With- drawals During Year.	Interest Added During Year.	Amount on Deposit at 30th June, 1954.
COMMONWEALTH SAVINGS BANK.								
New South Wales ..	266,269	257,091	5,439	319,149	291,765	276,915	5,797	339,796
Victoria ..	82,328	75,077	1,401	85,137	90,606	83,140	1,571	94,174
Queensland ..	101,595	96,747	1,851	109,360	111,454	105,413	2,005	117,406
South Australia ..	21,836	19,277	422	25,483	24,073	21,842	478	28,192
Western Australia ..	46,698	44,929	854	49,794	51,587	49,679	912	52,614
Tasmania ..	10,685	9,531	210	12,170	11,165	10,691	225	12,869
Northern Territory ..	1,565	1,501	16	1,116	1,889	1,716	19	1,308
Australian Capital Ter- ritory ..	2,737	2,439	35	2,154	3,312	3,177	39	2,328
Total ..	533,113	506,592	10,228	604,363	585,851	552,573	11,046	648,687
STATE SAVINGS BANKS.								
Victoria ..	179,500	173,200	4,187	234,834	189,832	183,467	4,408	245,607
South Australia ..	57,925	52,509	1,752	88,392	64,061	59,621	1,925	94,757
Tasmania ..	13,832	13,040	412	19,908	14,580	13,868	458	21,078
Total ..	251,257	238,758	6,351	343,134	268,473	256,956	6,791	361,442

ALL SAVINGS BANKS.

New South Wales ..	266,269	257,091	5,439	319,149	291,765	276,915	5,797	339,796
Victoria ..	261,828	248,277	5,588	310,971	280,438	266,607	5,979	339,781
Queensland ..	101,595	96,747	1,851	109,360	111,454	105,413	2,005	117,406
South Australia ..	79,761	71,786	2,174	113,875	88,124	81,463	2,403	122,949
Western Australia ..	46,698	44,929	854	49,794	51,587	49,679	912	52,614
Tasmania ..	23,917	22,580	622	32,078	25,745	24,559	683	33,947
Northern Territory ..	1,565	1,501	16	1,116	1,889	1,716	19	1,308
Australian Capital Ter- ritory ..	2,737	2,439	35	2,154	3,312	3,177	39	2,328
Total ..	784,370	745,350	16,570	947,497	854,324	809,529	17,837	1,010,129

4. Deposits.—The amount at credit of depositors' accounts and the average deposits per head of population for each State and Territory at 30th June, 1939 and 1950 to 1954 is shown in the following table:—

TOTAL DEPOSITS IN AUSTRALIA.

At 30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
COMMONWEALTH SAVINGS BANK.(a) (£'000.)									
1939	87,474	11,242	29,045	3,167	12,396	2,358	99	319	146,100
1950	258,874	58,441	92,201	16,657	39,612	9,144	859	1,451	477,239
1951	284,467	68,092	98,840	20,203	44,672	10,497	965	1,717	529,453
1952	304,532	76,485	102,661	22,502	47,171	11,406	1,036	1,821	567,614
1953	319,149	85,137	109,360	25,483	49,794	12,170	1,116	2,154	604,363
1954	339,796	94,174	117,406	28,192	52,614	12,869	1,308	2,328	648,687

STATE SAVINGS BANKS.(b)
(£'000.)

1939	..	69,219	..	24,230	..	6,038	..	..	99,487
1950	..	198,680	..	71,038	..	15,128	..	..	284,846
1951	..	213,687	..	77,646	..	16,658	..	..	307,991
1952	..	224,347	..	81,224	..	18,713	..	..	324,284
1953	..	234,834	..	88,392	..	19,908	..	..	343,134
1954	..	245,607	..	94,757	..	21,078	..	..	361,442

ALL SAVINGS BANKS.
(£'000.)

1939	87,474	80,461	29,045	27,397	12,396	8,396	99	319	245,587
1950	258,874	257,121	92,201	87,695	39,612	24,272	859	1,451	762,085
1951	284,467	281,779	98,840	97,849	44,672	27,155	965	1,717	837,444
1952	304,532	300,832	102,661	103,726	47,171	30,119	1,036	1,821	891,898
1953	319,149	319,971	109,360	113,875	49,794	32,078	1,116	2,154	947,497
1954	339,796	339,781	117,406	122,949	52,614	33,947	1,308	2,328	1,010,129

PER HEAD OF POPULATION.
(£ s. d.)

1939	31 16 7	42 16 8	28 10 7	45 18 6	26 7 5	35 1 5	15 14 8	25 7 4	35 4 11
1950	80 5 4	116 14 5	77 17 0	125 4 8	71 0 0	86 17 6	56 2 5	60 15 8	93 2 0
1951	85 15 1	124 3 5	81 12 0	135 17 11	76 16 6	93 7 5	58 15 7	68 19 7	99 6 6
1952	89 17 6	128 16 2	82 17 11	140 5 1	78 9 1	99 13 11	62 17 5	67 19 7	103 2 6
1953	92 14 3	134 4 0	86 8 3	150 7 10	80 0 7	103 2 6	65 8 2	72 13 6	107 6 3
1954	99 4 10	138 15 2	89 2 1	154 2 2	82 5 2	109 18 9	79 6 9	76 15 8	112 8 11

(a) In addition to the amounts shown above, the Commonwealth Bank had deposits at offices in Papua, New Guinea, London and British Solomon Islands totalling:—1939, £780,000; 1950, £2,380,000; 1951, £2,841,000; 1952, £3,285,000; 1953, £3,785,000; and 1954, £4,190,000. (b) The State savings banks in New South Wales, Queensland, Western Australia and Tasmania were absorbed by the Commonwealth Savings Bank.

5. Deposits per head and Purchasing Power.—Particulars of the deposits per head of population, actual and adjusted to purchasing power by the application of retail price index-numbers, at 30th June, in each of the years 1939 and 1950 to 1954 are shown in the following table. In calculating the index-numbers in this table the average of deposits per head of population at 30th June, 1937, 1938 and 1939 has been used as a base and made equal to 1,000.

ALL SAVINGS BANKS : DEPOSITS PER HEAD OF POPULATION, AUSTRALIA.

At 30th June—				Actual		Adjusted to Purchasing Power.(a)	
				Deposits per head of population.	Index-Number.	Deposits per head of population.	Index-Number.
				£	1937-1939 = 1000	£	1937-1939 = 1000
1939	..	..	..	35.25	1,018	34.32	991
1950	..	..	..	93.10	2,689	54.20	1,565
1951	..	..	..	99.32	2,869	48.39	1,397
1952	..	..	..	103.13	2,979	41.75	1,206
1953	..	..	..	107.31	3,099	41.79	1,207
1954	..	..	..	112.45	3,248	43.21	1,248

(a) On the basis of the All Items ("C") Series of Retail Price Index-numbers (6 capitals) for June quarter in each year. (Base : Average of June quarters, 1937, 1938 and 1939 = 1,000.)

In interpreting the figures above it should be remembered that savings bank accounts are used to some extent by institutions and business people, as well as by individuals for the investment of personal savings. The relative extent to which savings bank accounts are used for business purposes, etc., may, and probably does, fluctuate considerably from time to time.

6. **School Banking.**—With the object of encouraging principles of thrift amongst children, agencies of the Savings Banks have been established at most of the schools throughout Australia. Particulars of operative accounts for the Commonwealth at 30th June of the years 1939 and 1950 to 1954 appear below :—

SCHOOL SAVINGS BANKS : AUSTRALIA.

At 30th June—				Number of School Agencies.	Number of Operative Accounts.	Deposits.	Deposits per Operative Account.
						£	£ s. d.
1939	..	..	..	9,535	560,116	1,090,703	1 18 11
1950	..	..	..	8,262	576,670	3,027,666	5 5 0
1951	..	..	..	8,239	591,915	3,369,872	5 13 10
1952	..	..	..	8,219	638,476	3,866,793	6 1 2
1953	..	..	..	8,148	684,527	4,375,185	6 7 10
1954	..	..	..	8,179	724,038	4,831,538	6 13 6

7. **War Savings and Savings Certificates.**—Sales of savings certificates and stamps under the War Savings and Savings Certificate schemes, particulars of which were given in earlier issues of the Official Year Book (*see* No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. This method of saving was replaced by special savings schemes to operate through the savings banks. Employers were asked to co-operate by forming employee savings groups and by making regular deductions from wages and salaries for payment into group savings bank accounts, and thence, at the end of each quarter to individual accounts. The total value of certificates outstanding at 30th June in each of the last five years was :—1950, £55,025,000; 1951, £48,115,000; 1952, £41,809,000; 1953, £35,601,000; 1954, £30,310,000.

8. **Commonwealth Savings Bank.**—(i) *General.* The Savings Bank Department of the Commonwealth Bank opened for business in Victoria on 15th July, 1912; in Queensland on 16th September, 1912; in the Northern Territory on 21st October, 1912; and in New South Wales, South Australia and Western Australia on 13th January, 1913. The Tasmanian State Savings Bank was absorbed by the Commonwealth Bank in January,

1913, the Queensland State Savings Bank was taken over in 1920 and the New South Wales and Western Australian State Savings Banks in 1931. The Savings Bank Department was separated from the General Bank on 9th June, 1928, and established as a separate institution known as the "Commonwealth Savings Bank of Australia". It has since then operated independently, publishing its own balance-sheets and profit and loss accounts. The Commonwealth Bank Act 1927, which provided for the establishment of the Commonwealth Savings Bank as a separate institution, provided for a Commission of three members to manage the Savings Bank. This Commission was never appointed and the Commonwealth Bank Act 1945 placed the control of the Commonwealth Savings Bank under the Governor of the Commonwealth Bank.

(ii) *Balance-sheet, 30th June, 1953 and 1954.* Particulars of the liabilities and assets of the Commonwealth Savings Bank as at 30th June, 1953 and 1954 were as follows :—

COMMONWEALTH SAVINGS BANK(a) : LIABILITIES AND ASSETS, 30th JUNE.
(£'000.)

Liabilities.	1953.	1954.	Assets.	1953.	1954.
Reserve Fund ..	7,676	8,276	Cash Balances and Money at Short Call	61,767	67,856
Depositors' Balances and Accrued Interest	609,092	653,910	Australian Notes and Coin	732	709
Contingency Account and other Liabilities	16,735	19,036	Government Securities	436,812	451,331
			Securities of Municipal and other Public Authorities ..	58,745	67,668
			Bank Premises ..	3,014	3,492
			Loans and Advances ..	64,750	80,671
			Other Assets ..	7,683	9,495
Total ..	633,503	681,222	Total ..	633,503	681,222

(a) Includes branches in London, Territories of Papua and New Guinea, and British Solomon Islands.

(iii) *Profits.* Under the terms of the Savings Bank Amalgamation Agreements the profits of the Commonwealth Savings Bank in New South Wales, Queensland, Western Australia and Tasmania are equally divided between the Bank and the former controlling authorities in those States. Net profits for the years ended 30th June, 1939 and 1950 to 1954 and the distribution of those profits are shown in the following table.

COMMONWEALTH SAVINGS BANK : DISTRIBUTION OF PROFITS.

(£.)

Year ended 30th June—	Total Profit.	Payments to State Authorities under Savings Bank Amalgamation Agreements.					Published Profit.	Distribution of Published Profit.	
		New South Wales. (a)	Queensland. (b)	Western Australia. (c)	Tasmania. (d)	Total.		National Debt Sinking Fund.	Savings Bank Reserve Fund.
1939 ..	532,736	168,878	30,464	13,251	3,861	216,454	316,282	158,141	158,141
1950 ..	1,492,459	430,781	159,705	24,255	4,921	619,752	872,707	436,353	436,354
1951 ..	1,616,082	459,959	170,191	30,370	9,321	669,841	946,241	473,120	473,121
1952 ..	1,522,597	453,200	140,443	20,122	7,024	620,789	901,718	450,859	450,859
1953 ..	1,525,475	497,082	94,795	23,544	4,984	620,405	905,070	452,535	452,535
1954 ..	2,031,371	629,614	155,365	33,217	12,439	830,635	1,200,736	600,368	600,368

(a) Paid to Rural Bank of New South Wales.

(b) Paid to State Consolidated Revenue Funds.

9. *State Savings Banks.*—(i) *Assets, 1954.* At 30th June, 1954 or in the case of Tasmania, 31st August, 1954, the assets of State savings banks amounted to £383,423,000, distributed as shown in the following table.

STATE SAVINGS BANKS : ASSETS, 30th JUNE, 1953 AND 1954.

(£'000.)

Particulars.	30th June, 1954.				30th June, 1953.
	Victoria.	South Australia.	Tasmania. (a)	Total.	Total.
Cash in hand, in transit and on Current Account	5,529	1,918	978	8,425	9,733
Fixed Deposits	41,862	13,060	1,705	56,627	54,477
Outstanding Interest, Dividends and Rents	1,874	636	222	2,732	2,530
Government Securities	120,783	52,401	6,918	180,102	178,207
Municipal and other Public Securities	74,751	16,712	7,574	99,037	87,820
Mortgages	13,755	15,528	5,430	34,713	29,557
Landed and House Property ..	1,000	560	222	1,782	1,631
All other Assets .. ..	..	..	5	5	11
Total Assets	259,554	100,815	23,054	383,423	363,966

(a) At 31st August, 1954.

(b) State totals were: Victoria, £248,135,000; South Australia, £93,997,000; and Tasmania, £21,834,000.

(ii) *Profit and Loss Accounts, 1953-54.* Details of the profit and loss accounts of the several State savings banks for the year 1953-54 are given below :—

STATE SAVINGS BANKS : PROFIT AND LOSS ACCOUNTS, 1953-54.

(£'000.)

Particulars.	1953-54.				1952-53.
	Victoria.	South Australia.	Tasmania. (a)	Total.	Total.
Receipts—					
Total, Interest, Dividends, Rents, and all other ..	7,325	3,056	753	11,134	10,065
Expenditure—					
Interest allotted to Depositors	4,050	1,766	478	6,294	5,944
Provision for accrued interest on Depositors' Balances ..	394	200	..	594	530
Expenses of Management ..	2,190	698	170	3,057	2,923
All other Expenditure ..	247	48	2	297	252
Total	6,881	2,712	650	10,242	9,649
Profit for year	445	344	103	892	416
Balance of profit and loss account brought forward	170	137	106	413	403
Total	615	481	209	1,305	819
Distribution of Profits—					
Amount written off Bank Premises	69	31	38	138	43
Amount carried to Reserves and Depreciation Funds ..	419	300	65	784	362
Balance of Profit and Loss Account carried forward ..	127	150	106	383	414

(a) Year ended 31st August, 1954.

10. **Classification of Depositors' Balances.**—The classification of deposits published by savings banks does not permit a fully detailed analysis with respect to Australia as a whole, but information supplied to the Royal Commission on Monetary and Banking Systems, for all savings banks except the Hobart Trustee Savings Bank, shows that at 30th June, 1936 the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £250, 21 per cent.; over £250 but under £500, 23 per cent.; over £500 but under £1,000, 25 per cent.; while those of over £1,000 accounted for 10 per cent. School, penny bank and small inoperative accounts were excluded in determining these percentages.

A similar classification as at 30th June, 1936, 1939 and 1950 to 1954, but relating only to the combined State Savings Banks of Victoria and South Australia, is shown below.

STATE SAVINGS BANKS : CLASSIFICATION OF DEPOSITS.

(Per cent.)

At 30th June—	£100 and under.	£101-£300.	£301-£500.	Total under £501.	£501-£1,000.	Over £1,000.
1936.. ..	19.54	26.13	17.84	63.51	27.42	9.07
1939.. ..	20.27	27.15	17.90	65.32	26.14	8.54
1950.. ..		48.44		48.44	32.81	18.75
1951.. ..		47.45		47.45	32.22	20.33
1952.. ..		45.85		45.85	32.33	21.82
1953.. ..		43.88		43.88	32.73	23.39
1954.. ..		42.17		42.17	32.03	25.80

11. **Rates of Interest on Deposits.**—The following tables show the rates of interest allowed at 30th June, 1939 and 1950 to 1954 by State and trustee savings banks and by the Commonwealth Savings Bank.

SAVINGS BANKS : INTEREST RATES(a) ON DEPOSITS.

(Per cent. per annum.)

Particulars.	Interest Rate at 30th June.					
	1939.	1950.	1951.	1952.	1953.	1954.
Part of Balance not exceeding £500—						
Commonwealth Savings Bank ..	2	2	2	2	2½	2½
State Savings Bank of Victoria ..	2	2	2	2	2½	2½
Savings Bank of South Australia (b)(c) ..	3	2½	2½	2½	2½	2½
The Hobart Savings Bank(b) ..	3	2½	2½	2½	2½	2½
The Launceston Bank for Savings(b) ..	3	2½	2½	2½	2½	2½
Part of balance in excess of £500 but not exceeding £1,500(d)—						
Commonwealth Savings Bank(e) ..	1½	1	1	1	1½	1½
State Savings Bank of Victoria ..	2	1	1	1	1½	1½
Savings Bank of South Australia ..	2½	1½	1½	1½	1½	1½
Deposit Stock—						
State Savings Bank of Victoria ..	2½	1	1	1	1½	1½
Savings Bank of South Australia ..	..	1	1	1	1½	1½

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1954 were—Commonwealth Savings Bank and State Savings Bank of Victoria, 2½ per cent. on first £2,000, 1½ per cent. on balance; Savings Bank of South Australia, £1-£500 2½ per cent., £501-£2,000 2½ per cent., 1½ per cent. on balance. (b) The interest bearing limit for these banks was increased from £300 to £450 from 13th April, 1951. (c) £1-£200. Rate on £201 to £500 was 2½ per cent. (d) The interest bearing limit was increased from £1,000 to £1,500 from 1st June, 1954. (e) Up to 1941 the interest bearing limit in all States except Queensland was £1,300. In Queensland it was £2,000. The limit from 1942 to 1953 was £1,000 in all States.

C. COMPANIES.

NOTE.—Statistics available in regard to companies relate to (a) Trustee, Executor and Agency Companies; (b) Building and Investment Societies; and (c) Co-operative Societies.

§ 1. Trustee, Executor and Agency Companies.

The following table shows, for the years 1939 and 1949 to 1953, particulars of the assets and liabilities of certain trustee companies transacting business in Australia and New Zealand. Details have been extracted from a summary of the last published balance-sheets for the various years, as shown in the *Australasian Insurance and Banking Record*.

TRUSTEE, EXECUTOR AND AGENCY COMPANIES.
AUSTRALIA AND NEW ZEALAND.

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
Number of Companies ..	23	24	24	24	24	24
Liabilities—	£	£	£	£	£	£
Capital paid-up	1,408,452	1,528,452	1,528,452	1,528,452	1,528,452	1,528,452
Reserves and undistributed Profits	1,254,262	1,472,884	1,483,424	1,508,912	1,511,506	1,533,107
Other Liabilities	621,069	823,804	867,364	901,314	1,000,752	1,107,642
Total Liabilities ..	3,283,783	3,825,140	3,879,240	3,938,678	4,040,800	4,169,201
Assets—						
Deposits with Government, Public Securities, Fixed Deposits, etc.	966,847	1,437,640	1,450,221	1,511,739	1,393,241	1,463,523
Mortgages	547,705	431,629	412,203	313,295	294,206	276,590
Property	1,104,216	1,051,434	1,111,837	1,117,672	1,140,140	1,149,490
Cash	102,300	240,784	206,538	265,985	478,812	481,606
Other Assets	562,715	633,653	698,441	729,987	734,392	797,992
Total Assets	3,283,783	3,825,140	3,879,240	3,938,678	4,040,800	4,169,201
Total Trust Fund Assets	(a)157,256	(a)190,594	(a)195,982	(a)203,585	(a)208,168	(b)219,155

(a) Nine offices only.

(b) Ten offices only.

§ 2. Building and Investment Societies.

1. Summary.—During 1952, returns were received from 960 societies, but the information is not exhaustive, as particulars regarding a number of organizations are not included. In the following table general information is given relating to the societies for the year 1952.

BUILDING AND INVESTMENT SOCIETIES : SUMMARY, 1951-52.

Particulars.		N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Societies making returns—								
Permanent ..	No.	25	19	5	5	6	5	65
Terminating ..	No.	870	21	3	18	2	..	895
Total ..	No.	895	21	8	23	8	5	960
Number of shareholders ..		105,427	11,805	24,069	23,016	24,537	6,124	194,978
„ shares ..	b	1,887,139	1,126,692	7,160,084	108,313	(c)	87,556	(c)
„ borrowers ..	(d)	9,644	17,752	8,924	3,439	3,980	2,303	46,042
Income for year from interest, etc. ..	£	898,721	699,994	182,559	57,675	110,827	83,410	2,033,186
Working expenses for year ..	£	619,506	576,392	243,274	28,110	33,736	25,237	1,526,255
Amounts of deposits during year ..	£	976,424	900,031	805,988	393,464	532,837	33,066	3,641,810
Repayment of loans during year ..	£	1,727,031	2,474,413	1,099,772	263,380	556,420	369,282	6,491,207
Loans granted during year ..	£	3,282,857	3,011,250	1,601,187	415,190	715,005	544,429	9,570,017

(a) Year 1952; excludes Co-operative Housing Societies, for details of which see para. 3.
 (b) Terminating societies only—Starr-Bowkett Societies, 386,644 and other terminating societies, 1,500,495. (c) Not available. (d) Permanent societies only. (e) Incomplete—other terminating societies not available.

2. Liabilities and Assets.—Particulars of liabilities and assets in 1951-1952 of the 960 societies mentioned in the previous paragraph are shown below.

BUILDING AND INVESTMENT SOCIETIES : LIABILITIES, 1951-52.

(£.)

State.	Paid-up Capital and Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
New South Wales ..	15,654,945	1,918,015	1,102,390	52,122,298	70,797,648
Victoria (a) ..	4,145,070	1,262,710	3,115,116	5,668,371	14,191,267
Queensland ..	3,819,358	96,969	161,264	424,087	4,501,678
South Australia ..	1,679,649	210,643	169,745	16,650	2,076,687
Western Australia ..	1,945,168	55,103	344,561	(b) 221,948	2,566,780
Tasmania ..	1,236,069	146,640	188,636	133,733	1,705,078
Total ..	28,480,259	3,690,080	5,081,712	58,587,087	95,839,138

(a) Year 1952.

(b) Includes net accumulated profits, £70,429.

BUILDING AND INVESTMENT SOCIETIES : ASSETS, 1951-52.

(£.)

State.	Advances on Mortgage.	Landed and House Property Furniture, etc.	Cash in Hand and on Deposit.	Other Assets.	Total Assets.
New South Wales ..	668,472,812	(b)	330,632	1,994,204	70,797,648
Victoria (c) ..	13,867,562	184,481	11,263	127,961	14,191,267
Queensland ..	4,437,686	25,112	23,282	15,598	4,501,678
South Australia ..	1,834,726	43,528	109,599	88,834	2,076,687
Western Australia ..	2,399,393	34,753	41,647	90,987	2,566,780
Tasmania ..	1,631,441	11,841	1,669	60,127	1,705,078
Total ..	92,643,620	299,715	518,092	2,377,711	95,839,138

(a) Includes Starr-Bowkett and other terminating societies:—New South Wales, £60,463,722; Queensland, £664,190. (b) Not available. Included in Other Assets. (c) Year 1952.

3. **Co-operative Housing Societies, Victoria.**—In addition to the information shown above, the following details of co-operative housing societies in Victoria have been extracted from the 7th Annual Report of the Registrar of Co-operative Housing Societies. At 30th April, 1952, 204 co-operative housing societies were registered in Victoria with 20,778 members who had subscribed for 634,943 shares giving a nominal share capital subscribed of £34,059,654. For the ten months ended 30th April, 1952, returns were submitted by 187 societies, the total income of those societies being £137,045, and total expenditure £108,163. The liabilities at 30th April, 1952 of the societies submitting returns were:—bank overdraft, £13,973,664; subscriptions, £1,899,783; surplus interest and management expenses, £207,489; other liabilities, £259,625; total liabilities £16,340,561. Assets at the same date consisted of:—advances, £16,154,590; other assets, £185,971; total assets, £16,340,561.

§ 3. Co-operative Societies.

Co-operative societies are divided into three classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as Producers' Co-operative Societies and the second as Consumers' Co-operative Societies. The particulars given for New South Wales relate to societies registered under the Co-operative Act 1923-1945. A summary of the business of all co-operative societies for the years 1951-52 or 1952 for all States except Western Australia is given in the following tables. For Western Australia details of the business during 1940-41 (the latest year available) are given. Separate particulars for each of the three types of Co-operative Societies is given in the Annual *Finance Bulletin* (see No. 44, pages 176 and 177).

CO-OPERATIVE SOCIETIES.

Particulars.	N.S.W. 1951-52.	Vic. 1951-52.	Q'land. 1951-52.	S. Aust. 1952.	W. Aust. 1940-41.	Tas. 1951-52.
SUMMARY.						
Number of Societies ..	291	100	174	63	85	11
" Branches ..	(a)	81	89	50	36	7
" Members ..	183,066	63,638	112,269	96,134	21,663	12,686
Gross Turnover (Sales) £	66,303,539	21,388,264	33,764,033	10,974,251	2,548,776	2,819,524
Other Income ..	3,564,234	1,152,020	1,253,510	609,507	698,449	127,489
Total Income ..	69,869,773	22,540,284	35,017,543	11,583,758	3,247,225	2,947,013
Total Purchases during Year £	58,122,487	17,917,335	28,488,752	9,201,065	2,354,419	2,214,216
Other Expenditure ..	11,567,235	4,132,186	7,139,386	2,242,035	850,741	794,173
Total Expenditure ..	69,689,722	22,049,521	35,628,138	11,443,100	3,105,160	3,008,389
Rebates and Bonuses ..	657,380	146,289	359,175	463,408	15,472	58,873
Dividends on Share Capital £	204,716	110,805	108,808	59,776	19,097	13,159

LIABILITIES AND ASSETS.

(£.)

Liabilities—						
Paid-up Capital ..	6,080,837	2,198,721	3,534,534	1,436,962	469,144	284,459
Loan Capital ..	..	295,707	926,443	1,310,628	225,009	87,685
Bank Overdrafts ..	4,604,952	1,437,550	3,924,917	617,507	61,388	338,052
Accumulated Profits ..	..	764,136	730,771	326,449	22,814	127,924
Reserve Funds ..	3,493,791	1,580,403	3,967,605	764,899	322,255	128,199
Sundry Creditors ..	..	2,123,010	4,264,548	675,275	374,533	571,755
Other Liabilities ..	8,776,825	396,184	595,806	1,819,931	457,371	95,962
Total Liabilities ..	22,956,405	8,797,711	17,944,624	6,951,651	1,932,514	1,634,036
Assets—						
Land and Buildings ..	..	..	3,204,992	975,420	510,279	461,403
Machinery, Plant and other fixed Assets ..	7,993,808	3,522,162	4,936,819	727,396	247,143	120,492
Stocks ..	5,002,017	2,300,273	3,566,636	2,916,293	351,437	608,330
Sundry Debtors ..	5,061,023	2,274,369	5,034,597	760,482	468,608	372,086
Cash in hand and on deposit ..	..	103,983	487,767	468,658	191,383	7,882
Profit and Loss Account ..	..	88,689	57,710	6,065	50,025	400
Other Assets ..	4,899,557	508,235	656,103	1,096,737	113,639	63,443
Total Assets ..	22,956,405	8,797,711	17,944,624	6,951,651	1,932,514	1,634,036

(a) Not available.

D. INSURANCE.**§ 1. Introductory.**

1. **Legislation.**—Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate in regard to “insurance other than State insurance; also State insurance extending beyond the limits of the State concerned”. Commonwealth legislation includes the Marine Insurance Act 1909 defining the limits of marine insurance and regulating the terms of contracts, etc., the Insurance Act 1932–1937 requiring the lodgment of deposits by insurance companies, and the Life Insurance Act 1945–1953 generally regulating life insurance business in Australia. The Marine Insurance Act 1909 and the Insurance Act 1932–1937 have limited application, and, except for life insurance business which is regulated by the Life Insurance Act 1945–1953, insurance business is conducted under State laws.

2. **Insurance Act 1932–1937.**—Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer.

Money deposited is invested by the Treasurer in prescribed securities selected by the depositor, and all interest is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies.

Deposits held by States on 1st February, 1932, could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance businesses under the Act :—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; and friendly society, union and association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and, under the Life Insurance Act 1945–1953, ceased to apply to life insurance business.

3. **Life Insurance Act 1945–1953.**—The objects of this Act are :—(a) To replace all State legislation on the subject of life insurance and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act was assented to on 16th August, 1945, and came into operation on 20th June, 1946. A summary of the provisions of the Act is given in Official Year Book No. 37 (pages 595 to 597).

The main amendment by the Life Assurance Act, No. 94 of 1953 was to repeal Part VI. of the principal Act, which provided for the establishment of a Commonwealth Government Insurance Office.

4. **Deposits under Insurance Acts.**—Deposits lodged under the Insurance Acts at 30th June, 1953, totalled £5,230,089, comprising £1,087,232 held by the Commonwealth in respect of life insurance and £3,397,097 held by the Commonwealth and £745,760 held by the States in respect of other forms of insurance.

The deposits comprise cash £424,750, government, municipal and other securities £3,857,639, fixed deposits £63,450, bank guarantees and undertakings £528,000, titles and mortgages £356,250.

§ 2. Life Assurance.

1. **General.**—Statistical returns have been collected from life assurance institutions since 1907. Until 1946 these returns were collected under the Census and Statistics Act. Since 1947 returns lodged under the Life Insurance Act 1945–1953 have been used to

compile life assurance statistics. This change in method of collection has resulted in some slight changes in definition and, as a result, the statistics for 1947 and later years are not in all cases strictly comparable with those for earlier years. In earlier years statistics of revenue and expenditure and of assets and liabilities, although generally related only to the life assurance business of the offices making the returns, included, in some cases, a small amount of other classes of business. Under the Life Insurance Act 1945-1953 companies transacting life assurance business are required to set up separate statutory funds for their life assurance business. As a result of this, it has been possible to separate life assurance business from other classes of business. Except where otherwise indicated, the figures in the succeeding paragraphs refer to Australian business only. Business in the Territories of Papua and New Guinea is, however, included in the Australian figures.

2. **Offices Transacting Business.**—The number of offices which transacted life assurance business in Australia during 1952 was 24, including three overseas companies. Of the twenty-one Australian offices, six are purely mutual, including one which transacts general business in respect of which share capital is used, thirteen are public companies, and two are State Government institutions. Of the total offices, thirteen transacted both ordinary and industrial business, and two industrial business only. Ordinary and industrial business has, where possible, been kept separate.

3. **Australian Business—Policies in Existence.**—In the following table details of policies on the registers in each State and the Australian Capital Territory are given for the year 1952:—

LIFE ASSURANCE: POLICIES EXISTING IN AUSTRALIA, 1952.

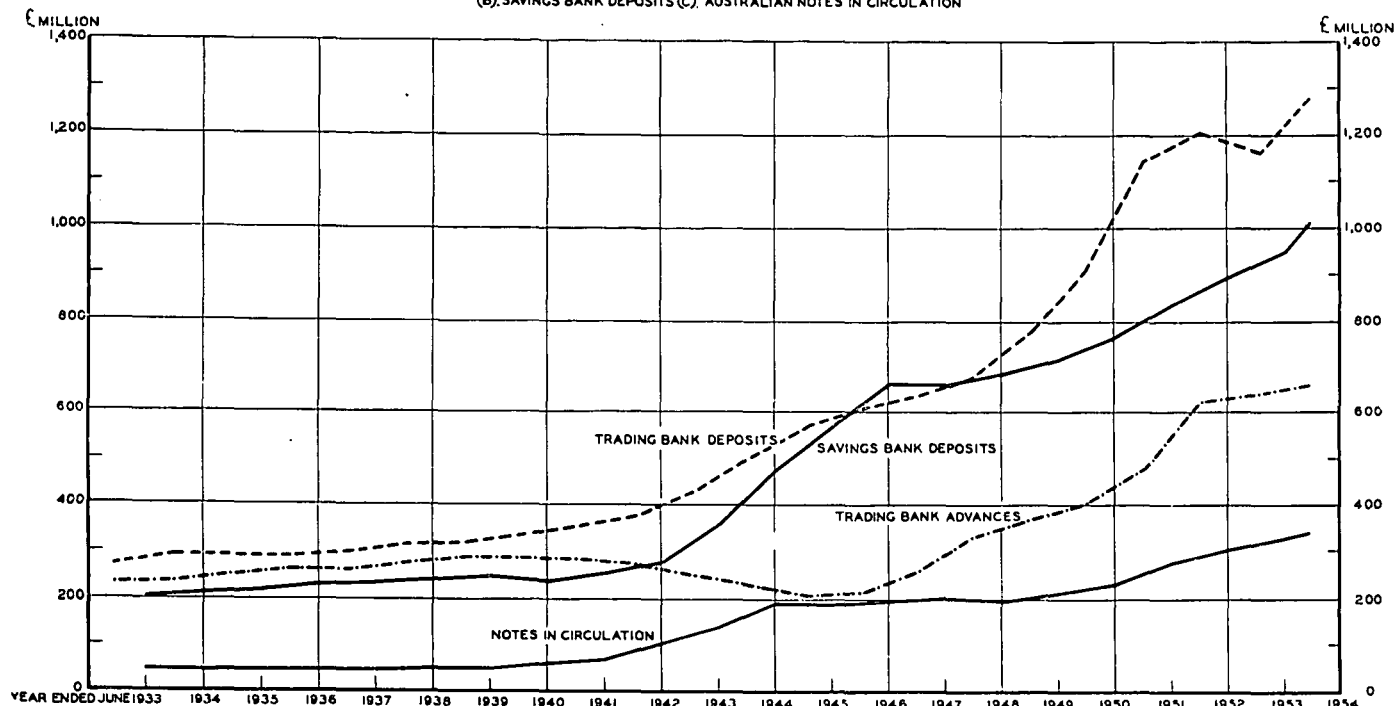
State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.		
	Number of Policies.	Sum Assured. (£'000.)	Bonus Additions. (£'000.)	Annual Premiums. (£'000.)	Number of Policies.	Annuities Per Annum. (£.)	Annual Premiums. (£.)
ORDINARY DEPARTMENT.							
New South Wales ..	990,730	490,236	44,796	17,077	4,753	1,040,887	306,839
Victoria ..	764,005	408,824	35,584	14,355	6,790	4,122,626	866,687
Queensland(b) ..	458,148	217,077	16,718	6,951	909	74,388	16,606
South Australia ..	252,488	123,257	11,071	4,386	901	77,193	15,732
Western Australia ..	172,153	85,504	8,019	3,078	598	61,937	11,885
Tasmania ..	85,842	44,631	3,711	1,484	700	71,546	19,330
Australian Capital Territory ..	7,918	8,945	460	303	1,589	138,535	17,402
Total ..	2,731,284	1,378,474	120,359	47,634	16,240	5,587,112	1,254,481
INDUSTRIAL DEPARTMENT.							
New South Wales ..	1,434,431	100,934	2,646	5,095	..	..	..
Victoria ..	1,245,552	86,191	2,483	4,409	I	I3	..
Queensland(b) ..	446,039	32,297	806	1,620	..	..	..
South Australia ..	404,863	25,991	750	1,322	..	..	..
Western Australia ..	239,516	17,628	440	877	..	..	..
Tasmania ..	97,489	6,872	202	339	..	..	..
Australian Capital Territory ..	4,836	410	16	20	..	..	..
Total ..	3,872,726	270,323	7,343	13,682	I	I3	..

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

BANK DEPOSITS AND ADVANCES AND NOTES IN CIRCULATION : AUSTRALIA 1933 to 1954

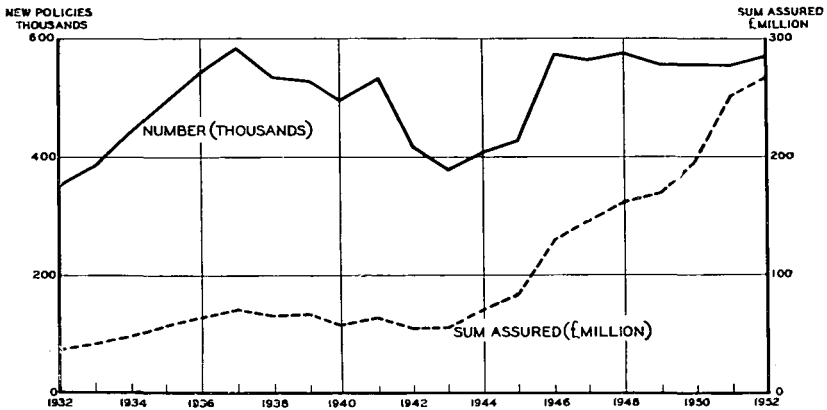
(a) PRIVATE TRADING BANKS (1), TOTAL DEPOSITS (2), ADVANCES
(b) SAVINGS BANK DEPOSITS (c), AUSTRALIAN NOTES IN CIRCULATION



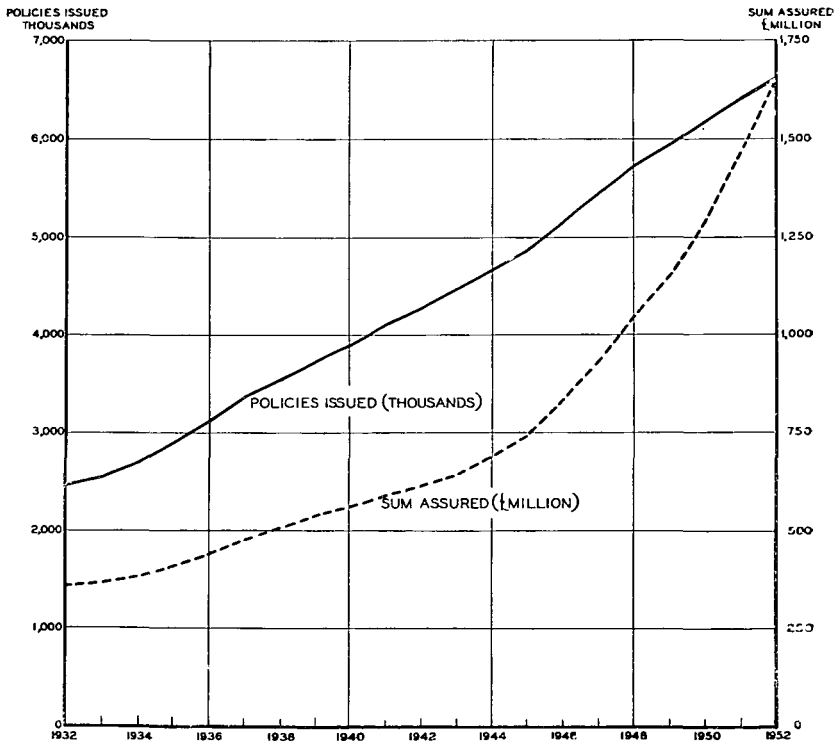
LIFE ASSURANCE : AUSTRALIA, 1932 to 1952

POLICIES ISSUED AND SUM ASSURED

NEW POLICIES ISSUED



TOTAL EXISTING BUSINESS



The following table shows particulars of policies existing at the end of the years 1939 and 1948 to 1952 inclusive:—

LIFE ASSURANCE: POLICIES EXISTING IN AUSTRALIA.

At End of Year—	Assurance and Endowment Policies.				Annuity Policies.	
	Number of Policies.	Sum Assured. (£'000.).	Average per Policy. (£).	Annual Premiums. (£'000.).	Number of Policies.	Annuities per Annum. (£).
ORDINARY DEPARTMENT.						
1939 ..	1,243,378	427,291	344	(a) 13,954	3,826	384,584
1948 ..	2,070,939	834,467	403	28,767	12,644	2,511,865
1949 ..	2,224,240	930,791	419	32,109	14,138	2,802,424
1950 ..	2,377,032	1,047,145	441	36,081	12,748	3,406,314
1951 ..	2,553,710	1,211,970	475	41,868	14,459	4,346,634
1952 ..	2,731,284	1,378,474	505	47,634	16,240	5,587,112
INDUSTRIAL DEPARTMENT.						
1939 ..	2,491,742	111,862	45	(a) 6,490	2	58
1948 ..	3,642,887	209,012	57	11,452	3	75
1949 ..	3,725,017	224,012	60	12,001	2	39
1950 ..	3,793,074	238,321	63	12,517	1	13
1951 ..	3,842,716	253,594	66	13,069	1	13
1952 ..	3,872,726	270,323	70	13,682	1	13

(a) Annual premium income.

4. New Policies issued in Australia. During 1952 298,797 new policies for £233,186,000 were issued in the Ordinary Department. The average amount per policy was £780 as compared with an average of £475 per policy for all ordinary policies existing at the end of 1951.

In the Industrial Department, 270,391 new policies were issued during 1952 assuring £34,367,000. The average amount per policy was £127 as compared with an average of £66 per policy for all industrial policies existing at the end of 1951.

In the following table details are given of new policies issued in each State and the Australian Capital Territory during 1952 for each class of business:—

LIFE ASSURANCE: NEW POLICIES ISSUED IN AUSTRALIA, 1952.

State or Territory. (a)	Assurance and Endowment Policies.				Annuity Policies.			
	Number of Policies.	Sum Assured. (£'000.).	Premiums.		Number of Policies.	Annuities per Annum. (£'000.).	Premiums.	
			Single. (£'000.).	Annual. (£'000.).			Single. (£'000.).	Annual. (£'000.).
ORDINARY DEPARTMENT.								
New South Wales ..	110,992	81,271	94	2,904	636	228	88	76
Victoria ..	81,397	69,381	75	2,433	1,514	1,427	465	321
Queensland(b) ..	50,071	36,312	120	1,182	118	12	18	4
South Australia ..	25,721	21,069	36	801	95	14	5	4
Western Australia ..	19,482	14,637	19	561	70	14	16	4
Tasmania ..	10,154	8,563	4	301	51	16	6	6
Australian Capital Territory ..	980	1,953	17	58	118	30	2	3
Total ..	298,797	233,186	365	8,240	2,602	1,741	600	418
INDUSTRIAL DEPARTMENT.								
New South Wales ..	99,573	13,342	..	612	..	..	..	..
Victoria ..	80,386	9,994	..	461	..	..	..	..
Queensland(b) ..	36,116	4,316	..	200	..	..	..	..
South Australia ..	26,984	3,168	..	145	..	..	..	..
Western Australia ..	19,426	2,556	..	117	..	..	..	..
Tasmania ..	7,486	937	..	42	..	..	..	..
Australian Capital Territory ..	420	54	..	2	..	..	..	..
Total ..	270,391	34,367	..	1,579	..	..	..	..

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

New policies issued in Australia during each of the years 1939 and 1948 to 1952 were as shown in the following table :—

LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA.

Year.	Assurance and Endowment Policies.				Annuity Policies.			
	Number of Policies.	Sum Assured. (£'000.).	Premiums.		Number of Policies.	Annuities per Annum. (£'000.).	Premiums.	
			Single. (£'000.).	Annual. (£'000.).			Single. (£'000.).	Annual. (£'000.).

ORDINARY DEPARTMENT.

1939	142,157	48,263	(a)	(a)	420	87	(a)	(a)
1948	261,506	131,903	360	4,749	1,999	567	352	171
1949	253,793	140,395	347	5,030	2,533	507	468	136
1950	265,846	167,271	364	5,891	2,879	878	560	209
1951	287,647	221,132	460	7,854	2,658	1,300	649	380
1952	298,797	233,186	355	8,240	2,602	1,741	600	418

INDUSTRIAL DEPARTMENT.

1939	385,498	18,542	(a)	(a)	..	..	..	..
1948	312,402	29,655	13	1,357	..	..	..	..
1949	300,988	29,690	7	1,367	..	..	..	..
1950	289,275	29,632	7	1,367	..	..	..	..
1951	266,577	30,661	..	1,413	..	..	..	..
1952	270,391	34,367	..	1,579	..	..	..	..

(a) Not available.

5. Policies Matured or Otherwise Discontinued in Australia.—The volume of business discontinued from various causes in each year is always large. In the following table details are given of ordinary and industrial life assurance policies matured or otherwise discontinued in each State and the Australian Capital Territory during the year 1952.

LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA, 1952.

State or Territory.(a)	Assurance and Endowment			Annuity Policies.		
	Number of Policies.	Sum Assured. (£'000.).	Annual Premiums. (£'000.).	Number of Policies.	Annuities per Annum. (£'000.).	Annual Premiums. (£'000.).

ORDINARY DEPARTMENT.

New South Wales ..	47,172	25,279	949	260	42	33
Victoria ..	34,647	21,057	776	395	442	142
Queensland(b) ..	19,886	10,254	353	24	2	1
South Australia ..	8,647	4,480	185	18	3	..
Western Australia ..	6,763	3,495	138	34	3	1
Tasmania ..	4,021	2,149	79	42	3	1
Australian Capital Territory	92	— 20	— 7	48	5	1
Total ..	121,228	66,694	2,473	821	500	179

INDUSTRIAL DEPARTMENT.

New South Wales ..	96,049	7,145	388	..	..	..
Victoria ..	75,195	5,261	294	..	..	..
Queensland(b) ..	27,867	2,123	116	..	..	..
South Australia ..	21,362	1,476	82	..	..	..
Western Australia ..	14,885	1,157	62	..	..	..
Tasmania ..	4,824	458	24	..	..	..
Australian Capital Territory	199	18	1	..	..	..
Total ..	240,381	17,638	967	..	..	..

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

Policies matured or otherwise discontinued in Australia during each of the years 1939, 1948 to 1952 were as shown in the following table :—

**LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED
IN AUSTRALIA.**

Year.	Assurance and Endowment Policies.			Annuity Policies.		
	Number of Policies.	Sum Assured. (£'000.).	Annual Prem- iums. (£'000.).	Number of Policies.	Annuities per Annum. (£'000.).	Annual Prem- iums. (£'000.).
ORDINARY DEPARTMENT.						
1939	80,912	24,786	(a)	275	17	(a)
1948	92,296	37,932	1,445	816	234	223
1949	100,492	44,071	1,687	1,039	216	90
1950	113,054	50,917	1,920	4,269	274	71
1951	110,969	56,307	2,067	947	360	124
1952	121,228	66,694	2,473	821	500	179

INDUSTRIAL DEPARTMENT.

1939	262,096	12,132	(a)	..	..	..
1948	211,386	13,750	766	..	..	..
1949	219,041	14,690	819	I	..	..
1950	221,218	15,323	851	I	..	..
1951	216,935	15,388	861	..	..	..
1952	240,381	17,638	967	..	..	..

(a) Not available.

The number of policies and sums assured, excluding annuities, discontinued during the years 1939, 1948 to 1952 and the cause for discontinuance are given in the following table :—

**LIFE ASSURANCE : POLICIES(a) MATURED OR OTHERWISE DISCONTINUED
IN AUSTRALIA—CAUSE OF DISCONTINUANCE.**

Year.	Death or Maturity.	Surrender.	Forfeiture.	Other.	Total.
ORDINARY DEPARTMENT : NUMBER OF POLICIES.					
1939	22,529	18,409	39,382	— 128	80,192
1948	30,468	30,690	33,306	— 2,168	92,296
1949	32,867	35,889	34,013	— 2,277	100,492
1950	34,655	42,710	35,045	— 644	113,054
1951	36,150	43,347	33,259	— 1,787	110,969
1952	39,150	48,879	33,734	— 535	121,228

(a) Excludes annuities.

LIFE ASSURANCE : POLICIES(*a*) MATURED OR OTHERWISE DISCONTINUED
IN AUSTRALIA—CAUSE OF DISCONTINUANCE—*continued.*

Year.	Death or Maturity.	Surrender.	Forfeiture.	Other.	Total.
ORDINARY DEPARTMENT : SUM ASSURED. (£'000.).					
1939	5,612	5,863	13,414	— 103	24,786
1948	8,512	14,290	13,762	1,368	37,932
1949	9,340	17,956	14,909	1,866	44,071
1950	10,132	22,270	16,939	1,576	50,917
1951	10,816	24,303	18,108	3,080	56,307
1952	12,044	28,824	21,458	4,368	66,694
INDUSTRIAL DEPARTMENT : NUMBER OF POLICIES.					
1939	73,585	33,766	154,328	417	262,096
1948	107,492	37,651	66,272	— 29	211,386
1949	113,833	37,268	67,800	140	219,041
1950	115,594	38,699	66,542	383	221,218
1951	122,209	33,109	60,877	740	216,935
1952	136,117	43,769	60,402	93	240,381
INDUSTRIAL DEPARTMENT : SUM ASSURED. (£'000.).					
1939	2,759	1,372	7,976	25	12,132
1948	4,714	2,136	6,888	12	13,750
1949	4,962	2,231	7,466	31	14,690
1950	4,880	2,446	7,950	47	15,323
1951	5,056	2,462	7,819	51	15,388
1952	5,728	3,914	7,983	13	17,638

(*a*) Excludes annuities.

6. Premiums and Claims, Australia.—(*i*) *Premiums.* (*a*) *Ordinary Business.* Details of revenue from premiums in respect of the ordinary business of all offices doing business in Australia are shown in the following table for each State and the Australian Capital Territory for the year 1952 :—

ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS, 1952.
(£'000.)

State or Territory. (<i>a</i>)	Assurance and Endowment Premiums.		Consideration for Annuities.		Total.
	Single Premiums.	Other Premiums.	Single Premiums.	Other Premiums.	
New South Wales ..	99	16,966	87	300	17,452
Victoria	77	14,103	422	817	15,419
Queensland(<i>b</i>) ..	108	6,691	16	16	6,831
South Australia ..	37	4,266	5	15	4,323
Western Australia ..	19	3,003	16	11	3,049
Tasmania	4	1,416	6	18	1,444
Australian Capital Territory	17	285	2	139	443
Total	361	46,730	554	1,316	48,961

(*a*) Location of register of policies.

(*b*) Includes Territories of Papua and New Guinea.

The next table shows, for each of the years 1939 and 1948 to 1952, the aggregate Australian income from premiums in respect of ordinary business of all offices doing business in Australia :—

ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS.
(£'000.)

Year.	Assurance and Endowment Premiums.	Consideration for Annuities.	Total.
1939	13,954	184	14,138
1948	28,611	1,009	29,620
1949	31,904	1,158	33,062
1950	35,840	1,365	37,205
1951	41,265	1,679	42,944
1952	47,091	1,870	48,961

(b) *Industrial Business.* Premiums received on policies in 1952 amounted to :— New South Wales, £4,973,000; Victoria, £4,334,000; Queensland, £1,578,000; South Australia, £1,296,000; Western Australia, £849,000; Tasmania, £330,000; Australian Capital Territory, £19,000; Australia, £13,379,000. The Australian receipts from premiums for the years 1939 and 1948 to 1952 were as follows :—1939, £6,490,000; 1948, £11,182,000; 1949, £11,676,000; 1950, £12,207,000; 1951, £12,874,000; 1952, £13,379,000.

(ii) *Claims, etc., paid.* Details of the claims, etc., paid on policies in each State and the Australian Capital Territory during the year 1952 are shown in the following table :—

LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1952.
(£'000.)

State or Territory.(a)	Claims.		Sur- renders.	Annuities.	Cash Bonuses.	Total.
	Death or Disability.	Maturity.				
ORDINARY DEPARTMENT.						
New South Wales	3,144	2,323	1,316	151	42	6,976
Victoria	2,596	2,435	1,070	135	35	6,271
Queensland(b)	1,319	1,011	402	22	11	2,765
South Australia	719	650	184	29	7	1,589
Western Australia	534	338	199	18	10	1,099
Tasmania	286	180	96	18	2	582
Australian Capital Territory	25	16	20	6	..	67
Total	8,623	6,953	3,287	379	107	19,349
INDUSTRIAL DEPARTMENT.						
New South Wales	334	2,040	322	..	..	2,696
Victoria	267	1,901	234	..	..	2,402
Queensland(b)	101	617	97	..	..	815
South Australia	78	459	59	..	..	596
Western Australia	49	313	45	..	..	407
Tasmania	17	98	15	..	..	130
Australian Capital Territory	1	9	..	..	..	10
Total	847	5,437	772	..	..	7,056

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

In the following table details are given of claims, etc., paid on policies in Australia for each of the years 1939 and 1948 to 1952 :—

LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA.
(£'000.)

Year.	Claims.	Surrenders.	Annuities.	Cash Bonuses.	Total.
ORDINARY DEPARTMENT.					
1939	7,935	1,843	220	260	10,258
1948	11,408	1,766	281	96	13,551
1949	12,273	1,951	298	98	14,620
1950	13,320	2,382	322	102	16,126
1951	14,029	2,641	346	87	17,103
1952	15,576	3,287	379	107	19,349
INDUSTRIAL DEPARTMENT.					
1939	3,132	499	..	..	3,631
1948	5,320	503	..	I	5,824
1949	5,572	546	..	..	6,118
1950	5,410	606	..	..	6,016
1951	5,585	566	..	..	6,151
1952	6,284	772	..	..	7,056

7. **Total Revenue and Expenditure.**—(i) *Total Revenue.* The following table shows particulars of the total life assurance revenue derived by life assurance offices from sources within and beyond Australia during each of the years 1939 and 1948 to 1952 :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL REVENUE.
(£'000.)

Year.	Assurance and Endowment Premiums.	Con- sideration for Annuities Granted.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
ORDINARY BUSINESS.					
1939	21,568	303	9,901	17	31,789
1948	41,614	1,232	14,371	68	57,285
1949	45,770	1,366	15,267	736	63,139
1950	50,867	1,572	16,613	2,327	71,379
1951	57,869	2,461	18,244	307	78,881
1952	64,980	2,372	20,175	106	87,633
INDUSTRIAL BUSINESS.					
1939	7,863	..	2,127	61	10,051
1948	13,075	..	3,170	10	16,255
1949	13,576	..	3,301	366	17,243
1950	14,145	..	3,548	389	18,082
1951	14,915	..	3,831	85	18,831
1952	15,437	..	4,120	26	19,583

(ii) *Total Expenditure.* The next table supplies details of the total expenditure, both within and beyond Australia, of life assurance offices during each of the years 1939 and 1948 to 1952 :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL EXPENDITURE.

(£'000.)

Year.	Claims and Annuities paid.	Surrenders.	Cash Bonuses paid to Policy-holders.	Commission.	Share-holders' Dividends.	All other Expenditure. (a)	Total Expenditure.
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ORDINARY BUSINESS.

1939	..	12,320	2,668	380	1,483	125	3,867	20,843
1948	..	18,674	2,545	138	3,471	97	5,094	30,019
1949	..	19,735	2,845	143	3,613	105	6,390	32,831
1950	..	20,876	3,481	152	4,027	105	6,187	34,828
1951	..	21,786	3,813	134	5,042	128	7,770	38,673
1952	..	24,034	4,691	161	5,479	120	10,355	44,840

INDUSTRIAL BUSINESS.

1939	..	3,763	576	..	1,619	72	1,278	7,308
1948	..	6,409	587	1	2,058	41	1,859	10,955
1949	..	6,778	638	..	2,082	37	2,159	11,694
1950	..	6,622	710	..	2,116	31	2,416	11,895
1951	..	6,743	667	..	2,250	35	2,646	12,341
1952	..	7,594	878	..	2,405	75	3,030	13,982

(a) Includes other expenses of management, licence fees and taxes, &c.

8. *Liabilities and Assets.*—(i) *General.* The liabilities of the Australian offices consist mainly of their assurance funds, but in the case of public companies there is a further liability on account of the shareholders' capital. The assets consist chiefly of government and municipal securities, mortgages, loans on policies, landed and house property, etc. Loans on personal security are granted by very few of the Australian offices. Separate details of liabilities and assets in respect of Australian business are not available.

(ii) *Total Liabilities and Assets.* In the two tables which follow, the details of liabilities and assets relate to all business (Australian and overseas) of Australian companies, the life assurance business of the two State Government offices, all business of the Provident Life Assurance Co. Ltd. (incorporated in New Zealand) and the Australian business only of the Prudential Assurance Co. Ltd. (incorporated in England). For various reasons several offices do not attempt the dissection of liabilities and assets between the industrial and ordinary branches, and, therefore, the figures in the following tables relate to the ordinary and industrial branches combined. Details of the total liabilities of life assurance offices for the year 1952 are given in the following table.

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL LIABILITIES, 1952.
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total Liabilities.
Shareholders' Capital—			
Authorized .. .. .	..	4,585	4,585
Less Unissued .. .. .	..	1,849	1,849
Subscribed Capital .. .. .	..	2,736	2,736
Paid-up—			
In Money .. .. .	..	2,314	2,314
Otherwise than in Money .. .. .	..	99	99
Total .. .. .	..	2,413	2,413
Life Assurance Statutory Funds—			
Ordinary Department	530,813	..	530,813
Industrial Department	108,862	..	108,862
Total	639,675	..	639,675
Funds in respect of Other Classes of Business .. .. .	..	758	758
General Reserves	12,874	1,278	14,152
Profit and Loss Account Balance .. .. .	..	104	104
Total, Shareholders' Capital, Assurance Funds and Reserves	652,549	4,553	657,102
Other Liabilities—			
Deposits	561	815	1,376
Staff Provident and Superannuation Funds	155	311	466
Claims admitted or intimated but not paid	7,460	68	7,528
Annuities due but not paid	6	..	6
Premiums Paid in Advance and in Suspense	872	12	884
Sundry Creditors	2,280	163	2,443
Bank Overdraft	2,783	17	2,800
Reserves and Provisions for Taxation	2,465	136	2,601
All other Liabilities	651	21	672
Total Liabilities	669,782	6,096	675,878

The following table furnishes details of the total assets of life assurance offices for the year 1952 :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL ASSETS, 1952.
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total.	Amount of Total Assets held in Australia.
Freehold and leasehold property, office premises, furniture, etc.	23,361	322	23,683	16,341
Loans—				
On Mortgage	177,057	67	177,124	136,006
On Policies of the Company including Advances of Premiums	27,961	..	27,961	20,580
Other Loans	19,956	456	20,412	19,998
Total Loans	224,974	523	225,497	176,584
Investments—				
Government Securities—				
Australia	204,501	2,297	206,798	196,445
Other	44,523	84	44,607	2
Securities of Local and Semi-Governmental Bodies	105,797	143	105,940	75,445
Other Investments	51,893	1,996	53,889	48,218
Total Investments	406,714	4,520	411,234	320,110
Cash on Deposit, Current Account and in hand	3,308	75	3,383	2,708
Other Assets	11,425	656	12,081	8,855
Total Assets	669,782	6,096	675,878	524,598

(iii) *Assets held in Australia.* Details of assets held in Australia for the years 1939 and 1948 to 1952 are set out in the following table:—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE(a): ASSETS HELD IN AUSTRALIA.

(£'000.)

Particulars.	1939. (b)	1948.	1949.	1950.	1951.	1952.
Landed and house property ..	12,823	12,942	13,436	13,582	13,941	15,776
Government and municipal securities ..	115,712	270,988	278,354	273,331	267,158	271,892
Other investments ..	6,700	17,213	25,611	36,114	45,613	48,218
Loans on mortgages ..	61,720	51,954	60,941	82,793	113,312	136,006
Loans on companies' policies	22,445	16,141	16,699	17,071	18,067	20,580
Other loans ..	(c)	4,103	5,484	10,941	16,463	19,998
All other assets ..	8,116	9,781	11,377	11,465	11,562	12,128
Total Australian Assets	227,516	383,127	411,902	445,297	486,116	524,598

(a) Life assurance and other classes of business.
other investments.

(b) Australian assets.

(c) Included with

9. *Loans.*—In the following table details are given of new loans granted by life assurance companies during each of the years ended 31st December, 1949 to 1953. The information has been compiled from monthly returns furnished by each company. New loans granted by the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office are not included. Advances of premiums are also excluded.

LIFE ASSURANCE COMPANIES: NEW LOANS GRANTED.

(£'000.)

Particulars.	1949.	1950.	1951.	1952.	1953.
CLASS OF SECURITY.					
Mortgage of Real Estate ..	17,177	35,677	41,132	30,140	26,863
Companies' Policies ..	2,263	2,583	2,930	4,329	3,477
Other ..	3,034	4,211	7,298	4,937	3,067
Total ..	22,474	42,471	51,360	39,406	34,307

STATE OR TERRITORY.(a)

New South Wales ..	13,108	21,176	26,596	21,748	18,637
Victoria ..	5,651	16,651	16,813	10,687	9,638
Queensland ..	1,447	1,916	3,325	2,065	1,841
South Australia ..	796	1,419	1,641	2,349	1,754
Western Australia ..	1,106	894	2,075	1,649	1,694
Tasmania ..	359	391	873	858	731
Aust. Cap. Territory ..	7	24	37	50	12
Total ..	22,474	42,471	51,360	39,406	34,307

(a) State or Territory of location of mortgage, registration of policy, or residence of borrower.

§ 3. Fire, Marine and General Insurance.

1. *Australasian Companies.*—The following table which has been extracted from the *Australasian Insurance and Banking Record*, shows, for the years 1938-39 and 1948-49 to 1952-53 particulars of the revenue and expenditure of a group of insurance companies having their head offices either in Australia, New Zealand or Fiji :—

FIRE, MARINE AND GENERAL INSURANCE COMPANIES : SUMMARY OF REVENUE AND EXPENDITURE.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
No. of companies	40	47	44	45	46	48
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Premiums, less reinsurances..	9,708	21,816	24,008	31,796	40,451	45,679
Losses	5,417	11,502	12,585	17,131	22,777	25,826
Expenses, commission and taxes	2,994	6,991	7,880	9,799	12,397	14,306
Transfer to Reserve for Un-earned Premiums ..	(a)	1,335	1,526	3,151	3,441	2,764
Underwriting Profit ..	1,297	1,988	2,017	1,715	1,836	2,783
Interest, rent, etc..	1,011	1,257	1,360	1,545	1,828	2,094
Dividends and bonuses paid..	709	1,470	1,755	1,912	1,904	1,629

(a) Not available.

2. *Aggregate Australian Business.*—(i) *General.* While the foregoing statements relate only to those companies whose head offices are located in Australia, New Zealand or Fiji, the following particulars, which are somewhat restricted in the range of information, are in respect of all companies operating in Australia. The statistics in this paragraph conform substantially to the following definitions and should be interpreted in accordance therewith.

(a) Premiums represent the full amount receivable in respect of policies issued and renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from "earned premium income" appropriate to the year. When business is increasing, as in recent years, premiums receivable (as shown in the statistics) are greater than "earned premium income" appropriate to the year. The converse applies when business is declining.

(b) Claims or losses include provision for outstanding claims and represent claims or losses incurred in the year. Salvage and other amounts recoverable have been deducted.

(c) Contributions to Fire Brigades, Commission and Agents' Charges, and Expenses of Management represent mainly charges paid during the year.

(d) Taxation represents mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The tables contain selected items of statistics and the information shown is not suitable for the construction of a "profit and loss" statement or "revenue" account.

In cases where the business is underwritten in one State and the risk is situated in another the business is included in the State in which the policy was issued.

During 1952-53 (1951-52) revenue from premiums amounted to £89,346,000 (£77,608,000) and from the net interest on investments, etc., to £2,593,000 (£2,232,000), totalling £91,939,000 (£79,840,000). Expenditure on losses amounted to £45,800,000 (£40,408,000), contributions to fire brigades £2,290,000 (£1,732,000), commission and agents' charges £9,279,000 (£8,057,000), expenses of management £15,537,000 (£12,840,000) and taxation £3,817,000 (£3,794,000), a total of £76,723,000 (£66,831,000).

(ii) *States.* The following table shows, for each State, the aggregate premium income less reinsurances and returns, and claims or losses less amounts recoverable, for all classes of insurance other than life for the years 1938-39 and 1948-49 to 1952-53 :—

FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—STATES.
(£'000.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.						
New South Wales	6,943	15,935	18,797	23,214	31,107	35,130
Victoria	4,505	11,994	14,579	18,024	24,441	28,215
Queensland	2,327	4,557	5,422	6,755	9,015	10,733
South Australia	1,245	2,861	3,637	4,630	6,167	7,275
Western Australia	1,373	2,536	3,141	3,911	5,000	5,779
Tasmania	457	999	1,156	1,415	1,878	2,214
Total	16,850	38,882	46,732	57,949	77,608	89,346
GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.						
New South Wales	3,842	8,278	9,109	11,156	16,661	17,848
Victoria	2,194	5,494	6,465	9,042	12,205	15,208
Queensland	1,071	2,307	2,401	2,658	4,979	5,650
South Australia	487	1,357	1,357	1,851	2,858	3,021
Western Australia	731	1,027	1,365	1,912	2,981	3,120
Tasmania	204	375	471	786	724	953
Total	8,529	18,898	21,168	27,405	40,408	45,800

NOTE.—See footnotes to next table.

(iii) *Classes of Insurance.* The following statement shows premiums and losses in respect of the principal classes of risks, for the years 1938-39 and 1948-49 to 1952-53 :—

**FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—
PRINCIPAL CLASSES OF RISK, AUSTRALIA.**
(£'000.)

Class of Risk.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.						
Fire	5,597	10,713	12,343	14,763	18,535	21,366
Workers' Compensation (a) ..	4,361	10,066	11,556	13,378	17,159	19,310
Motor Vehicle—						
Compulsory Third Party ..	3,848	1,832	2,383	3,040	4,750	7,106
Other		6,252	8,236	11,920	18,048	21,934
Marine	1,018	(b)3,635	4,296	5,303	7,433	5,940
Personal Accident	554	1,012	1,188	1,541	1,899	2,184
All other	1,472	5,342	6,730	8,004	9,784	11,506
Total	16,850	38,882	46,732	57,949	77,608	89,346
GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.						
Fire	2,223	2,951	2,430	4,197	6,669	6,731
Workers' Compensation (a) ..	2,972	5,920	6,292	6,784	8,678	10,934
Motor Vehicle—						
Compulsory Third Party ..	2,324	2,014	2,695	3,372	5,331	7,042
Other		3,528	4,970	7,867	12,025	13,436
Marine	243	(b)1,248	1,784	2,244	3,352	3,420
Personal Accident	264	349	412	514	634	741
All other	503	2,888	2,585	2,427	3,710	3,496
Total	8,529	18,898	21,168	27,405	40,408	45,800

(a) From 1947-48 excludes Workers' Compensation Insurance in coal-mining industry in New South Wales.

(b) Excludes business of Commonwealth Marine War Risks Insurance Board (see Official Year Book No. 33, pp. 753-4).

The volume of business measured by the amount of premium income shows that fire insurance represented about 23.9 per cent. of the total business during 1951-52 and also during 1952-53, workers' compensation 22.1 per cent. during 1951-52 and 21.6 per cent. during 1952-53, motor vehicles (including compulsory third party insurance) 29.4 per cent. in 1951-52 and 32.5 per cent. in 1952-53 and marine insurance constituted 9.6 per cent. in 1951-52 and 6.6 per cent. in 1952-53.

E. FRIENDLY SOCIETIES.

1. **General.**—The total membership of friendly societies in Australia is approximately 570,000 but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports are published in most of the States dealing with the returns received.

2. **Societies, Members and Revenue.**—The following table sets out the number of societies, members, etc., and revenue and expenditure and funds of registered societies for the year 1951-52. More detailed information is available in *Finance Bulletin* No. 44

FRIENDLY SOCIETIES : 1951-52.

Particulars.	New South Wales. (a)	Victoria. (b)	Queensland. (c)	South Australia. (e)	Western Australia.	Tasmania. (d)	Total
	No.	No.	No.	No.	No.	No.	No.
Registered Societies	(e) 34	122	26	16	13	20	..
Branches	2,237	1,412	536	(f) 789	306	161	5,441
Benefit members at end of year	190,842	177,227	62,024	67,563	26,279	18,800	542,735
Average benefit members during year	201,967	185,539	64,317	69,577	27,253	19,069	567,757
Members who received sick pay	(g) 39,165	10,982	15,520	5,026	2,679	(g)	(g)
Total weeks sick pay granted	(g) 468,022	131,854	189,890	61,208	34,418	(g)	(g)
Average weeks per member sick	(g) 11.95	12.01	12.24	12.18	12.85	(g)	(g)
Deaths of benefit members	(g) 2,488	1,071	1,053	320	325	(g)	(g)
Proportion of deaths per 1,000 members (average)	(g)	13.41	16.65	15.13	11.73	17.04	(g)
Revenue—(e)	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Entrance fees, levies and members' contributions	1,133	1,014	300	329	177	90	3,043
Interest, dividends and rents	249	311	106	162	37	23	1,172
All other revenue	104	87		61	1	31	
Total	1,486	1,412	406	552	215	144	4,215
Expenditure—(e)							
Sick pay	235	273	82	96	30	20	736
Medical attendance and medicine	495	421	104	212	86	36	1,354
Summs payable at death	127	64	50	53	16	24	334
Administration	305	251	76	90	13	30	795
All other expenditure	73	203		75	3	21	375
Total	1,235	1,212	312	526	178	131	3,594
Total Funds (e)	7,135	8,814	2,734	4,013	1,087	663	24,446

(a) Includes Australian Capital Territory. (b) Excludes Dispensaries, juvenile societies and members contributions to medical benefits only. (c) Excludes juvenile branches. (d) Year 1952. (e) Excludes 22 miscellaneous societies. (f) Lodges which contain male and female members counted as two branches. (g) Not available.

F. PROBATES AND LETTERS OF ADMINISTRATION.

The following particulars give some idea of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States the figures are not entirely comparable.

PROBATES AND LETTERS OF ADMINISTRATION.

Particulars.		New South Wales. 1952-53. (a)	Victoria. 1952.	Queensland. 1951-52.	South Australia. 1952.	Western Australia. 1952.	Tasmania. 1952. (b)
Probates—							
Estates ..	No.	17,424	10,303	1,737	3,026	1,927	944
Gross Value ..	£	(c)	(d)	12,656,653	15,973,039	8,264,063	4,239,056
Net Value ..	£	71,862,965	(d)	(c)	14,832,979	7,766,160	3,978,520
Letters of Administration—							
Estates ..	No.	(c)	2,843	285	1,082	327	229
Gross Value ..	£	(c)	(d)	770,539	1,922,651	333,023	439,824
Net Value ..	£	(c)	(d)	(c)	1,721,214	712,433	403,189
Total—							
Estates ..	No.	17,424	13,146	2,022	4,108	2,254	1,173
Gross Value ..	£	(c)	61,684,703	13,427,192	17,895,690	9,097,086	4,678,880
Net Value ..	£	71,862,965	58,318,708	(c)	16,554,193	8,478,602	4,381,718

(a) Total estates of deceased persons assessed for death duty. (b) Estates dealt with by Taxation Department.
(c) Not available. (d) Not available separately.

G. STATE LOTTERIES AND BETTING.

§ 1. State Lotteries.

State Governments operate lotteries in New South Wales, Queensland and Western Australia. Tattersalls Lotteries and Tasmanian Lotteries are operated under Government licences in Victoria and Tasmania respectively.

New South Wales State Lotteries are conducted in accordance with the New South Wales State Lotteries Act, 1930 and the first drawing took place on 20th August, 1931. At present, each ordinary lottery consists of 100,000 tickets at 5s. 6d. each, with prizes totalling £17,550. Each special lottery has 100,000 tickets at 10s. each, with prize money totalling £31,700. Net profits of the lottery are paid to the Consolidated Revenue Fund from which grants are made to hospitals.

Tattersalls Lotteries, which were previously conducted in Tasmania, were transferred to Victoria in 1954 and the first drawing in Melbourne took place on 8th July, 1954. The Tattersalls Consultations Act, 1953 provides that prizes in each consultation shall not be less than sixty per cent. of total subscriptions to that consultation, and that a duty equal to thirty-one per cent. of subscriptions shall be paid into the Consolidated Revenue Fund from which an equivalent amount will be paid out into the Hospitals and Charities Fund and the Mental Hospitals Fund in proportions as determined by the Treasurer. At present, tickets are priced at 5s. each (200,000), 10s. each (200,000) and a special Melbourne Cup consultation at £1 (200,000) with prizes totalling £30,000. £60,000 and £120,000 respectively.

In Queensland, the Golden Casket Art Union commenced in 1916 with the specific object of augmenting the funds of the Queensland War Council. Subsequently, Anzac Cottages and Nurses Quarters Funds benefited until 1920, when net profits were paid to the Department of Health and Home Affairs (Hospitals, Motherhood and Child Welfare Trust Fund) and used for the maintenance of hospitals, grants to institutions, and for motherhood and child welfare purposes. A stamp duty is imposed on tickets sold. The proceeds of this are paid to Consolidated Revenue Fund. At present, ordinary tickets are priced at 5s. 6d. each (100,000), special tickets at 10s. each (100,000), with prizes totalling £17,550 and £32,000 respectively.

In Western Australia, lotteries are conducted by the Lotteries Commission under the Lotteries Control Act of 1932. Profits are paid by the Commission to hospitals and other charities. Each lottery comprises 100,000 tickets at 2s. 6d. each, with prizes totalling £6,630.

In Tasmania, lotteries are subject to the provisions of the Racing and Gaming Act 1950-1952. With the transfer of Tattersalls from Hobart to Melbourne, Tasmanian Lotteries commenced operations under Government licence and the first drawing took

place on 30th June, 1954. The stamp duty on tickets sold, and the duty on prize money are paid into Consolidated Revenue. Tickets are priced at present at 5s. (250,000) and £1 (250,000) with prizes totalling £38,047 and £152,188 respectively.

Details of the income, expenditure and net profit of the three State Lotteries for the years 1938–39 and 1948–49 to 1952–53 are given in the following table:—

STATE LOTTERIES : INCOME, EXPENDITURE AND NET PROFIT.

(£.)

Year ended 30th June—	Income.			Expenditure.				Net Profit.
	Tickets.	Other Income.	Total.	Prizes Allotted.	Taxes.	Adminis- tration and other.	Total.	
NEW SOUTH WALES STATE LOTTERY.								
1939	2,388,750	18	2,388,768	1,500,059	..	55,674	1,555,733	833,035
1949	6,312,500	144	6,312,644	4,024,555	..	135,981	4,160,536	2,152,108
1950	6,990,000	336	6,990,336	4,456,505	..	151,882	4,608,387	2,381,949
1951	7,867,500	233	7,867,733	5,015,255	..	194,819	5,210,074	2,657,659
1952	8,830,000	142	8,830,142	5,627,205	..	266,307	5,893,512	2,936,630
1953	10,330,000	204	10,330,204	6,580,500	..	317,128	6,897,628	3,432,576
QUEENSLAND GOLDEN CASKET ART UNION.								
1939	1,902,500	2,626	1,905,126	1,217,800	95,125	146,907	1,459,832	445,294
1949	3,790,000	1,636	3,791,636	2,420,800	189,500	223,485	2,833,785	957,851
1950	3,972,500	1,794	3,974,294	2,537,450	198,625	236,092	2,972,167	1,002,127
1951	4,265,000	2,484	4,267,484	2,724,300	213,250	253,132	3,190,682	1,076,802
1952	4,882,500	1,865	4,884,365	3,118,650	244,125	294,483	3,657,258	1,227,107
1953	5,650,000	2,410	5,652,410	3,609,000	282,500	343,918	4,235,418	1,416,992
WESTERN AUSTRALIAN STATE LOTTERY.								
1939	238,680	..	238,680	127,389	..	33,432	160,821	77,859
1949	749,981	..	749,981	397,800	..	103,813	501,613	248,368
1950	787,470	..	787,470	417,690	..	108,876	526,566	260,904
1951	924,965	..	924,965	490,620	..	127,731	618,351	306,614
1952	949,975	..	949,975	511,800	..	128,892	640,692	309,283
1953	974,950	..	974,950	530,010	..	134,673	664,683	310,267

§ 2. Totalizator Investments.

Estimates of totalizator investments and investments with licensed bookmakers for the years 1938–39 and 1948–49 to 1952–53 are given in the following table:—

TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS.

(£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTALIZATOR INVESTMENTS.(a)							
1939	1,731	2,732	722	630	762	339	6,916
1949	8,742	9,012	973	1,736	2,333	824	23,620
1950	9,702	9,457	1,945	1,746	2,382	950	26,182
1951	11,550	10,756	2,249	1,966	2,718	936	30,175
1952	16,344	11,334	2,857	2,204	3,226	951	36,916
1953	14,190	10,314	2,888	2,337	3,019	839	33,587
INVESTMENTS WITH LICENSED BOOKMAKERS.(b)							
1939	21,379	(c)	(c)	7,640	(c)	(d) 1,093	(c)
1949	68,183	49,000	(c)	19,053	(c)	(e) 5,940	(c)
1950	74,664	50,000	(c)	21,272	(c)	6,389	(c)
1951	82,073	51,000	(c)	22,857	(c)	7,223	(c)
1952	115,485	52,000	(c)	25,080	(c)	8,889	(c)
1953	110,080	50,000	(c)	24,642	(c)	10,764	(c)

(a) Estimated from taxes on totalizators. (b) Estimated from taxes on betting with licensed bookmakers. (c) Not available. (d) Year ended 31st December. (e) Year ended 31st July.

H. GOVERNMENT, SEMI-GOVERNMENTAL AND PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES.

§ 1. Government and Semi-Governmental Pension and Superannuation Schemes.

The Commonwealth and all State Governments have established pension or superannuation schemes for their employees. These schemes are operated through funds to which both the Government and the employees make contributions. Employees of semi-governmental authorities are in some cases covered by the Commonwealth or State Government scheme and in other cases by a separate scheme of the authority.

In the following table aggregate details are given for the year 1952-53, of the receipts, expenditure, accumulated funds and number of contributors and pensioners of the Commonwealth and State Government and main semi-governmental schemes. The funds included are :—

- (a) *Commonwealth*.—The Superannuation Fund and Defence Forces Retirement Benefits Fund.
- (b) *New South Wales*.—State Superannuation Fund, Government Railways Superannuation Fund and Police Superannuation and Reward Fund.
- (c) *Victoria*.—The State Superannuation Fund, Police Superannuation Fund, Police Pensions Fund, Melbourne Harbor Trust Superannuation Account, Geelong Harbor Trust Superannuation Fund, Melbourne and Metropolitan Board of Works Superannuation Fund, State Electricity Commission Provident Fund, Gas and Fuel Corporation Superannuation Fund, Metropolitan Fire Brigades Board Superannuation Fund, Country Fire Authority Superannuation Fund and Port Phillip Pilots' Sick and Superannuation Fund.
- (d) *Queensland*.—Public Service Superannuation Fund and Police Superannuation Fund.
- (e) *South Australia*.—South Australian Superannuation Fund, Police Pensions Fund and Public Service Superannuation Fund.
- (f) *Western Australia*.—The Superannuation Fund.
- (g) *Tasmania*.—Public Service Superannuation Fund (Old and New Funds), Police Provident Fund and State Teachers' Superannuation Fund.

GOVERNMENT AND SEMI-GOVERNMENTAL PENSION AND SUPERANNUATION SCHEMES, 1952-53.

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Receipts—								
Contributions—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Employees ..	5,036	3,163	2,101	237	598	234	313	11,682
Government ..	2,374	5,681	2,490	78	632	484	198	11,937
Interest ..	1,075	1,308	833	222	256	95	65	3,854
Other ..	12	73	12	4	4	3	18	126
Total ..	8,497	10,225	5,436	541	1,490	816	594	27,599
Expenditure—								
Pension Payments ..	2,996	4,969	2,460	276	792	524	231	12,248
Gratuities or Rewards ..	91	100	59	3	..	..	14	267
Refund of Contributions ..	422	262	149	75	34	28	28	998
Other ..	..	48	2	..	25	..	3	78
Total ..	3,509	5,379	2,670	354	851	552	276	13,591
Funds at end of Year ..	34,836	37,268	25,336	4,586	7,264	2,854	1,982	114,126
Contributors at end of Year—								
Males ..	No.	No.	No.	No.	No.	No.	No.	No.
Females ..	128,978	88,571	39,871	9,942	11,369	6,887	5,394	303,184
Total ..	128,978	88,571	45,074	13,268	12,650	7,494	7,149	303,184
Pensioners at end of Year—								
Males ..	7,540	..	7,606	982	2,688	2,284	749	..
Female ex-employees ..	768	..	1,023	255	416	145	131	..
Widows ..	5,172	22,952	5,480	248	2,123	1,030	401	64,245
Children ..	1,075	..	676	20	220	180	132	..
Total ..	14,555	22,952	14,725	1,514	5,447	3,639	1,413	64,245

For details of the individual funds summarized above see *Finance Bulletin* No. 44 issued by this Bureau.

§ 2. Parliamentary Pension and Superannuation Schemes.

Pension and superannuation schemes have been established for members of the Commonwealth and all State Parliaments except the Tasmanian. Full details of these schemes are given in pages 91 to 99 of Official Year Book No. 38. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or States contribute. Details of the receipts, expenditure, funds and number of contributors and pensioners for the year 1952-53 are given in the following table :—

PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES, 1952-53.

Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Total.
Receipts—	£	£	£	£	£	£	£
Contributions—							
Members	28,392	11,859	9,868	7,360	3,693	4,136	65,308
Government	11,193	5,103	11,050	7,360	6,196	4,160	45,062
Interest	2,960	1,422	..	1,639	1,404	461	7,886
Other	546	..	..	..	..	..	546
Total	43,091	18,384	20,918	16,359	11,293	8,757	118,802
Expenditure—							
Pension Payments (a)	14,586	6,619	21,283	2,117	1,667	2,988	49,260
Refund of Contributions .. .. .	..	3,654	..	2,000	538	504	6,696
Other .. .. .	..	..	..	..	60	..	60
Total	14,586	10,273	21,283	4,117	2,265	3,492	56,016
Funds at end of Year	111,014	44,306	..	57,017	43,901	17,869	274,107
Contributors at end of Year	No. 181	No. 103	No. 99	No. 71	No. 59	No. 80	No. 593
Pensioners at end of Year—							
Ex-members	13	14	(b)	11	4	8	(b)
Widows	11	8	(b)	..	6	10	(b)
Total	24	22	(b)	11	10	18	(b)

(a) Including lump sum payments.

(b) Not available.

CHAPTER XVII. PUBLIC FINANCE.

NOTE.—The subject of "Public Finance" is dealt with in this Chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand also a combination of these two divisions under the heading of Commonwealth and State Finance. Under the Financial Agreement the Commonwealth assumed the liability to bondholders for the States' Debts existing at the date of the Agreement and now arranges for all borrowings for and on behalf of the Commonwealth or any State and for all conversions, renewals, redemptions and consolidations of the Public Debts of the Commonwealth and the States. In view of this it has been found convenient to deal with the Commonwealth and State Public Debt in a separate division.

The subject of income taxes is also dealt with in a separate division.

A. COMMONWEALTH FINANCE.

§ 1. General.

1. **Financial Provisions of the Constitution.**—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 20–23 of Official Year Book No. 39 and also in earlier issues). Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Official Year Book and on pages 619–622 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The majority of the tables relating to Commonwealth Finance have been compiled from the annual Budget Papers as presented to Parliament by the Treasurer of the Commonwealth.

2. **Accounts of Commonwealth Government.**—The Commonwealth Government, like the State Governments, bases its accounts upon three funds, the Consolidated Revenue Fund, the Trust Fund and the Loan Fund.

§ 2. Consolidated Revenue Fund.

Division I.—Nature of Fund.

1. **Provisions of the Constitution.**—The provisions made for the establishment of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in Sections 81 to 83 of the Constitution (*see* page 20 of Official Year Book No. 39 and also in earlier issues).

2. **Annual Results of Transactions.**—In the early 1920's receipts and expenditure of the Consolidated Revenue Fund each ranged between £60 million and £70 million. Excess receipts in these years amounted to one or two million pounds a year, and were utilized for a variety of purposes, e.g., for debt redemption, naval construction, main

roads, science and industry investigations, prospecting for oil and precious metals, civil aviation, etc. In the later 'twenties and early 'thirties, when receipts and expenditure were each about £70 million or £80 million a year, there were annual deficiencies, which by the end of 1930-31 had accumulated to more than £17 million.

In subsequent years (receipts and expenditure each rising from about £70 million in 1931-32 to £95 million in 1938-39) there were excess receipts of up to £3.5 million a year. Approximately £1.5 million of these excess receipts were used to reduce the accumulated deficiency, and the balance for non-recurring grants to the States, post office works and the provision of defence equipment. The balance of the accumulated deficiency (£15.7 million) was funded in 1937-38.

For most of the 1939-45 War years and thereafter, the Consolidated Revenue Fund has been balanced, as all available revenue after charging expenditure on ordinary services has been used for defence, war and repatriation purposes. In 1951-52 the Fund was balanced after a special payment of £98.5 million had been made to the National Debt Sinking Fund for investment in a special loan for States' works requirements and in 1952-53 after a special payment of £13.4 million to the War Pensions Trust Account.

Receipts and expenditure increased from £95 million in 1938-39 to £377 million in 1944-45. By 1949-50 they had risen to £581 million, and then increased sharply to £842 million in 1950-51, £1,016 million in 1951-52 and £1,040 million in 1952-53.

Division II.—Revenue.

1. General.—The following table shows details of the revenue from each source and the amount per head of population under each of the main headings during the years 1938-39 and 1948-49 to 1952-53. Taxation constitutes the main source of Commonwealth revenue e.g. 86.1 per cent. in 1952-53.

COMMONWEALTH CONSOLIDATED REVENUE FUND: SOURCES OF REVENUE. (£'000.)

Source.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Taxation	74,111	490,813	518,959	777,187	934,011	895,464
Per head of population ..	£10 13 9	£62 18 8	£64 9 5	£93 10 2	£109 7 6	£102 7 5
Business Undertakings ..	17,892	34,912	42,087	48,792	64,955	70,933
Per head of population ..	£2 11 9	£4 9 6	£5 4 7	£5 17 5	£7 12 2	£8 2 2
Territories(a)	356	738	926	1,150	1,558	1,779
Per head of population ..	£0 1 0	£0 1 11	£0 2 3	£0 2 9	£0 3 8	£0 4 1
Other Revenue—						
Interest, etc.	1,144	1,532	1,889	2,756	3,795	5,415
Coinage	128	635	466	499	895	310
Defence	151	355	541	702	499	2,188
Atomic Energy Commission ..	6	1,998	2,870	3,504	3,247	3,591
Civil Aviation	18	20	25	31	51	43
Patents, Trade Marks, etc. ..	68	128	124	128	143	183
Bankruptcy	31	20	22	23	27	31
Wool Committee Operations ..	..	..	..	..	..	..
Surplus .. .. .	..	103	..	..	..	..
Wartime Trading Profits—Wool ..	..	..	..	..	..	42,361
Commerce and Agriculture ..	..	22	11	22	34	121
Shipping and Transport ..	158	478	264	282	260	255
Net Profit on Australian Note Issue	767	4,460	4,183	3,394	3,381	4,861
Surplus Balances of Trust Accounts .. .. .	..	17,014	6,700	1,034	179	761
Other	235	1,149	1,585	2,288	3,793	10,637
Total	2,706	27,914	18,680	14,663	16,304	71,891
Per head of population ..	£0 7 9	£3 11 7	£2 6 5	£1 15 4	£1 18 2	£8 4 4
Grand Total	95,065	554,377	580,652	841,792	1,016,828	1,040,067
Per head of population ..	£13 14 3	£71 1 8	£72 2 8	£101 5 8	£119 1 6	£118 18 0

(a) Excludes Railways.

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 613.

2. Taxation.—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1938-39 and 1948-49 to 1952-53 are shown below :—

COMMONWEALTH TAXATION : TOTAL NET COLLECTIONS.

(£'000.)

Heading.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Customs	31,160	63,465	77,726	91,921	113,936	70,720
Excise	16,472	62,735	66,157	73,083	99,981	113,104
Sales Tax	9,308	39,029	42,425	57,173	95,459	89,067
Land Tax	1,489	3,032	4,210	3,591	6,109	1,250
Pay-roll Tax .. .. .	..	19,803	22,728	28,721	37,170	40,171
Income Taxes(a)	11,883	272,347	279,654	341,957	545,179	556,960
Wool Deduction .. .. .	..	..	..	109,531	5,963	— 2,223
Estate Duty	1,916	4,740	6,054	6,401	7,778	8,393
Gift Duty .. .. .	..	582	745	1,044	1,202	1,162
Entertainments Tax .. .. .	..	5,299	4,698	5,148	6,161	6,708
Special Industry Taxes(b)	1,883	19,781	14,562	58,617	14,983	10,152
Total Taxation	74,111	490,813	518,959	777,187	934,011	895,464

(a) Includes Social Services Contribution, War-time (Company) Tax, Super Tax and Undistributed Profits Tax. (b) Paid to Trust Funds for purposes of industries concerned. The taxes are as follows :—Flour Tax, Wool Levy, Wool Contributory Charge, Wheat Tax, Wheat Export Charge, Miscellaneous Export Charges, Stevedoring Industry Charge and Gold Tax.

NOTE.—Minus sign (—) indicates an excess of refunds.

(b) *Proportion of each Class on Total Collections.* The following table shows the proportion of the total collections represented by returns from each class of taxation for the years 1938-39 and 1948-49 to 1952-53 :—

COMMONWEALTH TAXATION : PROPORTION OF EACH CLASS ON TOTAL NET COLLECTIONS.

(Per Cent.)

Heading.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Customs	42.1	12.9	15.0	11.8	12.2	7.9
Excise	22.3	12.8	12.7	9.4	10.7	12.6
Sales Tax	12.6	8.0	8.2	7.4	10.2	10.0
Land Tax	2.0	0.6	0.8	0.5	0.7	0.2
Pay-roll Tax .. .. .	..	4.0	4.4	3.7	4.0	4.5
Income Taxes(a)	16.0	55.5	53.9	44.0	58.4	62.2
Wool Deduction .. .. .	..	..	..	14.1	0.6	— 0.3
Estate Duty	2.6	1.0	1.2	0.8	0.8	0.9
Gift Duty .. .. .	..	0.1	0.1	0.1	0.1	0.1
Entertainments Tax .. .. .	..	1.1	0.9	0.7	0.7	0.8
Special Industry Taxes(b)	2.4	4.0	2.8	7.5	1.6	1.1
Total Taxation	100.0	100.0	100.0	100.0	100.0	100.0

(a) See note (a) to previous table.

(b) See note (b) to previous table.

(ii) *Customs Revenue.* Particulars of net customs receipts for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table :—

COMMONWEALTH CUSTOMS REVENUE : CLASSIFICATION OF NET RECEIPTS.
(£'000.)

Classes.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Ales, spirits and beverages ..	1,165	1,171	1,462	1,800	2,751	1,999
Tobacco and manufactures ..	3,256	14,612	17,657	20,830	24,996	19,199
Agricultural products and groceries ..	1,373	1,304	1,517	1,697	1,806	1,217
Textiles and attire ..	2,801	6,644	7,066	9,394	12,842	3,247
Metals and machinery ..	2,386	5,782	8,439	8,574	14,342	6,843
Oils, paints, etc. ..	9,927	17,316	19,274	23,720	25,915	25,601
Earthenware, etc. ..	510	1,089	1,274	1,467	2,188	660
Drugs and chemicals ..	310	322	397	758	941	313
Wood, wicker and cane ..	739	993	966	488	695	307
Jewellery and fancy goods ..	481	1,237	1,900	2,530	2,908	1,138
Leather and rubber ..	477	923	1,124	1,535	2,044	744
Paper and stationery ..	454	485	428	545	934	324
Vehicles ..	2,062	3,936	3,735	7,804	3,902	2,178
Miscellaneous articles ..	1,056	1,904	1,347	1,749	2,497	330
Primage ..	3,914	5,393	5,711	8,206	9,296	6,181
Other receipts ..	250	352	429	234	879	444
Total	31,161	63,465	77,726	91,921	113,936	70,720

(iii) *Excise Revenue.* Net excise receipts for the years 1938-39 and 1948-49 to 1952-53 were as follows :—

COMMONWEALTH EXCISE REVENUE : CLASSIFICATION OF NET RECEIPTS.
(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Beer	7,289	31,807	33,402	37,243	56,941	65,826
Spirits	1,604	7,023	6,926	8,129	8,890	6,680
Tobacco	3,868	9,622	10,229	10,759	13,845	16,036
Cigars and cigarettes ..	2,419	9,558	10,192	10,662	13,848	17,890
Cigarette papers ..	531	897	1,002	1,166	1,085	1,019
Petrol	582	2,238	2,678	3,065	3,419	3,823
Matches	82	1,201	1,201	1,213	1,053	955
Playing cards	11	67	61	63	55	46
Coal .. ..	..	..	207	375	499	552
Miscellaneous	86	322	259	408	341	283
Total	16,472	62,735	66,157	73,083	99,981	113,104

(iv) *Other Taxation.* (a) *General.* Taxes other than customs and excise are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises an office in each State assessing the returns of taxpayers whose interests are restricted to that State only, and a Central Office assessing taxpayers whose interests are in more than one State.

(b) *Sales Tax.* The sales tax was first imposed in August, 1930. The operation of the tax is controlled chiefly by a system of registration of taxpayers whereby all manufacturers and wholesale merchants, who are the taxpayers under the Act in respect of goods sold in Australia, must be registered with the Department. The tax on imports subject to sales tax is collected by the Customs Department at ports of entry.

Since the inception of the tax certain exemptions have been allowed. These exemptions, which have been extended from time to time, relate mainly to goods of an essential nature or for use in primary production. The most recent exemptions were those granted from 19th August, 1954.

A general rate of Sales Tax is levied on all goods other than those specified in the schedules of the Sales Tax (Exemptions and Classifications) Act 1935-1952. These schedules set out details of goods exempt from sales tax and those subject to special rates. The general and special rates which operated from 15th November, 1946, were,

Period.	General Rate.	Special Rates
15th November, 1946 to 7th September, 1949 ..	10 per cent. ..	25 per cent.
8th September, 1949 to 12th October, 1950 ..	8½ per cent. ..	25 per cent.
13th October, 1950 to 26th September, 1951 ..	8½ per cent. ..	10, 25 and 33½ per cent.
27th September, 1951 to 6th August, 1952 ..	12½ per cent. ..	20, 25, 33½, 50 and 66½ per cent.
7th August, 1952 to 9th September, 1953 ..	12½ per cent. ..	20, 33½ and 50 per cent.
10th September, 1953 to 18th August, 1954 ..	12½ per cent. ..	16½ per cent.
From 19th August, 1954 ..	12½ per cent. ..	10 and 16½ per cent.

For particulars of rates applicable since the inception of Sales Tax in August, 1936 see Official Year Book No. 37, page 617.

Particulars of the net amount of sales tax payable, and the sales of taxable and exempt goods in each State for 1952-53 are given in the following table. The figures are in respect of sales during the period 1st July to 30th June.

SALES TAX AND AMOUNT OF SALES, 1952-53.
(£'000.)

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total
Net Sales on which Sales Tax was payable at—								
12½ per cent. ..	157,902	119,213	50,149	40,667	28,029	7,529	101	403,660
20 per cent. ..	47,567	34,534	15,996	14,127	7,414	1,764	11	121,413
25 per cent. ..	59	32	21	11	9	1	1	134
33½ per cent. ..	11,342	6,333	2,335	1,539	1,141	306	4	23,000
50 per cent. ..	3,212	2,378	542	387	241	34	..	6,794
66½ per cent. ..	153	141	35	27	11	2	..	369
Total ..	220,235	162,631	69,078	56,753	36,845	9,636	207	555,390
Sales of Exempt Goods by Registered Persons ..	517,581	392,259	175,437	130,330	88,738	36,575	1,359	1,342,279
Total Sales of Taxable and Exempt Goods ..	737,816	554,890	244,515	187,088	125,583	46,211	1,566	1,897,669
Sales Tax Payable ..	34,755	25,210	10,545	8,636	5,497	1,414	28	86,085

(a) Includes Australian Capital Territory.

Sales of taxable and exempt goods and sales tax payable for Australia as a whole for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table :—

SALES TAX AND AMOUNT OF SALES.
(£'000.)

Year.	Net Sales on which Sales Tax was Payable.	Sales of Exempt Goods by Registered Persons.	Total Sales of Taxable and Exempt Goods.	Sales Tax Payable
1938-39	196,491	280,656	477,147	9,363
1948-49	363,164	757,381	1,120,545	38,197
1949-50	455,251	866,575	1,321,826	40,789
1950-51	552,919	1,138,887	1,691,806	54,471
1951-52	623,390	1,321,696	1,945,086	91,332
1952-53	555,390	1,342,279	1,897,669	86,085

In the foregoing tables sales include goods transferred to stock for sale by retail, goods imported by persons other than registered taxpayers, and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the

Sales Tax (Exemptions and Classifications) Act 1935-1952. The figures shown in the foregoing tables do not represent the total sales of all commodities, as vendors trading in exempt goods only are not required to be registered and consequently the volume of their sales is not included in the statistics above. In addition non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

(c) *Land Tax.* Commonwealth Land Tax was levied annually from 1910-11 to 1951-52 on the unimproved value of land. It was abolished from 1st July, 1952. For rates of tax payable from 1942-43 to 1951-52, see Official Year Book No. 40, 1954, page 669. Receipts for the years 1938-39 and 1948-49 to 1952-53 were as follows:—1938-39, £1,489,000; 1948-49, £3,032,000; 1949-50, £4,210,000; 1950-51, £3,591,000; 1951-52 £6,199,000; 1952-53, £1,250,000.

(d) *Pay-roll Tax.* The Pay-roll Tax Assessment Act 1941-1942 and the Pay-roll Tax Act 1941 imposed a pay-roll tax of 2½ per cent. on all wages and salaries in excess of £20 per week paid by an employer after 30th June, 1941. Employers who are liable for tax are required to register and to furnish a monthly return of all wages paid. These measures formed part of the Commonwealth scheme of child endowment, the revenue from the tax being designed to provide part of the money required. The exemption was increased to £80 per week (£4,160 per annum) from 1st October, 1953 and to £120 per week (£6,240 per annum) from 1st September, 1954.

Receipts from pay-roll tax for the years 1948-49 to 1952-53 were, 1948-49, £19,803,000; 1949-50, £22,728,000; 1950-51, £28,721,000; 1951-52, £37,170,000; 1952-53, £40,171,000.

(e) *Income Taxes.* Details of taxes on income are given in Division E of this Chapter.

(f) *Wool Sales Deduction.* The Wool Sales Deduction Act 1950 and the Wool Sales Deduction (Administration) Act 1950 came into operation on 2nd December, 1950 and required that a deduction be made from the sale value of wool sold or exported, the amount deducted being set off against the Income Tax and Social Services Contribution assessed in respect of the income of the year 1950-51. These Acts were repealed by the Wool Sales Deduction Legislation Repeal Act 1951 which came into operation on 17th November, 1951, and provided for the refund to producers, etc., of amounts paid on the value of wool sold or otherwise disposed of, after 30th June, 1951. The amount of deduction collected was—1950-51, £109,531,000; 1951-52, £5,963,000. In 1952-53 refunds amounted to £2,223,000.

(g) *Estate Duty.* The Commonwealth Estate Duty was first levied in 1914. Particulars of exemptions and the rates imposed prior to October, 1953 are given in earlier issues of the Year Book (see No. 40, page 670).

Estate duty, under the Estate Duty Assessment Act 1914-1953, operative from 28th October, 1953 is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula:—(a) where the whole of the estate passes to the widow, children or grand-children of the deceased, the sum of £5,000 decreasing by £1 for every £3 by which the value exceeds £5,000 and ceasing to apply at £20,000; (b) where no part of the estate passes to the widow, children or grand-children, the sum of £2,500 decreasing by £1 for every £3 by which the value exceeds £2,500 and ceasing to apply at £10,000; and (c) where part only of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (a) and (b).

This Act also provides, from 27th June, 1950, for a special deduction of £5,000 from estates of persons who served in Korea or Malaya.

The rates of duty levied under the Estate Duty Act 1914-1941 increase as the value of the estate increases as follows:—£1 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; over £500,000, 27.9 per cent.

Total collections for the years 1938-39 and 1948-49 to 1952-53 were as follows:—1938-39, £1,915,000; 1948-49, £4,740,000; 1949-50, £6,054,000; 1950-51, £6,401,000; 1951-52, £7,778,000; 1952-53, £8,393,000.

Particulars of the number and value of estates and duty assessed, for each of the assessment years 1938-39 and 1948-49 to 1952-53, are given in the following table:—

ESTATE DUTY ASSESSMENTS.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number of Estates ..	9,681	12,350	13,982	15,680	16,289	19,663
Gross Value Assessed .. £'000	65,699	99,717	117,534	134,074	144,073	175,672
Deductions .. £'000	12,630	16,475	19,219	22,714	22,083	27,795
Statutory Exemption .. £'000	..	14,402	16,271	18,175	18,672	22,566
Dutiable Value .. £'000	53,069	68,840	82,044	93,185	103,318	125,311
Duty Payable .. £	2,002,283	4,902,352	5,992,799	6,933,608	7,797,967	9,248,925
Average dutiable value .. £	5,482	5,574	5,868	5,943	6,313	6,373
Average duty per estate .. £	207	397	429	442	479	470

(h) *Gift Duty.* The Gift Duty Assessment Act 1941-1947 and the Gift Duty Act 1941-1947 impose a gift duty on all gifts made after the 29th October, 1941. A gift has been defined as any disposition of property, which is made otherwise than by will, without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty.

The following rates of duty are levied under the Gift Duty Act 1941-1947 and relate to the value of all gifts made by the donor within a period of eighteen months:—Not exceeding £2,000, nil; £2,001 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; £500,001 and over, 27.9 per cent.

An amendment which operated from 3rd June, 1947 provides that gift duty will not exceed one half of the amount by which the value of the gift exceeds £2,000.

Total receipts from gift duty for the years 1948-49 to 1952-53 were as follows:—1948-49, £582,000; 1949-50, £745,000; 1950-51, £1,044,000; 1951-52, £1,202,000; 1952-53, £1,162,000.

(i) *Entertainments Tax.* The Commonwealth levied an Entertainments Tax from 1st October, 1942 to 30th September, 1953. Details of rates are given in earlier issues of the Official Year Book (*see* No. 40, pages 672 and 673).

Entertainments tax receipts during the five years 1948-49 to 1952-53 were as follows:—1948-49, £5,299,000; 1949-50, £4,698,000; 1950-51, £5,148,000; 1951-52 £6,161,000; 1952-53, £6,708,000.

Numbers of admissions to taxable entertainments during 1952-53 were as follows:—theatres, 3,939,000; picture theatres, 137,861,000; racing, 11,252,000; dancing and skating, 9,436,000; sport, 7,674,000; other, 4,564,000. Total admissions were 174,726,000 of which 13,913,000 were at reduced rates and 160,813,000 at full rates.

(j) *Flour Tax.* Particulars of the rates of flour tax which operated from 4th December, 1933 to 21st December, 1947 are given in Official Year Book No. 37, pages 618 and 619. Because of the rise in wheat prices the rate was declared to be nil as from 22nd December, 1947.

(k) *Wool Levy.* The Wool Tax Act 1936 and Wool Tax Assessment Act 1936 provided for a levy on all wool grown in Australia and shorn on or after 1st July, 1936. Details of this levy are given in earlier issues of the Official Year Book. This levy was suspended from 1st July, 1946 until 30th June, 1952 while the Wool Contributory Charge was imposed. No levy has been collected since 1947-48.

However, with the repeal of the Wool Contributory Charge, a levy on wool produced in Australia was re-introduced from 1st July, 1952. The Wool Tax Acts (Nos. 1 and 2) of 1952 provide for the payment of a levy of four shillings per bale until 30th June, 1953, after which date the rate of tax may be varied within prescribed limits. The purpose of the tax is to provide funds for publicity and research previously provided by the Wool Contributory Charge. Collections during 1952-53 totalled £675,000.

(l) *Wool Contributory Charge.* The Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 imposed a charge on all wool produced in Australia and sold, manufactured or exported. Wool sold by the Australian Wool Realization Commission was not liable to the charge. Details of the rate of the charge are given in earlier issues of the Official Year Book (*see* No. 40, page 675).

The various Wool (Contributory) Charge Acts were repealed by the Wool Tax Assessment Act of 1952 and the charge superseded by the wool levy. Collections in each State during the years 1948-49 to 1952-53 were as follows:—1948-49, £1,029,000; 1949-50, £1,439,000; 1950-51, £44,844,000; 1951-52, £2,230,000; 1952-53, £28,000.

(m) *Wheat Export Charge and Wheat Tax.* A summary of the provisions of the Wheat Export Charge Acts 1946 is contained in previous issues of the Official Year Book (see No. 40, p. 676).

The Wheat Export Charge Act 1948, which operated from 25th November, 1948, repealed the Wheat Export Charge Acts 1946 and provided for an export charge on all wheat and wheat products of the 1947-48 and subsequent seasons exported after 25th November, 1948. Subject to a lower rate being prescribed, the rate of charge per bushel of wheat exported by the Australian Wheat Board was fixed at 50 per cent. of the amount by which the average price per bushel of all wheat exported by the Board exceeded the guaranteed price, with a maximum charge of 2s. 2d. per bushel. If the exporter was not the Australian Wheat Board the charge was the same except that there was no maximum charge of 2s. 2d. per bushel.

The guaranteed price for the 1947-48 season was 6s. 3d. per bushel for all fair average quality bulk wheat f.o.r. at the ports of export. It was raised to 6s. 8d. per bushel for the 1948-49 season with further rises to 7s. 1d. for the 1949-50 season, 7s. 10d. for the 1950-51 season, 10s. 0d. for the 1951-52 season and 11s. 11d. for the 1952-53 season. By an amendment passed in 1952, the Act shall not apply to wheat harvested after 30th September, 1952.

Under the Wheat Industry Stabilization Act 1946-1948 an amount equivalent to the charges collected under the Wheat Export Charge Act 1948 is paid to the Wheat Prices Stabilization Fund. Out of this fund payments shall be made to the Australian Wheat Board, when required, for the purpose of building up the average export price for any season to the guaranteed price. By reason of the favourable level of export prices, part of the funds of the Wheat Stabilization Fund were considered surplus and accordingly, the export charge collected on wheat for the 1947-48, 1948-49 and 1949-50 seasons was repaid to growers under the Wheat Industry Stabilization (Refund of Charge) Acts 1950, 1951 and 1952. These repayments amounted to £17,000,000, £12,960,000 and £15,639,000 (including interest) respectively. (See also Chapter XX.—Agricultural Production.)

Collections of wheat export charge were as follows:—1948-49, £18,086,000; 1949-50, £12,633,000; 1950-51, £13,353,000; 1951-52, £12,202,000 and 1952-53, £8,139,000.

(n) *Miscellaneous Export Charges.* These consist of charges levied on exports of apples and pears (Apple and Pear Export Charges Act 1938-1947), canned fruits (Canned Fruits Export Charges Act 1926-1952), dairy produce (Dairy Produce Export Charges Act 1924-1937), dried fruits (Dried Fruits Export Charges Act 1924-1929), eggs (Egg Export Charges Act 1947) and on grapes used in the manufacture of wine (Wine Grapes Charges Act 1929-1941). The collections are paid into funds to be applied for the purposes of export Boards established under various Acts, in controlling the quantity and quality of produce exported.

Collections for the last five years were as follows:—1948-49, £90,000; 1949-50, £89,000; 1950-51, £76,000; 1951-52, £72,000 and 1952-53, £166,000.

(o) *Stevedoring Industry Charge.* The Stevedoring Industry Charge Act 1947 and the Stevedoring Industry Charge Assessment Act 1947 imposed a charge of 4½d. per man-hour on the employer of a waterside worker after 22nd December, 1947.

The amounts received are paid to the Stevedoring Industry Board for the payment of attendance money to waterside workers and for other expenses of the Board.

Since 1947 the charge has been amended as follows:—11th October, 1949 a reduction to 2½d. per man-hour; 11th December, 1951 an increase to 4d. per man-hour; 28th October, 1952 an increase to 11d. per man-hour and from 4th May, 1954 a reduction to 6d. per man-hour.

Collections during the years 1948-49 to 1952-53 were as follows:—1948-49, £670,000; 1949-50, £499,000; 1950-51, £420,000; 1951-52, £551,000; 1952-53, £1,144,000.

(p) *Gold Tax.* Particulars of the Gold Tax which operated from 15th September, 1939 to 20th September, 1947 are given in Official Year Book No. 39, page 767.

3. *Business Undertakings.*—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1938-39 and 1948-49 to 1952-53 are contained in the following table :—

POSTMASTER-GENERAL'S DEPARTMENT : NET RECEIPTS.
(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Private boxes and bags ..	74	94	96	144	164	164
Commission on money orders and postal notes ..	289	408	441	472	827	859
Tele-graphs ..	1,372	2,991	3,756	4,442	5,066	4,547
Telephones ..	8,040	15,055	19,168	22,667	31,059	35,177
Postage ..	6,636	12,735	13,942	16,020	20,687	21,821
Radio ..	516	1,192	(a)	(a)	(a)	(a)
Miscellaneous ..	439	832	946	1,032	1,568	1,825
Total ..	17,366	33,307	38,349	44,777	59,371	64,398

(a) Included under Broadcasting Services.

Further particulars of the Postmaster-General's Department's receipts to 1952-53 are given in Chapter VI.—Transport and Communication (Division I. Posts, Telegraphs, Telephones and Wireless).

(ii) *Broadcasting Services.* Following the amendment of the Australian Broadcasting Act 1942-1946 by Act No. 64 of 1948, the Broadcasting Control Board was set up on 15th March, 1949. (See also Chapter VI.—Transport and Communication).

Details of net receipts for the years 1949-50 to 1952-53 are shown in the following table :—

BROADCASTING SERVICES : NET RECEIPTS.
(£'000.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53
Listeners' Licence Fees ..	1,899	1,943	2,776	3,770
Broadcasting Station Licence Fees ..	17	18	20	23
Miscellaneous ..	18	10	9	13
Total ..	1,934	1,971	2,805	3,806

(iii) *Commonwealth Railways.* The Commonwealth Government is responsible for four railways—the Trans-Australian, the Central Australia, the North Australia and the Australian Capital Territory. The following table shows the amounts paid to the credit of the Consolidated Revenue Fund on account of each of these railways for the years 1938-39 and 1948-49 to 1952-53 :—

COMMONWEALTH RAILWAY REVENUE.
(£'000.)

Railway.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Trans-Australian ..	331	888	981	1,175	1,479	1,372
Central Australia ..	138	679	776	816	1,241	1,290
North Australia ..	50	29	35	38	49	42
Aust. Cap. Territory ..	7	9	12	15	10	25
Total ..	526	1,605	1,804	2,044	2,779	2,729

Further particulars to 1952-53 are given in Chapter VI.—Transport and Communication (Division B. Government Railways).

4. **Other Sources of Revenue.**—Revenue derived by the Consolidated Revenue Fund from the Territories of the Commonwealth during 1952-53 amounted to £1,779,000 (Australian Capital Territory, £1,208,000; Northern Territory, £571,000). Of other sources of revenue, amounting in 1952-53 to £71,891,000, the following are noteworthy :—War-time Trading Profits—Wool, £42,361,000; Interest, £5,415,000; Civil Aviation, £3,501,000; Net Profit on Australian Note Issue, £4,861,000; and Sale of Shares in Commonwealth Oil Refineries, £2,762,000.

Division III.—Expenditure.

1. **Details of Expenditure from Consolidated Revenue.**—The following table shows details of the expenditure from the Consolidated Revenue Fund during the years 1938-39 and 1948-49 to 1952-53.

COMMONWEALTH CONSOLIDATED REVENUE FUND : EXPENDITURE.

(£'000.)

Department, etc.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Defence Services	8,061	56,304	42,774	74,045	125,586	174,267
War (1914-18 and 1939-45) and Repatriation Services ..	19,257	133,141	96,594	129,635	105,931	117,910
Subsidies and Bounties ..	236	23,108	20,683	40,537	31,341	25,332
Cost of Departments ..	8,747	41,330	47,841	60,039	70,452	74,757
National Welfare Fund .. (a)	16,428	110,058	123,288	132,680	171,709	165,511
National Debt Sinking Fund Special Payment (Surplus) ..	..	..	..	..	98,500	..
Business Undertakings—						
Postmaster-General	14,878	38,669	44,512	54,802	64,291	69,917
Broadcasting Services	(b)	(b)	2,872	3,591	4,135	4,556
Railways	1,351	2,594	2,792	3,381	4,025	3,944
Territories	1,100	5,768	7,294	8,260	9,746	9,815
Capital Works and Services—						
Defence and War Services ..	1,349	5,624	12,500	75,125	45,113	42,304
Repatriation	141	8,664	14,848	(c) 342	27,861	28,167
Postmaster-General	3,851	14,770	19,792	34,897	28,819	28,427
Broadcasting Services	(b)	(b)	157	212	251	202
Railways	142	223	482	1,461	2,637	4,746
Territories	739	2,628	3,161	5,085	5,153	4,821
Other	493	13,463	25,757	31,471	45,899	37,232
Payments to or for States ..	15,649	78,704	101,232	128,032	160,947	182,891
Self-Balancing Items (d)	2,015	19,329	14,073	58,197	14,432	51,868
Grand Total	94,437	554,377	580,652	841,792	1,016,828	(e) 1,026,667
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per Head of Population ..	13 12 5	71 1 8	72 2 8	101 5 8	119 1 6	117 7 5

(a) Invalid and Age Pensions and Maternity Allowances. (b) Provided in part from Postmaster-General's Department Votes and balance from Wireless Broadcasting Trust Account. (c) In addition, £24,911,000 was provided from Loan Fund. (d) Assistance to Primary Producers. (e) Excludes surplus, £13,400,000, transferred to War Pensions Trust Account.

Further details of the expenditure in each section are given in paragraphs 2 to 11 following.

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 613. In this diagram Public Debt Charges (interest and debt redemption, etc.) are shown as a separate item, whereas in the table above these charges are included in the section to which they relate.

Details of Commonwealth expenditure on public debt charges for 1938-39 and 1948-49 to 1952-53 are shown in the following table:—

PUBLIC DEBT CHARGES(a) : COMMONWEALTH EXPENDITURE.
(£'000.)

Item.	1936-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
War (1914-18 and 1939-45)						
Debt(b)—						
Interest and Exchange ..	7,616	44,677	45,127	44,614	43,902	43,354
Debt Redemption ..	2,049	13,084	13,197	13,835	15,002	21,256
Other(c) ..	224	190	379	312	215	279
Total ..	9,889	57,951	58,703	58,761	59,119	64,889
Business Undertakings—						
Postmaster-General's Department—						
Interest and Exchange ..	1,758	1,302	1,281	1,454	1,437	1,349
Debt Redemption ..	1,129	1,950	2,048	2,150	2,257	2,371
Total ..	2,887	3,252	3,329	3,604	3,694	3,720
Railways—						
Interest and Exchange ..	455	380	375	420	415	413
Debt Redemption ..	75	122	128	134	141	148
Other(c) ..	11	1	7	1	..	1
Total ..	541	503	510	555	556	562
Territories—						
Interest and Exchange ..	318	262	241	230	219	218
Debt Redemption ..	58	95	99	105	110	115
Other(c) ..	4	..	..	3	..	..
Total ..	380	357	340	338	329	333
Works and Other Purposes—						
Interest and Exchange ..	3,226	2,805	2,812	2,794	3,259	4,149
Debt Redemption ..	613	688	640	864	791	718
Other(c) ..	37	77	75	59	46	66
Total ..	3,876	3,570	3,527	3,717	4,096	4,933
Total—						
Interest and Exchange ..	13,373	49,426	49,836	49,512	49,232	49,483
Debt Redemption ..	3,924	15,939	16,112	17,088	18,301	24,608
Other(c) ..	276	268	461	375	261	346
Grand Total ..	17,573	65,633	66,409	66,975	67,794	74,437

(a) Excludes payments to or for States under the Financial Agreement. See pages 610-622.

(b) Includes repatriation debt.

(c) Redemption, conversion and loan management, etc., expenses.

2. Defence Services.—Details of the expenditure on Defence Services by the Departments of Defence, Navy, Army, Air, Supply and Defence Production are shown in the following table. The expenditure shown under Department of Supply includes the former Departments of Shipping and Fuel, Supply and Development, Supply and Shipping, and Munitions. This table covers expenditure by the service and associated departments only, and includes the cost of maintaining forces in Korea and at other oversea posts.

The figures represent the combined expenditures from revenue, trust and loan fund for the years 1938-39 and 1948-49 to 1952-53.

**DEFENCE SERVICES : COMMONWEALTH EXPENDITURE FROM REVENUE,
TRUST AND LOAN FUNDS.**

(£'000.)

Item.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Department of Defence	61	250	303	422	537	690
Department of the Navy—						
Naval Forces—Pay, maintenance, etc.	2,592	12,813	12,268	19,337	30,390	36,411
Naval construction and additions to the fleet	1,643	2,676	1,384	2,244	3,302	5,436
Buildings, works, etc.	433	872	1,121	1,659	2,812	2,510
Administrative and miscellaneous expenditure(a)	163	4,334	2,237	1,587	1,447	3,166
Total	4,831	20,695	17,010	24,827	37,951	47,523
Department of the Army—						
Military Forces—Pay, maintenance, etc.	2,941	13,408	12,975	16,977	28,615	58,441
Arms, armament, ammunition .. .	1,129	983	1,894	5,387	17,926	26,174
Buildings, works, etc.	418	249	758	4,349	8,769	6,039
Administrative and miscellaneous expenditure(a)	334	675	—39	42	1,250	1,503
Total	4,822	15,315	15,588	26,755	56,560	92,157
Department of Air—						
Air Force—Pay, maintenance, etc. Aircraft, equipment and stores ..	1,304	9,403	8,433	12,042	20,042	23,815
Buildings, works, etc.	1,049	6,652	2,912	13,210	23,502	25,881
Administrative and miscellaneous expenditure(a)	489	323	692	1,592	3,883	4,521
Total	2,923	16,906	11,963	27,874	48,576	55,509
Department of Supply—						
Defence research and development Strategic stores and equipment reserve .. . . .	..	4,550	5,575	6,264	6,434	6,786
Buildings, works, etc.	463	317	324	57,048	10,049	..
Administrative and miscellaneous expenditure(a)	1,295	3,895	4,511	264	270	372
Total	1,758	8,762	10,410	69,280	19,915	11,506
Department of Defence Production(b)	..	..	..	..	7,140	9,186
Total Defence Services—						
Consolidated Revenue Fund(c)	9,410	61,928	55,274	149,170	170,699	216,571
Trust Funds	3,072	..	..	..	..	..
Loan Fund	1,913	..	..	—12	..	..
Grand Total	14,395	61,928	55,274	149,158	170,699	216,571

(a) As a dissection is not available, expenditure on War and Repatriation Services (see page 609) has been deducted from this item instead of from departmental expenditure above. (b) Included with Department of Supply prior to 1951-52. (c) Expenditure from excess receipts of previous years appropriated for Defence Equipment Trust Account.

NOTE.—Minus sign (—) indicates excess of transfers or repayments over expenditure.

3. **War and Repatriation Services.**—Expenditure from Consolidated Revenue and Loan Fund for War and Repatriation Services and Post-war Charges in relation to both the 1914-18 and 1939-45 Wars is shown in the following table for the years 1938-39 and 1948-49 to 1952-53. Expenditure on subsidies, which for the years 1948-49 to 1949-50 were paid from the War and Repatriation Votes, have been excluded from this

table and are dealt with separately in paragraph 4. Expenditure on the maintenance of forces in Korea and at other oversea posts and the cost of arms and equipment is included in Defence Services (*see* paragraph 2).

WAR AND REPATRIATION SERVICES AND POST-WAR CHARGES: COMMONWEALTH EXPENDITURE FROM CONSOLIDATED REVENUE AND LOAN FUNDS.

(£'000.)

Item.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Public Debt Charges—						
Interest and Exchange	7,616	44,677	45,127	44,614	43,902	43,354
Debt Redemption	2,049	13,084	13,197	13,835	15,002	21,256
Other	224	190	379	312	215	279
Total Public Debt Charges(a)	9,889	57,951	58,703	58,761	59,119	64,889
War Gratitudes		31,888	9,994	30,797	42	15
War and Service Pensions	8,228	20,268	22,023	27,532	33,566	36,577
Commonwealth Reconstruction Training Scheme		10,500	7,086	4,141	1,807	974
War Service Land Settlement		2,922	4,074	4,388	5,641	6,567
Re-establishment loans for agricultural purposes		1,572	1,065	296	188	140
Repatriation Department—						
Repatriation benefits	631	7,141	6,662	7,834	9,758	10,822
Other benefits	119	245	262	263	298	388
Administration and general expenses	315	2,073	2,473	3,061	3,196	3,464
Expenditure recovered(b)	-71	-1,995	-1,951	-1,777	-1,615	-1,534
Total Repatriation Department	994	7,466	7,446	9,381	11,637	13,140
War Service Homes—Salaries and general expenses	98	200	266	492	631	622
Defence Departments—Proportion of expenditure(c)			3,988	2,455		
Other Departments—Miscellaneous expenditure	48	1,784	1,155	438	1,243	1,386
International Payments		13,027	14,572	95	142	126
Other Administrations—Recoverable expenditure(d)		-2,528	-1,942	-1,849	1,071	-832
Miscellaneous Credits		-5,451	-2,371	-1,749	-2,853	(e)
Credits from the Disposals Commission		-6,454	-3,982	-1,681	-1,183	(e)
Capital Works and Services—						
Repatriation Department	36	268	297	342	271	203
War Service Homes Act 1918-1949	105	8,396	14,551	24,911	27,590	27,964
Total Capital Works and Services	141	8,664	14,848	25,253	27,861	28,167
Total, War and Repatriation Services and Post-war Charges—						
Consolidated Revenue Fund	19,398	141,805	111,443	129,977	133,792	146,077
Loan Fund			25,483	28,773	5,120	5,684
GRAND TOTAL	19,398	141,805	136,925	158,750	138,912	151,761

(a) Excludes Interest and Redemption on War (1914-18) Debt due to the United Kingdom Government, payment of which was suspended in 1931. (b) From Service Departments and Australian Soldiers' Repatriation Trust Account. (c) Represents expenditure on War and Repatriation Services by Defence Departments (*see* page 608) for which dissection is not available. (d) Munitions, stores, etc., supplied to the Government of United Kingdom and other administrations. Includes repayments and waiver of war-time indebtedness of other administrations. (e) Receipts credited to Defence revenue.

NOTE.—Minus sign (—) indicates excess of credits or repayments over expenditure.

4. Subsidies and Bounties.—The following table shows details, for the years 1938-39 and 1948-49 to 1952-53, of Commonwealth expenditure from revenue on subsidies, bounties and assistance to primary producers. Expenditure on special relief such as drought, frost, flood and bush fire, etc. (*see* table, p. 612, for more important items), is not included, nor are items of expenditure grouped under "Self Balancing Items" (*see* paragraph 11 following). These items of expenditure are from the proceeds of certain taxes on primary products and profits from marketing schemes, which have been paid to trust funds for the purpose of price or other stabilization schemes or for distribution to producers. Further information relating to these schemes and other assistance to primary producers is given in Chapter XX.—Agricultural Production.

Details of price stabilization subsidies and of various forms of assistance to primary producers for earlier years may be found on pages 414 and 1014-15 respectively of Official Year Book No. 38.

SUBSIDIES AND BOUNTIES : COMMONWEALTH EXPENDITURE.
(£'000.)

Item.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Subsidies—						
Price Stabilization—						
Tea .. .. .	..	4,667	6,986	7,129	5,577	4,683
Potatoes .. .. .	..	1,065	..	..	..	..
Whole Milk .. .. .	..	564	..	..	..	..
Imports (other than Tea) .. .. .	..	7,605	572	..	..	..
Coal .. .. .	..	232	..	1,704	1,519	1,114
Other .. .. .	..	687	..	140	143	210
Total .. .. .	..	14,820	7,558	8,973	7,239	6,007
Assistance to Primary Production—						
Dairy Industry .. .. .	..	4,653	8,008	a 14,998	a 17,843	a 15,719
Superphosphate .. .. .	..	3,374	3,657	263	..	..
Nitrogenous Fertilizers .. .. .	..	164	781	599	1,521	289
Wheat Industry .. .. .	..	..	622	683	..	..
Other .. .. .	..	58	2	36	9	519
Total .. .. .	..	8,249	13,070	16,579	19,373	16,527
Total Subsidies .. .. .	..	23,069	20,628	25,552	26,612	22,534
Bounties—						
Tractor .. .. .	..	37	54	90	103	38
Wool Products .. .. .	..	..	..	14,875	2,234	1
Wheat—for Stock Feed .. .. .	..	..	..	..	2,368	2,759
Other	(b) 236	2	1	20	4	..
Total Bounties .. .. .	..	39	55	14,985	4,729	2,798
Grand Total .. .. .	..	23,108	20,683	40,537	31,341	25,332

(a) Dairy products.

(b) Includes Raw Cotton Bounty, £115,000 and Sulphur Bounty, £88,000.

5. **Total Cost of Departments.**—Expenditure under this heading covers expenditure by departments, other than the defence and repatriation departments and business undertakings, on administrative services and other activities. Expenditure on defence, war and repatriation services, subsidies and bounties, social services (paid from the National Welfare Fund), business undertakings, Commonwealth territories and capital works and services is excluded.

Information on the functions of departments and the acts administered by the Ministers of departments was published in Official Year Book No. 37, pages 76-86, and particulars of subsequent changes in departmental structure are given in later issues.

In the following table details are given of that expenditure on the branches of each department which might be termed running expenses. Miscellaneous expenditure and debt charges, etc., are not included in this table but in the one following.

COMMONWEALTH CONSOLIDATED REVENUE FUND : COST OF DEPARTMENTS—
SALARIES, WAGES AND GENERAL EXPENDITURE.
(£'000.)

Department.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Governor-General	2	37	37	44	64	81
Parliament—						
Cost of Parliament	279	521	647	833	1,062	1,193
Electoral Office	105	191	288	344	341	441
Total	384	712	935	1,177	1,403	1,634
Prime Minister—						
Department	62	105	119	155	210	246
Audit Office	38	192	210	272	289	(a)
Public Service Board	51	212	289	381	405	429
National Library	4	38	52	73	96	107
High Commissioner's Office—United Kingdom	81	450	485	548	621	621
Commonwealth Grants Commission	5	10	10	12	14	15
Office of Education .. .. .	..	193	226	276	200	148
Security Services .. .. .	..	13	115	208	276	331
Total	241	1,213	1,506	1,925	2,111	1,897
External Affairs—						
Department	20	238	284	380	442	427
Oversea representation .. .. .	..	689	811	965	1,160	1,301
Total	20	927	1,095	1,345	1,602	1,728

For footnotes see next page.

COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—SALARIES, WAGES AND GENERAL EXPENDITURE—*continued.*

(£'000.)

Department.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Treasury—						
Department	59	241	236	329	367	468
Taxation Branch and Boards of Review ..	616	3,666	4,119	5,323	6,117	6,668
Bureau of Census and Statistics	61	227	274	374	461	530
Commonwealth Superannuation Board ..	9	28	38	52	73	78
Total	745	4,162	4,667	6,078	7,018	7,744
Attorney-General—						
Department	20	60	79	123	149	187
Crown Solicitor	28	134	140	179	205	227
High Court	34	53	58	69	78	87
Bankruptcy Administration	44	54	59	79	90	97
Court of Conciliation and Arbitration ..	24	118	134	139	168	175
Patents, Trade Marks and Designs	71	145	152	197	319	334
Other Branches	37	130	131	231	241	233
Total	258	694	753	1,017	1,250	1,340
Interior—						
Department	296	674	803	965	1,083	1,212
Meteorological Branch	80	195	292	399	440	438
Observatory	7	36	45	56	60	67
Forestry Branch	10	51	60	79	86	88
Total	393	956	1,200	1,499	1,669	1,805
Works	(b)	1,873	1,058	1,594	1,481	1,384
Civil Aviation	90	1,839	2,115	3,166	3,571	3,788
Trade and Customs	721	1,620	1,860	2,474	2,953	3,244
Health—						
Department	} 135	153	209	297	353	405
Quarantine		67	80	143	161	198
Health Services		190	174	287	343	479
Total	135	410	463	727	857	1,082
Commerce and Agriculture—						
Department	58	223	240	296	333	388
Inspection of goods for export	175	400	446	516	582	689
Commercial Intelligence Services Abroad ..	47	192	201	241	299	334
Division of Agricultural Economics and Division of Agricultural Production .. ..	..	63	78	119	122	123
Total	280	878	965	1,172	1,336	1,534
Social Services—Department	139	945	1,249	1,686	1,974	2,300
Shipping and Transport—						
Department .. .. .	..	646	766	223	161	144
Marine Branch	208	393	435	553	748	792
Ship Construction .. .. .	..	67	71	80	85	91
Total	208	1,106	1,272	856	994	1,027
Territories—Department	(c)	74	88	127	158	193
Immigration—Department	(b)	396	820	888	1,230	1,269
Labour and National Service—Department..	..	1,222	1,525	1,845	1,773	1,785
National Development—						
Department .. .. .	..	288	299	437	452	458
Bureau of Mineral Resources .. .. .	..	118	118	282	480	688
Total .. .. .	..	406	417	719	932	1,146
Commonwealth Scientific and Industrial Research Organization—Department ..	195	1,757	1,930	2,477	2,895	3,260
Atomic Energy Commission .. .. .	..	..	..	..	..	6
Total All Departments	3,837	21,227	23,955	30,816	35,271	38,247

(a) Allocated to Departments.
with Prime Minister's Department.

(b) Included with Department of the Interior.

(c) Included

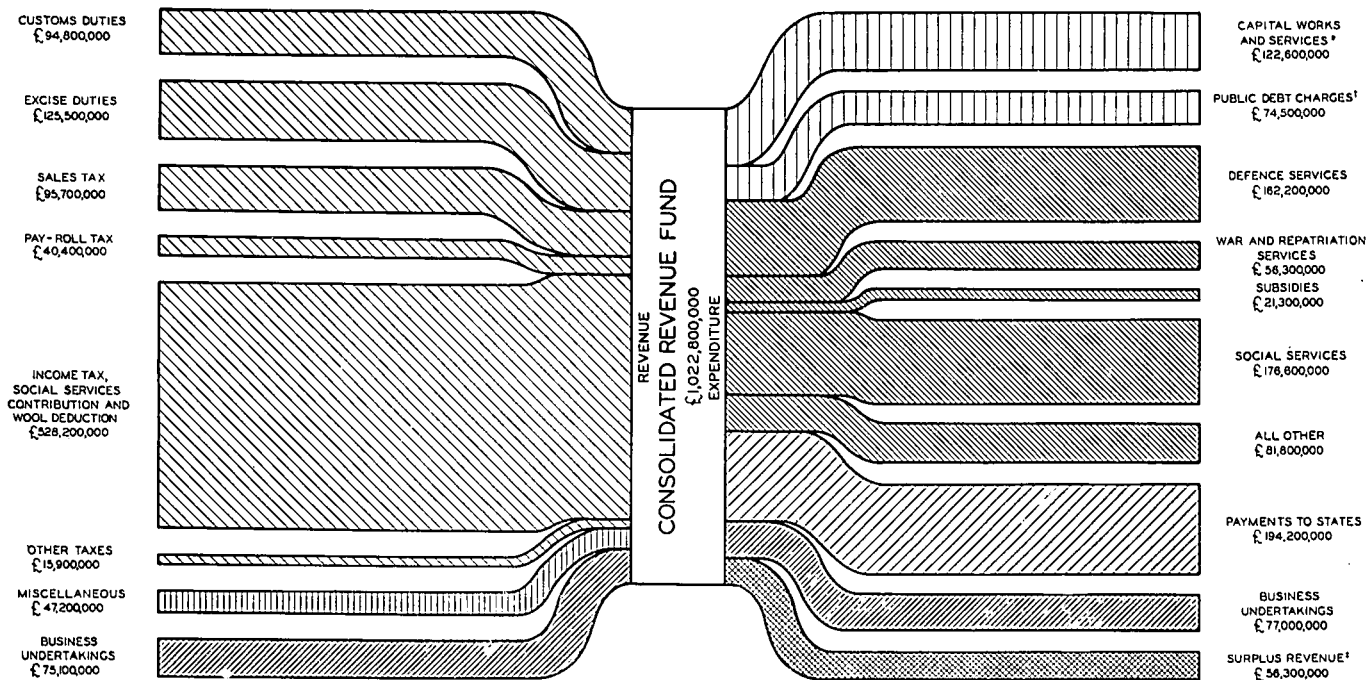
The following table gives details of miscellaneous expenditure included in the total cost of the various departments. It covers such items as interest and debt redemption allocated to the departments, repairs and maintenance of buildings, and special expenditure for which the Commonwealth is committed, such as contributions to international organizations, payment of Commonwealth scholarships, etc. The costs of social services, which are paid from the National Welfare Fund, are not included in this table (*see* p. 615 for this information).

**COMMONWEALTH CONSOLIDATED REVENUE FUND : COST OF DEPARTMENTS—
MISCELLANEOUS EXPENDITURE.(a)
(£'000.)**

Department.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Governor-General	5	15	8	9	15	12
Parliament—						
Cost of elections	3	3	177	210	231	244
Other	58	56	70	86	83	71
Total	61	59	247	296	314	315
Prime Minister—						
Commonwealth Scholarship Scheme and financial assistance to University students .. .. .	..	219	199	425	742	864
Australian National University .. .. .	..	102	216	280	450	600
Bush fire and flood relief, etc.	19	11	101	312	43	75
Other	873	694	712	1,012	839	1,061
Total	892	1,026	1,228	2,029	2,074	2,600
External Affairs—						
United Nations and Allied Organizations..	(b) 46	580	699	701	715	597
Australian National Antarctic Research Expeditions .. .. .	..	108	84	119	145	152
International development and relief .. .. .	..	..	..	1,511	4,859	4,271
Contributions to other international agencies, etc.	4	46	94	102	94	105
Total	50	734	877	2,433	5,813	5,125
Treasury—						
Exchange and loan management expenses .. .. .	..	..	..	..	..	..
Other(c)	549	502	505	510	473	495
Total	964	1,506	1,445	1,697	2,213	3,679
	1,513	2,008	1,950	2,207	2,686	4,174
Attorney-General	24	51	68	79	99	98
Interior—						
Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc. .. .. .	..	200	209	262	231	302
Other	882	883	949	966	971	1,018
Total	882	1,083	1,158	1,228	1,202	1,320
Works	(d)	125	129	148	138	131
Civil Aviation—						
Maintenance and development of civil aviation	162	667	1,441	1,767	2,526	2,671
Domestic and international air services—Mails, subsidies, etc.	56	2,112	2,444	3,041	3,274	3,968
Meteorological maintenance services and other	20	410	500	514	627	695
Total	238	3,189	4,385	5,322	6,427	7,334
Trade and Customs	117	207	292	207	250	282
Health—						
Subsidy, cattle tick control	69	53	253	53	53	53
Miscellaneous expenditure on health	93	217	241	265	295	369
Other	41	88	77	88	100	95
Total	203	358	571	406	448	517
Commerce and Agriculture—						
Dairy industry—Efficiency grant .. .. .	..	141	101	205	293	244
Wool use publicity, promotion and research	74	318	341	348	341	1,046
Wheat—Contract with New Zealand .. .. .	..	3,538	..	..	..	..
Other	630	280	293	315	360	512
Total	704	4,277	735	868	994	1,802

For footnotes see next page.

COMMONWEALTH CONSOLIDATED REVENUE FUND, YEAR ENDED 30TH JUNE, 1954

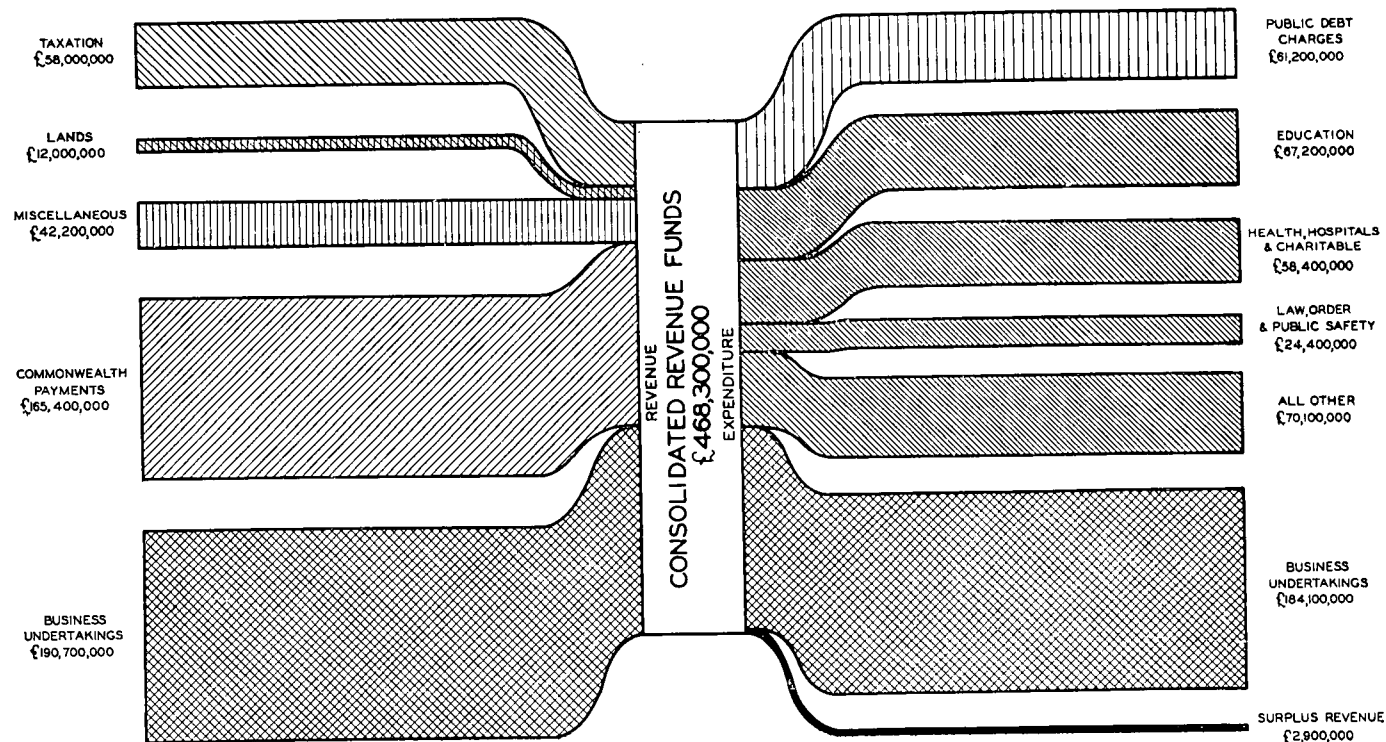


* INCLUDES DEFENCE WORKS AND SERVICES £26,500,000

† INCLUDES WAR DEBT CHARGES £83,900,000

‡ PAID TO DEBT REDEMPTION RESERVE TRUST ACCOUNT

STATE CONSOLIDATED REVENUE FUNDS, YEAR ENDED 30TH JUNE, 1954



COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—MISCELLANEOUS EXPENDITURE(a)—continued.
(£'000.)

Department.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Social Services—						
Compassionate allowances, etc. ..	186	53	54	76	87	101
Other		73	54	64	73	79
Total	186	128	108	140	160	181
Shipping and Transport—						
Shipping subsidies, etc. ..		1,939	626	86	185	186
Storage services		572	977	285	(e)	(e)
Other	7	79	67	51	92	55
Total	7	2,590	1,670	422	277	241
Territories	(f)	1	3	2	2	2
Immigration—						
Assisted migration	(d)	2,784	6,647	8,110	8,802	6,400
Other migration activities	(d)	404	2,257	3,708	3,365	3,096
Other	(d)	5	77	264	283	277
Total	(d)	3,193	8,981	12,082	12,540	9,773
Labour and National Service—						
Stevedoring Industry Board		670	499	421	551	1,144
Other		106	251	147	108	102
Total		776	750	568	659	1,246
National Development—						
Joint Coal Board		284	724	636	716	1,031
Other		31	25	52	259	194
Total		315	749	688	975	1,225
Commonwealth Scientific and Industrial Research Organization—						
Miscellaneous grants to scientific bodies	28	68	65	69	83	102
Other			12	20	25	28
Total	28	68	77	89	108	130
Total, All Departments	4,910	20,203	23,986	29,223	35,181	36,510

(a) Includes rent, repairs and maintenance, interest and redemption, pension and superannuation contributions. (b) League of Nations. (c) Principally unallocated debt charges. (d) Included with Department of the Interior. (e) Provided under Defence Services. (f) Included with Prime Minister's Department.

6. **National Welfare Fund.**—The National Welfare Fund was established for the purpose of providing a fund for the payment of Commonwealth social services benefits. During the years 1948-49 and 1949-50 an amount equivalent to the total collections of pay-roll tax and social services contribution was paid to the fund from Consolidated Revenue. During 1950-51 the social services contribution was amalgamated with the normal income tax and it became necessary to base the contributions on another formula. For the year 1950-51 the amount paid to the fund was the total of collections of pay-roll tax and social services contribution plus £30,000,000. In 1951-52 the amount paid to the fund was the amount paid in 1950-51 increased in the same proportion as collections of pay-roll tax increased over the collections of pay-roll tax in 1950-51. By an amendment to the National Welfare Fund Act 1943-1950, the amount to be paid to the fund in 1952-53

and subsequent years was changed to the amount of moneys paid out of the fund. In addition to these payments from Consolidated Revenue the fund received a small amount of interest from investments.

In the following table details are given of the income and expenditure of the National Welfare Fund and the balance in the fund at the end of each year for the years 1948-49 to 1952-53. A dissection of expenditure into the various types of benefits is given in Chapter XIV.—Welfare Services (*see* page 483).

NATIONAL WELFARE FUND : RECEIPTS, EXPENDITURE AND BALANCES.
(£'000.)

Year.	Income.			Expenditure.	Balance in Fund at end of Year.
	Contribution from Consolidated Revenue.	Interest on Investments.	Total.		
1948-49	110,058	672	110,730	80,777	99,880
1949-50	123,288	751	124,039	92,804	131,115
1950-51	132,680	985	133,665	114,983	149,797
1951-52	171,709	1,129	172,838	137,668	185,027
1952-53	165,511	1,809	167,320	165,511	186,836

7. **National Debt Sinking Fund.**—During 1951-52 surplus revenue of £98,500,000 was paid to the National Debt Sinking Fund for investment in a special loan raised to finance State works expenditure.

8. **Business Undertakings.**—(i) *Postmaster-General's Department.* From the beginning of 1949-50, Broadcasting Services were separated from the Postmaster-General's Department. Prior to 1949-50 part of the expenditure on these services was included with the Postmaster-General's Department. Details of the expenditure of this Department for the years 1938-39 and 1948-49 to 1952-53 are given in the following table :—

POSTMASTER-GENERAL'S DEPARTMENT : EXPENDITURE.
(£'000.)

Item.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Salaries, stores and materials, mail, engineering services, etc.	11,485	34,315	39,919	49,670	58,686	64,157
Superannuation, Pensions, etc.	392	641	665	795	1,061	1,056
Rents, repairs, etc. ..	114	461	599	733	850	984
Interest and Exchange ..	1,758	1,302	1,281	1,454	1,437	1,349
Debt Redemption ..	1,129	1,950	2,048	2,150	2,257	2,371
Total Working, etc., expenses ..	14,878	38,669	44,512	54,802	64,291	69,917
Capital Works and Services ..	3,851	14,770	19,792	34,897	28,819	28,427
Grand Total ..	18,729	53,439	64,304	89,699	93,110	98,344

Further details of expenditure for 1952-53 on account of the Postmaster-General's Department appear in Chapter VI.—Transport and Communication (Division I., Posts, Telegraphs, Telephones and Wireless).

(ii) *Broadcasting Services.* Since 1949-50 all expenditure on broadcasting services has been brought together in one section. Previously these services had been financed partly by the Postmaster-General's Department and partly from the Wireless Broadcasting Trust Account. Details of expenditure for the years 1949-50 to 1952-53 are shown in the following table.

COMMONWEALTH BROADCASTING SERVICES : EXPENDITURE.
(£'000.)

Item.	1949-50.	1950-51.	1951-52.	1952-53.
Australian Broadcasting Control Board	37	59	61	56
Australian Broadcasting Commission— Salaries, general and programme expenses	1,539	2,010	2,254	2,497
Technical and other Services—Post- master-General	1,290	1,509	1,807	1,988
Repairs, maintenance, etc.	6	13	13	15
Total Working, etc., expenses ..	2,872	3,591	4,135	4,556
Capital Works and Services	157	212	251	202
Grand Total	3,029	3,803	4,386	4,758

(iii) *Railways.* The Commonwealth Railways, previously administered by the Department of the Interior, were transferred in March, 1950 to the newly-formed Department of Fuel, Shipping and Transport which became the Department of Shipping and Transport in May, 1951. The expenditure on railways for the years 1938-39 and 1948-49 to 1952-53 is shown below.

COMMONWEALTH RAILWAYS : EXPENDITURE.
(£'000.)

Item.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Working expenses—						
Trans-Australian	494	1,055	1,165	1,457	1,540	1,285
North Australia	55	55	74	69	91	115
Central Australia	214	657	728	867	1,178	1,297
Aust. Capital Territory	7	18	19	26	37	46
Interest and Exchange	455	380	375	420	415	413
Debt Redemption	75	122	128	135	141	148
Superannuation	14	27	28	34	43	44
Freight concessions—North Australia and Central Australia Railways .. .. .	..	204	196	297	513	531
Miscellaneous	37	(a) 76	(a) 79	76	67	(a) 65
Total Working, etc., ex- penses	1,351	2,594	2,792	3,381	4,025	3,944
Capital Works and Services ..	142	223	482	1,461	2,637	4,746
Grand Total	1,493	2,817	3,274	4,842	6,662	8,690

(a) Includes loans redemption and conversion expenses, 1948-49, £1,000; 1949-50, £7,000; 1952-53, £1,000.

Additional details of the financial operations of the Commonwealth Railways to 1952-53 are given in Chapter VI.—Transport and Communication (Division B, Government Railways).

9. *Territories.*—The following table shows the expenditure on account of Commonwealth Territories for the years 1938-39 and 1948-49 to 1952-53. The Australian Capital Territory is administered by the Department of the Interior, and the Department of Territories controls the external territories and the Northern Territory. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in the *Finance Bulletins* issued by this Bureau.

COMMONWEALTH TERRITORIES : EXPENDITURE.
(£'000.)

Territory.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Administrative and Maintenance of Services—						
Australian Capital(a) ..	637	1,240	1,519	1,924	2,157	2,462
Northern (a) ..	403	1,105	1,422	1,814	2,041	2,425
Papua ..	49	3,418	4,348	4,518	5,532	4,888
New Guinea ..	6					
Norfolk Island ..	5	5	5	4	16	40
Total ..	1,100	5,768	7,294	8,260	9,746	9,815
Capital Works and Services—						
Australian Capital(a) ..	244	1,833	2,426	3,713	3,851	3,246
Northern(a) ..	495	633	707	1,361	1,281	1,206
Papua and New Guinea ..	..	162	28	11	21	369
Total ..	739	2,628	3,161	5,085	5,153	4,821

(a) Excludes Railways, *see* para. 7 (iii).

10. **Capital Works and Services.**—In the following table details are given of Commonwealth expenditure on capital works and services during each of the years 1938-39 and 1948-49 to 1952-53 and of the aggregate to 30th June, 1953. The table covers all expenditure on capital works and services made from the Consolidated Revenue Fund, the Loan Fund and Trust Funds.

COMMONWEALTH EXPENDITURE ON CAPITAL WORKS AND SERVICES FROM REVENUE, TRUST AND LOAN FUNDS.
(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	1901-2 to 1952-53— Total.(a)
Defence and War—							
Navy ..	2,076	872	4,318	4,357	6,415	9,847	73,192
Army ..	1,547	249	1,154	7,153	18,410	20,960	115,844
Air Force ..	1,538	323	2,266	1,592	3,883	4,521	61,372
Munitions and other ..	1,173	4,205	4,762	62,011	16,405	6,976	187,811
Repatriation Services—							
War Service Homes ..	105	8,396	14,551	24,911	27,590	27,964	133,078
Other ..	..	268	297	342	271	203	2,875
Postmaster-General's Department.	3,849	14,909	19,785	34,897	28,818	28,427	234,134
Broadcasting Services ..	..	..	157	212	251	202	821
Railways—							
Commonwealth ..	142	224	481	1,460	2,634	4,742	24,461
Other ..	..	..	..	..	..	..	2,445
Territories—							
Australian Capital Territory ..	488	1,844	2,418	3,697	3,851	3,237	29,290
Northern Territory ..	244	649	708	1,361	1,281	1,206	8,755
Papua-New Guinea ..	..	162	28	11	20	369	768
Norfolk Island ..	..	..	..	..	..	..	2
Other—							
Ships, yards and docks ..	—300	388	2,000	1,462	2,413	1,786	37,617
Civil Aviation ..	419	2,607	3,805	4,845	6,424	6,096	36,069
Snowy Mountains Scheme ..	..	..	2,497	6,077	10,393	13,600	32,567
Immigration ..	..	2,744	7,304	7,168	7,243	2,279	28,440
Coal Industry Act 1946 ..	..	1,650	4,232	3,000	4,100	26	13,008
Health ..	35	16	477	679	1,224	1,709	5,083
Subscriptions to Capital(c) ..	..	1,400	527	390	13	1,062	7,287
Advances(d) ..	..	1,012	333	477	2,389	4,180	12,526
All other works, buildings, etc. ..	243	3,724	4,582	7,373	11,700	6,493	51,052
Total ..	11,559	45,642	76,682	173,475	155,728	145,785	1,098,497
Source of Funds—							
Consolidated Revenue Fund ..	6,715	45,372	76,697	148,593	155,733	145,899	(e)
Loan Fund ..	1,598	—12	—15	24,882	—5	—14	(e)
Trust Funds(f) ..	3,246	..	..	..	..	..	(e)
Disposals Commission(g) ..	..	282	..	..	..	..	(e)
Total ..	11,559	45,642	76,682	173,475	155,728	145,885	1,098,497

(a) Includes properties transferred from the States.

(b) Includes Strategic Stores and Equipment

Revenue, 1950-51, £57,048,000; 1951-52, £10,049,000.

(c) Excludes Amalgamated Wireless (A'asia)

Ltd. and Commonwealth New Guinea Timbers Ltd. included under Postmaster-General's Department and Territories respectively.

(d) Excludes Overseas Telecommunications Commission included under Postmaster-General's Department.

(e) Not available.

(f) From excess receipts of previous years and National Defence Contributions Trust Account.

(g) Surplus buildings, equipment, etc., taken over from Disposals Commission.

NOTE.—Minus sign (—) indicates excess of credits or repayments over expenditure.

11. Payments to or for the States.—(i) *General.* An outline of the provisions of the Constitution requiring the Commonwealth to make payments to the States, and of the systems which followed, is given in earlier issues of the Official Year Book (*see* No. 37, pages 633 to 638). In the following paragraphs reference is made to the arrangements at present in operation.

(ii) *Amounts Paid.* (a) *Year 1952-53.* The table below shows particulars of the amounts paid to each of the States as grants for the several purposes referred to in subsequent paragraphs.

COMMONWEALTH PAYMENTS TO OR FOR THE STATES, 1952-53.(a)
(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Interest on States' Debts ..	2,918	2,127	1,096	704	473	267	7,585
Sinking Fund on States' Debts (b) ..	1,126	651	387	376	311	160	3,011
Special Grants ..				6,343	8,041	1,550	15,934
Tax Reimbursement Grants ..	13,424	26,028	17,487	9,342	8,742	3,600	108,623
Special Financial Assistance ..	10,495	7,132	4,221	2,255	2,110	933	27,146
Commonwealth Aid Roads(c) ..	4,260	2,629	2,900	1,662	2,900	756	15,107
Price Control Reimbursement ..	431	261	169	102	85	8	1,056
Western Australian Waterworks Grant ..					224		224
Coal Mining Industry—Long Service Leave ..	435	1	83		26	7	552
Imported Houses—Grants ..	(d) 113	375	135	747	160		1,530
Encouragement of Meat Production ..			298		100		398
Grants to Universities ..	(e) 394	337	128	134	86	46	1,125
Total ..	63,596	39,541	26,904	21,665	23,258	7,327	182,291

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund; excludes £600,000 for road safety practices and Commonwealth strategic roads. (d) Excludes special grant. £23,000. (e) Excludes supplementary grant to University of Technology, £135,000.

(b) 1938-39 and 1948-49 to 1952-53. The following table shows particulars of payments by the Commonwealth to or on behalf of the States during each of these years.

COMMONWEALTH PAYMENTS TO OR FOR THE STATES.(a)
(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Financial Agreement—						
Interest on States' Debts ..	7,585	7,585	7,585	7,585	7,585	7,585
Sinking Fund on States' Debts (b) ..	1,478	1,852	2,005	2,241	2,557	3,011
Special Grants ..	2,020	7,450	11,054	12,175	10,522	15,934
Tax Reimbursement—						
Grants ..		53,488	62,271	70,107	86,268	108,623
Additional Grants ..					5,000	
Special Financial Assistance ..				15,000	33,577	27,146
Coal Strike Emergency Grant ..			8,000			
Price Control Reimbursement ..		597	706	704	937	1,056
Grants for Road Construction, etc. (c) ..	4,266	7,101	8,767	13,543	14,647	15,107
Local Public Works—Interest and Sinking Fund ..	100					
Youth Employment ..	200					
Western Australian Waterworks ..			37	218	289	224
Coal Mining Industry—Long Service Leave ..			207	374	499	552
Imported Houses—Grants ..				170	1,788	1,530
Encouragement of Meat Production ..				315	205	398
Grants to Universities ..					1,473	1,125
Interest on Loans for Drought Relief ..		1				
Total ..	15,649	78,074	100,632	127,432	160,347	182,291

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Excludes expenditure on strategic roads and road safety practices, 1948-49, £630,000; 1949-50 to 1952-53, £600,000.

Particulars of special Commonwealth grants for the relief of primary producers are not included in the foregoing tables. For details *see* Chapter XX.—Agricultural Production. *See also* para. 4. Subsidies and Bounties, and para. 12. Self-balancing Items, of this Division.

(iii) *Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Official Year Book No. 37, pages 685 to 690. Under this Agreement the Commonwealth undertook to contribute £7,584,912 per annum towards interest payable on the State Debts for a period of 58 years from 1st July, 1927. This amount is to be distributed amongst the States as follows:—New South Wales, £2,917,411; Victoria, £2,127,159; Queensland, £1,096,235; South Australia, £703,816; Western Australia, £473,432; Tasmania, £266,859.

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926–27 at the rate of 25s. per head of population, the rate at which the Commonwealth had contributed annually to the States since 1st July, 1910 as compensation for the States relinquishing, after Federation, the right to levy Customs and Excise Duties.

In addition, under the Financial Agreement, the Commonwealth agreed to make certain contributions to the National Debt Sinking Fund for redemption of State Debts. Details of these payments are given in part D of this Chapter (§ 2, page 639).

(iv) *Special Grants.* The Constitution provides in Section 96 for the granting of special financial assistance to the States. Prior to 1933 financial assistance of varying amounts was granted by the Commonwealth to South Australia, Western Australia and Tasmania, details of which may be found in previous issues of the Official Year Book (see No. 40, page 695).

In 1933 the Commonwealth Government appointed the Commonwealth Grants Commission of three members to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto.

Applications have been received from South Australia, Western Australia and Tasmania during each year from 1933 and the recommendations of the Commission in respect of the years 1938–39 and 1949–50 to 1953–54 are shown in the following table. Commencing with 1949–50 the Commission has divided the grants recommended into two parts. One part is the Commission's estimate of the indispensable need of the claimant State for the year in which the payment is to be made after allowing a sufficient margin for safety. The other part is an adjustment of this estimate for an earlier year after an examination of the audited accounts for that year. Thus the grants for 1953–54 include an estimate of the indispensable need of the claimant State for 1953–54 and an adjustment to the estimated grant for 1951–52.

COMMONWEALTH GRANTS COMMISSION : GRANTS RECOMMENDED.
(£'000.)

Particulars.	1938–39.	1949–50.	1950–51.	1951–52.	1952–53.	1953–54.
South Australia—						
Estimated grant ..	1,040	3,850	4,570	4,250	6,600	6,300
Adjustment(a) ..	..	324	762	308	—257	—200
Net grant recommended ..	1,040	4,174	5,332	4,558	6,343	6,100
Western Australia—						
Estimated grant ..	570	4,850	4,750	5,000	8,200	7,350
Adjustment(a) ..	..	768	1,089	88	—159	450
Net grant recommended ..	570	5,618	5,839	5,088	8,041	7,800
Tasmania—						
Estimated grant ..	410	1,000	1,100	750	1,550	1,650
Adjustment(a) ..	..	262	—96	126	..	—150
Net grant recommended ..	410	1,262	1,004	876	1,550	1,500
Grand Total ..	2,020	11,054	12,175	10,522	15,934	15,400

(a) Adjustment to estimated grant paid two years previously.

(v) *Tax Reimbursement Grants.* Details of the States Grants (Income Tax Reimbursement) Act 1942 and the States Grants (Entertainments Tax Reimbursement) Act 1942 are given in earlier issues of the Official Year Book (see No. 37, pages 635 to 637).

These Acts provided for grants to the States as compensation for vacating the fields of Income Tax and Entertainments Tax. Grants under these Acts ceased after 1945-46 and were replaced by grants under the States Grants (Tax Reimbursement) Act 1946-1948.

This Act provided for reimbursement grants of certain specified amounts to be paid to the States during 1946-47 and 1947-48. For 1948-49 and subsequent years the grants were assessed on the aggregate paid in 1947-48 (£45,000,000) increased in accordance with a formula based on increases in population and average wages. Details of the formula and of the treatment of arrears of State income taxes are given in previous issues of the Official Year Book (*see* No. 40, page 696).

In 1950-51 an amount of £5,000,000 was paid to the States under the States Grants (Additional Tax Reimbursement Act) 1950. As this was considered as a non-recurring grant the formula outlined above was not amended.

(vi) *Additional Financial Assistance, 1948-49 to 1952-53.*—(a) *Coal Strike Emergency Grant.* During 1949-50 State business undertakings suffered considerable losses as a result of the coal strike. Towards meeting these losses the Commonwealth made grants totalling £8,000,000 to the States. The amounts paid to each State were:—New South Wales, £3,261,000; Victoria, £1,830,000; Queensland, £1,309,000; South Australia, £687,000; Western Australia, £661,000; and Tasmania, £252,000.

(b) *Special Financial Assistance Grants.* During the years 1950-51 to 1952-53 there were heavy additions to the financial needs of the States and special assistance grants amounting to £15,000,000, £33,577,000 and £27,146,000 respectively were made. For details of amounts paid to each State during 1952-53 *see* page 619 and for payments during 1950-51 and 1951-52 *see* Official Year Book No. 39, page 791 and No. 40, page 698.

(vii) *Grants for Road Construction.* (a) *Main Roads Development Act 1923-25, Federal Aid Roads Act 1926, 1931 and 1936, Federal Aid Roads and Works Act 1937 and Commonwealth Aid Roads and Works Act 1947-1949.* Details of these Acts are given in earlier issues of the Year Book (*see* issue No. 38, pp. 787-8) and in the *Finance Bulletins* published by this Bureau.

(b) *Commonwealth Aid Roads.* On the expiration of the Commonwealth Aid Roads and Works Act 1947-1949 the Commonwealth Aid Roads Act 1950 provided, for a period of five years from 1st July, 1950, an amount equivalent to the sum of (i) 6d. per gallon of customs duty and (ii) 3½d. per gallon of excise duty collected on petroleum and shale products as specified in Customs Tariff Item 229C and Excise Tariff Item 11 (excluding such products used in civil aircraft). Out of this amount the following grants are to be made to the States for construction and maintenance of roads and the purchase of road-making plant:—

(a) Sixty-five per cent. of the amount, less £600,000, per annum, for expenditure on roads, and

(b) Thirty-five per cent. of the amount for expenditure on roads in rural areas other than highways, trunk or main roads.

Of the former amount, one-sixth may be spent on other works connected with transport by road or water. Five per cent. of the grants to the States is payable to Tasmania. Fifty-seven per cent. is to be divided between the other States in proportion to their populations at 30th June, 1947, and 38 per cent. according to area. In addition, the Commonwealth may spend each year £500,000 on strategic roads and £100,000 on the promotion of road safety practices.

(viii) *Other Payments.* (a) *Price Control Reimbursement.* These grants were made from 1948-49 to 1952-53 to reimburse the States for expenditure incurred in administering prices, rents and land sales controls.

(b) *Western Australian Waterworks.* The Western Australia (Water Supply) Act 1948 provides for grants to Western Australia not exceeding an aggregate of £2,150,000 for the development of the agricultural areas, great southern towns and Goldfields Water Supply scheme. The amount provided by the Commonwealth is not to exceed half the total expenditure on the scheme.

(c) *Coal Mining Industry—Long Service Leave.* To provide funds for the payment for long service leave in the coal mining industry the Commonwealth imposed an excise

duty of 6d. per ton on coal produced from 1st November, 1949. The rate of duty was raised to 7½d. per ton from 26th August, 1951 and to 8d. per ton from 30th May, 1952. The proceeds of this excise duty are paid to a trust fund out of which the States are reimbursed for expenditure incurred in granting long service leave to employees in the coal mining industry.

(d) *Imported Houses.* A subsidy is paid to the States for houses imported by a State or a housing authority of a State after 12th October, 1949. The amount of the subsidy is the amount by which the cost of imported houses exceeds the cost of building comparable houses from local materials. The subsidy is limited to £300 per house and in aggregate to 30,000 houses or £9,000,000.

(e) *Encouragement of Meat Production.* To develop meat production in Queensland and Western Australia grants are made to these States for the provision of improved roads and other facilities for the movement of live-stock. Provision is made for the Commonwealth to meet the cost of the construction and improvement of certain specified roads in both States and the construction of eight cattle loading and unloading points in Queensland. Provision is also made for the Commonwealth to meet half the cost of improving watering facilities on specified stock routes in both States. The amount of the grants for improving watering facilities on stock routes is limited to £75,000 in Queensland and £31,500 in Western Australia. These limits were extended as from 20th April, 1954 to £150,000 in Queensland and £50,000 in Western Australia.

(f) *Grants to Universities.* The States Grants (Universities) Act 1951, provides for grants to be made to the States for the purpose of financial assistance to Universities during the three years 1950–51 to 1952–53. This Act was superseded by the States Grants (Universities) Act 1953 which came into operation on 1st January, 1953, and which increased the assistance payable during 1952–53 and 1953–54.

12. *Self-balancing Items.*—Expenditure under this item represents the proceeds of certain taxes on primary products or profits from marketing schemes which have been paid to trust funds for the purpose of price stabilization and other assistance schemes, or for distribution to producers. Details of expenditure from the trust funds are given in § 3. Commonwealth Trust Funds. Information relating to the taxes levied is given in Division II.—Revenue of this section (see pages 602, 603 and 604) and details of the price stabilization and other assistance schemes may be found in Chapter XX.—Agricultural Production. From 1952–53 advance payments in respect of sales of uranium paid to the Atomic Energy Commission have been included as a self-balancing item. Details of expenditure from the Consolidated Revenue Fund during the last five years are given in the following table.

**SELF-BALANCING ITEMS: RECEIPTS AND EXPENDITURE FROM
COMMONWEALTH CONSOLIDATED REVENUE FUND.
(£'000.)**

Receipts from—	Expenditure on—	1948–49.	1949–50.	1950–51.	1951–52.	1952–53
Flour Tax	Wheat Industry—Assistance (a)	I	..	..	..	..
Wheat Export Charge and Wheat Tax	Wheat Industry Stabilization (b)	18,086	12,634	13,353	12,202	8,139
Wool Contributory Charge	Wool Use Promotion and Disposals Plan	1,029	1,439	1,654	486	} 28
Wool Committee Operations Surplus	Wool Reserve Prices Fund	103	..	43,190	1,744	
Eggs—War-time Control Surplus Funds	Wool Industry Assistance .. ..	..	..	..	..	..
Export Charges ..	Eggs—War-time Control—Distribution of surplus	110	..	..	..	..
Wool Disposals Profit ..	Export Control Board(c) .. ..	..	..	..	..	166
Advance Payments—Sales of Uranium	Wool Industry—Distribution of War-time Trading Profits .. ..	..	..	..	..	42,561
	Atomic Energy Commission .. ..	..	..	..	..	1,174
Total .. ..	.. ..	19,329	14,073	58,197	14,432	51,868

(a) Paid to Wheat Industry Stabilization Fund. (b) Paid to Wheat Prices Stabilization Fund. (c) Paid to Apple and Pear Export Fund, Canned Fruits Export Fund, Dairy Produce Export Fund, Dried Fruits Export Fund, Egg Export Fund and Wine Export Fund. Prior to 1952–53 these charges were treated as refunds of revenue and not shown separately.

§ 3. Commonwealth Trust Funds.

1. Receipts, Expenditure and Balances, 1952-53.—The following table shows the opening and closing balances, and receipts and expenditure of some of the more important Trust Funds of the Commonwealth for the year ended 30th June, 1953.

COMMONWEALTH TRUST FUNDS: RECEIPTS, EXPENDITURE AND BALANCES, 1952-53. (£'000.)

Fund.	Balance at 30th June, 1952.	Year ended 30th June, 1953.		Balance at 30th June, 1953.
		Receipts.	Expenditure.	
Aluminium Production ..	74	2,330	2,404	..
Australian New Guinea Production ..	1,424	45	28	1,441
Coal Mining Industry Long Service Leave	958	588	532	1,014
Coinage	3,891	2,037	2,037	3,891
Commonwealth Aid Roads	1,519	15,707	15,622	1,604
Defence Forces Retirement Benefits ..	4,111	1,708	721	5,098
Enemy Subjects	1,174	140	291	1,023
Insurance Deposits	3,197	829	70	3,956
International Development and Relief International Post-war Relief and Re- habilitation	987	4,518	4,919	586
Lend-Lease Settlement	219	..	158	61
Liquid Fuel Equalization	1,791	23	216	1,598
National Debt Sinking	930	..	..	930
National Welfare	135,258	61,484	28,960	167,782
Parliamentary Retiring Allowances ..	185,027	167,320	165,511	186,836
Public Trustee and Custodian	82	43	14	151
Strategic Stores and Equipment Reserve	2,141	180	3	2,318
Superannuation	50,192	..	1,321	48,871
Temple Society	25,737	6,937	2,936	29,738
War Gratuity	721	81	175	627
War Service Homes	4,545	..	194	4,351
War Service Homes—Insurance .. ..	..	28,598	28,598	..
Wheat Industry Stabilization	533	85	58	560
Wheat Prices Stabilization	304	..	6	298
Wool Contributory Charge	27,924	8,292	15,639	20,577
Wool Disposals Profit	4,152	42	1,368	2,826
Wool Industry .. .. .	..	43,574	17,008	26,566
Wool Research	7,488	217	324	7,381
Wool (Reserve Prices)	732	411	455	688
Other	114	(a) —7	106	1
	24,504	(b) 364,791	343,457	45,838
Total	489,729	709,973	633,131	566,571

(a) Represents transfer of £6,000 to Wool Contributory Charge Fund and £1,000 to self-balancing items.

(b) Includes surplus balances transferred to Consolidated Revenue Fund, £373,000. These items have been treated as reductions of receipts.

2. Summary, 1938-39 and 1948-49 to 1952-53.—In the following table the balances and total receipts and expenditure of the Trust Funds are shown for each of these years.

COMMONWEALTH TRUST FUNDS. (£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Balance brought forward ..	25,609	196,478	245,194	278,647	363,051	489,729
Receipts	84,167	370,294	410,174	462,135	725,282	709,873
Expenditure	85,550	330,578	376,721	538,031	598,604	683,191
Balance carried forward ..	24,226	245,194	278,647	363,051	489,729	566,571

§ 4. Commonwealth Loan Fund.

Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Official Year Book (*see* No. 37, page 640). In the following table details are given of the net expenditure from the Commonwealth Loan Fund for the years 1938-39 and 1948-49 to 1952-53 and of the aggregate expenditure to 30th June, 1953. The figures shown represent "net" loan expenditure, i.e., after adjustments have been made on account of amounts expended in earlier years.

COMMONWEALTH NET EXPENDITURE FROM LOAN FUND. (£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	Total to 30th June, 1953.
War Loans—							
Defence and War (1914-18, 1939-45) Services .. ..	..	a 18,733	25,483	b 28,773	b 5,120	b 5,684	1,997,480
Other Loans—							
Capital Works and Services—							
Defence(c)	1,912	..	..	- 12	..	..	8,682
Repatriation Services(c)—							
War Service Homes(c) .. ..	..	..	..	..	..	..	7,329
Other .. ..	..	..	..	..	..	..	47
Postmaster-General's Department	- 1	- 1	- 8	- 1	- 1	- 1	40,424
Broadcasting Services .. ..	..	..	..	..	..	..	104
Railways .. ..	..	- 1	- 1	- 1	- 3	- 4	13,751
Territories(d)	- 7	- 6	- 7	- 16	- 1	- 9	8,736
Other—							
Ships, Yards and Docks	-305	- 4	..	..	..	..	7,694
Civil Aviation .. ..	..	..	..	..	..	..	213
Immigration .. ..	..	..	..	..	..	..	1,681
All other works, buildings, etc. ..	- 1	..	..	..	..	..	4,223
Other Purposes—							
Assistance to States—							
Farmers' Debt Adjustment	2,000	..	..	..	..	..	7,967
Housing .. ..	..	14,492	17,215	21,640	26,547	30,000	141,009
Other	- 4	..	..	..	..	..	5,976
Wheat Bounty .. ..	..	..	..	..	..	..	3,430
Total Capital Works and Services and Other Purposes	3,594	14,480	17,199	21,610	26,542	29,986	251,266
International Bank Dollar Loan(e) .. ..	..	..	..	4,044	23,831	17,935	45,810
GRAND TOTAL	3,594	-4,253	42,682	54,427	55,493	53,605	2,294,556

(a) Repayment of surplus balances of Defence Trust Accounts. (b) Comprises expenditure under War Service Homes Acts—1950-51, £24,911,000 and financial assistance to the States in connexion with War Service Land Settlement—1950-51, £3,862,000; 1951-52, £5,120,000; 1952-53, £5,684,000. (c) Excludes amounts charged to War Loan Fund. (d) Includes administration and other public buildings, Australian Capital Territory. (e) Payment to National Debt Sinking Fund. *See* pages 652 and 653.

NOTE.—Minus sign (—) indicates excess of repayments to Loan Fund.

Information relating to the Public Debt of the Commonwealth is given in part D, Commonwealth and State Public Debt, of this chapter.

B. STATE FINANCE.

§ 1. General.

1. Functions of State Governments.—In comparing the financial returns of the States, allowances must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of the revenue, expenditure and debt of the individual States are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to

municipal or semi-governmental bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the Central Government. Care, therefore, is needed in making comparisons, and the particulars contained in this Chapter should be read with those contained in Chapter XV.—Local Government. In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. **Accounts of State Governments.**—The various financial transactions of the States are in each case mainly concerned with one or other of three Funds—the “Consolidated Revenue Fund”, the “Trust Fund”, and the “Loan Fund”. All revenue (except certain items paid into special funds) collected by the State is paid into its Consolidated Revenue Fund, from which payments are made under the authority of an annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special act.

Figures in § 2 following relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These latter are as follows:—Railways, Tramways and Omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Adjustments have been made to the Budget figures, however, in order to obviate duplications caused by inter-fund payments and to maintain uniformity from year to year in the presentation of statistics. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

The Trust Fund comprises all moneys held in trust by the Government, and includes such items as superannuation funds, road funds, insurance companies' deposits, etc.

The Loan Fund is debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. **Inter-relation of Commonwealth and State Finances.**—A statement in some detail, covering the inter-relation of Commonwealth and State Finances during the period from the inception of Federation to the passing of the Financial Agreement Act 1928, was published in Official Year Book No. 22, pages 379–80. Changes in the financial relations between the Commonwealth and States since the passing of the Financial Agreement Act have been described in issues of the Official Year Book from year to year (*see also* pages 639–41).

§ 2. State Consolidated Revenue Funds.

Division I.—Revenue.

1. **General.**—The principal sources of State revenue are:—

(a) Taxation; (b) The business undertakings controlled by the State Governments; (c) Sale of and rental from crown lands; (d) Payments by Commonwealth Government under the Financial Agreement, Special Grants and Tax Reimbursement Acts, etc.; (e) Interest on advances; and (f) Miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of business undertakings, the principal contributors being the government railways and tramways. Next in magnitude are Commonwealth payments under the Tax Reimbursement Acts, followed in order by taxation receipts, Commonwealth special financial assistance and special grants, and lands receipts. Since the introduction in 1942–43 of the uniform tax scheme, Commonwealth payments under the Income and Entertainments Tax Reimbursement Acts and, from 1946–47, under the Tax Reimbursement Act, have replaced revenue previously received from income and entertainment taxes.

2. **Revenue Received.**—The following table shows particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the years 1938–39 and 1948–49 to 1952–53.

STATE CONSOLIDATED REVENUE.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL REVENUE. (£'000.)							
1938–39 ..	51,099	26,985	19,330	12,304	10,950	3,615	124,283
1948–49 ..	96,082	46,842	32,979	21,845	20,561	5,740	224,049
1949–50 ..	106,504	55,557	37,119	26,360	26,018	7,077	258,635
1950–51 ..	128,298	63,546	44,723	31,072	28,974	7,819	304,432
1951–52 ..	167,095	81,661	55,753	37,588	33,955	10,469	386,521
1952–53 ..	180,908	96,995	63,171	44,251	38,725	12,061	436,111
PER HEAD OF POPULATION. £ s. d.							
1938–39 ..	18 13 7	14 8 3	19 3 6	20 13 6	23 9 0	15 4 2	17 19 5
1948–49 ..	31 7 2	22 3 4	29 1 4	32 16 10	39 7 6	21 8 0	28 16 11
1949–50 ..	33 11 6	25 12 0	31 18 3	38 7 7	47 13 5	25 10 3	32 5 4
1950–51 ..	39 3 9	28 8 2	37 9 10	43 14 0	50 14 3	27 3 9	36 15 11
1951–52 ..	49 15 10	35 0 7	45 13 2	51 10 9	57 8 9	35 1 3	45 9 8
1952–53 ..	52 17 11	41 1 2	50 11 8	59 0 10	63 4 0	39 0 10	50 2 3

(a) See § 1 para. 2, page 625.

3. **Sources of Revenue.**—(i) *General.* Classifying the revenue of the several States in the manner indicated in para. 1 above, particulars for the year 1952–53 are as follows.—

STATE CONSOLIDATED REVENUE : SOURCES, 1952–53.

Source of Revenue.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL REVENUE. (£'000.)							
Taxation (b) ..	17,801	14,364	7,451	4,992	2,693	3,088	50,389
Business Under-takings ..	86,223	36,845	24,868	15,366	11,475	4	174,784
Lands ..	5,158	2,663	3,429	302	756	351	12,659
Interest (n.e.i.) ..	900	2,641	1,332	2,253	1,041	1,472	9,639
Commonwealth Payments—							
Tax Reimburse-ments ..	43,424	26,028	17,487	9,342	8,742	3,600	108,623
Other (c) ..	13,844	9,520	5,493	9,404	10,709	2,750	51,720
Miscellaneous ..	13,558	4,934	3,111	2,592	3,309	796	28,300
Total ..	180,908	96,995	63,171	44,251	38,725	12,061	436,111
PER HEAD OF POPULATION (£ s. d.)							
Taxation (b) ..	5 4 1	6 1 7	5 19 4	6 13 3	4 7 11	9 19 11	5 15 10
Business Under-takings ..	25 4 3	15 11 11	19 18 3	20 10 0	18 14 7	0 0 3	20 1 8
Lands ..	1 10 2	1 2 7	2 14 11	0 8 1	1 4 8	1 2 9	1 9 1
Interest (n.e.i.) ..	0 5 3	1 2 4	1 1 4	3 0 1	1 14 0	4 15 4	1 2 2
Commonwealth Payments—							
Tax Reimburse-ments ..	12 13 11	11 0 4	14 0 0	12 9 4	14 5 4	11 13 1	12 9 8
Other (c) ..	4 1 0	4 0 7	4 8 0	12 10 11	17 9 7	8 18 0	5 18 10
Miscellaneous ..	3 19 3	2 1 10	2 0 10	3 9 21	5 7 11	2 11 6	3 5 0
Total ..	52 17 11	41 1 2	50 11 8	59 0 10	63 4 0	39 0 10	50 2 3

(a). See § 1 para. 2, page 625. (b) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (c) Includes payments under Financial Agreement, Special Grants, Prices Control Reimbursements Grants and Special Financial Assistance.

(ii) *Revenue from Taxation.* (a) *General.* The following table shows, for the year 1952-53, particulars of all State taxation collections irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason the particulars hereunder differ from those shown in the tables relating to the Consolidated Revenue Funds and represent a comprehensive statement of all taxation collections by the Government in each State. In this and the succeeding statements of taxation, the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under "Entertainments Tax" instead of under "Stamp Duties" and "Licences" respectively. Commonwealth payments under the State Grants (Tax Reimbursement) Act are not included.

STATE REVENUE FROM TAXATION : TOTAL NET COLLECTIONS(a) 1952-53.

(£'000.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Motor Taxes--							
Registration Fees and Taxes ..	7,580	3,890	3,524	1,502	1,018	169	17,983
Drivers', etc., Licences ..	675	319	37	129	63	32	1,255
Other ..	1,622	1,246	863	96	116	140	4,083
Total Motor ..	9,877	5,455	4,424	1,727	1,197	341	23,321
Probate and Succession Duties ..	8,406	4,833	2,302	1,002	843	370	17,756
Other Stamp Duties ..	4,844	3,206	2,084	899	945	319	12,297
Land ..	2	1,370	1,035	574	209	166	3,416
Income (Arrears) ..	67	57	4		3	1	132
Liquor ..	1,803	1,761	424	52	230	153	4,429
Lotteries ..			280			1,476	1,756
Entertainments(b) ..	2,593	2,254	293	998	322	165	6,625
Licences (n.e.l.) ..	86	221		45	25	5	
Other ..			757	44	72		1,255
GRAND TOTAL ..	27,678	19,157	11,603	5,341	3,912	3,296	70,987

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds.

(b) Mainly racing.

Of the total taxation collections detailed above the following were paid into special funds :—

STATE REVENUE FROM TAXATION : PAYMENTS INTO SPECIAL FUNDS, 1952-53.

(£'000.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Motor ..	9,877	4,560	3,524		1,147	208	19,316
Other Stamp Duties ..		122					122
Liquor ..		111	62				173
Racing ..				349			349
Other ..			566		72		638
Total ..	9,877	4,793	4,152	349	1,219	208	20,598

The table hereunder shows, for the year 1952-53, the proportions of collections under individual classes of tax to the total taxation revenue :—

STATE REVENUE FROM TAXATION : PROPORTIONS OF INDIVIDUAL TAXES TO TOTAL, 1952-53.

(Per Cent.)

Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Motor ..	35.69	28.48	38.13	32.33	30.60	19.45	32.85
Probate and Succession Duties ..	30.37	25.23	19.84	18.76	21.55	11.23	25.02
Other Stamp Duties ..	17.50	16.74	17.96	16.83	24.16	9.68	17.32
Land ..	..	7.15	8.92	10.75	6.88	5.04	4.81
Income (Arrears) ..	0.24	0.30	0.03	..	0.07	0.03	0.19
Liquor ..	6.52	9.19	3.65	0.98	6.03	4.64	6.24
Lotteries ..	..	..	2.41	..	..	44.78	2.47
Entertainments ..	9.37	11.76	2.53	18.69	8.23	5.00	9.33
Licences (n.e.l.) ..	0.31	1.15	..	0.84	0.64	0.15	..
Other ..	..	..	6.53	0.82	1.84	..	1.77
GRAND TOTAL ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(b) 1938-39 and 1948-49 to 1952-53. Prior to federation, customs and excise duties constituted the principal source of revenue from taxation. Thereafter, until the introduction of the uniform income tax scheme in 1942-43, the most productive State taxes were the various income taxes which, in 1941-42, included unemployment relief, State development and hospital taxes. Since 1941-42 the States have been reimbursed by the Commonwealth for the revenue lost by the discontinuance of these taxes. Details of the reimbursement grants are given on pp. 620 and 626. Information relating to the State income taxes which were levied prior to 1942-43 may be found in earlier issues of the Year Book.

The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund, during the years 1938-39 and 1948-49 to 1952-53, are shown in the following table :—

STATE REVENUE FROM TAXATION : TOTAL NET COLLECTIONS.(a)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL NET COLLECTIONS.							
(£'000.)							
1938-39(b)	20,263	12,023	8,657	4,199	3,597	1,779	50,518
1948-49 ..	14,412	9,463	5,435	3,038	2,099	2,052	36,499
1949-50 ..	16,584	10,814	6,172	3,475	2,518	2,323	41,886
1950-51 ..	20,850	13,226	7,755	4,347	2,977	2,644	51,799
1951-52 ..	24,840	16,943	9,672	5,151	3,455	2,949	63,010
1952-53 ..	27,678	19,157	11,603	5,341	3,912	3,296	70,987

PER HEAD OF POPULATION.

(£ s. d.)

1938-39(b)	7 8 2	6 8 5	8 11 6	7 1 1	7 14 1	7 9 8	7 6 1
1948-49 ..	4 14 1	4 9 7	4 15 10	4 11 4	4 0 5	7 13 0	4 14 0
1949-50 ..	5 4 7	4 19 8	5 6 2	5 1 2	4 12 3	8 7 6	5 4 6
1950-51 ..	6 7 4	5 18 3	6 10 1	6 2 3	5 4 2	9 3 10	6 5 2
1951-52 ..	7 8 0	7 7 3	7 18 5	7 1 3	5 16 10	9 17 6	7 8 3
1952-53 ..	8 1 10	8 2 2	9 5 10	7 2 6	6 7 8	10 13 5	8 3 1

(a) Excluding Commonwealth Tax Reimbursements.

(b) Includes Income Taxes.

The following table shows, for the years 1938-39 and 1948-49 to 1952-53, the aggregate amounts collected by the several State Governments, under the various forms of State taxation and includes amounts paid to funds other than Consolidated Revenue.

STATE REVENUE FROM TAXATION : TOTAL NET COLLECTIONS.(a)
(£'000.)

Tax.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Motor	6,961	10,256	12,038	15,579	20,523	23,321
Probate and Succession Duties ..	5,000	10,091	10,600	13,004	15,394	17,756
Other Stamp Duties	3,466	6,829	9,431	11,961	12,228	12,297
Land	1,408	1,257	1,201	1,362	2,511	3,416
Income Taxes	29,796	(b) 257	(b) 267	(b) 291	(b) 155	(b) 132
Liquor	1,045	2,267	2,432	2,726	3,681	4,429
Lotteries	532	1,184	1,353	1,502	1,642	1,756
Entertainments(c)	1,884	3,566	3,741	4,430	5,852	6,625
Licences and all other	426	792	823	944	1,024	1,255
Total	50,518	36,499	41,886	51,799	63,010	70,987

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. Excludes Commonwealth Tax Reimbursements. (b) Arrears of State income taxes. (c) Mainly racing.

Details of taxation collections paid into special funds and included in the above table are shown below :—

STATE REVENUE FROM TAXATION : PAYMENTS INTO SPECIAL FUNDS.
(£'000.)

Tax.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Unemployment Relief ..	1,119	..	..	..	..	..
Hospital	264	..	..	..	..	..
Motor	5,858	8,428	10,037	13,309	16,934	19,316
Other Stamp Duties .. ..	..	85	106	125	137	122
Liquor	92	124	136	137	149	173
Racing	83	160	371	450	448	349
Other	173	371	176	294	357	638
Total	7,589	9,168	10,826	14,315	18,025	20,598

(iii) *Business Undertakings.* (a) 1952-53. A very large proportion of State gross revenues is made up of receipts from business undertakings under the control of the Governments. The principal of these are railways and tramways, harbour works, water supply and sewerage and electricity supply and, in addition, State batteries for the treatment of auriferous ores in Western Australia and various minor revenue-producing services rendered by the Governments of all States are included. For the year 1952-53 the revenue from these sources was £174,781,000 or 40.1 per cent. of the revenue from all sources. Details of revenue are as follows :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1952-53.
(£'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total.
Railways (b)	72,676	(c) 31,666	24,868	11,616	7,934	..	148,760
Tramways and Omnibuses	11,526	(d) 147	..	..	1,046	..	12,719
Harbours, Rivers, Lights	2,021	(e) 325	..	1,284	428	..	4,058
Water Supply, Sewerage, Irrigation and Drainage .. ..	..	2,196	..	2,236	1,710	..	6,142
Electricity Supply .. ..	..	1,369	..	..	69	4	1,442
Other .. ..	..	1,142	..	230	288	..	1,660
Total	86,223	36,845	24,868	15,366	11,475	4	174,781

(a) Tasmanian transport services are under the separate control of the Transport Commission. (b) The following contributions to Railways revenue from Consolidated Revenue Fund are excluded—New South Wales, £800,000; Victoria, £1,798,000; South Australia, £4,850,000. (c) Includes electric tramways operated by the Railways Department. (d) Tramway contribution to Consolidated Revenue. (e) Includes Harbour Trust Fund contribution, £207,000.

(b) 1938-39 and 1948-49 to 1952-53. The total revenue from Business Undertakings and the revenue per head in each State are shown in the following table :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL REVENUE.							
(£'000.)							
1938-39 ..	24,676	11,649	7,642	4,957	5,633	(a) 511	55,068
1948-49 ..	40,974	20,457	14,909	8,389	7,728	6	101,463
1949-50 ..	50,879	23,834	15,460	9,133	8,822	4	108,132
1950-51 ..	61,675	22,646	18,876	10,120	9,782	4	123,103
1951-52 ..	82,454	29,180	22,391	12,938	12,430	4	159,397
1952-53 ..	86,223	36,845	24,868	15,366	11,475	4	174,781

PER HEAD OF POPULATION.

(£ s. d.)												
1938-39 ..	9	0	5	6	2	6	7	11	7	8	6	6
1948-49 ..	16	6	3	9	13	7	13	2	9	12	12	3
1949-50 ..	16	0	10	10	19	8	13	5	10	13	6	0
1950-51 ..	18	16	9	10	2	6	15	16	5	14	4	8
1951-52 ..	24	11	5	12	13	7	18	6	9	17	14	9
1952-53 ..	25	4	3	15	11	11	19	18	3	20	10	0

(a) Includes Tasmanian transport services which were subsequently placed under the control of the Transport Commission.

In the table below, particulars of total State revenue from Business Undertakings for the various types of undertakings are shown for the years 1938-39 and 1948-49 to 1952-53 :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS.

(£'000.)

Source.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Railways, Tramways and Omnibuses ..	48,154	92,321	98,289	112,396	146,720	161,479
Harbour Services ..	2,357	3,257	3,627	3,939	4,569	4,958
Water Supply, Sewerage, Irrigation and Drainage ..	2,543	3,950	4,338	4,745	5,568	6,142
Other ..	2,014	1,935	1,878	2,023	2,540	3,102
Total ..	55,068	101,463	108,132	123,103	159,397	174,781

(iv) *Lands.* The revenue from the sale and rental of crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. The following table shows the revenue from sales and rentals of crown lands for the year 1952-53.

STATE LAND REVENUE, 1952-53.
(£'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Sales ..	94	145	..	37	36	13	765
Conditional Purchases ..	328	..	..	4	108		
Rentals(a) ..	3,527	227	2,014	261	161	87	6,277
Forestry ..	1,161	2,183	1,345	..	451	247	5,387
Other ..	48	108	70	..	..	4	230
Total ..	5,158	2,663	3,429	302	756	351	12,659

(a) Includes mining royalties, rents, etc.

The total land revenue for all States for the years 1938-39 and 1948-49 to 1952-53 respectively was :—£4,144,000, £6,476,000, £7,004,000, £7,917,000, £11,792,000, and £12,659,000.

(v) *Commonwealth Payments.* Commonwealth payments to the States represent a considerable proportion of the States' Revenue. In 1952-53 the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £160,343,000 (36.8 per cent.). This was made up of the contribution towards interest on States' debts under the Financial Agreement, £7,585,000, special grants to the States of South Australia, Western Australia and Tasmania, £15,934,000, prices control reimbursement, £1,055,000, special financial assistance, £27,146,000 and tax reimbursement grants, £108,623,000.

In addition to these, the States receive a number of other payments which are paid to trust funds. The main items in this class are the contribution towards the sinking fund on States' debts (£3,011,000 in 1952-53) paid to the National Debt Sinking Fund and grants for Commonwealth Aid Roads (£15,107,000 in 1952-53) paid to State trust funds.

More detailed information concerning Commonwealth payments to the States is given under part A of this Chapter (§ 2, para. 11, page 619).

(vi) *Interest and Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc. In 1952-53 interest, mainly from loans to local governing bodies, on public account balances and for soldier land settlement amounted to £9,639,000, whilst "Miscellaneous" revenue, which includes fines of the courts and fees for services, amounted to £28,300,000.

Division II.—Expenditure.

I. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are :—

(a) Interest, exchange and debt redemption charges in connexion with public debt; (b) Working expenses of railways, tramways and other business and industrial undertakings; (c) Education; (d) Health and charitable expenditure; (e) Justice; (f) Police; (g) Penal establishments; and (h) all other expenditure under which heading is included public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions and miscellaneous.

In earlier years the working expenses of railways and tramways were the most important item of State Governmental expenditure, but, for a period prior to 1941-42, public debt charges were the heaviest item. Since then, however, railways and tramways expenditure has again taken the major place. In the year 1952-53 the working expenses of the railways, tramways and omnibuses were 38.0 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in importance were education, 14.2 per cent.; charitable, public health and hospitals, 12.5 per cent.; public debt charges, 12.5 per cent.; and law, order and public safety, 5.3 per cent.

2. **Total Expenditure.**—The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the years 1938–39 and 1948–49 to 1952–53 are shown in the following table :—

STATE EXPENDITURE : CONSOLIDATED REVENUE FUNDS.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL EXPENDITURE. (£'000.)							
1938–39 ..	53,558	27,773	19,316	12,701	11,170	3,641	128,159
1948–49 ..	95,918	48,225	32,929	22,130	21,378	5,845	226,425
1949–50 ..	107,681	55,816	37,090	26,550	25,994	7,344	260,475
1950–51 ..	128,265	63,889	44,625	30,842	28,814	8,066	304,501
1951–52 ..	166,997	84,067	55,708	37,499	34,547	10,871	389,689
1952–53 ..	180,811	97,360	62,980	44,226	39,233	11,763	436,373
PER HEAD OF POPULATION. (£ s. d.)							
1938–39 ..	19 11 7	14 16 8	19 3 3	21 6 10	23 18 5	15 6 5	18 10 8
1948–49 ..	31 6 1	22 16 5	29 0 5	33 5 5	40 18 9	21 15 9	29 3 0
1949–50 ..	33 18 11	25 14 5	31 17 9	38 13 1	47 12 7	26 9 6	32 9 11
1950–51 ..	39 3 6	28 11 3	37 8 2	43 7 7	50 8 8	28 0 11	36 16 1
1951–52 ..	49 15 2	36 10 6	45 12 5	51 8 3	58 8 10	36 8 3	45 17 2
1952–53 ..	52 17 4	41 4 3	50 8 8	59 0 2	64 0 7	38 1 6	50 2 10

(a) See § 1, para. 2, page 625.

3. **Details of Expenditure.**—(i) 1952–53. The following table shows the total expenditure and expenditure per head for each of the principal items :—

STATE EXPENDITURE : DETAILS, 1952–53.

Particulars.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
TOTAL EXPENDITURE. (£'000.)							
Public Debt (interest, exchange, debt redemption, etc.) ..	18,622	12,298	8,077	7,043	5,728	2,681	54,449
Railways ..	63,232	33,122	27,171	14,562	12,803	..	150,890
Tramways and Omnibuses ..	13,818	..	..	..	1,155	..	14,973
Harbours and Rivers, etc. ..	1,468	304	..	1,076	307	..	3,155
Water Supply, Sewerage, Irrigation and Drainage ..	..	2,519	..	1,902	1,730	..	6,151
Other Business and Industrial Undertakings ..	..	1,202	..	206	1,096	901	3,405
Education ..	25,610	15,987	7,221	5,316	5,063	2,561	61,758
Health and Charitable ..	21,323	14,012	8,641	4,246	4,224	2,195	54,641
Justice ..	2,037	1,280	654	276	317	167	4,731
Police ..	5,621	3,792	2,640	1,147	1,142	495	14,837
Penal establishments ..	1,403	466	195	224	160	89	2,537
Public safety ..	307	198	256	49	86	34	930
Adjustment of surplus of previous years ..	..	..	..	..	(c) - 159	..	(c) - 159
All other expenditure ..	27,370	12,180	8,125	8,179	5,581	2,640	64,075
Total ..	180,811	97,360	62,980	44,226	39,233	11,763	436,373

(a) See § 1, para. 2, page 625.

(b) Tasmanian transport services are under the separate control of the Transport Commission. (c) Balance of Special Grant, 1950–51. The Special Grant for 1952–53 was brought into the Western Australian Consolidated Revenue Fund as £8,200,000 although the payment by the Commonwealth was £8,041,000.

STATE EXPENDITURE: DETAILS, 1952-53—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
PER HEAD OF POPULATION. (£ s. d.)							
Public Debt (interest, exchange, debt redemption, etc.) ..	5 8 10	5 4 1	6 9 4	9 7 11	9 7 0	8 13 7	6 5 2
Railways ..	18 9 10	14 0 6	21 15 2	19 8 7	20 17 11	..	17 6 9
Tramways and Omnibuses ..	4 0 10	..	..	..	1 17 8	..	1 14 5
Harbours and Rivers, etc. ..	0 8 7	0 2 7	..	1 8 8	0 10 0	..	0 7 3
Water Supply, Sewerage, Irrigation and Drainage ..	..	1 1 4	..	2 10 9	2 16 6	..	0 14 2
Other Business and Industrial Undertakings ..	..	0 10 2	..	0 5 8	1 15 9	2 18 4	0 7 10
Education ..	7 9 9	6 15 4	5 15 8	7 1 10	8 5 3	8 5 10	7 1 11
Health and Charitable ..	6 4 8	5 18 8	6 18 5	5 13 4	6 17 10	7 2 0	6 5 7
Justice ..	0 11 11	0 10 10	0 10 6	0 7 4	0 10 4	0 10 10	0 10 10
Police ..	1 12 10	1 12 1	2 2 3	1 10 7	1 17 3	1 12 1	1 14 1
Penal establishments ..	0 8 2	0 3 11	0 3 1	0 5 11	0 5 3	0 5 9	0 5 10
Public safety ..	0 1 10	0 1 8	0 4 1	0 1 4	0 2 10	0 2 2	0 2 2
Adjustment of surplus of previous years ..	..	..	..	..	-0 5 2	..	-0 0 5
All other expenditure ..	8 0 1	5 3 1	6 10 2	10 18 3	9 2 2	8 10 11	7 7 3
Total ..	52 17 4	41 4 3	50 8 8	59 0 2	64 0 7	38 1 6	50 2 10

(ii) 1938-39 and 1948-49 to 1952-53. Expenditure by the several States for these years on principal items is shown in the following table :—

STATE EXPENDITURE.
(£'000.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Public Debt (interest, exchange, debt redemption, etc.) ..	40,158	41,915	43,999	46,231	50,545	54,449
Railways, Tramways and Omnibuses (working expenses) ..	38,138	87,907	99,230	115,366	151,710	165,863
Harbours and Rivers, etc. ..	680	1,609	1,789	2,155	3,067	3,155
Water Supply, Sewerage, Irrigation and Drainage ..	1,076	2,814	3,363	4,137	5,233	6,151
Other Business and Industrial Undertakings ..	1,035	2,318	2,340	2,319	2,809	3,405
Education ..	12,639	27,778	32,786	39,973	51,025	61,758
Health and Charitable ..	15,307	22,262	27,739	34,817	48,396	54,641
Justice ..	1,323	2,536	2,851	3,376	4,240	4,731
Police ..	3,733	6,906	8,257	9,831	12,575	14,837
Penal establishments ..	646	1,281	1,490	1,731	2,338	2,537
Public safety ..	297	644	657	711	962	930
Reduction of previous deficits or adjustment of surpluses ..	..	..	1,012	1,196	126	-159
All other expenditure ..	13,127	28,455	34,962	42,658	56,663	64,075
Total ..	128,159	226,425	260,475	304,501	389,689	436,373

Division III.—Surplus Revenue.

The following table shows for each of the years 1938-39 and 1948-49 to 1952-53 the total amount and amount per head of the surplus or deficit of each State :—

STATE SURPLUS REVENUE.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL AMOUNT. (£'000.)							
1938-39 ..	-2,459	— 787	14	-397	-221	— 26	-3,876
1948-49 ..	164	-1,383	50	-285	-817	-105	-2,376
1949-50 ..	-1,177	— 259	29	-190	24	-267	-1,840
1950-51 ..	33	— 343	98	230	160	-247	— 69
1951-52 ..	98	-2,406	45	89	-592	-402	-3,168
1952-53 ..	97	— 305	191	25	-508	298	— 262
PER HEAD OF POPULATION. (£ s. d.)							
1938-39 ..	-0. 18 0	-0 8 5	0 0 3	-0 13 4	-0 9 5	-0 2 3	-0 11 3
1948-49 ..	0 1 1	-0 13 1	0 0 11	-0 8 7	-1 11 3	-0 7 10	-0 6 1
1949-50 ..	-0 7 5	-0 2 5	0 0 6	-0 5 6	0 0 10	-0 19 3	-0 4 7
1950-51 ..	0 0 3	-0 3 1	0 1 8	0 6 5	0 5 7	-0 17 2	0 0 2
1951-52 ..	0 0 8	-1 0 11	0 0 9	0 2 6	-1 0 1	-1 7 0	-0 7 6
1952-53 ..	0 0 7	-0 3 1	0 3 0	0 0 8	-0 16 7	0 19 4	-0 0 7

(a) See § 1, para. 2, page 625.

NOTE.—Minus sign (—) indicates deficit.

§ 3. State Trust Funds.

In addition to the moneys received as revenue and paid to the credit of the Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. The balances of trust funds held at 30th June of the years 1939 and 1949 to 1953 were as follows :—

STATE TRUST FUND BALANCES.

(£'000.)									
At 30th June—			N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939	..	..	15,684	8,189	3,062	1,448	3,744	530	32,657
1949	..	..	29,559	16,449	29,924	2,689	9,381	609	88,611
1950	..	..	32,922	16,468	30,382	3,162	10,929	390	94,253
1951	..	..	43,169	18,725	33,907	6,184	12,090	360	114,435
1952	..	..	39,419	20,084	35,097	1,896	10,537	625	107,658
1953	..	..	53,240	22,456	38,652	2,573	11,646	1,320	129,887

(a) Special Deposits Account and Special Accounts.

§ 4. State Loan Funds.

1. **General.**—As far back as 1842 revenue collections were supplemented by borrowed moneys, the earliest loan being raised by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2½d. to 5½d. per £100 per diem, or

approximately from $4\frac{1}{2}$ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems. Loan moneys have also been largely used for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for defence or war purposes. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are to a very large extent represented by tangible assets.

Statements relating to "gross" loan expenditure are shown below. The gross expenditure represents the amounts disbursed during each year. Details of "net" loan expenditure, i.e., gross expenditure less any credits to the Loan Fund during the year on account of repayments of advances to local governing bodies, settlers, etc., the sale of assets and transfers from other funds may be found in *Finance Bulletin* No. 44, 1952-53. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made. See also page 636.

2. Gross Loan Expenditure.—(i) 1952-53. Particulars of gross loan expenditure on works, services, etc., are shown in the following table :—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1952-53.

(£'000.)

Head of Expenditure.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total
Public Works and Services—							
Railways	18,250	7,100	7,786	3,025	7,344	1,907	45,412
Tramways and Omnibuses	2,040			400	296		2,736
Roads	150	1,215	735	360			
Bridges							
Harbours and Rivers	1,254	320	305	900	1,416	508	7,167
Lights and Lighthouses							
Water Supply		6,920	2,017	3,243	1,799	480	16,719
Sewerage	1,205	80		616	359		
Electricity Supply	14,683	7,000		4,150	90	1,544	39,363
Public Buildings	8,446	7,863	1,264	2,160	2,790	1,060	23,583
Loans and Grants to Local Bodies							
Unemployment Relief Works	165	389	4,448				5,002
Housing(b)							
Other Public Works, etc.	251	1,222	1,356	4,744	2,095	1,280	10,948
Primary Production—	368	333		103	200	354	1,358
Soldier Settlement							
Land for Settlement	2,391	1,650	765	4		201	8,011
Advances to Settlers			142	102	11	9	264
Water Conservation				177		91	268
Irrigation and Drainage				141	217		
Rabbit-proof Fencing	3,974		759	463	125		5,679
Agriculture		32		(c)			32
Agricultural Bank	422				71		493
Forestry			1,029				1,029
Mines and Mineral Resources	148	787	814	1,075	104	217	3,145
Other	591	16	434	2,934	398		4,373
Other Purposes	213	87		8	10	1	319
		(d) 3,537		788	1,637	282	6,314
Total Public Works, Services, etc.	54,551	41,575	21,854	25,393	19,012	19,830	182,215
Per Head of Population	£15 19 0	£17 12 0	£17 10 0	£33 17 7	£31 0 7	£64 3 9	£20 18 9

(a) Expenditure from Loan Funds and on account of Loans; includes expenditure from Loan Funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (b) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreement. (c) Included with Advances to Settlers.

(d) Includes Gas and Fuel Corporation advances and share capital, £2,455,000, and Rural Finance Corporation, for advances to rural industries, £900,000.

(ii) 1938-39 and 1948-49 to 1952-53. Particulars of gross loan expenditure on works, etc., for these years are shown in the following table :—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
GROSS LOAN EXPENDITURE. (£'000.)							
1938-39	8,789	3,218	3,393	2,529	1,783	1,687	21,399
1948-49	22,960	12,727	7,118	7,149	3,819	4,393	58,166
1949-50	27,219	20,325	9,035	12,122	8,351	5,783	82,835
1950-51	41,168	35,309	17,698	20,601	11,404	15,200	141,380
1951-52	65,354	55,084	23,662	31,198	18,758	16,882	210,938
1952-53	54,551	41,575	21,854	25,393	19,012	19,830	182,215

PER HEAD OF POPULATION.

(£ s. d.)																						
1938-39	..	3	4	3	1	14	5	3	7	4	4	5	0	3	16	4	7	2	0	3	1	11
1948-49	..	7	9	10	6	0	5	6	5	6	10	15	0	7	6	3	16	7	7	7	9	0
1949-50	..	8	11	7	9	7	4	7	15	4	17	13	0	15	6	0	20	17	0	10	6	8
1950-51	..	12	11	6	15	15	9	14	16	9	28	19	6	19	19	2	52	17	1	17	1	9
1951-52	..	19	9	6	23	18	8	19	7	7	42	15	6	31	14	7	56	10	11	24	16	6
1952-53	..	15	19	0	17	12	0	17	10	0	33	17	7	31	0	7	64	3	9	20	18	9

(a) See footnote (a) to previous table.

The above tables do not include particulars of expenditure on loan discounts and flotations, the funding of deficits, the retirement of treasury bills, and similar items of a nature other than works, services, etc. Summaries of the gross and net expenditure and repayments in respect of all loan purposes for the years 1950-51 to 1952-53 are shown in paragraph 3 following.

3. **Total Loan Expenditure, 1950-51 to 1952-53.**—The following table shows particulars, in summary form, of the total loan expenditure in each State during each of these years.

STATE LOAN EXPENDITURE : SUMMARY.

(£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1950-51.							
Works and Services—							
Gross Expenditure ..	41,168	35,309	17,698	20,601	11,404	15,200	141,380
Net Expenditure ..	38,149	32,024	16,031	18,285	10,327	13,531	128,347
Repayments ..	3,019	3,285	1,667	2,316	1,077	1,669	13,033
Other than Works, etc.(a)—							
Gross Expenditure ..	2,745	47	150	22	29	201	3,194
Net Expenditure ..	2,745	47	150	22	20	201	3,185
Repayments ..	..	..	..	..	(b) 9	..	9
Total Loan Expenditure—							
Gross ..	43,913	35,356	17,848	20,623	11,433	15,401	144,574
Net ..	40,894	32,071	16,181	18,307	10,347	13,732	131,532
Repayments ..	3,019	3,285	1,667	2,316	1,086	1,669	13,042

For footnotes see next page.

STATE LOAN EXPENDITURE: SUMMARY—continued.
(£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1951-52.							
Works and Services—							
Gross Expenditure ..	65,354	55,084	23,662	31,198	18,758	16,882	210,938
Net Expenditure ..	63,433	51,573	22,070	27,795	17,758	15,008	197,637
Repayments ..	1,921	3,511	1,592	3,403	1,000	1,874	13,301
Other than Works, etc.(a)—							
Gross Expenditure ..	188	2,183	150	7	20	142	2,690
Net Expenditure ..	188	2,183	150	7	13	141	2,682
Repayments ..	..	..	..	..	(b) 7	1	8
Total Loan Expenditure—							
Gross ..	65,542	57,267	23,812	31,205	18,778	17,024	213,628
Net ..	63,621	53,756	22,220	27,802	17,771	15,149	200,319
Repayments ..	1,921	3,511	1,592	3,403	1,007	1,875	13,309
1952-53.							
Works and Services—							
Gross Expenditure ..	54,551	41,575	21,854	25,393	19,012	19,830	182,215
Net Expenditure ..	51,547	37,763	19,382	21,981	17,606	12,822	161,101
Repayments ..	3,004	3,812	2,472	3,412	1,406	7,008	21,114
Other than Works, etc.(a)—							
Gross Expenditure ..	596	2,510	150	9	42	247	3,554
Net Expenditure ..	596	2,510	150	9	36	247	3,548
Repayments ..	..	..	..	..	(b) 6	..	6
Total Loan Expenditure—							
Gross ..	55,147	44,085	22,004	25,402	19,054	20,077	185,769
Net ..	52,143	40,273	19,532	21,990	17,642	13,069	164,649
Repayments ..	3,004	3,812	2,472	3,412	1,412	7,008	21,120

(a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits.

(b) From Consolidated Revenue Fund.

Information relating to the State Public Debt is given in part D. Commonwealth and State Public Debt (page 639).

C. COMMONWEALTH AND STATE FINANCE.

1. Revenue and Expenditure.—(i) *Consolidated Revenue Funds.* The following tables show the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1938-39 and 1948-49 to 1952-53. In these tables the combined Commonwealth and State totals have been adjusted to exclude major duplications, but the separate Commonwealth and State figures are as shown in other sections of this Chapter. The items excluded from the total figures are :— payments made by the Commonwealth to the States on account of tax reimbursements, interest under the Financial Agreement, special grants, special financial assistance, coal strike emergency grants, price control reimbursements and estimated payments of pay-roll tax by the States to the Commonwealth.

COMMONWEALTH AND STATES: REVENUE AND EXPENDITURE.

Year ended 30th June—	Revenue.			Expenditure.		
	Commonwealth.	States.	Total.	Commonwealth.	States.	Total.
	£'000.	£'000.	£m.	£'000.	£'000.	£m.
1939	95,064	124,283	209 6	94,437	128,159	212 8
1949	554,377	224,049	706 6	554,377	226,425	709 0
1950	580,652	258,635	746 6	580,652	260,475	748 4
1951	841,792	304,432	1,032 0	841,792	304,501	1,032 0
1952	1,016,828	386,521	1,260 1	1,016,828	389,689	1,263 3
1953	1,040,067	436,111	1,310 7	1,026,667	436,373	1,297 6

(ii) *Loan Expenditure.* The aggregate gross loan expenditures of the Commonwealth and States on works and services for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table:—

COMMONWEALTH AND STATE GROSS LOAN EXPENDITURE: WORKS AND SERVICES.(a)
(£'000.)

Gross Loan Expenditure.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Commonwealth(b) ..	3,913	14,492	42,698	50,413	31,667	35,684
State ..	21,399	58,166	82,835	141,380	210,938	182,215
Total ..	25,312	72,658	125,533	191,793	242,605	217,899

(a) Excludes expenditure on loan flotations, funding deficits, etc. (b) Includes expenditure on Defence, War (1939-45) and Repatriation Services. Excludes payments to National Debt Sinking Fund from proceeds of loan from International Bank of Reconstruction and Development (see page 653).

2. *Taxation.*—The following table shows the combined Commonwealth and State taxation, and the amount per head of population, for the years 1938-39 and 1948-49 to 1952-53. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds have been included.

COMMONWEALTH AND STATE TAXATION: TOTAL NET COLLECTIONS.(a)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
NET COLLECTIONS. (£'000.)						
Customs and Excise Duties ..	47,632	126,200	143,883	165,004	213,917	183,824
Sales Tax ..	9,308	39,029	42,425	57,173	95,459	89,067
Land Tax ..	2,897	4,289	5,431	4,953	8,710	4,666
Pay-roll Tax ..	..	19,803	22,728	28,721	37,170	40,171
Income Taxes ..	679	272,604	279,921	342,248	545,334	557,092
Wool Deduction ..	..	..	..	109,531	5963	— 2,223
Probate and Succession Duties ..	6,916	14,831	16,654	19,405	23,172	26,149
Stamp Duties n.e.l. ..	3,456	6,829	9,431	11,961	12,228	12,297
Motor Taxes ..	6,961	10,256	12,038	15,579	20,523	23,321
Liquor Taxes ..	1,045	2,267	2,432	3,726	3,681	4,429
Entertainments Tax ..	1,884	8,865	8,439	9,578	12,013	13,333
Licences n.e.l. and other Taxes ..	2,841	22,339	17,483	62,107	18,851	13,325
Total ..	124,629	527,312	560,845	828,986	997,021	966,451

PER HEAD OF POPULATION.
(£ s. d.)

	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Customs and Excise Duties ..	6 17 5	16 3 8	17 17 5	19 17 0	25 1 0	21 0 4
Sales Tax ..	1 6 10	5 0 1	5 5 5	6 17 7	11 3 7	10 3 8
Land Tax ..	0 8 4	0 11 0	0 13 5	0 11 11	1 0 4	0 10 8
Pay-roll Tax ..	..	2 10 9	2 16 6	3 9 1	4 7 1	4 11 10
Income Taxes ..	6 10 3	34 19 1	34 15 6	41 3 7	63 17 2	63 13 9
Wool Deduction ..	..	..	..	13 3 7	0 14 0	— 0 5 1
Probate and Succession Duties ..	0 19 11	1 18 0	2 1 5	2 6 8	2 14 3	2 19 10
Stamp Duties n.e.l. ..	0 10 0	0 17 6	1 3 5	1 8 10	1 8 8	1 8 1
Motor Taxes ..	1 0 1	1 6 4	1 9 11	1 17 6	2 8 1	2 13 4
Liquor Taxes ..	0 3 0	0 5 10	0 6 7	0 6 7	0 8 7	0 10 3
Entertainments Tax ..	0 5 6	1 2 9	1 0 11	1 3 1	1 8 2	1 10 6
Licences n.e.l. and other Taxes ..	0 8 1	2 17 3	2 3 6	7 9 5	2 4 2	1 12 9
Total ..	17 19 5	67 12 3	69 13 6	99 14 10	116 15 1	110 9 9

(a) For separate details of Commonwealth and State taxation collections, see pages 599 and 627.

D. COMMONWEALTH AND STATE PUBLIC DEBT.**§ 1. General.**

Under the Financial Agreement between the Commonwealth and the States in 1927 the Commonwealth and State Public Debts were amalgamated and the Commonwealth Government accepted responsibility for the State Public Debts. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf and the debt is redeemed from the National Debt Sinking Fund to which both the Commonwealth and the States make contributions. Under the agreement the Commonwealth arranges for all borrowings on behalf of the Commonwealth and the States, and Commonwealth securities are issued for all money borrowed.

In the statistical tables relating to Public Debt the units of currency for debt outstanding and interest payable, with the exception referred to below, are:—Debt in Australia—£ Australian; Debt in London—£ Sterling; Debt in New York—£ (converted from dollars at the rate of \$4.8665 to £1).

The totals shown represent the total "face" or "book" value of the debt without adjustment on account of the differences in currency mentioned above.

In § 3, para. 5 only, details of the debt for the Commonwealth and each State are given in Australian currency.

§ 2. The Financial Agreement between the Commonwealth and the States.

1. **General.**—Full details of the Financial Agreement between the Commonwealth and the States are given in earlier issues of the Official Year Book (*see* No. 37, pages 685 to 690). In this issue a summary of the main provisions only is given.

2. **Australian Loan Council.**—The Australian Loan Council was set up to co-ordinate the public borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as Chairman and the Premier of each State, or Ministers nominated by them in writing. Each year the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

3. **Loan Raisings for the Commonwealth and States.**—Subject to the decisions of the Loan Council, the Commonwealth arranges for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the Public Debts of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in the name of the State, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil all its obligations to bond-holders in respect of the money so borrowed and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount and other charges, the Commonwealth or any State may—

- (i) borrow within its own territory, for any purpose, money from any authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice;
- (ii) borrow from the public by means of counter sales of securities; and
- (iii) use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

4. **Taking over of State Public Debts.**—The Commonwealth took over on 1st July, 1929—

- (a) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927; and
- (b) all other debts of each State existing on 1st July, 1929 for money borrowed by that State deemed by the Agreement to be money borrowed by the Commonwealth for and on behalf of the State,

and in respect of these debts assumed, as between the Commonwealth and the States, the liabilities of the States to bond holders.

5. *Transferred Properties.*—In relation to State properties transferred to the Commonwealth under Section 85 of the Constitution, the States, as from 1st July, 1929, were discharged from any liability in respect of principal, interest or debt redemption on so much of the debts bearing interest at 5 per cent. per annum, taken over by the Commonwealth, as amounted to the agreed value of these properties, namely £10,924,323.

6. *Payment of Interest.*—For a period of 58 years from 1st July, 1927 the Commonwealth agreed to contribute the sum of £7,584,912 each year towards the interest payable on the State debts. The balance of the interest payable on the State debts is paid to the Commonwealth by the States.

7. *Sinking Fund.*—(i) *State Public Debt existing at 30th June, 1927.* A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts of the States existing on 30th June, 1927, and conversions thereof, was established under the terms of the Agreement. The Commonwealth contributes annually from revenue 2s. 6d. per cent. on the net public debts of the States existing at 30th June, 1927 and each State contributes annually 5s. per cent. on the net public debt of such State at 30th June, 1927. The payments of the Commonwealth and of all States except New South Wales will continue for a period of 58 years from 1st July, 1927, and those of New South Wales for a similar period from 1st July, 1928.

(ii) *New Borrowings.* On new borrowings after 1st July, 1927 (except those for redemptions or conversions, or funding a State deficit) a sinking fund at the rate of 10s. per cent. per annum was established and the State and the Commonwealth contribute from revenue equal shares for a period of 53 years from the date of raising. (New South Wales did not commence sinking fund contributions in respect of new loans raised in the financial year 1927–28 until 1st July, 1928.)

(iii) *Loans raised to meet a Revenue Deficit.* In respect of any loan (except any of the loans referred to in para. (iv) below) raised after 30th June, 1927 by a State to meet a revenue deficit accruing after that date, no sinking fund contribution is made by the Commonwealth, but the State makes a sinking fund contribution at the rate of not less than 4 per cent. per annum of the loan for a period sufficient to provide for the redemption of the loan, the contributions being deemed to accumulate at the rate of 4½ per cent. per annum compound interest.

(iv) *Loans raised to meet Revenue Deficits between 30th June, 1927 and 1st July, 1935.* In respect of loans raised by a State or by the Commonwealth on behalf of a State, on the security of Commonwealth Treasury Bills, to meet a revenue deficit accruing after 30th June, 1927 and before 1st July, 1935, special contributions are payable. Details of these contributions are given in Official Year Book No. 37, pages 688 and 689.

(v) *National Debt Commission.* The sinking funds established are controlled by the National Debt Commission, which may arrange with any State to act as its agent in connexion with payments due to bond holders. Except where the conditions relating to sinking funds, redemption funds, and funds of a like nature held by a State on 30th June, 1929, precluded such transfer, all such funds were transferred to the National Debt Commission.

(vi) *Operation of Sinking Fund.* Sinking fund contributions made in respect of the debts of a State, and funds of that State transferred to the National Debt Commission, are not accumulated but must be applied, whenever expedient, to the redemption and repurchase of loan securities. When such a loan security is repurchased or redeemed by the National Debt Commission, it is cancelled, and the State, in addition to sinking fund contributions otherwise payable, pays a further annual sinking fund contribution at the rate of 4½ per cent. on the face value of the cancelled security.

(vii) *Oversea Debt.* Sinking fund contributions in respect of oversea debt shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

8. **Borrowing by Semi-Governmental Authorities.**—It was realized at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowing of large amounts by semi-governmental authorities. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules, which superseded all previous resolutions. This set of rules provides, *inter alia* for the submission of annual loan programmes, in respect of semi-governmental authorities proposing to raise £100,000 or more in a year, for the consideration of such programmes in conjunction with the loan programme of the Government concerned, and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

§ 3. Commonwealth and State Public Debt Outstanding.

1. **Public Debt, Annual Interest Payable and Average Rate of Interest at 30th June, 1953.**—In the following table details are given of the Commonwealth and State Public Debt, annual interest payable and average rate of interest at 30th June, 1953.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1953.

Particulars.	Maturing in—			Total.
	Australia.	London.	New York.	
DEBT.				
Commonwealth Debt—	£A.'000.	£ Stg.'000.	£'000.	£'000.
War (1914-18) Debt (a)—				
Stock and Bonds	144,679	7,534	..	152,213
Other Debt(b)	120	..	..	120
Total War (1914-18) Debt ..	144,799	7,534	..	152,333
War (1939-45) Debt—				
Stock and Bonds	1,036,557	5,775	..	1,042,332
Treasury Bills, Internal	165,390	..	..	165,390
Treasury Bills, Public	225,000	..	..	225,000
Other Debt(c)	40,055	..	..	40,055
Total War (1939-45) Debt ..	1,467,002	5,775	..	1,472,777
Works and Other Purposes—				
Stock and Bonds	166,032	49,351	15,096	230,479
Treasury Bills and Debentures .. .. .	..	720	..	720
Treasury Bills, Internal	10,810	..	..	10,810
International Bank Dollar Loan .. .. .	..	..	21,096	21,096
Total Works and Other Purposes ..	176,842	50,071	36,192	263,105
Total Commonwealth Debt ..	1,788,643	63,380	36,192	1,888,215
State Debt—				
Stock and Bonds	1,192,033	259,129	23,751	1,474,913
Debentures	38,371	..	..	38,371
Treasury Bills and Debentures—Short-term .. .. .	..	22,868	..	22,868
Balance of Debts of States taken over by Commonwealth and still represented by State Securities .. .. .	..	7,496	..	7,496
Total State Debt	1,230,404	289,493	23,751	1,543,648
Grand Total Commonwealth and State Debt	3,019,047	352,873	59,943	3,431,863

(a) Excludes War (1914-18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,774) was suspended in 1931. (b) War and Peace Savings Certificates and Stamps and War Gratuity Bonds. (c) Advance Loan Subscriptions, National Savings Bonds, War Savings and Savings Certificates, War Savings and National Savings Stamps.

**COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST
PAYABLE AT 30TH JUNE, 1953—continued.**

Particulars.	Maturing in—			Total.
	Australia.	London.	New York.	

DEBT PER HEAD OF POPULATION.

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (a)	16 8 0	0 17 1	..	17 5 1
War (1939-45) Debt	166 3 0	0 13 1	..	166 16 1
Works and Other Purposes	20 0 7	5 13 5	4 2 0	29 16 0
Total Commonwealth Debt	202 11 7	7 3 7	4 2 0	213 17 2
Total State Debt	140 1 10	32 19 3	2 14 1	175 15 2
Grand Total Commonwealth and State Debt	341 18 7	39 19 4	6 15 9	388 13 8

ANNUAL INTEREST PAYABLE.

	£A.'000.	£ Stg.'000.	£'000.	£'000.
Commonwealth Debt—				
War (1914-18) Debt (a)	4,656	228	..	4,884
War (1939-45) Debt	38,622	231	..	38,853
Works and Other Purposes	5,270	1,665	1,572	8,507
Total Commonwealth Debt	48,548	2,124	1,572	52,244
Total State Debt	38,028	9,231	881	48,140
Grand Total Commonwealth and State Debt	86,576	11,355	2,453	100,384

ANNUAL INTEREST PAYABLE PER HEAD OF POPULATION.

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (a)	0 10 7	0 0 6	..	0 11 1
War (1939-45) Debt	4 7 6	0 0 6	..	4 8 0
Works and Other Purposes	0 11 11	0 3 9	0 3 7	0 19 3
Total Commonwealth Debt	5 10 0	0 4 9	0 3 7	5 18 4
Total State Debt	4 6 7	1 1 0	0 2 0	5 9 7
Grand Total Commonwealth and State Debt	9 16 1	1 5 9	0 5 7	11 7 5

AVERAGE RATE OF INTEREST PAYABLE (PER £100 PER ANNUM).

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (a)	13 4 4	3 0 5	..	3 4 2
War (1939-45) Debt	2 12 8	4 0 0	..	2 12 9
Works and Other Purposes	2 19 7	3 6 6	4 6 11	3 4 8
Total Commonwealth Debt	2 14 4	3 7 0	4 6 11	2 15 4
Total State Debt	3 1 10	3 3 9	3 14 2	3 2 4
Grand Total Commonwealth and State Debt	2 17 4	3 4 4	4 1 10	2 18 6

(a) Excludes War (1914-18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,274) was suspended in 1931.

2. Public Debt and Annual Interest Payable, 1939 and 1949 to 1953.—In the following table details are given of the Public Debt and annual interest payable, including the average rate of interest, at 30th June, 1939 and 1949 to 1953. A dissection of debt for these years into debt payable in Australia, London and New York may be found in the *Finance Bulletins* issued by this Bureau.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE
AT 30th JUNE.

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
DEBT. (£'000.)						
Commonwealth Debt—						
War (1914-18) Debt ..	186,214	164,545	165,063	157,360	156,095	152,333
War (1939-45) Debt ..	..	1,491,652	1,497,251	1,505,176	1,484,915	1,472,777
Works and Other Purposes ..	131,313	160,972	168,313	189,613	227,809	263,105
Total Commonwealth Debt	317,527	1,817,169	1,830,627	1,852,149	1,868,819	1,888,215
State Debt	897,772	1,008,884	1,078,800	1,208,338	1,395,676	1,543,648
Grand Total, Commonwealth and State Debt	1,215,299	2,826,053	2,909,436	3,060,487	3,264,495	3,431,863

ANNUAL INTEREST PAYABLE.
(£'000.)

Commonwealth Debt—						
War (1914-18) Debt ..	7,376	5,995	6,001	5,043	5,022	4,884
War (1939-45) Debt ..	..	39,898	40,004	38,284	37,509	38,853
Works and Other Purposes ..	5,150	5,162	5,391	6,017	7,159	8,507
Total Commonwealth Debt	12,526	51,055	51,396	49,344	49,690	52,244
State Debt	33,644	32,291	34,181	37,100	41,631	48,140
Grand Total Commonwealth and State Debt	46,170	83,346	85,577	86,444	91,321	100,384

AVERAGE RATE OF INTEREST PAYABLE (PER £100 PER ANNUM).
(£ s. d.)

Commonwealth Debt—						
War (1914-18) Debt ..	3 19 3	3 12 11	3 12 9	3 4 5	3 4 5	3 4 2
War (1939-45) Debt ..	..	2 13 8	2 13 6	2 10 11	2 10 7	2 12 9
Works and Other Purposes ..	3 18 5	3 4 2	3 4 1	3 3 6	3 2 11	3 4 8
Total Commonwealth Debt	3 18 11	2 16 4	2 16 2	2 13 4	2 13 3	2 15 4
State Debt	3 14 11	3 4 0	3 3 4	3 1 5	2 19 8	3 2 4
Grand Total Commonwealth and State Debt	3 16 0	2 19 1	2 18 10	2 16 6	2 16 0	2 18 6

3. State Public Debt and Annual Interest Payable at 30th June, 1953.—In paragraphs 1 and 2 totals only of the States' Public Debt are given. In the following table the total debt of each State and the amounts outstanding per head of population at 30th June, 1953, the annual interest payable and the average rate of interest payable are shown according to the place of flotation.

STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1953.

State.	Maturing in Australia.	Maturing Oversea.			Grand Total.
		London.	New York.	Total Oversea.	
DEBT.					
	£A.'000.	£ Stg. '000.	£'000.	£'000.	£'000.
New South Wales ..	435,578	122,658	10,687	133,345	568,923
Victoria ..	290,072	45,024	4,424	49,448	339,520
Queensland ..	155,451	44,117	4,687	48,804	204,255
South Australia ..	157,333	34,697	1,720	36,417	193,750
Western Australia ..	115,093	35,970	2,009	37,979	153,072
Tasmania ..	76,877	7,027	224	7,251	84,128
Total ..	1,230,404	289,493	23,751	313,244	1,543,648

DEBT PER HEAD OF POPULATION.

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d.
New South Wales ..	126 10 8	35 12 7	3 2 1	38 14 8	165 5 4
Victoria ..	121 13 2	18 17 8	1 17 1	20 14 9	142 7 11
Queensland ..	122 16 7	34 17 2	3 14 1	38 11 3	161 7 10
South Australia ..	207 15 8	45 16 6	2 5 5	48 1 11	255 17 7
Western Australia ..	184 19 6	57 16 3	3 4 7	61 0 10	246 0 4
Tasmania ..	247 2 11	22 11 10	0 14 5	23 6 3	270 9 2
Total ..	140 1 10	32 19 3	2 14 1	35 13 4	175 15 2

ANNUAL INTEREST PAYABLE.

	£A.'000.	£ Stg. '000.	£'000.	£'000.	£'000.
New South Wales ..	13,277	3,905	360	4,265	17,542
Victoria ..	9,060	1,456	180	1,636	10,696
Queensland ..	4,880	1,464	171	1,635	6,515
South Australia ..	4,844	1,078	70	1,148	5,992
Western Australia ..	3,559	1,105	92	1,197	4,756
Tasmania ..	2,408	223	8	231	2,639
Total ..	38,028	9,231	881	10,112	48,140

AVERAGE RATE OF INTEREST PAYABLE (PER £100 PER ANNUM).

	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d.
New South Wales ..	3 1 0	3 3 8	3 7 4	3 4 0	3 1 8
Victoria ..	3 2 6	3 4 8	4 1 2	3 6 2	3 3 0
Queensland ..	3 2 9	3 6 5	3 13 2	3 7 1	3 3 10
South Australia ..	3 1 7	3 2 2	4 1 4	3 3 0	3 1 10
Western Australia ..	3 1 10	3 1 5	4 11 9	3 3 0	3 2 2
Tasmania ..	3 2 8	3 3 5	3 7 6	3 3 6	3 2 9
Total ..	3 1 10	3 3 9	3 14 2	3 4 7	3 2 4

4. State Public Debt, 1939 and 1949 to 1953.—In the following table the debt of each State and the amounts outstanding per head of population at 30th June, 1939 and 1949 to 1953 are shown.

STATE PUBLIC DEBT.

30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
DEBT. (£'000.)							
1939	359,044	179,098	127,503	108,887	95,473	26,367	897,772
1949	396,493	202,883	144,125	124,720	102,916	37,747	1,008,884
1950	425,289	217,413	150,662	133,174	109,550	42,721	1,078,809
1951	462,241	250,933	166,157	148,388	123,186	57,433	1,208,338
1952	522,491	302,499	187,310	173,436	138,288	71,652	1,395,676
1953	568,923	339,520	204,255	193,750	153,072	84,128	1,543,648
DEBT PER HEAD OF POPULATION. (£ s. d.)							
1939	130 18 7	95 13 3	125 4 11	182 10 6	203 2 4	111 1 2	129 3 11
1949	127 6 10	94 16 11	125 4 10	185 6 0	193 4 2	140 2 5	128 1 1
1950	131 17 3	98 13 11	127 5 5	190 3 7	196 7 1	152 18 3	132 7 7
1951	139 6 11	110 11 7	137 3 7	206 1 8	211 17 0	197 9 6	144 0 5
1952	154 4 0	129 10 6	151 5 0	234 10 3	229 19 11	237 3 5	162 3 9
1953	165 5 4	142 7 11	161 7 10	255 17 7	246 0 4	270 9 2	175 15 2

In some States certain public utilities such as tramways, water supply and sewerage, harbour services, etc., are controlled by boards or trusts, which, in addition to receiving advances from the central Government, raise loans by public borrowing on their own behalf, while in other States these services are controlled by the central Government. Comparison of the debts of the States is therefore difficult, but on page 648 figures showing the aggregate debts of the States, including these local and semi-governmental authorities, are shown for the years 1938-39 and 1948-49 to 1952-53.

5. Public Debt and Interest Payable in Australian Currency.—In the foregoing tables relating to Commonwealth and State public debt the debt outstanding in London is expressed in sterling, and debt outstanding in New York is expressed in pounds converted from dollars at the rate of \$4.8665 to £1. This method of showing the debt gives no indication of the amount that the Australian Governments would have to find to repay the debt. In the following tables the public debt and the interest payable are shown in terms of Australian currency throughout. Debt in London and in New York has been converted to Australian currency at the selling rate of exchange on 30th June, 1953.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE
AT 30th JUNE, 1953 : AUSTRALIAN CURRENCY.
(£A.'000.)

Particulars.	Maturing in—			Total.
	Australia.	London. (a)	New York. (b)	
DEBT.				
Commonwealth Debt—				
War (1914-18) Debt	144,799	9,455	..	154,254
War (1939-45) Debt	1,467,002	7,247	..	1,474,249
Works and Other Purposes	176,842	62,840	78,647	318,329
Total Commonwealth Debt	1,788,643	79,542	78,647	1,946,832
State Debt—				
New South Wales	435,578	153,936	23,222	612,736
Victoria	290,072	56,504	9,613	356,189
Queensland	155,451	55,367	10,184	221,002
South Australia	157,333	43,545	3,738	204,616
Western Australia	115,093	45,143	4,365	164,601
Tasmania	76,877	8,819	488	86,184
Total State Debt	1,230,404	363,314	51,610	1,645,328
Commonwealth and State Debt—				
Short-term Debt	401,200	29,603	..	430,803
Other Debt	2,617,847	413,253	130,257	3,161,357
Grand Total Commonwealth and State Debt	3,019,047	442,856	130,257	3,592,160

(a) Converted at rate of £ stg. 100 = £A. 125 10s.

(b) Converted at rate of \$2.2395 = £A. 1.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE
AT 30th JUNE, 1953: AUSTRALIAN CURRENCY—continued.
 (£A.'000.)

Particulars.	Maturing in—			Total.
	Australia.	London. (a)	New York. (b)	
ANNUAL INTEREST PAYABLE.				
Commonwealth Debt—				
War (1914-18) Debt	4,656	286	..	4,942
War (1939-45) Debt	38,622	290	..	38,912
Works and Other Purposes	5,270	2,090	3,416	10,776
Total Commonwealth Debt	48,548	2,666	3,416	54,630
State Debt—				
New South Wales	13,277	4,900	782	18,959
Victoria.. ..	9,060	1,828	390	11,278
Queensland	4,880	1,838	373	7,091
South Australia	4,844	1,353	152	6,349
Western Australia	3,559	1,386	200	5,145
Tasmania	2,408	280	17	2,705
Total State Debt	38,028	11,585	1,914	51,527
Grand Total Commonwealth and State Debt	86,576	14,251	5,330	106,157

(a) Converted at rate of £ stg. 100 = £A. 125 10s.

(b) Converted at rate of \$2.2395 = £A. 1.

6. Public Debt at each Rate of Interest.—The following table shows particulars of the amounts of debt for Commonwealth and State purposes at 30th June, 1953, at each rate of interest :—

COMMONWEALTH AND STATE PUBLIC DEBT AT 30TH JUNE, 1953 : AMOUNTS
AT EACH RATE OF INTEREST.

Rate of Interest.	Maturing in—						Total.	
	Australia.		London.		New York.		Common-wealth.	State.
	Common-wealth.	State.	Common-wealth. (a)	State.	Common-wealth.	State.		
Per cent.	£A.'000.	£A.'000.	£stg.'000.	£stg.'000.	£'000.	£'000.	£'000.	£'000.
5.0 .. ..	..	..	..	1	9,515	4,793	9,515	4,794
4.75 .. ..	..	..	..	..	2,304	..	2,304	..
4.5	34,004	118,012	..	11,790	..	..	34,004	129,802
4.25 .. ..	..	..	..	..	18,792	..	18,792	..
4.0 .. ..	..	579	5,775	11,546	..	..	5,775	12,125
3.875	31,476	57,165	..	..	..	..	31,476	57,165
3.75	19,543	73,020	6,951	..	..	..	26,494	73,020
3.625 .. ..	..	107	..	..	..	..	..	107
3.5 .. ..	..	1,146	5,952	60,574	1,131	7,296	7,083	69,016
3.4875 .. ..	..	474	..	..	..	..	..	474
3.375	139	..	..	..	3,316	5,309	3,455	5,309
3.25	872,187	155,498	34,187	57,602	1,134	6,353	907,508	219,453
3.2391	23,393	..	..	..	..	..	23,393	..
3.125	282,513	487,659	..	..	..	..	282,513	487,659
3.1 .. ..	..	3,953	..	..	..	..	..	3,953
3.0	40,595	100,249	9,795	90,720	..	..	50,390	190,960
2.8347	12,208	..	..	..	..	..	12,208	..
2.75 .. ..	..	..	470	37,326	..	..	470	37,326
2.7125 .. ..	..	418	..	..	..	..	..	418
2.5 .. ..	..	1	250	19,932	..	..	250	19,933
2.325 .. ..	..	1,730	..	..	..	..	..	1,730
2.0	70,702	188,301	..	..	..	..	70,702	188,301
1.5 .. ..	..	3,720	..	..	..	..	..	3,720
1.0	401,200	38,371	..	..	..	..	401,200	38,371
Miscellaneous (b)	683	1	..	2	..	..	683	3
Total Debt ..	1,788,642	1,230,404	63,380	289,493	36,192	23,751	1,888,215	1,543,645

(a) Excludes War (1914-18) Debt due to United Kingdom Government, £79,724,000 (rate of interest 4.91667 per cent.).

(b) Consists of overdue debt, War (1914-18) and (1939-45) Savings Stamps and National Savings Stamps, etc.

7. Dates of Maturity.—(i) *Commonwealth.* In the following table the Commonwealth Public Debt at 30th June, 1953 is classified according to the earliest and the latest years of maturity.

COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1953(a) : CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.

Year of Maturity.	Earliest Year.				Latest Year.			
	Maturing in—			Total.	Maturing in—			Total.
	Aus- tralia.	London.	New York.		Aus- tralia.	London.	New York.	
	£A.'000.	£Stg. '000.	£'000.	£'000.	£A.'000.	£ Stg. '000.	£'000.	£'000.
Before 30th June, 1953	781,252	6,951	9,515	797,718	..	..	..	..
1953-54(b)	418,440	720	..	419,160	416,722	720	..	417,442
1954-55	55,179	..	1,134	56,313	89,749	..	..	89,749
1955-56	160,526	16,166	..	176,692	36,738	..	9,515	46,253
1956-57	81,942	..	4,447	86,389	43,129	6,951	1,134	51,214
1957-58	10,851	..	..	10,851	43,738	..	..	43,738
1958-59	..	..	..	..	239,980	..	..	239,980
1959-60	..	..	..	..	243,195	..	..	243,195
1960-61	80,389	5,775	..	86,164	235,517	16,166	..	251,683
1961-62	78,785	5,952	..	84,737	165,882	..	3,316	169,198
1962-63	80,486	..	..	80,486	65,797	..	..	65,797
1963-64	..	..	..	..	80,389	5,775	..	86,164
1964-65	..	294	..	294	72,325	..	..	72,325
1965-66 and later	..	27,522	..	27,522	14,689	33,768	1,131	49,588
Miscellaneous (c)	40,793	..	(d)21,096	61,889	40,793	..	(d)21,096	61,889
Total	1,788,643	63,380	30,192	1,888,215	1,788,643	63,380	36,192	1,888,215

(a) See note (a) to previous table. (b) Includes Short-term Debt. (c) Consists of advance loan subscriptions, overdue debt, debt repayable in half-yearly instalments, War Savings and Savings Certificates, War Savings Stamps, National Savings Stamps and Peace Savings Certificates. (d) International Bank Dollar Loans to be repaid in half-yearly instalments from 1st September, 1955 to 1st September, 1975 and from 1st June, 1957 to 1st September, 1972.

(ii) *States.* Particulars of State Public Debt at 30th June, 1953 have been classified in the following table according to the earliest and the latest years of maturity.

STATE PUBLIC DEBT AT 30th JUNE, 1953 : CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.

Year of Maturity.	Earliest Year.				Latest Year.			
	Maturing in—			Total.	Maturing in—			Total.
	Aus- tralia.	London.	New York.		Aus- tralia.	London.	New York.	
	£A.'000.	£Stg. '000.	£'000.	£'000.	£A.'000.	£ Stg. '000.	£'000.	£'000.
Before 30th June, 1953	180,606	15,892	4,793	201,291	..	..	..	..
1953-54	55,793	(a)43,676	..	99,469	34,104	(a)33,664	..	67,768
1954-55	157,160	20,091	6,353	183,604	198,018	3,205	..	201,223
1955-56	66,590	16,049	..	82,639	77,645	..	4,793	82,438
1956-57	64,590	..	12,605	77,195	18,657	..	6,353	25,010
1957-58	39,191	..	..	39,191	37,189	20,091	..	57,280
1958-59	1,668	13,935	..	15,603	36,091	20,809	..	56,900
1959-60	2,732	..	..	2,732	76,830	..	..	76,830
1960-61	110,695	11,790	..	122,485	65,215	18,438	..	83,653
1961-62	199,324	23,874	..	223,198	48,869	..	5,309	54,178
1962-63	268,764	12,871	..	281,635	160,078	11,790	..	171,868
1963-64	3,604	10,000	..	13,604	110,020	..	..	110,020
1964-65	1,564	12,974	..	14,538	180,879	12,870	..	193,749
1965-66	1,084	54,975	..	56,059	109,770	10,000	..	119,770
1966-67	2,450	..	..	2,450	23,874	7,296	..	33,620
1967-68	2,202	15,949	..	18,151	2,202	14,850	..	17,052
1968-69	2,455	..	..	2,455	..	..	..	2,455
1969-70	3,242	18,441	..	21,683	3,242	42,016	..	45,258
1970-71	2,369	..	..	2,369	11,546	..	..	13,915
1971-72	2,177	12,225	..	14,402	2,177	15,949	..	18,126
1972-73	2,711	..	..	2,711	..	..	..	2,711
1973-74	3,336	..	..	3,336	12,225	..	..	15,561
1974-75	4,378	..	..	4,378	31,415	..	..	35,793
1975-76 and later	29,813	4,351	..	34,164	29,813	4,351	..	34,164
Miscellaneous (b)	21,906	2,400	..	24,306	21,906	2,400	..	24,306
Total	1,230,404	289,493	23,751	1,543,648	1,230,404	289,493	23,751	1,543,648

(a) Includes short-term debt, £22,868,000. (b) Consists of overdue, indefinite and interminable debt, debt due at Treasurer's option and half-yearly drawings.

8. **Short-term Debt.**—(i) *Amount.* Particulars of the short-term debt (Treasury Bills and Debentures) of the Commonwealth and States in London and in Australia at 30th June, 1939 and at intervals from 30th June, 1949 to 30th June, 1953 are shown in the following table. This debt is included in the public debt as shown elsewhere.

COMMONWEALTH AND STATE SHORT-TERM DEBT.(a)

Date.	Maturing in Australia. (£A.'000.)			Maturing in London. (£Stg.'000.)		
	Commonwealth.	States.	Total.	Commonwealth.	States.	Total.
30th June, 1939 ..	..	50,228	50,228	4,220	23,155	27,375
" " 1949 ..	123,280	..	123,280	1,720	22,868	24,588
" " 1950 ..	108,280	..	108,280	1,470	22,868	24,338
" " 1951 ..	108,280	2,400	110,680	1,220	22,868	24,088
" " 1952 ..	153,280	..	153,280	970	22,868	23,838
30th September, 1952	178,280	5,163	183,443	970	22,868	23,838
31st December, 1952 ..	263,280	8,378	271,658	720	22,868	23,588
31st March, 1953 ..	305,000	8,078	313,078	720	22,868	23,588
30th June, 1953 ..	225,000	..	225,000	720	22,868	23,588

(a) Excludes Overdrafts and Internal Treasury Bills.

(ii) *Interest Rates.* (a) *London.* The rates of interest payable on Treasury Bills and Debentures in London during the following periods were: 1938–39—minimum rate, 2 per cent., maximum rate, $2\frac{1}{2}$ per cent.; 1948–49 to 1950–51—minimum rate, 2 per cent., maximum rate, $2\frac{1}{2}$ per cent. On 8th November, 1951 the rates were increased to—minimum rate, $2\frac{1}{2}$ per cent., maximum rate, $2\frac{3}{4}$ per cent.

(b) *Australia.* The Treasury Bill rates in Australia were as follows:— $1\frac{1}{2}$ per cent. from 1st January, 1935; $1\frac{1}{2}$ per cent. from 1st May, 1940; $1\frac{1}{2}$ per cent. from 1st May, 1943; 1 per cent. from 1st March, 1945; $\frac{3}{4}$ per cent. from 1st May, 1949; 1 per cent. from 1st August, 1952.

9. **State and Municipal and Semi-Governmental Authority Public Debt.**—For the reasons indicated on page 645 direct comparisons of the debts of the several States should be made with caution. The table following shows, for 1938–39 and 1948–49 to 1951–52, particulars of the debts of the States and the debts due to the public by municipal and semi-governmental authorities in each State.

STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY PUBLIC DEBT.

State.	State.	Municipal. (a)	Semi-Governmental. (a)	Total.
DEBT. (£'000.) 1951–52.				
New South Wales ..	522,491	44,217	123,064	689,772
Victoria ..	302,499	17,205	160,468	480,172
Queensland ..	187,310	41,561	17,659	246,530
South Australia ..	173,436	911	12,859	187,206
Western Australia ..	138,288	2,950	432	141,670
Tasmania ..	71,652	5,332	1,709	78,693
Total	1951–52 ..	1,395,676	112,176	1,824,043
	1950–51 ..	1,208,338	98,201	1,564,426
	1949–50 ..	1,078,809	84,445	1,369,876
	1948–49 ..	1,008,884	74,201	1,259,646
	1938–39 ..	897,772	78,126	1,096,410

For footnotes see following page.

STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY
PUBLIC DEBT—continued.

State.	State.	Municipal. (a)	Semi-Gov- ernmental. (a)	Total.
DEBT PER HEAD OF POPULATION. (£.)				
1951-52.				
New South Wales	154.2	13.0	36.3	203.5
Victoria	129.5	7.4	68.7	205.6
Queensland	151.3	33.6	14.3	199.2
South Australia	234.5	1.2	17.4	253.1
Western Australia	230.0	4.9	0.7	235.6
Tasmania	237.2	17.6	5.7	260.5
Total	1951-52	13.0	36.7	211.9
	1950-51	11.7	30.8	186.5
	1949-50	10.4	25.3	168.1
	1948-49	9.4	22.4	159.9
	1938-39	11.2	17.4	157.8

(a) Due to the public and excludes amounts due to Central Government. Includes bank overdrafts.

§ 4. Commonwealth Loan Raisings.

1. New Loans Raised, 1950-51 to 1952-53.—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required by both the Commonwealth and the State Governments. Details of loan transactions given in this section relate, therefore, to all loans raised for the Commonwealth and the States. The following table shows details of new loans raised in Australia by the Commonwealth during the three years 1950-51 to 1952-53. No new loans were raised in London during this period, and the only new loans raised in New York were those from the International Bank for Reconstruction and Development. Details of these loans are given in para. 3, below.

COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA.

Month of Raising.	Amount Invited.	Amount Sub- scribed.	Rate of In- terest per annum.	Year of Maturity.	Price of Issue per £100.	Allocation of Proceeds.		
						Commonwealth.		States.
						War (1939- 45) etc.	Other Pur- poses.	
	£'000.	£'000.	%		£	£'000.	£'000.	£'000.
1950-51—								
August (Tenth Security Loan)	12,897	6,531	2	1953	100	1,301	..	47,000
November (Eleventh Security Loan)	21,253	41,770	3½	1961-64				
		1,976	2	1953	100	..	..	30,000
		28,024	3½	1961-64				
May (Twelfth Security Loan)	40,000	3,275	2	1954	100	328	..	48,938
		45,991	3½	1962-65				
1951-52—								
August (Thirteenth Security Loan)	40,000	8,911	2	1954	100	..	3,840	28,660
November (Fourteenth Security Loan)	13,233	23,589	3½	1962-65				
		2,794	2	1954	100	..	1,470	12,076
March (Fifteenth Security Loan)	30,533	10,752	3½	1962-65				
		5,277	2	1955	100	..	1,787	15,862
June(b)	160,000	12,282	3½	1962-65				
		160,000	2	1955	100	7,135	16,367	136,498
1952-53—								
November (Sixteenth Security Loan)	20,000	20,269	4½	1961	100	..	2,459	17,810
March (Seventeenth Security Loan)	29,789	13,981	3	1955	99 108.	..	3,595	28,331
		18,037	4½	1962				
June(b)	123,000	35,000	3	1955	99 108.	..	15,327	107,673
		88,000	4½	1962				

(a) Includes loans raised for redemption of Treasury Bills, but excludes conversion loans, loans for redemption of debt maturing in London, short-term debt and certain miscellaneous debt (see below).
(b) Special Issue. For details see following paragraph.

The loans of £160,000,000 and £123,000,000 issued in June, 1952 and 1953 respectively were for the purpose of fulfilling an undertaking given by the Commonwealth that the States would have access to loan funds for their works programmes up to the approved Loan Council borrowing programmes. These programmes totalled £225,287,000 in 1951-52 and £190,182,000 in 1952-53. Subscriptions to these special loans came from the following sources :—

	1951-52.	1952-53.
National Debt Commission—	£	£
Investment of surplus received from Commonwealth Revenue	98,500,000	..
Investment of Australian currency proceeds of International Bank Loan	27,000,000	18,500,000
Commonwealth Trust Moneys—Investment	34,500,000	104,500,000
Total ..	160,000,000	123,000,000

Finance of the approved Loan Council programmes in 1951-52 and 1952-53 was therefore provided from the following sources—

	1951-52.	1952-53.
	£	£
Public Loans, domestic raisings, etc.	72,422,000	67,357,000
Special Commonwealth Loan	152,865,000	122,825,000
Total ..	225,287,000	190,182,000

In addition to the new loans raised shown in the foregoing table, and the redemption and conversion loans shown in the following table, there were other miscellaneous debt operations during 1952-53, viz. :—Savings Certificates and War Saving Certificates (Five and Seven Years' Series), decrease of £6,208,000 ; War Savings and Savings Stamps, decrease of £2,000 ; National Savings Bonds and Stamps, decrease of £1,767,000 ; " Over the Counter Sales " (small amounts borrowed by virtue of certain statutory rights), Commonwealth, £15,000,000 and States, £1,517,000. Advance loan subscriptions in hand increased from £1,417,000 at the end of 1951-52 to £4,280,000 at the end of 1952-53.

2. Conversion and Redemption Loans, 1950-51 to 1952-53.—(i) *Australia*. Particulars of conversion loans raised in Australia during the three years 1950-51 to 1952-53 are given in the following table :—

COMMONWEALTH CONVERSION AND REDEMPTION LOANS RAISED IN AUSTRALIA.

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest.
	Amount.	Rate of Interest per annum.	Amount.	Rate of Interest per annum.	Price of Issue per £100.	Year of Maturity.	
	£A.'000.	%	£A.'000.	%	£		£A.'000.
1950-51—							
August ..	{ 9,285	3½	9,716	2	100	1953	400
	{ 27,818	4	27,387	3½	100	1961-64	
November ..	116,828	4	{ 14,698	2	100	1953	1,187
			{ 102,130	3½	100	1961-64	
1951-52—							
November ..	26,767	3½	{ 5,077	2	100	1954	89
			{ 21,690	3½	100	1962-65	
March ..	44,467	2	{ 33,744	2	100	1955	-189
			{ 10,723	3½	100	1962-65	
1952-53—							
March ..	47,211	2	{ 30,196	3	99.108.	1955	-727
			{ 17,015	4½	100	1962	

NOTE.—Minus sign (—) denotes an increase in the annual liability for interest.

(ii) *London.* The following table shows particulars of loans raised in Australia and London during the years 1950-51 and 1952-53 for the purpose of redeeming and converting London loans. There were no loans raised for this purpose in 1951-52.

COMMONWEALTH LOANS RAISED FOR THE CONVERSION AND REDEMPTION OF LOANS MATURING IN LONDON.

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest and Exchange. (a)	
	Amount.	Rate of Interest per annum.	Amount raised in—		Rate of Interest per annum.	Price of Issue per £100.		Year of Maturity.
			Australia.	London.				
	£ Stg. '000.	%	£A. '000.	£ Stg. '000.	%	£	£A. '000.	
1950-51—								
July ..	9,400	3½	11,785	..	3½	100	1964	44
1952-53—								
July ..	11,790	3½	..	11,790	4½	98	1960-62	-148

(a) No account has been taken of cost of issuing the conversion loans at a discount. Exchange calculated at £A. 125.375 = £ stg. 100.

NOTE.—Minus sign (—) denotes an increase in the annual liability for interest and exchange.

(iii) *New York.* During 1946-47 four loans totalling \$128,000,000 were raised in New York to redeem loans which became due for redemption or which the Commonwealth had the option of redeeming. No further loans have been raised in New York for this purpose since that year.

3. *International Bank for Reconstruction and Development Loan.*—To provide dollar funds for the purchase of certain types of capital equipment and plant which were indispensable to the furtherance of development in Australia and which could be obtained only in the United States of America and Canada, the Commonwealth Government, in August, 1950, arranged a loan of \$100,000,000 from the International Bank for Reconstruction and Development. The loan is for a term of 25 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. In addition there is a commitment charge of ¾ per cent. per annum on the amount of the loan not withdrawn from time to time. Repayment of the loan is to be made in half-yearly instalments commencing on 1st September, 1955. The last instalment is payable on 1st September, 1975. Up to 30th June, 1953, \$91,452,531 had been drawn on the loan.

In July, 1952, a further loan of \$50,000,000 was arranged. This loan is for a term of 20 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. There is also a commitment charge of ¾ per cent. per annum similar to that of the previous loan. Repayment of the loan is to be made in half-yearly instalments from 1st June, 1957 to 1st December, 1972. Up to 30th June, 1953, \$11,209,743 had been drawn on the loan.

In March, 1954 a third loan of \$54,000,000 was arranged. The loan is for a term of 15 years with interest and commitment charges similar to those for the previous loan for \$50,000,000. Repayment of the loan will be made in half-yearly instalments from 1st March, 1957 to 1st March, 1969.

The capital equipment and plant purchased from the proceeds of these loans are made available to Commonwealth and State Government departments and agencies and private firms and individuals for use in the development of Australian resources. Subject to a special import licence being obtained, the goods are imported and distributed through normal channels and payment made through the Australian banking system. Periodically, schedules of dollar payments for goods imported against loan licences are submitted to the International Bank for Reconstruction and Development. These

schedules form the basis for periodical drawings by the Commonwealth against the loan. The amounts drawn are paid to the Commonwealth Bank to replace the dollar funds used in making the purchases. In return, the Commonwealth Government receives Australian currency from the Commonwealth Bank. This is paid to the Commonwealth National Debt Sinking Fund, out of which the loans will subsequently be redeemed.

4. **Swiss Loan.**—To foster industrial development in Australia and to stimulate trade relations between the two countries, the Commonwealth Government in November, 1953 arranged for the issue in Switzerland of a public loan of 60,000,000 Swiss francs. The loan was underwritten by a Swiss Banking group headed by the Swiss Bank Corporation and the Crédit Suisse. The loan is for a period of 15 years with an option on the part of the Australian Government to repay the loan in whole or in part after 12 years. The rate of interest is 4 per cent. and the issue price was £99. Certain Swiss taxes connected with the issue and servicing of the loan are payable on an agreed basis by the Australian Government.

The loan was fully subscribed and Swiss franc proceeds, after deducting borrowing expenses, were sold by the Commonwealth Government to the Commonwealth Bank in return for an equivalent amount of Australian currency. A trust account, named the Swiss Loan Trust Account, was opened and the loan proceeds were transferred from Loan Fund to this account to be used later in assisting the Loan Council borrowing programmes for the 1953-54 financial year. The Swiss Loan Trust Account will also be used as a sinking fund for the loan and, when the time comes for repayment, the trust account investments can be realized. The provisions of the National Debt Sinking Fund Act do not apply to the loan.

5. **Summary of Loan Transactions, 1948-49 to 1952-53.**—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the five years 1948-49 to 1952-53.

COMMONWEALTH LOAN TRANSACTIONS : SUMMARY.

Year ended 30th June—	New Loans.			Net Increase in Short- term Debt in—				Loans Raised for Conversion or Redemption of Existing Debt Maturing in—			
	New Loans (a) Raised in—		Miscel- laneous Debt in Aus- tralia.(b)	Australia.		Lon- don.	Aus- tralia.	London.		New York.	
				Aus- tralia.	New York.		Raised in—				
	Public.	In- ternal.					Aus- tralia.	Lon- don.			
	£A.'000.	\$'000.		£A.'000	£A.'000.	£A.'000.	£ Stg. '000.	£A.'000.	£A.'000.	£ Stg. '000.	\$'000.
1949 ..	76,876	..	20,196	— 85,000	41,400	— 250	161,799	23,111	52,986	..	
1950 ..	105,845	..	13,928	— 15,000	19,000	— 250	93,213	7,000	..	..
1951 ..	127,567	(c) 9,059	— 16,443	2,400	87,000	— 250	153,928	11,785	..	..
1952 ..	222,695	c 53,380	7,402	42,600	— 37,000	— 250	71,234	..	..	..
1953 ..	6175,287	c 40,223	24,510	71,720	— 75,610	— 250	47,211	..	11,790	..	

(a) Includes loans raised for redemption of Treasury Bills. No new loans were raised in London during this period.

(b) "Over the Counter Sales", Instalment Stock, National Savings Bonds, War Savings and Savings Certificates and net increase in debt on account of War Savings and Savings Stamps, National Savings Stamps and advance loan subscriptions. (c) Amounts drawn of \$100,000,000 and \$50,000,000 loans from International Bank for Reconstruction and Development. (d) Includes special loan of £160,000,000 raised from Commonwealth Trust Funds. (e) Includes special loan of £123,000,000 raised from Commonwealth Trust Funds.

NOTE.—Minus sign (—) denotes a decrease in debt.

§ 5. National Debt Sinking Fund.

1. **Commonwealth Public Debt.**—Particulars relating to the creation of sinking funds are included in issues of the Official Year Book prior to No. 23.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account for the years 1938-39 and 1948-49 to 1952-53 were as follows :—

NATIONAL DEBT SINKING FUND : COMMONWEALTH ACCOUNT. (£'000.)

Items.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52	1952-53.
Receipts—						
From Consolidated Revenue	3,918	16,083	16,146	17,225	(a) 116,928	18,471
Loans and Advances Repaid	17	766	580	4,381	2,094	2,508
War Service Homes Money Repaid	629	1,357	2,156	3,147	4,046	4,050
Half Net Profit Commonwealth Bank	321	1,082	1,116	1,140	1,336	1,704
Reparation Moneys	..	..	500	..	..	..
Interest on Investments	32	42	104	70	76	(b) 2,141
Loan (International Bank for Reconstruction and Development) Act	..	..	..	4,044	23,831	17,935
Other Contributions	14	12	12	12	12	10
Total Receipts	4,931	19,342	20,614	30,019	148,323	46,882
Expenditure—						
Securities Repurchased and Redeemed in—						
Australia	4,230	3,917	26,916	28,762	25,382	16,011
London	608	314	610	1,688	411	436
New York	214	78	118	449	448	455
Total Expenditure	5,052	4,309	27,644	30,899	26,241	16,902
Balance at 30th June	1,131	17,907	10,877	9,997	132,079	162,059
Face Value of Securities Repurchased and Redeemed in—						
Australia	4,199	3,900	26,872	28,828	26,882	16,860
London	498	250	496	1,409	335	363
New York	167	57	68	210	211	212
Total Face Value	4,864	4,207	27,436	30,447	27,428	17,435

(a) Includes £98,500,000 Consolidated Revenue Fund surplus. (b) Includes £1,562,000 interest received under National Debt Sinking Fund (Special Payment) Act 1951.

2. **State Public Debt.**—(i) *States, 1952-53.* A sinking fund for the redemption of the debt of the States was established under the Financial Agreement. Details of contributions to be made to this fund are given on page 640. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1952-53 are shown below.

NATIONAL DEBT SINKING FUND : STATE ACCOUNT, 1952-53. (£'000.)

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Receipts—							
Contributions under Financial Agreement—							
Commonwealth	1,126	651	387	376	311	160	3,011
States	4,228	2,552	1,551	1,449	1,115	467	11,362
Interest from States on cancelled Securities	20	13	5	6	3	2	49
Special Contributions by States	111	35	..	2	1	6	155
Interest on Investments, etc.	10	4	4	3	3	1	25
Total Receipts	5,495	3,255	1,947	1,836	1,432	637	14,602
Expenditure—							
Securities Repurchased and Redeemed in—							
Australia	4,034	2,197	1,345	1,387	788	551	10,602
London	551	230	157	15	18	2	973
New York	269	64	105	26	13	6	483
Total Expenditure	4,854	2,791	1,607	1,428	819	559	12,058
Balance at 30th June, 1953	2,022	1,038	834	720	931	178	5,723
Face Value of Securities Repurchased and Redeemed in—							
Australia	4,180	2,783	1,422	1,521	837	601	11,644
London	463	201	141	14	17	2	838
New York	134	32	53	13	6	3	241
Total Face Value	5,077	3,016	1,616	1,548	860	606	12,723

(ii) *All States, 1938-39 and 1948-49 to 1952-53.* The following table is a summary of the transactions of the National Debt Sinking Fund (State Account) for the years 1938-39 and 1948-49 to 1952-53 :—

NATIONAL DEBT SINKING FUND : STATE ACCOUNT.

(£'000.)

Items.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Receipts—						
Contributions under Financial Agreement—						
Commonwealth ..	1,478	1,851	2,006	2,241	2,557	3,011
States ..	4,327	8,109	8,747	9,418	10,325	11,362
Interest from States on cancelled Securities ..	15	29	27	25	41	49
Commonwealth Contributions under Federal Aid Roads and Works Act ..	69	20	..	..	..	..
Special Contributions by States ..	61	174	142	147	151	155
Interest on Investments, etc.	56	11	6	8	4	25
Total Receipts ..	6,066	10,194	10,928	11,839	13,078	14,602
Expenditure—						
Securities Repurchased and Redeemed in—						
Australia ..	4,068	8,337	6,509	8,877	9,280	10,602
London ..	1,722	2,393	1,449	5,307	474	973
New York ..	347	256	393	462	430	483
Total Expenditure ..	6,137	10,986	8,351	14,646	10,184	12,058
Balance at 30th June ..	1,885	515	3,092	285	3,179	5,723
Face Value of Securities Repurchased and Redeemed in—						
Australia ..	3,996	8,292	6,480	8,859	9,661	11,644
London ..	1,561	1,909	1,182	4,345	420	838
New York ..	285	185	223	229	220	241
Total Face Value ..	5,842	10,386	7,885	13,433	10,301	12,723

E. TAXES ON INCOME.

NOTE.—The following section contains details of taxes on individuals and companies for the 1953-54 and 1954-55 financial years. .

1. **General.**—A description of the development of income taxes in Australia appeared in Official Year Book No. 35, p. 926. Since July, 1942, the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income. Taxes on income are assessed and imposed under the Income Tax and Social Services Contribution Assessment Act 1936-1954 and the Income Tax and Social Services Contribution Act 1954. The latter Act is an annual measure and its primary purpose is to declare the rates of tax and contribution payable for the financial year. The rates for the financial year are levied, in the case of individuals, on the income of that year and, in the case of companies, on the income of the preceding year. Thus tax for the financial year 1954-55 is levied on the income of individuals in 1954-55 and on the income of companies in 1953-54.

2. **Present Taxes.**—For individuals, a single tax known as the Income Tax and Social Services Contribution was levied for both years. All companies were liable for primary income tax and in addition, private companies were subject to tax on undistributed income.

3. **Assessable Income.**—Income taxes in Australia are levied, primarily, on all income derived from Australian sources by any person, rather than on income derived from all sources by Australian residents. Thus a non-resident is taxed on income derived in Australia, while a resident is, in general, not taxed on income other than dividends derived from overseas if the income is taxed in the country in which it is derived.

Certain types of Australian income are exempt from tax in Australia, the more important being (i) pensions, child endowment and other payments under the Social Services Act 1947-1954 and the Tuberculosis Act 1948, (ii) income from gold-mining and uranium mining, (iii) twenty per cent. of certain mining profits, (iv) dividends paid out of exempt mining profits, (v) pay and allowances earned by a member of the Defence Forces while serving in Korea after 26th June, 1950 and Malaya after 28th June, 1950 and (vi) income received from a scholarship, bursary or other education allowance.

No amount is included in assessable income on account of a house occupied by its owner. Profits derived from the sale of property are not assessable income if such property was not purchased with a view to resale at a profit.

Assessable income is divided into two main groups—personal exertion and property. Personal exertion income includes all wage, salary, business and professional incomes, while property income includes all rents, dividends and interest. No distinction between personal exertion and property income is made for companies. The further tax on property income imposed on individuals in cases where the total taxable income exceeded £400 and the amount of property income exceeded £100 was discontinued from the 1953-54 financial year.

Expenses incurred in earning income, certain subscriptions to business associations and trade union dues, are allowable deductions. Losses incurred in previous years may be carried forward as a deduction.

Because of uncongenial climatic conditions, isolation and high cost of living, taxpayers living in certain areas are allowed an additional deduction. Two zones have been prescribed, and the allowances are Zone A, £120 and Zone B, £20.

Income Tax and Social Services Contribution is levied on the taxable income remaining after making these deductions and the concessional deductions to which reference is made in paragraph 4 following.

4. **Concessional Deductions.**—Concessional allowances for dependants, medical expenses, life assurance and superannuation contributions, etc., are made by way of a deduction from income. The maximum deduction allowed for each dependant, parent or a housekeeper employed by the taxpayer for the financial years 1953-54 and 1954-55 is shown in the following table.

CONCESSIONAL DEDUCTIONS FOR DEPENDANTS, ETC.

(£.)

Dependant, etc. (Resident).	Maximum Deduction. (a)
Spouse	130
Daughter-housekeeper (b)	130
Housekeeper (b) having care of taxpayer's children under 16 years of age	130
Parent	130
One child under 16 years of age	78
Other children under 16 years of age	52
Invalid relative (c)	78
Child 16 to 21 years receiving full-time education (d)	78

(a) These deductions are allowed only if the dependant or parent is a resident of Australia. If the dependant is maintained for part only of the year a partial deduction is allowed. (b) Of a widower or widow.

(c) Child, step-child, brother or sister over 16 years of age. The amount of the deduction is reduced by any invalid pension received. (d) The amount of the deduction is reduced by the value of any assistance provided by the Commonwealth or a State.

When the dependant or person maintained derives separate income, the amount of the concessional deduction allowable is reduced as follows :—

In the case of a spouse or daughter-housekeeper, by £2 for every £1 by which the separate net income exceeds £65; for each parent maintained, by £1 for each £1 of separate income; and for each dependent child or invalid relative, by £2 for every £1 by which the separate net income exceeds £52.

For both the 1953-54 and 1954-55 financial years, medical expenses paid by a taxpayer who is a resident, in respect of himself, a dependant, or other child under 21 years of age, up to £150 for each person, are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist, or a hospital, in respect of an illness or operation, payments for dental services not exceeding £30 for any one person, payment for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, and the remuneration of an attendant of a person who is blind or confined to bed or invalid chair.

Other concessional deductions allowed to resident taxpayers include (i) payments of life, etc., insurance premiums and contributions to superannuation, medical, hospital and similar funds and friendly societies, not exceeding an aggregate of £200, (ii) funeral expenses of a dependant not exceeding £30 and (iii) expenditure incurred for the full-time education of dependants who are less than 21 years of age (maximum £75 per dependant).

In addition to concessional deductions, all taxpayers (residents and non-residents) are allowed a deduction from income of rates and taxes on land which are annually assessed, gifts to charitable, benevolent or patriotic funds and one-third of amounts paid as calls to certain mining, forestry and oil-prospecting companies.

5. Effective Exemptions from Tax.—For the financial years 1953-54 and 1954-55 resident taxpayers without dependants were exempt from Income Tax and Social Services Contribution if their income did not exceed £104. The effect of the deductions for dependants was to exempt taxpayers up to the incomes shown hereunder. For comparison, the effect of concessions for dependants for the years 1950-51 to 1952-53 are also shown.

RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM TAX.

(£.)

Taxpayer with—						Income Tax and Social Services Contribution— Financial Years 1950-51 to 1952-53.	Income Tax and Social Services Contribution— Financial Years 1953-54 and 1954-55.
No dependants	..	..	..	..	..	104	104
Wife	..	..	..	..	..	208	234
„ and one child	..	..	..	..	..	286	312
„ „ two children	..	..	..	..	..	338	364
„ „ three children	..	..	..	..	..	390	416
„ „ four children	..	..	..	..	..	442	468

For both the 1953-54 and 1954-55 financial years an aged person (i.e., a man who has attained the age of 65 years or a woman who has attained the age of 60 years) is exempt from Income Tax and Social Services Contribution if his net income (i.e., gross income less

expenses of earning that income) does not exceed £375. A married couple both of whom qualify by age for the concession, are exempt from tax if their combined net incomes do not exceed £750.

6. Rates of Income Tax and Social Services Contribution on Individuals.—The following table shows the rates of income tax and social services contribution for the financial years 1953-54 and 1954-55.

INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS: RATES OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—1953-54 AND 1954-55.

Total Taxable Income.		1953-54.		1954-55.	
Column 1.	Column 2.	Tax and Contribution on Amount in Column 1.		Tax and Contribution on Amount in Column 1.	
Exceeding—	Not Exceeding—	Tax and Contribution on each £1 of Balance of Income.		Tax and Contribution on each £1 of Balance of Income.	
£	£	£ s. d.	d.	£ s. d.	d.
Nil	100	Nil	1	Nil	1
100	150	0 8 4	4	0 8 4	3
150	200	1 5 0	9	1 0 10	7
200	250	3 2 6	13	2 10 0	11
250	300	5 16 8	17	4 15 10	15
300	400	9 7 6	22	7 18 4	20
400	500	18 10 10	28	16 5 0	26
500	600	30 4 2	33	27 1 8	30
600	700	43 19 2	38	39 11 8	34
700	800	59 15 10	42	53 15 0	38
800	900	77 5 10	46	69 11 8	42
900	1,000	96 9 2	50	87 1 8	46
1,000	1,200	117 5 10	56	106 5 0	52
1,200	1,400	163 19 2	64	149 11 8	59
1,400	1,600	217 5 10	71	198 15 0	65
1,600	1,800	276 9 2	78	252 18 4	71
1,800	2,000	341 9 2	85	312 1 8	77
2,000	2,400	412 5 10	93	376 5 0	85
2,400	2,800	567 5 10	100	517 18 4	92
2,800	3,200	733 19 2	107	671 5 0	99
3,200	3,600	912 5 10	114	836 5 0	105
3,600	4,000	1,102 5 10	121	1,011 5 0	111
4,000	4,400	1,303 19 2	128	1,196 5 0	117
4,400	5,000	1,517 5 10	136	1,391 5 0	124
5,000	6,000	1,857 5 10	144	1,701 5 0	132
6,000	8,000	2,457 5 10	151	2,251 5 0	139
8,000	10,000	3,715 12 6	158	3,409 11 8	145
10,000	16,000	5,032 5 10	165	4,617 18 4	152
16,000	upwards	9,157 5 10	168	8,417 18 4	160

For primary producers, the rate of Income Tax and Social Services Contribution for a current year is determined by the average of the taxable income for the five years up to and including the current year. A taxpayer may elect not to have these averaging provisions applied to his assessment, but the election once made, is irrevocable. The application of the averaging provisions is limited to that part of the taxable income which does not exceed £4,000, and when the taxable income exceeds £4,000, the balance is taxed at ordinary rates. When the taxable income is less than £4,000, the rate of tax for averaging purposes is limited to the rate on a taxable income of £4,000.

Commencing with 1953-54, the taxable income, including any abnormal receipts, of actors, artists, composers and inventors, is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest on Commonwealth Loans issued prior to 1st January, 1940 is subject to the condition that it shall not be taxed at rates higher than those for 1930-31. Interest on Commonwealth Loans issued after 1st January, 1940 and interest on certain State semi-governmental loans issued free of State income tax receive a rebate of 2s. in the £1.

The minimum amount of Income Tax and Social Services Contribution payable is 10s. and the amounts payable and rebates are calculated to the nearest shilling.

7. **The Income Tax (International Agreements) Act 1953.**—This Act provided for relief from double taxation of incomes flowing between Australia and the United States of America. It also provided similar relief in respect of the United Kingdom, which had been covered by the Income Tax Assessment Act since 1947.

8. **Taxes on Specified Incomes.**—The following table shows the Income Tax and Social Services Contribution payable by taxpayers, with various incomes and numbers of dependants, on income derived in each year from 1950-51 to 1954-55 :—

COMMONWEALTH TAXES ON INCOME.

(£.)

Income.	Income Tax and Social Services Contribution.				
	1950-51 Financial Year.	1951-52 Financial Year.	1952-53 Financial Year.	1953-54 Financial Year.	1954-55 Financial Year.

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH NO DEPENDANTS.

150	1.65	1.80	1.65	1.25	1.05
200	3.95	4.35	3.95	3.10	2.50
250	7.30	8.05	7.30	5.85	4.80
300	11.65	12.80	11.65	9.35	7.90
350	17.10	18.80	17.10	13.95	12.10
400	22.50	24.75	22.50	18.55	16.25
500	35.85	39.45	35.85	30.20	27.10
600	51.65	56.80	51.65	43.95	39.60
800	90.00	99.00	90.00	77.30	69.60
1,000	135.00	148.50	135.00	117.30	106.25
1,500	281.65	309.80	281.65	246.85	225.85
2,000	468.35	515.20	468.35	412.30	376.25
3,000	928.35	1,021.20	928.35	823.10	753.75
5,000	2,088.35	2,297.20	2,088.35	1,857.30	1,701.25

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE.

150 .. ..	..	..	..	..	..
200 .. ..	..	..	..	..	..
250	1.55	1.70	1.55	0.75	0.65
300	3.75	4.10	3.75	2.00	1.60
350	7.00	7.70	7.00	4.20	3.60
400	11.30	12.45	11.30	7.25	6.05
500	22.05	24.25	22.05	15.80	13.75
600	35.30	38.85	35.30	26.70	23.85
800	69.25	76.15	69.25	55.05	49.50
1,000	110.80	121.90	110.80	90.70	81.85
1,500	247.15	271.85	247.15	209.30	191.35
2,000	426.75	469.40	426.75	366.25	334.55
3,000	876.35	964.00	876.35	765.15	700.10
5,000	2,022.45	2,224.70	2,022.45	1,783.60	1,634.10

COMMONWEALTH TAXES ON INCOME—*continued.*
(£.)

Income.	Income Tax and Social Services Contribution.				
	1950-51 Financial Year.	1951-52 Financial Year.	1952-53 Financial Year.	1953-54 Financial Year.	1954-55 Financial Year.
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD.					
150 .. .. .	..	..	..	..	..
200 .. .. .	..	..	..	..	..
250 .. .. .	..	..	..	..	..
300	0.85	0.95	0.85	..	..
350	2.50	2.75	2.50	1.10	0.95
400	5.15	5.05	5.15	2.80	2.25
500	13.60	14.95	13.60	8.80	7.40
600	24.90	27.40	24.90	17.80	15.60
800	54.95	60.45	54.95	42.85	38.60
1,000	93.90	103.30	93.90	75.90	68.30
1,500	223.75	246.10	223.75	188.50	172.20
2,000	395.55	435.10	395.55	338.85	309.70
3,000	837.35	921.10	837.35	730.60	668.20
5,000	1,973.05	2,170.35	1,973.05	1,739.40	1,593.80
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN.					
150 .. .. .	..	..	..	..	..
200 .. .. .	..	..	..	..	..
250 .. .. .	..	..	..	..	..
300 .. .. .	..	..	..	..	..
350	0.80	0.90	0.80	..	..
400	2.40	2.65	2.40	1.10	0.90
500	8.70	9.55	8.70	5.30	4.35
600	18.80	20.70	18.80	13.05	11.25
800	46.30	50.90	46.30	35.70	32.10
1,000	83.20	91.50	83.20	66.80	60.10
1,500	208.15	228.90	208.15	174.60	159.40
2,000	375.85	413.45	375.85	321.95	294.35
3,000	812.45	893.70	812.45	708.95	648.25
5,000	1,940.15	2,134.15	1,940.15	1,709.95	1,566.90
INCOME FROM PROPERTY.—TAXPAYER WITH NO DEPENDANTS.					
150	1.65	1.80	1.65	1.25	1.05
200	3.95	4.35	3.95	3.10	2.50
250	7.30	8.05	7.30	5.85	4.80
300	11.65	12.80	11.65	9.35	7.90
350	17.10	18.80	17.10	13.95	12.10
400	22.50	24.75	22.50	18.55	16.25
500	40.85	44.95	40.85	30.20	27.10
600	61.65	67.80	61.65	43.95	39.60
800	110.00	121.00	110.00	77.30	69.60
1,000	165.00	181.50	165.00	117.30	106.25
1,500	345.00	379.50	345.00	246.85	225.85
2,000	565.00	621.50	565.00	412.30	376.25
3,000	1,091.70	1,200.85	1,091.70	823.10	753.75
5,000	2,351.70	2,586.85	2,351.70	1,857.30	1,701.25

9. **Pay-as-you-earn.**—Individual taxpayers pay tax on a pay-as-you-earn basis. A similar scheme does not operate for companies.

(a) *Salary and Wage Earners.* Salary and wage earners are subject to instalment deductions for payment of tax at current rates out of weekly (or fortnightly) earnings. Employers are required to deduct tax and contribution from each payment of wages and salary to an employee at the appropriate rate in accordance with a prescribed instalment scale. This scale shows the amount to be deducted according to the income and number of dependants of the employee.

Under the group scheme of deduction, which covers most employers of more than ten persons, the amount deducted is remitted to the Taxation Department, and after 30th June each year each employee is given a group certificate by his employer showing the amount of deductions made during the year. This certificate is forwarded to the Taxation Department with the employee's return of income for the year. If the tax assessed on the basis of this return is less than the amount shown on the group certificate a refund is forwarded to the employee with his assessment. If the tax assessed is greater than the amount shown on the group certificate the employee is required to pay the balance.

Under the stamp scheme, used by small employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of the deductions made each pay day and stick one part on each half of the sheet. At the end of the year the employer gives the employee one half of the sheet and sends the other half to the Taxation Department. The employee's half is then used in the same way as a group certificate.

(b) *Taxpayers with Income other than Salary and Wages.* These taxpayers pay provisional tax in respect of income other than salary and wages. Collection of tax and contribution for the current year is made at the same time as collection and assessment for the previous year is adjusted. The notice of assessment shows an amount of provisional tax and contribution for the current year. This provisional amount is an approximation to the tax and contribution which will be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year (for which a return has already been lodged) but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax and contribution paid in the previous year as a credit against the tax and contribution assessed on the basis of the return for that year. On receipt of his assessment the taxpayer may elect to substitute his estimate of income for the current year and pay tax on the basis of this estimate. To protect the revenue, a penalty is imposed if the taxpayer elects to pay provisional tax on an estimate of income more than 20 per cent. lower than the income of the previous year and he underestimates his income by more than 20 per cent.

Employees with more than £100 income from sources other than salaries and wages are required to pay provisional tax in respect of that income.

10. **Lodgment of Returns and Assessment of Tax.**—All persons with assessable income in excess of £104 are required to lodge returns by the 31st July each year (31st August for business incomes). Income Tax and Social Services Contribution payable is assessed, and assessment notices showing the amount payable are issued during the year following the year of income (in most cases from September to June following the lodgment of the return). The approximate amount payable, however, has already been collected during the income year—from employees by deductions from wages and from non-employees by a provisional tax. The amount shown on the assessment notice is therefore adjusted against the amount already collected and any difference either collected or refunded.

11. **Company Income Taxes.**—(i) *General.* For taxation purposes, companies are divided into two main groups—public and private. A private company is defined as a company in which all the issued shares are held by not more than twenty persons or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested or a subsidiary of a public

company. All other companies are regarded as public companies. Both public and private companies pay primary Income Tax and Social Services Contribution assessed on a taxable income ascertained by the same principles as for individuals.

Dividends received are assessable income, but resident companies receive a rebate at the average rate on the amount of dividends included in the taxable income. This rebate is not allowed to non-resident companies.

(ii) *Rates of Tax.* The rates of Primary Tax, in the case of public companies, and Primary and Additional Tax for private companies, for the 1953-54 and 1954-55 financial years, are shown in the table below.

Super Tax and Undistributed Income Tax ceased to be levied on public companies in the 1951-52 financial year and Additional Income Tax and Social Services Contribution ceased in the 1953-54 financial year. For details see Official Year Books No. 39, p. 846 and No. 40, p. 743.

RATES OF TAX : COMPANIES, 1953-54 AND 1954-55 FINANCIAL YEARS.

(Pence per £.)

Type of Company.	Rate of Tax—		
	On Taxable Income.		Undistributed Amount—Additional Tax.
	Up to £5,000.	On Remainder of Taxable Income.	
Private	48	72	120
Co-operative and Non-profit(a)	60	84	..
Life Assurance—			
Mutual	48	72	..
Other—			
(1) Mutual Income	48	72	..
(2) Other Income (b)	(c) 72	84	..
Other	(c) 72	84	..
Interest paid to a Non-resident(d)	84	84	..

(a) Non-profit companies with taxable incomes not exceeding £104 were exempted from tax and if the taxable income does not exceed £208 the tax may not exceed one-half of the amount by which the taxable income exceeds £104.

(b) The rate of 72d. is levied on the amount by which the £5,000 exceeds the mutual income. (c) For non-resident companies dividends included in this part of taxable income are taxed at 60 pence per £1. (A resident company is allowed a rebate of tax in respect of dividends received.) (d) If the non-resident is not a company, tax is paid only on income in excess of £104.

A private company incurs liability for additional tax on its undistributed income if it fails to make a sufficient distribution of income within a specified period after the close of the year of income. The tax is levied on the undistributed amount which, for practical purposes, is the taxable income less—

(a) Primary income tax and social services contribution payable;

(b) Retention allowance (i.e., the proportion of the reduced distributable income which a company may retain without incurring liability for undistributed income tax); and

(c) Certain dividends paid by the company.

For the 1953-54 and 1954-55 financial years, the retention allowance is the following proportion of the reduced distributable income:—

Financial Years 1953-54 and 1954-55—

On first £1,000 or part, 50 per cent.

On next £1,000 or part, 40 per cent.

On next £1,000 or part, 35 per cent.

On next £1,000 or part, 30 per cent.

On balance, 25 per cent., and

Ten per cent. of distributable income from property, except dividends from other private companies.

For the financial years 1953-54 and 1954-55, the reduced distributable income was calculated by deducting from the taxable income the primary tax payable and the amount of all property income included in taxable income.

For the financial years 1953-54 and 1954-55 the additional tax imposed on undistributed income has been imposed at a flat rate of 10s. in the £1 on the undistributed amount.

12. **Yield of Income Taxes.**—(i) *Collections from all Income Taxes.* The following table shows the collections of taxes of all types imposed on income for the years 1938-39 and 1949-50 to 1953-54 :—

INCOME TAX COLLECTIONS.

(£'000.)

Year.	Total.		
	Commonwealth.	State.	Total.
1938-39	11,883	29,796	41,679
1949-50(a)	279,654	267	279,921
1950-51(a)	341,957	291	342,248
1951-52(a)	545,179	155	545,334
1952-53(a)	556,960	132	557,092
1953-54(a)	528,420	92	528,512

(a) Commonwealth collections are greater than the Budget figures by the amount of refunds of State taxes. State collections are net arrears after deduction of these refunds.

(ii) *Commonwealth Income Tax Assessed.* The amounts of Commonwealth taxes assessed on the income of recent years are shown in the following table. The amounts are shown under the year in which most of the assessments were made, i.e., the year following the income year. Income taxes assessed on income for past years and for the years shown, after the close of the normal assessing period, are not included.

COMMONWEALTH INCOME TAXES ASSESSED.

(£'000.)

Tax.	1939-40.	1948-49.	1949-50.	1950-51.	1951-52.(a)	1952-53.
Individuals—						
Income Tax	7,423	687,383	78,982	80,712	} 332,956	340,175
Social Services Contribution .. .. .	..	679,538	86,214	92,588		
Companies—						
Income Tax	8,041	55,863	63,467	74,770	156,163	151,246
Super Tax .. .. .	..	4,910	5,943	7,040	..	..
Undistributed Income Taxes (c)						
Private Companies	688	7,120	7,098	8,253	11,219	5,824
Non-Private Companies .. .. .	..	3,301	4,308	4,847	..	..
Total	16,152	238,115	246,012	268,210	500,338	497,245

(a) Income Tax and Social Services Contribution were consolidated in 1951-52.

(b) Includes

assessments issued to 30th June, 1952.

(c) Approximate.

(iii) *Commonwealth Income Tax and Social Services Contribution, 1952-53 Assessment Year.* The following table shows, for the 1952-53 assessment year, particulars for individual taxpayers, income, and tax assessed, according to grade of actual income and State, etc., of assessment.

COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION : 1952-53 ASSESSMENT(a)—NUMBER OF TAXPAYERS, TAXABLE INCOME AND NET INCOME TAX AND SOCIAL SERVICES CONTRIBUTION ASSESSED—INDIVIDUALS.
(Incomes derived in year 1951-52.)

Grade of Actual Income(b) and State or Territory of Assessment.		Number of Taxpayers.			Actual Income.	Taxable Income.				Net Income Tax and Social Services Contri- bution Ass- essed.
						Personal Exertion.		Pro- perty.	Total.	
		Males.	Fe- males.	Total.	Total.	Salary and Wages.	Total.				Total.
£	£	No.	No.	No.	£'000	£'000	£'000	£'000	£'000	£'000
105- 200 ..		74,996	125,715	200,711	31,339	25,560	27,939	2,311	30,250	434
201- 300 ..		108,276	162,453	270,729	68,353	53,771	59,742	4,272	64,014	1,985
301- 400 ..		129,454	177,626	307,080	107,868	83,926	94,167	4,696	98,863	2,860
401- 500 ..		157,641	205,630	363,271	163,773	127,350	142,189	4,758	146,947	3,569
501- 600 ..		256,928	114,533	371,461	205,197	149,616	168,635	4,862	173,497	13,350
601- 700 ..		438,231	48,157	486,388	316,838	227,839	249,831	4,647	254,478	22,031
701- 800 ..		411,876	22,835	434,711	325,333	230,119	252,791	4,587	257,378	24,955
801- 900 ..		294,025	12,181	306,206	259,316	177,614	199,524	4,186	203,710	21,846
901- 1,000 ..		189,731	7,141	196,872	186,337	121,016	141,905	3,809	145,714	17,093
1,001- 1,250 ..		204,519	9,063	213,582	236,337	133,861	179,946	7,611	187,557	25,203
1,251- 1,500 ..		74,479	5,827	80,306	109,244	44,879	84,177	6,002	90,179	14,657
1,501- 2,000 ..		65,747	6,788	72,535	124,324	34,218	97,327	8,920	106,247	21,019
2,001- 3,000 ..		50,575	5,885	56,460	136,363	20,727	109,575	11,542	121,117	31,511
3,001- 4,000 ..		21,386	2,482	23,868	82,102	8,842	67,115	7,582	74,697	24,598
4,001- 5,000 ..		10,824	1,194	12,018	53,446	5,220	43,971	5,235	49,206	10,168
5,001-10,000 ..		13,438	1,648	15,086	99,302	8,817	80,026	12,328	92,354	47,391
10,001-15,000 ..		2,017	337	2,354	28,209	2,147	22,002	4,390	26,392	17,027
15,001 and over ..		1,115	208	1,323	33,083	1,810	22,973	7,234	30,207	22,233
Total Residents..		2,505,258	910,603	3,415,861	2,566,764	1,457,323	2,043,775	108,972	2,152,747	338,930
Central Office ..		7,832	4,537	12,369	37,401	5,063	22,733	10,734	33,467	16,781
New South Wales ..		944,702	358,806	1,303,508	968,486	593,650	775,995	36,120	812,124	119,930
Victoria ..		707,261	284,125	991,386	740,334	426,302	593,316	33,280	626,596	93,973
Queensland ..		342,281	105,498	447,779	305,679	166,113	239,050	9,728	248,778	37,373
South Australia ..		234,598	76,516	311,114	245,625	125,065	196,670	10,472	207,142	33,852
Western Australia..		172,774	52,149	224,923	181,317	88,916	146,549	5,881	152,430	27,579
Tasmania ..		82,256	24,967	107,223	73,576	42,557	58,171	2,526	60,697	7,770
Northern Territory ..		3,787	867	4,654	3,735	2,408	2,875	35	2,910	384
Aust. Cap. Terr. ..		9,767	3,138	12,905	10,211	7,249	8,416	187	8,603	1,288
Total Residents ..		2,505,258	910,603	3,415,861	2,566,764	1,457,323	2,043,775	108,972	2,152,747	338,930
Total Non-residents		2,387	2,017	4,404	4,364	336	944	3,157	4,101	1,245
Grand Total ..		2,507,645	912,620	3,420,265	2,571,128	1,457,659	2,044,719	112,129	2,156,848	340,175

(a) Assessment in respect of 1951-52 income issued to 30th September, 1953. Assessments issued after that date have been excluded. (b) Actual income is the total income (less any expenses of earning the income) and includes any exempt income and any concessional deductions or expenses of a capital nature which are allowed as a deduction for the purpose of assessing taxable income.

(iv) *Commonwealth Income Tax on Residents—Grades of Income.* Individual income taxes assessed on residents are distributed according to grades of actual income in the following table. The year shown in each case refers to the year in which assessment was made, i.e., the year following the income year. The figures relate only to assessments made on the income of the previous year during the normal assessing period. Assessments issued after the normal assessing period are excluded.

COMMONWEALTH INCOME TAXES ON RESIDENT INDIVIDUALS IN GRADES
OF ACTUAL INCOME.

Grade of Actual Income.(b)	1939-40.		1949-50.(a)		1950-51.(a)		1951-52.(a)		1952-53.(a)	
	No. of Tax- payers.	Tax.	No. of Tax- payers.	Tax.	No. of Tax- payers.	Tax.	No. of Tax- payers.	Tax.	No. of Tax- payers.	Tax.
£		£'000.		£'000.		£'000.		£'000.		£'000.
105- 200		..	376 141	1,488	345,054	1,081	266,134	517	200,711	434
201- 300	(c) 47,732	27	476,233	5,222	455,284	3,655	351,062	2,282	270,729	1,985
301- 400	104,210	126	494,925	9,479	459,219	6,449	412,396	5,778	307,080	4,860
401- 500	68,168	182	608,272	16,434	613,437	12,176	440,555	9,176	363,271	9,569
501- 600	38,939	197	361,222	13,754	475,486	13,298	553,803	15,008	371,461	13,350
601- 700	} d 29,912	294	176,272	9,483	248,498	9,770	427,288	15,406	486,388	22,031
701- 800			89,140	6,462	130,579	6,935	262,954	12,398	434,711	24,955
801- 900	} e 23,070	460	51,707	4,853	72,272	5,012	145,231	8,721	306,206	21,846
901- 1,000			33,547	3,937	45,399	3,660	83,028	6,340	196,872	17,093
1,001- 1,250	10,922	372	49,846	7,924	62,573	7,511	101,209	10,921	214,482	25,203
1,251- 1,500	6,281	306	27,473	6,378	33,790	5,982	48,123	7,823	80,306	14,657
1,501- 2,000	7,987	691	31,981	10,781	38,430	10,390	49,840	12,618	72,535	21,019
2,001- 3,000	4,549	686	28,878	16,855	34,940	17,176	47,681	22,152	56,460	31,511
3,001- 4,000	2,045	615	11,785	11,671	14,277	12,393	24,374	19,662	23,868	24,598
4,001- 5,000	984	484	5,714	8,441	6,981	9,134	14,102	17,761	12,018	19,168
5,001-10,000	1,298	1,321	6,248	17,958	9,494	22,991	23,366	66,729	15,086	47,391
10,001-15,000	205	504	984	5,829	1,752	9,461	4,917	33,056	2,354	17,027
15,001-30,000	(f) 92	393	442	4,770	954	10,060	3,124	38,841	1,091	14,357
30,001-50,000	(g) 39	316	84	1,712	155	3,385	612	15,255	164	4,196
50,001 and over	8	141	24	1,016	39	1,773	216	11,263	68	3,680
Total ..	346,441	7,115	2,831,418	164,452	3,048,613	172,592	3,260,015	331,707	3,415,861	338,930

(a) Includes Social Services Contribution. (b) See note (b) to previous table. (c) Grade £251-£300.
 (d) Grade £601-£750. (e) Grade £751-£1,000. (f) Grade £15,001-£25,000. (g) Grade £25,001-£50,000.

CHAPTER XVIII.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

1. *Place of Mining in Australian Development.*—The discovery of gold in payable quantities first attracted population to Australia in large numbers and was thus a significant factor in its early development. In more recent times the rapid growth of Australia's secondary industries has been associated with considerable expansion in mining for silver-lead-zinc, copper and iron ores, and coal. However, the value of mineral production has lagged behind that recorded for Australia's large rural industries and in 1952 represented only about 10 per cent. of the net value of production of all primary industries.

2. *Extent of Mineral Wealth.*—The extent of the mineral wealth of Australia has not been determined fully, and large areas of the country still await geological survey. Regional and detailed investigations are being carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics, by the Geological Surveys of the State Governments and by the exploration departments of mining companies. No major discoveries have been made in recent years, although important prospects of oil, uranium ore, bauxite (aluminium ore) and some other minerals have been recorded and are being investigated in detail.

3. *Standardization of Mineral Statistics.*—At the 1945 Conference of Australian Statisticians, consideration was given to the defective nature of Australian mineral production statistics arising from the widely different methods adopted by individual States in collecting, compiling and publishing the data. Further attention was given to the problem by a conference in 1948 of officers of the Bureau of Mineral Resources, Geology and Geophysics, State Mines Departments and State and Commonwealth Statistical Bureaux. Following work subsequently undertaken by the Bureau of Mineral Resources, the Commonwealth Bureau of Census and Statistics and other authorities concerned, a specific plan for standardization of Australian mineral production statistics was adopted in 1950. In accordance with the plan, numerous improvements have been introduced and with the establishment of the Australia-wide industrial censuses for mining and quarrying in 1952, Australian mineral statistics are now considered to be adequate for present needs. It should be noted that the statistics included in this chapter omit particulars relating to uranium-bearing minerals.

The fundamental provision of the plan for standardization of Australian mineral statistics is that quantities and values of individual minerals produced should be reported in terms of the products in the form in which they are despatched from the locality of each mine. This involves the inclusion in the mining industry of ore-dressing and elementary smelting of metallic minerals (e.g., in the case of gold) and miscellaneous treatment of non-metallic minerals, where these operations are carried out in an associated plant at or near the mine. For example, in the case of a metal mine, the output is recorded as ore when no treatment is undertaken at the mine or as a concentrate where ore-dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the plan provides for the reporting of contents of metallic minerals and of contents or average grade of selected non-metallic minerals. Wherever practicable, contents (based on assay) of metallic minerals are shown for each metal which is a "pay metal" or a "refiners' prize" when present in the particular mineral.

For the purpose of compiling and publishing data relating to employment, value of output, value of production, etc., a detailed statistical classification for the mining industry has been used in Australia from 1950. For the purpose of this classification, the "Mining Industry" includes all mining and quarrying and the recovery of minerals from ore dumps, tailings, etc. As mentioned above, ore dressing and miscellaneous treatment of non-metallic minerals (where these are carried out in an associated plant at or near the mine) are included in the Mining Industry. However, establishments primarily engaged in smelting and/or refining (including the large plants operated at Mt. Morgan and Mt. Isa in Queensland and at Mt. Lyell in Tasmania) are omitted and classified to the Manufacturing Industry. The classification divides the industry into four major groups, viz., Metal Mining, Fuel Mining, Non-metal (excluding Fuel) Mining and Construction Material Quarrying.

The adoption of revised methods of compiling and presenting mineral statistics in 1950 caused a break in continuity of the data published for earlier years. For this reason, it has not been possible to continue some of the comparative tables beyond 1949, while in other tables comparisons have been continued, but data for 1950 and 1951 are in general not strictly comparable with those for 1949 and earlier years. The establishment of industrial censuses of the mining and quarrying industry in all States in 1952 has caused a further break in continuity of data, particularly those relating to values.

4. **Quantity and Value of Minerals Produced, 1952.**—(i) *Quantities.* In the following table particulars of the quantities of principal minerals produced are shown for each State and the Northern Territory for 1952. Because of the revised bases of compiling and presenting mineral statistics referred to above, the data in the table differ considerably as to form and content from corresponding data for 1949 and earlier years published in previous issues of the Year Book.

In the main, the data consist of official statistics of Mines Departments furnished to this Bureau by the Statisticians of the several States and by the Northern Territory Mines Branch. These statistics have been supplemented, as necessary, by data obtained from the Australian Mines and Metals Association (Inc.), the Bureau of Mineral Resources, Geology and Geophysics and several other sources. The particulars shown have been compiled as far as practicable on the standardized basis outlined in para. 3 above. This has involved some re-arrangement of official statistics published by Mines Departments for some States.

In these tables individual minerals are arranged in four groups, viz., metallic minerals, fuel minerals, non-metallic (excluding fuel) minerals and construction materials, to correspond with the major groups of the statistical classification of the mining industry.

The particulars shown in the group "construction materials" cover, broadly, data similar to those previously included under the heading of "Quarries".

QUANTITIES OF PRINCIPAL MINERALS PRODUCED, 1952.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
METALLIC MINERALS.									
Antimony Ore and Concentrate ..	ton	(a) 164	8	43	..	265	..	..	480
Bismuth Concentrate ..	lb.	(a) 7,926	..	56	..	..	..	..	7,982
Copper Ore, Concentrate and Precipitate ..	ton	9,165	..	(b) 62,436	51	16.	35,062	1,166	108,150
Gold Ore, Concentrate, etc.	..	186	893	..	..	..	11	..	1,090
Gold—Other Forms (d)	oz.	28,827	73,419	(e)	(e)	(e)	26	(e)	(e)
Iron Ore ..	'000 tons	..	..	..	2,684	224	..	..	2,908
Lead Ore, Concentrate ..	ton	246,347	..	121,310	214	7,449	11,130	..	356,450
Manganese Ore ..	..	(a) 2,024	..	..	..	5,045	..	..	7,069
Pyritic Ore and Concentrate ..	..	23,965	..	66,750	70	53,577	54,421	..	198,783
Rutile Concentrate ..	..	24,450	..	13,564	..	..	..	..	38,014
Silver Ore ..	..	(a)(f) 181	..	..	..	..	..	..	181
Tin Concentrate ..	..	(a) 560	52	476	..	981	1,115	17	2,318
Tungsten Concentrates—	..	..	..	..	..	..	..	..	..
Scheelite Concentrate ..	..	(a) 8	..	9	..	21	970	..	989
Wolfram Concentrate ..	..	(a) 33	2	230	..	27	481	262	1,035
Zinc Ore and Concentrate ..	..	283,621	..	46,574	..	..	46,709	..	376,904
Zircon Concentrate ..	..	17,156	..	10,540	..	..	..	..	27,606

FUEL MINERALS.

Coal, Black—									
Semi-Anthracite ..	'000 tons	1	..	83	..	..	1	..	85
Bituminous ..	..	15,008	144	2,312	..	..	247	..	17,711
Sub-Bituminous ..	..	13	..	347	418	830	..	..	1,608
Total ..	..	15,022	144	2,742	418	830	248	..	19,404
Coal, Brown (including Lignite) ..	..	..	8,104	..	..	..	..	..	8,104

NON-METALLIC (EXCLUDING FUEL) MINERALS.

Asbestos ..	ton	466	..	..	..	3,592	..	..	4,058
Clays—									
Brick Clay and Shale ..	'000 tons	1,286 (b)	670	195	218 (b)	260 (b)	42	..	(c) 2,671
Other ..	..	364 (g)	55 (g)	10 (g)	70 (g)	27 (g)	8	..	(g) 534
Cupreous Ore and Concentrate—For Fertilizer ..	ton	..	..	..	..	1,644	..	193	2,047
Diatomite ..	..	4,655	1,261	450	..	..	..	..	6,366
Dolomite ..	..	2,959	..	8,074	83,873	555	1,003	..	96,464
Felspar (including Cornish Stone) ..	..	6,467	..	..	4,619	2,504	..	..	13,590
Greensand ..	..	..	..	..	..	1,380	..	..	1,380
Gypsum ..	..	89,226	47,295	..	164,825	50,332	..	..	351,678
Limestone (h) ..	'000 tons	1,180	481	52	837	(e)	171	..	(g) 2,721
Magnesite ..	ton	40,333	164	13	572	1,055	..	..	42,137
Mica—Muscovite ..	lb.	..	..	..	..	..	..	71,929	71,929
Salt ..	ton	..	(i)	..	203,486	(i)	..	..	b 277,000
Silica (Glass, Chemical, etc.) ..	..	94,944	(e)	(e)	24,913	7,669	9,393	..	g 136,919
Talc (including Steatite) ..	..	987	..	..	5,109	1,224	..	..	7,320

CONSTRUCTION MATERIALS.(g)

Sand ..	'000 tons	1,057 (j)	652	(e)	597 (j)	12	(e)	(e)	2,318
River Gravel and Gravel Boulders ..	..	975 (j)	140	(e)	598 (j)	185	(e)	(e)	1,898
Dimension Stone (k) ..	..	76 (j)	7	4	57 (j)	92	(e)	(e)	236
Crushed and Broken Stone ..	..	1,662 (j)	2,579	548	2,365 (j)	406	(e)	(e)	7,560
Other (Decomposed Rock, etc.) ..	..	6,361	(i)(j)	(e)	26	(i)(j)	(e)	(e)	6,420

(a) Despatches from the mine (or sales) as distinct from production. (b) Estimated. (c) Partly estimated. (d) Bullion, alluvial, retorted gold, etc. (e) Not available. (f) Includes silver flange and silver bullion. (g) Incomplete. (h) Excludes quantities used directly as a building or road material. (i) Not available for publication; included in total for Australia. (j) Year 1952-53. (k) Includes some quantities of stone dressed at the quarries.

(ii) *Principal Contents of Metallic Minerals.* The following table provides a summary of the principal contents of metallic minerals produced in 1952. Further particulars, including data for earlier years, are shown in the several sections dealing with individual minerals later in this chapter.

PRINCIPAL CONTENTS OF METALLIC MINERALS PRODUCED, 1952.

Content of Metallic Minerals Produced.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Antimony	ton	584	5	(a) 22	..	130	2	..	743
Cadmium .. ..	..	592	..	..	..	..	42	..	634
Cobalt .. ..	..	54	..	..	..	..	..	..	54
Copper .. ..	..	3,562	..	6,966	(a) 2	7	7,722	319	18,578
Gold	fine oz.	39,030	66,777	85,756	437	727,469	16,072	44,894	980,435
Iron	'000 tons	..	..	..	41,744.6	138.5	..	..	1,883.1
Lead	ton	173,433	..	40,793	(a) 51	5,495	8,424	..	228,196
Silver	'000	..	..	..	..	..	..	..	..
.. ..	fine oz.	6,756.3	5.8	3,223.5	0.6	209.6	1,078.3	4.3	11,278.4
Sulphur	ton	101,203	..	47,116	7	22,765	(a) 41,940	..	213,031
Tin .. ..	..	396	39	330	..	65	771	9	1,610
Tungsten(b) ..	..	33	1	158	..	18	907	165	1,282
Zinc .. ..	..	147,655	..	23,683	..	47	25,065	..	196,450

(a) Estimated.

(b) In terms of WO₃.

(iii) *Values.* Particulars of the estimated values of minerals (mine and quarry products) produced in 1952 are shown in the following table. The values represent the estimated selling value at the mine or quarry of minerals produced during the year and are not comparable with recorded values of minerals for earlier years, particularly in the case of copper, lead and zinc minerals and some other metallic minerals.

VALUE OF MINERALS PRODUCED, 1952.

(£'000.)

Mineral.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
METALLIC MINERALS.								
Copper Ore, Concentrate and Precipitate ..	417	..	(a)	(b)	1	(a)	55	(c) 4,414
Gold Ore, Concentrate, etc. ..	14	29	..	..	..	(b)	..	43
Gold—Other Forms ..	394	1,084	243	7	11,913	(b)	681	14,322
Iron Ore ..	..	..	..	3,087	229	..	..	3,316
Lead, Silver, Silver and Lead and Silver Zinc Ores ..	80	..	66	6	124	1	..	277
Lead Concentrate ..	17,963	..	(a)	..	623	(a)	..	(c) 21,405
Manganese Ore ..	10	..	..	..	36	..	..	52
Pyritic Ore and Concentrate ..	35	..	186	(b)	422	144	..	787
Rutile Concentrate ..	1,013	..	500	..	..	..	..	1,513
Tin Concentrate ..	432	42	332	..	66	886	10	1,768
Tungsten Concentrates—	..	..	..	..	..	..	..	..
Scheelite Concentrate ..	14	..	10	..	4	1,682	..	1,710
Wolfram Concentrate ..	54	(d)	233	..	46	731	413	1,477
Zinc Ore and Concentrate ..	7,671	..	(a)	..	..	(a)	..	(c) 11,823
Zircon Concentrate ..	130	..	90	..	..	..	..	220
Other Metallic Minerals ..	84	(d)	6	(b)	35	7	..	132
Total, Metallic Minerals ..	28,317	1,155	11,078	3,100	13,499	7,953	1,157	66,259
FUEL MINERALS.								
Coal, Black ..	43,283	728	5,956	430	2,457	475	..	53,329
Coal, Brown ..	..	3,255	..	..	..	..	..	3,255
Other Fuel Minerals ..	51	..	..	..	..	..	..	51
Total, Fuel Minerals	43,334	3,983	5,956	430	2,457	475	..	56,635
NON-METALLIC (EXCLUDING FUEL) MINERALS.								
Total, Non-metallic (excluding Fuel) Minerals ..	1,714 (e)	442 (e)	155	1,439 (e)	972	208 (e)	125 (e)	5,055
CONSTRUCTION MATERIALS. (e)								
Total, Construction Materials ..	3,732 (f)	2,955	240	1,078 (f)	776	114	(g)	8,895
TOTAL. (e)								
Total, All Minerals and Construction Materials ..	77,097	8,535	17,429	6,047	17,704	8,750	1,282	136,844

(a) Not available for publication. (b) Less than £500. (c) Includes particulars of items marked "(a)". (d) Not available for publication; included with "Non-metallic (excluding Fuel) Minerals". (e) Incomplete. (f) Year ended 30th June, 1953. (g) Not available.

5. Mine Production of Principal Metals and Production of Coal and Sulphur, 1939 and 1948 to 1952.—Particulars of the mine production of principal metals (i.e., metallic contents of minerals produced) and production of coal and sulphur in the years 1939 and 1948 to 1952 are shown in the following table.

MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL AND SULPHUR.

Particulars.	Unit.	1939.	1948.	1949.	1950.	1951.	1952.
Metallic Content of Minerals Produced(a)—							
Copper	ton	20,560	12,368	13,462	17,481	17,926	18,578
Gold	fine oz.	1,645,697	885,507	889,058	869,537	895,551	980,435
Lead	ton	280,003	216,955	209,292	225,367	212,013	228,196
Iron(b)	"	1,548,031	1,273,231	924,836	1,417,608	1,605,400	1,883,087
Silver	'000 fine oz.	15,320	10,058	10,102	10,984	10,244	11,278
Tin	ton	3,007	1,885	1,886	1,854	1,559	1,610
Zinc	"	214,823	178,464	175,988	197,783	189,227	196,450
Production of—							
Coal—Black ..	'000 tons	13,535	14,783	14,106	16,543	17,608	19,404
Brown	"	3,651	6,692	7,376	7,327	7,836	8,104
Sulphur(c) ..	ton	151,008	(d) 126,270	158,777	179,843	183,126	217,242

(a) Mine production of metals. (b) Estimated. (c) Total sulphur content of zinc concentrates and pyrites produced and of spent oxide roasted. (d) Recoverable sulphur.

6. Value of Output and Value of Production for Mining and Quarrying.—(i) *Individual Industries*, 1952. The following two tables show particulars of the value of output and value of production of individual mining and quarrying industries and for all mining and quarrying for the year 1952. The data were obtained from industrial censuses of the mining and quarrying industry which were made on a substantially uniform basis in all States and the Northern Territory for the year 1952.

MINING AND QUARRYING : VALUE OF OUTPUT(a), 1952. (£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Metal Mining—								
Gold Mining ..	401	1,155	(b)	(b)	11,913	..	681	(c) 14,400
Silver-Lead-Zinc Mining ..	25,992	..	(b)	(b)	(b)	(b)	..	(c) 37,477
Copper-Gold Mining ..	180	..	(b)	..	(b)	(b)	53	(c) 4,004
Tin Mining ..	418	..	152	..	72	1,402	10	2,654
Other Metal Mining ..	1,326	(d)	839	(b)	766	(b)	413	e 8,333
Total, Metal Mining ..	28,317	1,155	(c) 11,078	(c) 3,100	(c) 13,499	(e) 7,062	1,157	(e) 66,268
Fuel Mining—								
Black Coal Mining ..	43,283	728	5,956	430	2,457	475	..	53,329
Brown Coal Mining ..	..	3,255	..	..	..	..	..	3,255
Other Fuel Mining ..	51	..	..	..	..	..	..	51
Total, Fuel Mining ..	43,334	3,983	5,956	430	2,457	475	..	56,635
Non-metal (excluding Fuel) Mining—								
Clays	612 (e)	17	(f)	204	201	57	..	(e) 1,091
Gypsum	88	(b)	..	124	(b)	..	..	(c) 277
Limestone(g) ..	705	(b)	127	482	(b)(h)	139	(f)	e 1,962
Salt .. ..	..	(f)	(f)	405	(f)	..	..	(e) 405
Other Non-metal (excluding Fuel) Mining ..	305 (f)	19	(e) 28	224	603	3	125	(e) 1,307
Total, Non-metal (excluding Fuel) Mining ..	1,710 (c)(e)	442 (e)	155	1,439 (c)(e)	972	199 (e)	125 (e)	5,042
Total, All Mining ..	73,361 (e)	5,580 (e)	17,189 (e)	4,969 (e)	16,928 (e)	8,636 (e)	1,282 (e)	127,945
Construction Material Quarrying ..								
.. ..	3,736 e h	2,955 (e)	240	1,078 (h)	776	114	(f)	(e) 8,809
Total, All Mining and Quarrying ..	77,097 (e)	8 535 (e)	17,420	6,047 (e)	17,704	8,750 (e)	1,282 e	136,844

(a) Selling value at point of sale of mine or quarry products less transport costs from mine or quarry to point of sale, i.e., value of output at mine or quarry. (b) Not available for publication. (c) Includes particulars of items marked "(b)". (d) Not available for publication; included with "Other Non-metal (excluding Fuel) Mining". (e) Incomplete. (f) Not available. (g) Excluding quarries primarily engaged in obtaining construction material. (h) Year ended 30th June, 1953. (i) Includes particulars for "Other Metal Mining".

MINING AND QUARRYING : VALUE OF PRODUCTION(a), 1952.
(£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (b)	Tas.	N.T.	Aust.
Metal Mining—								
Gold Mining ..	163	844	(c)	(c)	7,792	..	605	d 9,585
Silver-Lead-Zinc Mining ..	20,568	..	(c)	5	(c)	(c)	..	(d) 30,276
Copper-Gold Mining ..	79	..	(c)	..	(c)	(c)	37	(d) 2,359
Tin Mining ..	357	..	89	..	54	1,294	(d) 8	1,802
Other Metal Mining ..	1,033	(e)	611	(c)	575	(c)	354	d f 7,235
Total, Metal Mining	22,200	844	(d) 8,535	(d) 2,942	(d) 9,060	(d) 6,672	1,004	(f) 51,257
Fuel Mining—								
Black Coal Mining ..	35,785	587	5,046	366	2,054	405	..	44,243
Brown Coal Mining ..	..	2,906	..	..	..	..	..	2,906
Other Fuel Mining ..	27	..	..	..	..	..	..	27
Total, Fuel Mining	35,812	3,493	5,046	366	2,054	405	..	47,176
Non-metal (excluding Fuel) Mining—								
Clays ..	(g) 612	(f) 16	..	182	198	47	..	(f) 1,055
Gypsum ..	61	(c)	..	82	(c)	..	..	(d) 194
Limestone(i) ..	504	(c)	88	375	(c)(j)	102	(h)	d f 1,405
Salt ..	..	(h)	(h)	346	(h)	..	..	(f) 346
Other Non-metal (excluding Fuel) Mining	241	(k) 17	(f) 28	201	369	2	121	(f) 979
Total, Non-metal (excluding Fuel) Mining	1,418	(d)(f) 201	(f) 116	1,186	(d)(f) 696	151	(f) 121	(f) 3,079
Total, All Mining ..	50,430	(f) 4,678	(f) 13,697	4,404	(f) 11,810	7,228	(f) 1,125	f 102,412
Construction Material Quarrying ..	(g) 3,736	f j 2,004	(f) 163	659	(j) 600	97	(h)	(i) 7,259
Total, All Mining and Quarrying ..	63,166	(f) 6,682	(f) 13,860	5,153	(f) 12,410	7,325	(f) 1,125	f 109,671

(a) Value of output at mine, less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (b) In the case of Metal, Non-metal (excluding Fuel) and Fuel Mines employing less than 5 persons, costs of power, fuel, light and other materials and stores have not been deducted. (c) Not available for publication. (d) Includes particulars of items marked "(e)". (e) Not available for publication; included with "Other Non-metal (excluding Fuel) Mining". (f) Incomplete. (g) Costs of power, fuel, light and other materials have not been deducted. (h) Not available. (i) Excluding quarries primarily engaged in obtaining construction material. (j) Year ended 30th June, 1953. (k) Includes particulars for "Other Metal Mining".

(ii) *States, 1939 and 1948 to 1952.* Values for individual minerals produced based on estimated selling value at the mine or quarry are shown for the year 1952 in para. 4 (iii) above. These data are not available on a comparable basis for earlier years. Australian State and Commonwealth Statisticians however, have for many years used values for mine and refinery products as recorded by Mines Departments and other relevant data (including censuses of the industry in some States) to estimate value of output and value of production for the mining and quarrying industry as a whole. The following table shows estimates on this basis for the years 1939 and 1948 to 1951 together with the values ascertained from the Australia-wide mineral industry census of 1952. The estimates for 1951 and the earlier years shown are approximate and as value added in ore-dressing and similar treatment plants situated at or near the mine was excluded in some cases, they are not strictly comparable with the 1952 valuations which consistently include the value of such mine treatment. The Northern Territory is omitted for years prior to 1952.

MINING AND QUARRYING : VALUE OF OUTPUT AND VALUE OF PRODUCTION.
(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
VALUE OF OUTPUT.(a)							
1939	12,914	2,789	3,438	3,648	12,496	2,145	37,430
1948	32,870	3,452	5,243	3,757	8,681	4,369	58,372
1949	35,295	4,215	7,096	3,118	9,799	4,629	64,152
1950	46,102	5,274	10,829	4,428	12,037	7,049	85,719
1951	67,877	6,949	10,922	4,938	13,474	10,552	114,712
1952	77,097	8,535	17,420	6,047	17,704	8,750	(b) 136,844

For footnotes see next page.

MINING AND QUARRYING: VALUE OF OUTPUT AND VALUE OF PRODUCTION—continued.
(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total
VALUE OF PRODUCTION.(c)							
1939	10,927	2,111	2,088	3,444	9,268	(a) 2,145	30,583
1948	28,108	2,173	4,143	3,597	5,873	(d) 4,369	48,353
1949	30,191	2,263	5,606	2,941	6,697	(d) 4,629	52,327
1950	39,634	2,960	8,559	4,188	8,751	(d) 7,049	71,150
1951	59,385	4,209	8,632	4,646	9,775	(d) 10,552	97,199
1952	63,166	6,632	13,860	5,153	12,410	7,325 (b)	109,671

(a) Selling value of mine and quarry products at the mine or quarry. (b) Includes Northern Territory. (c) Value of output less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (d) Value of output; value of production not available.

7. Industrial Census of the Mining and Quarrying Industry, 1952.—Industrial censuses of the mining and quarrying industry (covering employment, salaries and wages paid, fixed assets, value of output, costs of materials used, etc.) have been taken in some Australian States for many years, but on different bases. In 1952 censuses were taken in all States and the Northern Territory on a substantially uniform basis, thus providing important Australian statistics on mining and quarrying operations which were not previously available. A summary of the statistics collected is shown in the following table. The statistics show that there were 2,339 mines and quarries operating in Australia in 1952, of which 874 were metal mines, 299 fuel mines (mainly coal mines), 636 non-metal (excluding fuel) mines and 530 construction material quarries. The total number of persons employed (average for period worked) was 56,299, value of output £136,844,000 and value of production £109,671,000. Of the total value of production, £51,257,000 (46.8 per cent.) was contributed by metal mines, £47,176,000 (43.0 per cent.) by fuel mines, £3,979,000 (3.6 per cent.) by non-metal (excluding fuel) mines and £7,259,000 (6.6 per cent.) by construction material quarries.

MINING AND QUARRYING: SUMMARY OF OPERATIONS, AUSTRALIA, 1952.

Particulars.	Unit.	Metal Mining.	Fuel Mining.	Non-metal (excluding Fuel) Mining. (a)	Total, All Mining.	Construction Material Quarrying. (b)	Total, All Mining and Quarrying.
Mines and Quarries ..	No.	874	299	636	1,809	530	2,339
Persons Employed(c) ..	"	21,411	27,656	3,070	52,137	4,162	56,299
Salaries and Wages Paid d e	£'000	22,367	24,408	1,617	48,392	2,020	50,412
Value of—							
Power, Fuel and Light Used(d)	"	3,726	2,159	249	6,134	234	6,368
Materials and Stores Used(d)(f)	"	11,097	7,296	740	19,133	7,304	20,437
Total Power, Fuel, Light and Materials and Stores Used(g) ..	"	15,011	9,459	1,063	25,533	1,640	27,173
Output(h)	"	66,268	56,635	5,042	127,945	8,899	136,844
Production(i)	"	51,257	47,176	3,979	102,412	(j) 7,259	109,671
Value of Fixed Assets d k—							
Land and Buildings ..	"	7,480	5,540	1,141	14,161	(l)	(l)
Plant and Machinery ..	"	20,239	19,817	2,327	42,383	(l)	(l)
Mine Development ..	"	8,738	6,658	382	15,778	(l)	(l)
Total Value of Fixed Assets	"	36,457	32,015	3,850	72,322	(l)	(l)

(a) Incomplete for some non-metal (excluding fuel) mining industries outside the normal administrative control of State Mines Departments (e.g., clays and salt). (b) Incomplete in some States. (c) Average number employed (including working proprietors) during period worked by mine or quarry. (d) Excludes mines and quarries employing less than four persons (less than five persons in Western Australia). (e) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to own employees. (f) Includes value of explosives sold to own employees. (g) Includes estimates for mines and quarries employing less than four persons (less than five persons in Western Australia). (h) Value at mine or quarry. (i) Value of output less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (j) Costs of power, fuel, light and other materials and stores used have not been deducted in all cases. (k) Depreciated value (i.e., book value less any depreciation reserves) at end of year. (l) Not available.

In the next table statistics of numbers of mines and quarries, numbers employed, value of output and value of production are shown for each State and the Northern Territory for the year 1952. Of the New South Wales total value of production, £35,785,000 (56.7 per cent.) was contributed by black coal mining and £20,568,000 (32.6 per cent.) by silver-lead-zinc mining.

MINING AND QUARRYING : SUMMARY OF OPERATIONS, 1952.

State or Territory.	Number of Mines and Quarries.	Persons Employed. (a)	Value of Output.(b) £'000.	Value of Production.(c)	
				Total.	Proportion of Total.
				£'000.	%
New South Wales ..	(d) 692	30,894	77,097	63,166	57.6
Victoria(e) ..	263	4,252	8,535	6,632	6.1
Queensland(e) ..	476	7,853	17,429	13,860	12.6
South Australia ..	541	2,381	6,047	5,153	4.7
Western Australia(e)	262	7,686	17,704	12,410	11.3
Tasmania ..	71	2,829	8,750	7,325	6.7
Northern Territory(e)	34	404	1,282	1,125	1.0
Australia ..	2,339	56,299	136,844	109,671	100.0

(a) Average number employed during period worked by mine or quarry ; includes working proprietors.
 (b) Value of output at mine or quarry. (c) Value of output less cost of power, fuel, light and other materials and stores used ; depreciation and maintenance costs have not been deducted. (d) Excludes construction material quarrying. (e) Incomplete for some non-metal (excluding fuel) mining industries outside the normal administrative control of the State Mines Department (e.g., clays and salt) and/or for construction material quarrying.

§ 2. Gold.

1. **Discovery in Various States.**—A more detailed account of the discovery of gold in the various States appears under this section in Official Year Books Nos. 1 to 4.

2. **Mine Production.**—The following table shows the recorded mine production of gold (i.e., gold content of minerals produced) in the several States and in Australia as a whole during each of the ten decennial periods from 1851 to 1950, and in single years from 1951 to 1953. Owing to defective information in the earlier years it is likely that the recorded production falls considerably short of the actual totals.

GOLD : MINE PRODUCTION.(a)

('000 fine oz.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
1851-60 ..	2,715	21,973	3	..	..	186	..	24,877
1861-70 ..	3,220	15,327	489	..	..	3	..	19,039
1871-80 ..	2,019	9,564	2,527	136	..	165	19	14,430
1881-90 ..	1,014	6,689	3,250	58	42	357	168	11,587
1891-1900 ..	2,432	7,040	5,648	52	5,252	550	214	21,188
1901-10 ..	2,253	7,095	5,512	73	17,784	604	111	33,432
1911-20 ..	1,145	3,067	2,263	55	10,671	202	23	17,426
1921-30 ..	204	593	434	10	4,557	43	2	5,843
1931-40 ..	560	1,052	1,021	53	8,474	130	84	11,383
1941-50 ..	573	801	749	13	6,682	157	148	9,123
1951 ..	49	66	79	(b)	648	15	39	896
1952 ..	39	68	85	(b)	727	16	45	980
1953 ..	26	64	92	(b)	823	17	53	1,075
Total, 1851-1953 ..	16,256	73,398	22,162	450	55,662	2,444	906	171,278

(a) Gold content of minerals produced.

(b) Less than 500 ounces.

The amount of gold raised in Australia in any one year attained its maximum in 1903, when Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows:—New South Wales, 1852; Victoria, 1856; Queensland, 1900; South Australia, 1904; and Tasmania, 1899.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining the production of gold in Australia declined from 3,837,979 fine oz. in 1903 to 427,160 fine oz. in 1929, the lowest output since its discovery.

Increased activity in prospecting due to prevailing economic conditions resulted in some improvement in 1930, but the marked development between that year and 1939 received its impetus from the heavy depreciation of Australian currency in terms of gold. Following the outbreak of the 1939–45 War there was a sharp fall in gold production to 656,867 fine oz. in 1944 and 657,213 fine oz. in 1945, but with the release of man-power after the war, there has been a slight upward trend in mine production of gold which exceeded one million fine ounces in 1953 for the first time since 1942. From December, 1951, to June, 1954 the bulk of Australian newly-won gold was sold on overseas premium markets.

3. **Refinery Production.**—The quantities and values of the refinery production of new gold of Australian origin are shown in the following table for each of the years 1940 to 1953. The value of the refined new gold is based on the price fixed by the Commonwealth Bank, but allowance is made in the 1952 and 1953 figures for premiums on sales of gold overseas and for industrial purposes in Australia. Particulars of the values ascribed to gold production (mine basis) in 1939 and earlier years were included in Official Year Book No. 36 and previous issues.

GOLD : REFINERY PRODUCTION OF NEWLY-WON GOLD OF AUSTRALIAN ORIGIN.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	'000. fine oz.	£'000.		'000. fine oz.	£'000.
1940	1,637	17,445	1947	969	10,430
1941	1,441	15,393	1948	884	9,517
1942	1,168	12,210	1949	879	10,670
1943	754	7,878	1950	844	13,077
1944	636	6,679	1951	850	13,172
1945	613	6,556	1952	979	16,037
1946	820	8,830	1953	1,053	16,780

4. **Unit Values.**—The unit value of gold production rose to £12 2s. 10d. in 1949, as a result of the increase in the price to £15 9s. 10d. per fine oz. fixed by the Commonwealth Bank on 19th September, 1949, consequent upon alteration in the rate of exchange. In 1950 and 1951, the unit values were the Bank's price of £15 9s. 10d. per fine oz., while in 1952 and 1953 allowance was made for premiums on gold sold for industrial purposes in Australia and on premium markets overseas, the average value for these years being £16 9s. 10d. and £15 18s. 9½d. per fine ounce respectively. Further information regarding the price of gold realized, including particulars of prices for newly-won gold sold on overseas premium markets since December, 1951, is given in Chapter XVI.—Private Finance.

5. **Changes in Stocks of Gold held in Australia.**—The following table shows particulars of production, imports and exports of gold and changes in stocks of gold held in Australia for each of the years 1948–49 to 1952–53.

CHANGES IN STOCKS OF GOLD HELD IN AUSTRALIA.

(Fine oz.)

Particulars.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Mine Production of Gold (a)	898,832	859,353	891,428	908,813	1,037,885
Imports of Gold (b)(c)	103,005	139,208	158,661	208,143	228,407
Total	1,001,837	998,561	1,050,089	1,116,956	1,266,292
Exports of Gold (b)	395	84	19	416,652	1,250,162
Gold Content of Ores and Concentrates Ex- ported	5,592	8,257	10,662	14,503	23,204
Net Industrial Absorption of Gold	63,019	54,200	40,425	33,838	37,816
Total	69,006	62,541	51,106	464,993	1,311,182
Changes in Stocks of Gold held in Australia d	+932,831	+936,020	+998,983	+651,963	-44,890

(a) Gold content of minerals produced in Australia. (b) Includes gold contained in matte.
(c) Excludes gold imports in some minor minerals. (d) Includes gold content of mineral products awaiting refining; excludes gold specie.

6. **Production in Principal Countries.**—The quantities of gold produced in the principal producing countries in each of the years 1939 and 1948 to 1952 are shown in the table herunder.

GOLD : PRODUCTION IN PRINCIPAL COUNTRIES.

('000 fine oz.)

Country.	1939.	1948.	1949.	1950.	1951.	1952.
Union of South Africa ..	12,822	11,585	11,705	11,664	11,516	11,819
Canada	5,094	3,530	(a)4,124	(a)4,431	(a)4,313	(a)4,472
United States of America ..	4,673	2,014	1,902	2,394	1,958	1,886
Australia	1,646	886	889	870	886	980
British West Africa(b) ..	843	677	682	695	784	695
Rhodesia	800	516	529	513	488	499
Mexico	842	338	406	408	393	459
Columbia	570	335	385	406	431	422
Belgian Congo	465	300	334	339	352	369

(a) Includes Newfoundland.

(b) Includes Gold Coast, Nigeria and Sierra Leone.

7. **Employment in Gold Mining.**—Particulars of the numbers of persons employed in gold-mining are shown in §13 (page 700). For 1949 and earlier years it has been necessary to combine numbers employed in gold mining and copper-gold mining, as separate data are not available.

8. **Assistance to Gold Mining Industry.**—The Commonwealth Government imposed a tax on gold produced in Australia or in any Territory under its jurisdiction and delivered to the Commonwealth Bank on or after 15th September, 1939, the rate of tax being fixed at 50 per cent. of the price payable by the Bank in excess of £A.9 per fine oz. This tax was suspended as from 20th September, 1947, by the Gold Tax Suspension Act 1947 in order to assist the gold mining industry in meeting higher costs and to encourage greater output.

§ 3. Silver, Lead and Zinc.

1. **Mine Production.**—(i) *Australia.* The following table shows for 1951 and 1952 the mine production (metallic contents of ores and concentrates produced) of silver, lead and zinc in Australia, and the respective minerals in which these metals were contained.

SILVER, LEAD AND ZINC : CONTENT OF ORES AND CONCENTRATES PRODUCED.

Mineral in which contained.	Silver (fine oz.).		Lead (tons).		Zinc (tons).	
	1951.	1952.	1951.	1952.	1951.	1952.
Copper Concentrate ..	566,119	656,786	1,067	1,098	..	..
Gold Concentrate, etc. ..	208,463	218,374	..	..	..	..
Lead-Silver Ore ..	148,798	81,570	2,962	2,422	(a)	..
Lead-Silver-Zinc Ore ..	349	2,286	22	133	7	46
Lead Concentrate ..	8,954,390	9,944,610	204,094	220,628	2	1
Silver Ore ..	4,420	10,255	..	..	..	..
Zinc Concentrate ..	360,084	356,920	3,860	3,901	189,191	196,398
Other Minerals ..	1,068	7,573	8	14	27	5
Total ..	10,243,691	11,278,374	212,013	228,196	189,227	196,450

(a) Less than half a ton.

The following table shows the mine production of silver, lead and zinc in Australia for the years 1948 to 1952 compared with 1939.

SILVER, LEAD AND ZINC : CONTENT OF ORES AND CONCENTRATES PRODUCED, AUSTRALIA.

Metal.	Unit.	1939.(a)	1948.(a)	1949.(a)	1950.	1951.	1952.
Silver ..	'000 fine oz.	15,320	10,058	9,849	10,984	10,244	11,278
Lead ..	ton	280,003	216,955	213,491	225,367	212,013	228,196
Zinc ..	"	217,256	190,469	181,998	197,783	189,227	196,450

(a) Source : Australian Mines and Metals Association.

The following table shows the quantities of silver, lead and zinc contained in minerals won in the several States of Australia in the years 1951 and 1952 :—

SILVER, LEAD AND ZINC : CONTENT OF ORES AND CONCENTRATES PRODUCED, STATES.

State.	Silver (fine oz.)		Lead (tons).		Zinc (tons).	
	1951.	1952.	1951.	1952.	1951.	1952.
New South Wales ..	6,479,493	6,756,254	168,566	173,433	143,113	147,655
Victoria ..	8,326	5,846	..	..	..	..
Queensland ..	2,585,042	3,223,462	33,243	40,793	21,743	23,683
South Australia ..	457	644	41	(a) 51	..	..
Western Australia ..	196,743	209,581	1,913	5,495	9	47
Tasmania ..	973,629	1,078,268	8,250	8,424	24,362	25,065
Northern Territory ..	1	4,319	..	..	..	..
Australia ..	10,243,691	11,278,374	212,013	228,196	189,227	196,450

(a) Estimated.

Particulars of the values ascribed to the various minerals containing silver, lead and zinc for the year 1952 are shown in the detailed table relating to mineral production on pages 668.

(ii) *New South Wales.* By far the greater amount of silver-lead-zinc ore in New South Wales, in fact in Australia, is won from the massive silver-lead-zinc sulphide deposit at Broken Hill. Those concerned in operating this gigantic lode are North Broken Hill Limited, which mines the northern limb of the ore-bearing structure, Broken Hill South Ltd., and Zinc Corporation Ltd. (with which is associated New Broken Hill Consolidated), which are conducting operations on the southern limb.

The present-day sulphide ores are concentrated by gravity and flotation methods at Broken Hill. The lead (galena) concentrates are railed to Port Pirie and smelted to produce lead bullion which is later refined by a continuous lead refining process for the elimination of arsenic and antimony and the recovery of silver and gold. A large proportion of the zinc concentrate produced at Broken Hill is roasted by fertilizer plants in South Australia for the recovery of sulphur dioxide for sulphuric acid manufacture, the calcines after roasting being sent to Risdon in Tasmania for refining. The balance of the concentrate is either exported overseas or sent to Risdon for roasting and refining.

At Captain's Flat, Lake George Mines Limited is operating a lode of similar constitution. Concentration of the ore is carried out at the mine itself, after which process individual concentrates of zinc and lead (containing silver) are despatched to Port Kembla, New South Wales, for further treatment. Concentrates of copper, pyrites and gold are also produced at this mine.

Silver-lead-zinc ore has been mined in small quantities in various other parts of the State, the more important localities being Yerranderie, Howell and Kangiara.

(iii) *Victoria.* Small quantities of lead sulphide ore occur on most of Victoria's goldfields and in minor amounts in the Omeo, Bethanga and Cassilis districts. There has been no production of lead ore in recent years, the total recorded production being about 800 tons valued at £5,892.

Practically the whole of the Victorian mine production of silver of 5,846 fine oz. for 1952 was won as a by-product of the gold mining industry.

(iv) *Queensland.* In the far north-west of Queensland at Mt. Isa, some 600 miles west of Townsville, is operated the mining, milling and smelting enterprise of Mt. Isa Mines Ltd. Here, mining is carried out on extensive silver-lead-zinc ore lodes. After concentration by flotation in the concentrating mill, the silver-lead concentrate is converted to bullion in the smelter. All Mt. Isa bullion is exported overseas, where certain impurities, such as antimony, arsenic and copper, as well as silver, are removed to yield a pure lead suitable for commercial use.

Zinc concentrates and copper-lead dross produced by Mt. Isa are also exported overseas. During the 1939-45 War, operations on silver-lead-zinc ores at Mt. Isa were suspended while the mine was engaged in mining copper, but normal operations of the mine were resumed in 1946.

(v) *South Australia.* Output of lead from local ores has been very small in recent years. In 1953, 214 tons of lead-silver ore were produced, valued at £5,663 and containing 51 tons of lead and 644 fine ounces of silver.

There has been no recorded zinc production since 1903, when the zinc was contained in lead ores and concentrates which came mainly from the Glen Osmond and Strathalbyn districts.

(vi) *Western Australia.* During recent years, lead-silver-zinc ore and lead concentrates have been produced in Western Australia. Main centres of production have been the Northampton area, Nabawa, the Ashburton area and the West Kimberley district. The lead concentrates won at Nabawa and in the Northampton area do not contain payable amounts of silver. Silver-lead-zinc ore is produced by the Devonian Lead Mine in the West Kimberley district.

The bulk of the mine production of silver in Western Australia is obtained as a by-product of the gold mining industry.

(vii) *Tasmania*. There are two large centres of silver-lead-zinc mining in Tasmania. The more important is the field operated by the Electrolytic Zinc Company of Australasia Limited at Read-Rosebery. These are primarily zinc mines, although lead and copper-lead concentrates are also produced. This company also operates the electrolytic zinc works at Risdon near Hobart.

The lead concentrates and copper-lead concentrates produced at Rosebery are exported overseas.

The zinc concentrates, which are the principal product from the mine, also contain some lead. These concentrates are sent to Risdon for roasting and refining, portion of the resultant lead residue being sent to Port Pirie in South Australia for refining, the balance being dumped. In addition to the refining of zinc concentrates produced at Rosebery, the Risdon plant also treats considerable quantities of zinc concentrates from the Broken Hill mines.

Of secondary importance to Rosebery is the Mount Farrell field, situated 6 miles north-east of Rosebery. These ore-bodies are mainly silver-lead lodes which yield a lead concentrate with high silver content. The zinc content is insufficient to warrant recovery.

Most of the State's silver is contained in concentrates produced at Rosebery and Mount Farrell. Some silver is obtained from the Mount Lyell copper refinery tank house slimes which are treated at Port Kembla in New South Wales.

(viii) *Northern Territory*. There was no production of lead-silver ore in the Northern Territory in 1951 and 1952. However, 41 tons of ore valued at £883 and with a content of 339 fine ounces of silver and 15 tons of lead were won in 1950. The output in 1950 came mainly from a few old mines in the northern part of the Territory, abandoned since the early days of mining. The principal centres are Boomlera, Mount Shoobridge, McArthur River and Jervois Range.

2. **Production and Sales of Refined Silver, Lead and Zinc.**—In the following table, details are given of the production and sales of refined primary silver, lead and zinc as recorded from data received from the Australian Mines and Metals Association and from other sources. The figures shown for refined silver production include small quantities recovered from imported materials. The data relating to lead production include small quantities recovered from scrap for the year 1939.

REFINED SILVER, LEAD AND ZINC : PRODUCTION AND SALES, AUSTRALIA.

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
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SILVER ('000 fine oz.).

Production	9,552	5,858	6,882	6,879	6,773	6,606
Sold to Australian consumers (a) ..	1,794	1,019	1,095	1,693	739	1,129
Exported or sold for export (a) ..	7,518	4,205	5,745	4,924	5,876	4,755

LEAD (tons).

Refined Lead—						
Production	199,437	150,056	160,526	165,758	156,639	172,468
Sold to Australian consumers (a) ..	32,217	40,908	43,661	54,629	31,566	31,663
Exported or sold for export (a) ..	164,684	108,071	122,426	112,476	122,626	144,002
Lead Bullion—						
Produced for export	43,955	32,621	37,021	31,872	37,709	34,050

ZINC (tons).

Production	71,220	80,956	83,652	77,010	87,438	90,178
Sold to Australian consumers (a) ..	31,088	44,024	45,141	45,950	50,174	58,524
Exported or sold for export (a) ..	43,137	38,230	38,558	29,411	38,132	32,881

(a) Source : Australian Mines and Metals Association.

3. **Silver, Lead and Zinc : Production in Principal Countries and World Total, 1952.**—The following table shows, for the year 1952, particulars of silver, lead and zinc production (mine basis) in principal producing countries, together with the estimated world total, according to data published by the Mineral Resources Division of the Colonial Geological Surveys.

SILVER, LEAD AND ZINC : MINE PRODUCTION IN PRINCIPAL COUNTRIES AND WORLD TOTAL, 1952.

Country.	Silver.	Lead.	Zinc.
	'000 fine oz.	Tons.(a)	Tons.(a)
Mexico	50,354	242,142	223,784
United States of America	39,452	348,358	594,044
Canada	25,222	150,752	331,966
Peru	19,180	96,520	125,844
Australia	11,278	228,196	196,450
U.S.S.R.	(b)	(c) 200,000	(c) 200,000
Bolivia	7,066	29,539	35,056
Italy	694	38,014	103,272
Estimated World Total	188,000	1,828,000	2,530,000

(a) Long tons.

(b) Not available.

(c) Estimated.

4. **Prices of Silver, Lead and Zinc.**—In view of the close association in Australia, particularly in New South Wales, of ores containing these metals, relevant particulars of the prices of each of the metals have been included in the following table. The table shows average prices in Australia and on the London Metal Exchange during the years 1938 and 1949 to 1953. Lead and zinc prices were controlled in Australia and the United Kingdom after the outbreak of war in 1939. Prices of lead and zinc were decontrolled in Australia on 21st April, 1953. Free trading in lead in the United Kingdom, after thirteen years of Government control, was resumed on 1st October, 1952, while the price of zinc, fixed by regulation, was abandoned from 1st January, 1953. Silver prices have not been controlled in Australia and the United Kingdom.

PRICES OF SILVER, LEAD AND ZINC.

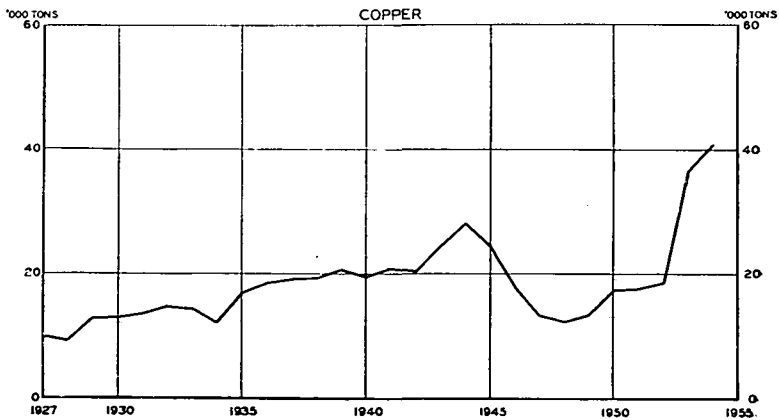
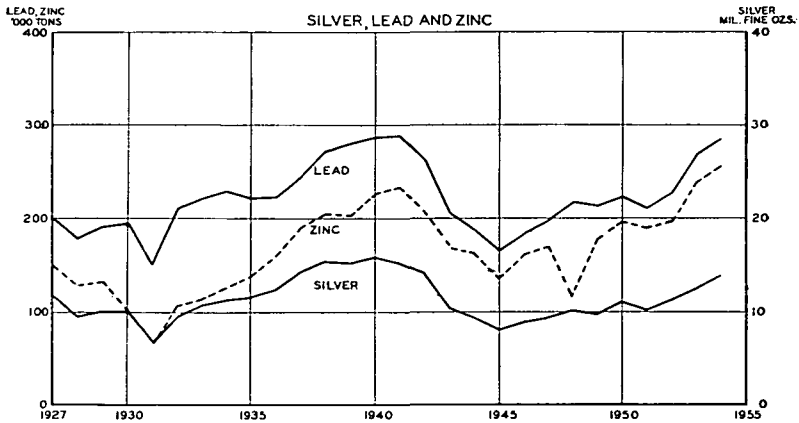
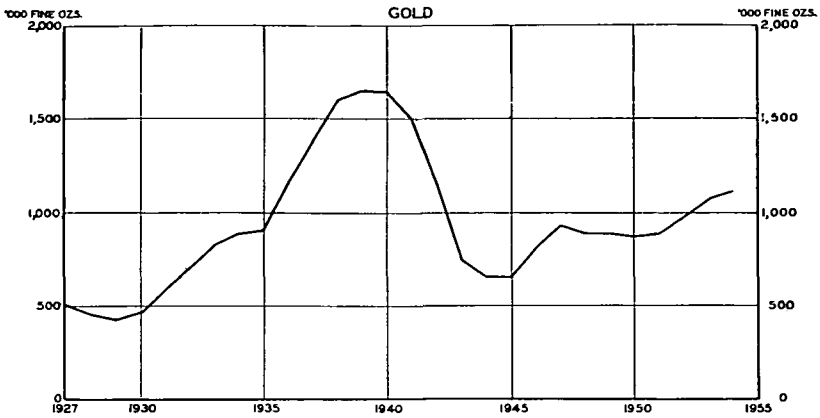
(£ s. d.)

Metal.	1938.	1949.	1950.	1951.	1952.	1953.
Australian Prices, in Australian currency—						
Silver, per fine oz. (a) ..	0 2 2	0 5 2	0 6 9	0 8 2	0 7 9	0 7 8
Lead, per ton ..	b 22 0 0	b 35 0 0	b 43 12 7	b 65 0 0	b 74 15 1	d 103 9 1
Zinc, per ton ..	b 22 0 0	b 40 0 0	b 47 3 10	b 65 0 0	b 74 15 1	d 91 10 7
London Metal Exchange Prices, in sterling—						
Silver, per fine oz. (e) ..	0 1 9	0 4 1	0 5 5	0 6 6	0 6 2	0 6 2
Lead, per ton ..	b 15 6 6	b 103 3 11	b 106 8 2	b 161 19 10	f 135 9 0	£ 91 7 2
Zinc, per ton ..	b 14 1 7	b 87 8 6	b 119 4 3	b 171 12 3	b 149 10 2	£ 75 1 3

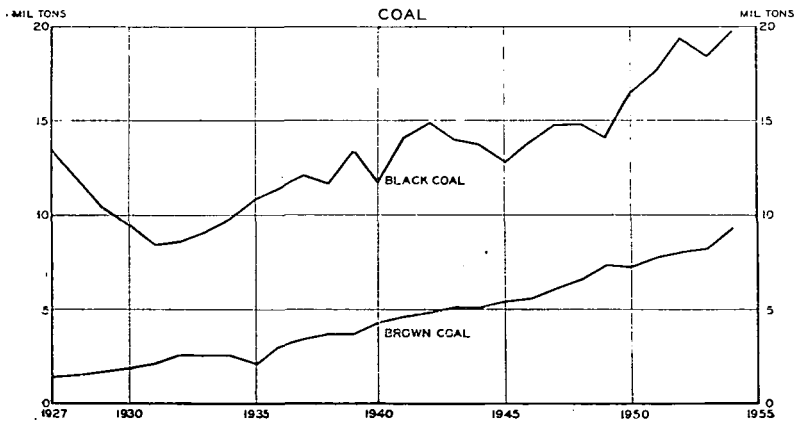
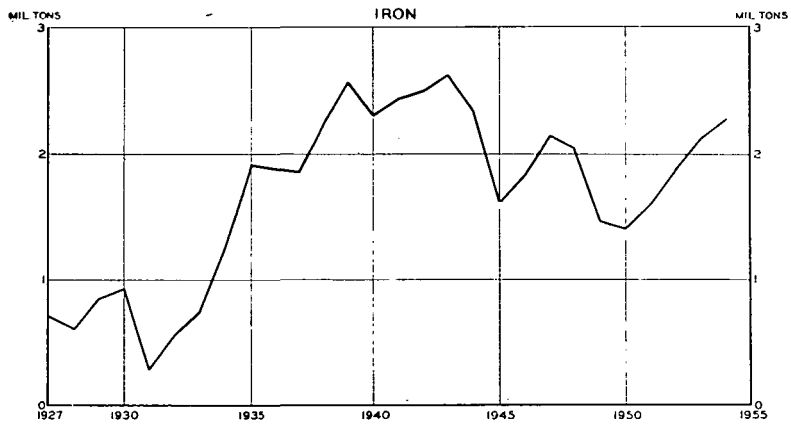
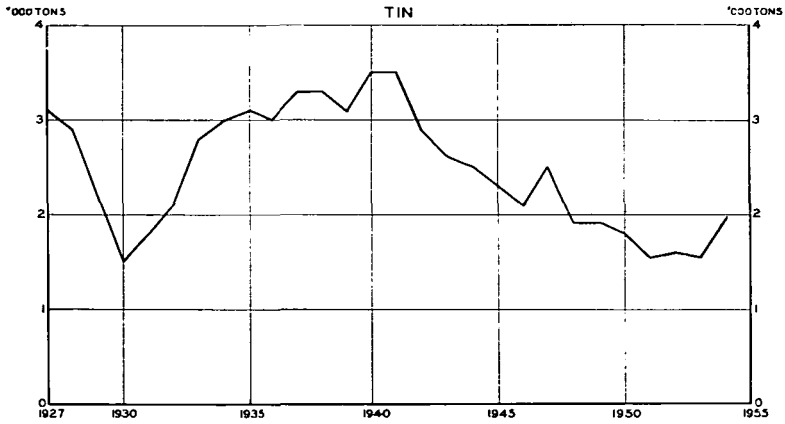
(a) Silver prices have not been fixed by regulation in Australia, the prices shown representing export parity calculated from London Metal Exchange prices. (b) Prices fixed by regulation. (c) From February, 1940. (d) Price regulation was abandoned from 21st April, 1953; average market prices have been used for balance of year. (e) Average market prices. (f) Price regulation was abandoned from 1st October, 1952; average market prices have been used for balance of year.

5. **Employment in Silver, Lead and Zinc Mining.**—Particulars of the number of persons employed in mining for these metals are shown in § 13, page 700.

MINE PRODUCTION OF MINERALS AND METALS AUSTRALIA: 1927 TO 1954



MINE PRODUCTION OF MINERALS AND METALS AUSTRALIA: 1927 to 1954



§ 4. Copper.

1. **Production.**—Copper is widely distributed throughout Australia. However, the principal producing States in 1952 were Tasmania, Queensland and New South Wales, in that order of magnitude.

In view of the revised methods of compiling values of individual minerals produced, operative from 1950 (*see* page 666), it is not practicable to continue a table of values of mine production of copper similar to that shown in issues of the Official Year Book prior to No. 40. The table hereunder shows the quantity of mine production of copper (copper content of ores and concentrates produced) in Australia for the years 1951 and 1952. It should be noted that the minerals shown below contain, in addition to copper, certain other metals.

COPPER : CONTENT OF ORES AND CONCENTRATES PRODUCED, AUSTRALIA. (Tons.)

Mineral in which Contained.	1951.	1952.
Copper Ore, Concentrate and Precipitate	15,739	16,125
Gold Ore, Concentrate, etc.	5	1
Lead Ore and Concentrate	1,874	2,163
Zinc Concentrate	308	289
Total	17,926	18,578

Particulars of the copper content of ores and concentrates produced in each producing State and the Northern Territory, as published by the Australian Mines and Metals Association for the years 1939, 1948 and 1949, and as recorded by this Bureau from data obtained from the several State Mines Departments and other sources for the years 1950 to 1952, are shown in the table below.

COPPER : CONTENT OF ORES AND CONCENTRATES PRODUCED, STATES. (Tons.)

State.	1939.	1948.	1949.	1950.	1951.	1952.
New South Wales ..	1,155	2,515	2,453	3,893	3,679	3,562
Queensland ..	5,798	3,149	4,924	5,424	5,432	6,966
South Australia ..	110	4	3	..	(a)	2
Western Australia ..	1	..	5	1	7	7
Tasmania ..	13,453	6,574	5,229	7,884	8,657	7,722
Northern Territory ..	43	126	848	279	151	319
Australia ..	20,560	12,368	13,462	17,481	17,926	18,578

(a) Less than half a ton.

2. **Sources of Production.**—(i) *New South Wales.* The copper content of ores and concentrates produced in New South Wales in 1952 amounted to 3,562 tons. The principal sources of this production were ores mined at Broken Hill and Captain's Flat.

(ii) *Queensland.* In 1952 mine production of copper in this State amounted to 6,966 tons compared with 5,432 tons in 1951 and 5,424 tons in 1950. The bulk of the production in 1952 came from Mt. Morgan while the copper content of copper-lead dross from Mt. Isa Mines, treated overseas, yielded 562 tons.

A copper mill and smelter is now in operation at Mt. Isa for the purpose of operating on copper ores at that site. Copper was produced from copper ore at Mt. Isa during the 1939-45 War, but production was suspended in 1946 and until recently operations have been confined to silver-lead-zinc ores. The production of copper in the new smelter commenced early in 1953, resulting in a considerable increase in Australia's total copper output for that year.

(iii) *South Australia.* Deposits of copper were previously found over a large portion of South Australia but the principal fields have been exhausted and output in recent years has been negligible.

(iv) *Western Australia.* The ore sent to smelters in 1952 amounted to 16 tons containing 7 tons of metal. In the same year carbonate ores for use as fertilizers amounted to 1,644 tons, the average copper content being 10.7 per cent.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1952 was 7,722 tons, The Mount Lyell Mining and Railway Co. Ltd. providing the greater part thereof (7,490 tons). Most of the balance consisted of copper in copper-lead concentrates exported from Read-Rosebery.

(vi) *Northern Territory.* Copper has been found at various places in the Territory. In 1952, 1,466 tons were mined, containing 319 tons of copper, compared with 805 tons of ore containing 151 tons of copper in 1951. The increase in 1952 was due mainly to mining of high-grade copper ore at the Peko Mine, Tennant Creek.

3. **Production and Sales of Refined Copper.**—There are two refining plants in Australia, one operated by Electrolytic Refining and Smelting Co., Port Kembla, New South Wales, and the other by The Mount Lyell Mining and Railway Co. Ltd., Mt. Lyell, Tasmania. The electrolytic process is employed in both cases. However, the latter plant produces the copper in cathode form, which with the exception of a quantity sold to the trade in Tasmania is shipped to Port Kembla for conversion into the various customary refinery shapes. In the following table, details are given of the production and sales of refined domestic primary copper, as recorded from data received from the Australian Mines and Metals Association and other sources.

REFINED COPPER(a) : PRODUCTION AND SALES, AUSTRALIA.

(Tons.)

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
Production	17,867	9,955	13,231	13,543	19,623	16,682
Sold to Australian consumers(b)	18,808	9,884	11,910	13,746	17,102	13,412
Exported or sold for export (b)	100	4	..	..	..	2,607

(a) Refined from domestic primary copper.

(b) Source : Australian Mines and Metals Association.

Up to 1952, local demand for copper considerably exceeded Australian refinery production and substantial quantities of copper were imported. A large proportion of the imports in 1948 and later years comprised blister copper imported mainly from South Africa and refined in Australia. However, in 1953 the large increase in blister copper production from the Mt. Isa smelter could not be handled with available refining capacity and considerable quantities of blister copper were exported for treatment overseas. During that year, imports of copper were very small.

4. **World Production of Copper.**—The world's estimated mine production of copper during the years 1939 and 1947 to 1952 is shown below.

COPPER : WORLD MINE PRODUCTION.

('000 Tons.)

1939.	1947.	1948.	1949.	1950.	1951.	1952.
2,160	2,180	2,280	2,250	2,490	2,630	2,720

The yields in 1952 from the principal copper-producing countries reporting, as published by the Mineral Resources Division of the Colonial Geological Surveys, were as follows :—

COPPER : MINE PRODUCTION IN PRINCIPAL COUNTRIES, 1952.
(Tons.)(a)

Country.	Production.	Country.	Production.
United States of America ..	826,229	Union of South Africa ..	34,558
U.S.S.R. Chile ..	402,179	Peru ..	30,687
Russia ..	(b) 329,000	Cyprus ..	24,900
Rhodesia ..	324,382	Turkey ..	22,962
Canada(c) ..	230,039	Australia ..	18,578
Belgian Congo ..	202,499	Finland ..	18,386
Mexico ..	57,540	Cuba ..	17,059
Japan ..	52,706	Sweden ..	13,554
Yugoslavia ..	36,386	Norway ..	13,417

(a) Long tons.

(b) Estimated.

(c) Includes Newfoundland.

During 1952 the share of the United States of America in the world's mine production of copper amounted to 30 per cent. while the Australian proportion was less than 1 per cent.

5. Prices.—Since the outbreak of war in 1939, the price of copper in Australia and the United Kingdom has been fixed by regulation. Private trading in copper in the United Kingdom was resumed on 5th August, 1953. Details of the average price for the years shown are given in terms of Australian currency and sterling in the following table :—

AVERAGE PRICE PER TON OF ELECTROLYTIC COPPER IN AUSTRALIA AND THE UNITED KINGDOM.
(£ s. d.)

Country.	December, 1939.	1949.	1950.	1951.	1952.	1953.
Australia — in Aust. currency	63 17 6	167 19 5	189 1 8	254 6 4	308 15 1	329 16 4
United Kingdom — in sterling ..	62 0 0	133 1 11	178 17 1	220 7 1	258 19 6	253 6 9

(a) *Hx* works Port Kembla.

(b) Average market prices from 5th August, 1953.

6. Employment in Copper Mining.—Particulars of the numbers of persons engaged in the mining of copper and copper-gold ores are shown in § 13 below. Data for 1949 and earlier years are combined with those for gold mining as separate particulars are not available.

§ 5. Tin.

1. Production.—Tasmania, Queensland and New South Wales are the principal producing States.

The table of values of tin production published in issues of the Official Year Book prior to No. 40 has been discontinued for reasons stated above (*see* p. 666).

The following table shows the production of tin in Australia in the years 1948 to 1952 compared with 1939.

TIN : PRODUCTION, AUSTRALIA.
(Tons.)

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Mine Production ..	3,067	1,885	1,886	1,854	1,559	1,610
Production of Refined Tin(a) ..	3,294	1,885	1,955	2,014	1,459	1,700

(a) This information has been prepared from data received from the Australian Mines and Metals Association and other sources.

2. **Sources of Production.**—(i) *New South Wales.* Production of tin concentrates in 1952 was 560 tons, with a tin content of 396 tons, compared with 578 tons (tin content 413 tons) in 1951. A large proportion of the output in this State is obtained in normal years by dredging and sluicing, principally in the New England district.

(ii) *Victoria.* The tin produced in this State is obtained solely as a by-product from the gold dredging operations at Eldorado. The production in 1952 amounted to 52 tons of concentrates, with a tin content of 39 tons, compared with 49 tons (tin content 36 tons) in 1951.

(iii) *Queensland.* The chief producing districts in Queensland during 1952 were Herberton, 347 tons of concentrates; Cooktown, 43 tons; Kangaroo Hills, 26 tons; Chillagoe, 23 tons; and Stanthorpe, 20 tons. The total production in 1952 amounted to 476 tons, compared with 490 tons in 1951. The tin content in 1951 and 1952 was 340 tons and 330 tons respectively. It is interesting to compare these production figures with those recorded in the early years of this century in this State when the output ranged between 2,000 and 5,000 tons per annum.

(iv) *Western Australia.* The quantity of tin concentrates reported in this State in 1952 amounted to 98 tons (tin content 65 tons), compared with 61 tons in 1951 (tin content 41 tons). Production was mainly in the Pilbara and Greenbushes fields.

(v) *Tasmania.* For 1952 the output amounted to 1,115 tons of tin concentrates, an increase of 117 tons on the output of the previous year. The tin content for 1952 was 771 tons and for 1951, 706 tons.

(vi) *Northern Territory.* The production for 1952 amounted to 17 tons of concentrates, compared with 37 tons of concentrates produced during 1951. The tin content for 1952 and 1951 was 9 tons and 23 tons respectively.

3. **World Production.**—The world production of tin ore, *in terms of metal*, during each of the years 1939 and 1948 to 1952, as published by the Mineral Resources Division of the Colonial Geological Surveys, was as follows :—

TIN : WORLD PRODUCTION.
(^{'000} Tons.)

1939.	1948.	1949.	1950.	1951.	1952.
174.0	151.6	161.5	167.2	167.3	171.0

The production of tin reached its maximum in 1941 when 241,400 tons were recorded. The following are the chief producing countries of the world :—Federation of Malaya, Indonesia, Bolivia, Belgian Congo, Thailand and Nigeria. In recent years these countries have produced approximately 90 per cent. of the total production. Australia's share of the world's tin production is about 1 per cent.

The production of tin ore, *in terms of metal*, as published by the International Tin Study Group and other authorities, for the principal producing countries in 1952 was as follows :—

TIN : PRODUCTION IN PRINCIPAL COUNTRIES, 1952.
(Tons.) (a)

Country.	Production.	Country.	Production.
Malaya, Federation of ..	56,838	Australia	1,610
Indonesia	35,003	Portugal	1,462
Bolivia	32,216	Burma	1,103
Belgian Congo	13,995	Union of South Africa	935
Thailand	9,474	United Kingdom	822
Nigeria	8,303	Spain	733
China	(b) 5,400	Mexico	413

(a) Long tons.

(b) Estimated.

4. **Prices.**—At the outbreak of war in September, 1939, the price of tin in Australia and London was fixed by regulation. London control of tin prices ceased on 14th

November, 1949, while the Australian price was decontrolled on the 21st April, 1953. Details of the movement in average prices for the years shown are given in terms of Australian currency and sterling in the following table :—

AVERAGE PRICE PER TON OF TIN IN AUSTRALIA AND THE UNITED KINGDOM.
(£ s. d.)

Country.	December, 1939.	1949.	1950.	1951.	1952.	1953.
Australia — In Aust. currency(a)	299 0 0	620 0 0	725 5 9	1,222 8 9	1,150 10 0	(b) 919 10 5
United Kingdom —In sterling ..	(c) 271 0 0	(c) 599 16 1	(d) 745. 16 9	d 1,079 16 0	(d) 964 12 1	(d) 730 14 11

(a) Prices fixed by regulation ex smelters for sales of 10 cwt. or more or in ingots of 70 lb. or more.
(b) Average market prices from 21st April, 1953. (c) Prices fixed by regulation for standard tin.
(d) Average spot market prices for standard tin.

5. **Employment in Tin Mining.**—The number of persons employed in tin mining is shown in § 13 (page 700).

§ 6. Iron.

1. **General.**—Although iron ore is widely distributed throughout Australia, the only known ore bodies of large extent and high grade which are easily accessible are those situated at Iron Knob, South Australia and at Yampi Sound, Western Australia. Estimates of the reserves at these centres place the quantities available at approximately 150 million tons and 100 million tons respectively. Bearing in mind the expansion of the iron industry in Australia, and the limitations of these reserves, the Commonwealth Government prohibited the export of iron ore from 1st July, 1938. A survey of the iron ore resources of Australia undertaken by the Commonwealth Geologist was completed at the end of 1940.

2. **Production.**—(i) *Australia.* Production of iron ore for smelting purposes and estimated iron ore content are shown below for the years 1939 and 1948 to 1952 :—

IRON ORE : PRODUCTION, AUSTRALIA.
(Tons.)

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Production of Iron Ore	2,575,758	2,053,599	1,472,669	2,364,719	2,436,229	2,907,754
Estimated Iron Content	1,548,031	1,273,231	924,836	1,417,608	1,605,400	1,883,087

(ii) *New South Wales.* The production in 1935 of pig iron from ores mined in New South Wales amounted to 4,580 tons, valued at £18,320. No iron ores were produced from 1935 until 1941, when 202,180 tons of ore were mined. In 1942, 375,297 tons were mined, but only 86,185 tons in 1945. Since that year there has been no iron ore mined in this State for conversion into pig-iron. For many years the chief source of supply for New South Wales blast furnaces has been South Australia.

Small quantities of iron oxide produced in New South Wales are used by the various gas-works for purifying gas, and also in the manufacture of paper, and for pigments. These supplies are drawn chiefly from the deposits in the Port Macquarie Division. During 1952, 12,315 tons of oxide were won.

(iii) *Queensland.* Extensive deposits of iron ore are known to exist in Queensland. Their location and size, however, in comparison with the more favourable deposits of South Australia and Western Australia, preclude their exploitation. The output of 1,253 tons of iron oxide for 1952 came mainly from the Biggenden district.

(iv) *South Australia.* The production from the deposits worked by The Broken Hill Proprietary Co. Ltd. in the Middleback Ranges reached its pre-war maximum in 1939, when 2,571,759 tons of ore were raised. Production in 1952 reached a new peak of 2,683,966 tons (estimated iron content, 1,744,578 tons).

(v) *Western Australia.* Plans drawn up in 1927 to develop the rich iron ore deposits on Cockatoo Island in Yampi Sound were realized on 24th July, 1951 when one specially

designed vessel of The Broken Hill Proprietary Co. Ltd. left the island with 10,384 tons of ore for Port Kembla, New South Wales. Since that date, regular shipments of ore have proceeded for smelting at Port Kembla. In 1952, 204,945 tons with an estimated iron content of 128,157 tons were transported while in 1953 687,895 tons (iron content, 436,057 tons) were shipped. Iron ore is also obtained from deposits at Wundowie and Koolyanobbing. Total production of iron ore during 1952 was 223,788 tons with an estimated iron content of 138,509 tons.

The whole iron pyrites production of Western Australia is won at the Iron King and Norseman mines and is railed, in the form of ores and concentrates, to superphosphate manufacturers at Bassendean and Bayswater on the coast.

(vi) *Tasmania.* There has been no production of ironstone in Tasmania since 1943 when 7 tons were produced. The iron pyrites concentrate produced, which in 1952 amounted to 54,421 tons (sulphur content, 26,950 tons), is a by-product from the flotation of copper ores at Mount Lyell. This product is exported to the mainland, where it is used in the manufacture of chemical fertilizers.

In 1952, 4,675 tons of iron oxide were produced for gas purification and fluxing purposes.

3. **Production of Iron and Steel.**—(i) *Australia.* The production of pig-iron and steel in Australia, of which New South Wales is the main producing State, is shown in the following table for each of the years 1944-45 to 1953-54 :—

PIG-IRON AND STEEL : PRODUCTION, AUSTRALIA.
(Tons.)

Year.	Pig-iron. (a)	Steel Ingots.	Blooms and Billets.	Year.	Pig-iron. (a)	Steel Ingots.	Blooms and Billets.
1944-45 ..	1,117,709	1,356,913	1,236,528	1949-50 ..	1,097,635	1,217,971	1,103,784
1945-46 ..	906,283	1,061,918	1,036,501	1950-51 ..	1,313,332	1,443,831	1,297,260
1946-47 ..	1,143,132	1,312,439	1,255,703	1951-52 ..	1,430,027	1,521,386	1,361,342
1947-48 ..	1,235,574	1,344,692	1,222,938	1952-53 ..	1,691,693	1,801,028	1,687,891
1948-49 ..	1,044,957	1,178,010	1,101,063	1953-54 ..	1,829,812	2,129,633	1,779,845

(a) Includes pig-iron for castings ; excludes ferro-alloys.

The principal producers in Australia are The Broken Hill Proprietary Co. Ltd. and Australian Iron and Steel Ltd., both in New South Wales, the former situated at Newcastle and the latter at Port Kembla. The Broken Hill Proprietary Co. Ltd. established a blast furnace at Whyalla in South Australia ; this was blown in during May, 1941, and has since continued to operate except for the periods May, 1944 to April, 1946 and April, 1949 to September, 1949.

In Western Australia, the production of pig-iron, under the direction of the State Department of Industrial Development, commenced in January, 1948 at Wundowie. The output for the year 1952-53 amounted to 10,280 tons.

(ii) *Principal Countries.* Particulars of the production in the principal countries and the estimated world total production during the years 1939, 1951 and 1952, according to figures published by the Mineral Resources Division of the Colonial Geological Surveys, are shown in the next table.

PIG-IRON AND STEEL : PRODUCTION IN PRINCIPAL COUNTRIES.
(‘000 Tons.) (a)

Country.	Pig-iron and Ferro-alloys.			Steel Ingots and Castings.		
	1939.	1951.	1952.	1939.	1951.	1952.
U.S. of America	31,855	64,686	56,566	47,142	93,928	83,186
U.S.S.R.(b)	15,000	21,800	24,900	18,500	30,800	33,900
United Kingdom	7,980	9,669	10,728	13,221	15,639	16,418
Germany (Federal Republic) ..	17,202	10,528	12,673	22,123	13,293	15,556
France	7,304	8,612	9,615	7,783	9,680	10,695
Japan	3,144	3,177	3,529	6,588	6,399	6,878
Belgium	3,010	4,791	4,713	3,055	4,974	4,987
Estimated World Total	100,000	147,700	149,900	134,000	207,000	207,000

(a) Long tons.

(b) Estimated.

(c) Pre-war Germany.

§ 7. Other Metallic Minerals.

1. **Tungsten.**—Tungsten ores occur in all States. Particulars of scheelite concentrates from King Island, in Bass Strait, the major producer, are included with Tasmanian production. Other important deposits of tungsten ores occur in Queensland, New South Wales, the Tasmanian mainland and the Northern Territory, but production from Victoria, South Australia and Western Australia has been comparatively unimportant. In recent years the largest producer has been Tasmania, followed by the Northern Territory. Production of tungsten concentrates and contents during 1952 in each State, etc., is shown below :—

TUNGSTEN CONCENTRATES : PRODUCTION, 1952.

(Tons.)

Particulars.	N.S.W.	Vic.	Q'land.	W. Aust.	Tas.	N. Terr.	Australia.
Scheelite Concentrate ..	8	..	9	2	970	..	989
WO ₃ Content ..	6	..	6	1	589	..	602
Wolfram Concentrate ..	33	2	230	27	481	262	1,035
WO ₃ Content ..	21	1	150	17	318	165	672

The following table shows production for Australia for the years 1939 and 1948 to 1952 :—

TUNGSTEN CONCENTRATES : PRODUCTION, AUSTRALIA.

(Tons.)

Particulars.	1939.	1948.	1949.	1950.	1951.	1952.
Scheelite Concentrate ..	191	651	810	800	1,031	989
WO ₃ Content ..	124	510	545	532	632	602
Wolfram Concentrate ..	726	328	376	282	697	1,035
WO ₃ Content ..	482	292	265	198	467	672

2. **Mineral Sands.**—The recovery of mineral sands from beaches in northern New South Wales and Queensland commenced in 1934. The industry was expanded considerably following the 1939-45 War and Australia is now one of the world's largest producers of the two principal minerals obtained from treatment of the sands, namely, rutile and zircon. Small quantities of ilmenite and monazite are also produced. Particulars of the quantity of rutile and zircon concentrates produced are shown in the following table for the years 1947 to 1953 :—

RUTILE AND ZIRCON PRODUCTION, AUSTRALIA.

(Tons.)

Year.	Rutile Concentrates.		Zircon Concentrates.	
	Quantity.	TiO ₂ Content.	Quantity.	Zircon Content.
1947	(a) 20,448	12,725	(a) 27,375	21,509
1948	(a) 18,992	15,007	(a) 24,668	21,889
1949	(a) 16,454	13,982	(a) 22,233	20,970
1950	18,312	18,089	21,805	21,536
1951	35,189	33,432	42,410	41,420
1952	38,014	36,861	27,696	27,371
1953	38,039	37,067	27,207	26,858

(a) Includes mixed Zircon-Rutile concentrates ; 1947, 11,984 tons ; 1948, 5,605 tons ; 1949, 3,360 tons.

3. **Cadmium and Cobalt.**—The sources of cadmium in Australia are lead and zinc concentrates. The cadmium content of these concentrates produced during the year 1952 is estimated at 634 tons. The greater proportion of the concentrates is treated at Risdon, Tasmania, and at Port Pirie, South Australia, for the extraction of cadmium. The remainder of the concentrates are exported. In 1938, which is the latest year for which relatively complete world production figures are available, Australia produced 196 tons of refined cadmium, amounting to about 5 per cent. of world output.

Cobalt is present in zinc concentrates produced at Broken Hill, New South Wales, and at Rosebery, Tasmania. The cobalt is recovered in the form of cobalt oxide at the zinc refining plant at Risdon, Tasmania, and is sold as such to industry. The cobalt metal content of zinc concentrate produced in 1952 is estimated at 54 tons.

Production of refined cadmium and cobalt oxide for the years 1939 and 1948 to 1952 is shown in the following table :—

CADMIUM (REFINED) AND COBALT OXIDE : PRODUCTION.
(Tons.)

Year.	Cadmium (Refined).			Cobalt Oxide.
	Extracted from Ores Mined in—			Extracted from Ores Mined in New South Wales.(a)
	New South Wales.	Tasmania.	Total.	
1939	124	48	172	20
1948	245	44	289	15
1949	216	44	260	14
1950	250	44	294	16
1951	195	36	231	13
1952	245	41	286	16

(a) Excludes less than a ton of cobalt oxide produced from Tasmanian ores in each of the years shown.

The figures shown above do not include the metallic contents of cadmium and cobalt oxide contained in the ores and concentrates exported overseas.

4. **Platinum Group Metals.**—(i) *Platinum.* The only production in Australia in recent years has been from deposits worked at Fifield, New South Wales. In 1950 the output of concentrates was 24 oz., containing 16 oz. of platinum, and in 1951 the quantity of concentrates produced was 13 oz., the platinum content being 8 oz. There was no production in 1952.

(ii) *Osmiridium.* Practically all the production of osmiridium is from the west coast of Tasmania, the only other production being a very small quantity contained in platinum concentrates produced at Fifield, New South Wales. Total production in 1950 was 48 oz., in 1951, 34 oz. and in 1952, 51 oz. Of this, 2 oz. were from New South Wales in 1950 and half an ounce in 1951, and in 1952 the whole of production was from Tasmania.

(iii) *Palladium.* In 1951 less than half an ounce of palladium was recovered from concentrates produced at Fifield, New South Wales, and production was nil in 1952.

(iv) *Osmium, iridium, etc.* There has been no production recorded in recent years.

5. **Other.**—The production, in 1952, of other metallic minerals worthy of note, is as follows :—

Antimony. The antimony content of antimony-bearing minerals produced was 743 tons. Of this amount 502 tons were in lead concentrates and 239 tons in 480 tons of antimony ore and concentrates.

Bismuth. Bismuth content of minerals produced was 3,152 lb., of which 3,124 lb. were contained in 7,926 lb. of bismuth concentrates from New South Wales.

Manganese. Production of manganese ore comprised 6,026 tons of metallurgical grade (manganese content 2,762 tons), 573 tons of battery grade (manganese dioxide content 423 tons), and 470 tons of other grades (manganese dioxide content 333 tons). Manganese content of zinc concentrates produced in New South Wales was 3,452 tons.

Molybdenum. 283 lb. of molybdenite concentrates were produced, the molybdenum sulphide content being 256 lb.

§ 8. Coal.

1. **Production in each State.**—An account of the discovery of coal in each State appears in preceding issues of the Official Year Book (*see* No. 3, pp. 515-16). The quantity and value of the production in each State and in Australia for 1939, and for each of the years 1949 to 1953 are shown in the following table. Of the total production of black coal in 1953, 81,909 tons were classified as semi-anthracite, 16,764,287 tons as bituminous and 1,564,649 tons as sub-bituminous.

Of the total production of black coal in Australia in 1953, 3,138,976 tons (17 per cent.) were obtained by open-cut methods. The remainder, 15,271,869 tons (83 per cent.) came from underground mines. In 1946, only 8 per cent. of black coal won in Australia came from open-cut mines while in 1952 the proportion reached a maximum of 21 per cent.

COAL PRODUCTION.

Year.	Black Coal.							Brown Coal.
	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.	Victoria.

QUANTITY ('000 tons).

1939	..	11,196	365	1,317	..	558	99	13,535	3,651
1949	..	10,736	122	1,970	345	751	182	14,106	7,376
1950	..	12,798	127	2,321	261	814	222	16,543	7,327
1951	..	13,513	148	2,474	388	848	237	17,608	7,836
1952	..	15,022	144	2,742	418	830	248	19,404	8,104
1953	..	14,174	152	2,517	448	886	234	18,411	8,257

VALUE (a) (£'000).

1939	..	7,027	260	1,168	..	363	74	8,892	386
1949	..	16,122	380	2,874	172	972	182	20,702	1,469
1950	..	22,121	382	3,562	131	1,185	232	27,613	1,707
1951	..	29,326	601	4,490	400	1,717	305	36,839	2,755
1952	..	43,283	728	5,956	430	2,457	475	53,329	3,255
1953	..	41,030	946	5,861	461	3,073	453	51,824	3,628

(a) At the mine.

2. **Production of Coal in each State.**—(i) *New South Wales.* The coal deposits of New South Wales are the most important and extensively worked in Australia. The principal fields are known as the Northern, Southern and Western, and are situated in the vicinity of Newcastle, Bulli and Lithgow respectively.

The coal from the various districts differs in quality or, geologically speaking, rank—that from the Northern district being especially suitable for gas-making, household purposes and steam, while the product of the Southern and Western districts is essentially a steaming coal. The Permian Coal Measures in the Northern division are being worked extensively in the Hunter River Valley area, particularly in the vicinity of Maitland, Cessnock and, more recently, Muswellbrook. This district is the most important, from the aspect of coal mining, in Australia.

The following table shows particulars of New South Wales coal production classified according to type of mining and rank during the five years 1949 to 1953 compared with 1939. Small quantities of semi-anthracite coal produced in some years are included with bituminous.

COAL : PRODUCTION, NEW SOUTH WALES.

('000 Tons.)

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
Underground Mines ..	11,196	9,388	11,196	11,224	12,492	12,452
Open Cut Mines ..	..	1,348	1,602	2,289	2,530	1,722
Total ..	11,196	10,736	12,798	13,513	15,022	14,174
Bituminous ..	11,194	10,729	12,786	13,508	15,009	14,165
Sub-bituminous ..	2	7	12	5	13	9

(ii) *Victoria. (a) Black Coal.* Production of black coal in Victoria is restricted to the Gippsland district. The State Coal Mines at Wonthaggi is the main producer, the remaining production coming from small privately-owned mines. In 1953, production of bituminous coal was 151,907 tons which was 8,087 tons higher than 1952 production of 143,820 tons.

(b) *Brown Coal. General.* The mining of brown coal is carried on only in the State of Victoria, where extensive deposits exist; estimates place the available reserves at 40,000 million tons. Large-scale developmental projects are in progress: these, when completed, will greatly reduce the dependence on fuel from other States. Brown coal produced in Victoria in 1953 amounted to 8,257,299 tons, of which 7,717,318 tons, or 93 per cent., were won at the State open-cuts at Yallourn. During 1952-53, 7,571,940 tons of brown coal were produced at Yallourn, of which 4,933,459 tons went to the Yallourn power station, and 2,186,170 tons to the briquette factory.

Production of Briquettes. The briquetting plant of the State Electricity Commission started operations in November, 1924, and the output, which in 1926 was 95,477 tons, had increased to 180,905 tons in 1930 and to 545,063 tons in 1952-53. Approximately two and a half tons of brown coal are required to make one ton of briquettes.

The table following shows the production and distribution of brown coal and the production of briquettes in Victoria for the years 1948-49 to 1952-53, compared with 1938-39.

BROWN COAL : PRODUCTION AND UTILIZATION, VICTORIA.

('000 Tons.)

Year.	Total Production.	State Electricity Commission.				Brown Coal for other Industries.
		Brown Coal used as Fuel.		Brown Coal used as Material in Production of Briquettes.	Production of Briquettes.	
		Generating Stations.	Briquette Factory.			
1938-39 ..	3,663	2,096	516	1,031	400	20
1948-49 ..	7,027	4,130	733	1,467	559	697
1949-50 ..	7,637	4,408	776	1,553	589	900
1950-51 ..	7,300	4,338	606	1,391	511	875
1951-52 ..	8,096	4,784	776	1,553	568	983
1952-53 ..	8,075	4,933	729	1,457	545	956

(iii) *Queensland.* The production of coal classified according to type of mining and rank during the years 1939 and 1949 to 1953 was as follows :—

COAL : PRODUCTION IN QUEENSLAND.
(Tons.)

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
Underground Mines ..	1,274	1,548	1,860	1,857	2,006	1,942
Open-cut Mines ..	43	422	461	617	736	575
Total ..	1,317	1,970	2,321	2,474	2,742	2,517
Semi-anthracite ..	1,317	1,861	99 2,057 165	81 2,138 255	83 2,312 347	81 2,215 221
Bituminous ..						
Sub-bituminous ..						

The principal coal-producing districts in Queensland are Ipswich, Clermont, Mt. Morgan and Bowen; output from these areas in 1953 amounted to 2,092,587 tons or 83 per cent. of the total.

The open-cut method of mining for black coal has advanced considerably in Queensland in recent years. In 1946, 106,444 tons (or 7 per cent. of total production) were won from open-cuts while in 1953, 575,181 tons (23 per cent.) were mined in this manner.

(iv) *South Australia.* Coal mined in South Australia is won by open-cut methods at Leigh Creek, some 380 miles by rail north of Adelaide. This important deposit yields a low grade sub-bituminous coal of Triassic age, and has known reserves of about 380 million tons. However, this State relies to a great degree on bituminous coal from New South Wales to supplement the demand created by industrial expansion. In the first year of major production of the Leigh Creek mine in 1944, 34,620 tons were won. Production has risen considerably in more recent years, and amounted to 448,484 tons in 1953.

(v) *Western Australia.* The only coal deposits which have been developed on a commercial scale are at Collie in the south-west of the State. Collie coal is sub-bituminous in rank. Production in 1953 was 886,182 tons, compared with 557,535 tons in 1939.

(vi) *Tasmania.* Two periods of coal formation are represented in Tasmania. The older (Permo-Carboniferous) seams contain fairly high ranking semi-anthracitic coal, with a high sulphur content, but production from these mines represents less than one per cent. of Tasmanian black coal output. The more recent Mesozoic coal of bituminous rank is mined in the north-east of the island, the Cornwall and Mt. Nicholas mines being the most prolific producers. In 1953, output amounted to 233,629 tons compared with 99,392 tons in 1939.

(vii) *Australia's Coal Reserves.* The latest available estimate of the actual and probable coal reserves of Australia is that prepared by the Coal and Lignites Panel of the Power Survey Sectional Committee of the Standards Association of Australia in March, 1953. This places total Australian reserves at about 56,800 million tons, of which 14,250 million tons are of anthracitic and bituminous rank and 42,550 million tons of sub-bituminous and lignitic rank. New South Wales has the largest reserves of anthracitic and bituminous coal (about 10,000 million tons) while the greater part of the sub-bituminous and lignitic reserves comprise brown coal in Victoria (40,000 million tons).

3. *Production in Principal Countries.*—The following table shows the production of the principal countries during each of the three years 1951 to 1953 compared with 1939, as published by the Statistical Office of the United Nations.

COAL : PRODUCTION IN PRINCIPAL COUNTRIES.

('000 Tons.) (a)

Country.	Black Coal.				Brown Coal, Lignite.			
	1939.	1951.	1952.	1953.	1939.	1951.	1952.	1953.
United States of America	395,800	515,632	465,581	431,266	2,716	(b)	(b)	(b)
United Kingdom	231,335	222,802	233,845	223,518				
Germany (Federal Republic)	c 171,937	117,009	125,269	122,506	208,757	81,788	84,725	83,218
France	61,419	52,117	56,272	67,917	1,084	1,972	2,025	1,915
Poland	(d) 22,818	80,679	85,811	51,371				
Japan	51,581	42,624	44,052	45,789	192	1,381	1,561	1,459
India	27,769	31,300	37,405	35,846				
Belgium	29,372	29,187	30,880	29,580				
Union of South Africa	16,623	25,602	27,697	28,013				
Australia	13,535	17,608	19,401	18,411	3,651	7,836	8,104	8,257
Canada	13,153	14,582	14,281	12,405	858	1,984	1,915	1,808
Netherlands	12,658	12,220	12,733	12,103	194	246	244	249
Spain	6,502	11,146	12,196	11,963	1,571	1,464	1,622	1,763

(a) Long tons.
to June only.

(b) Included with Black Coal.

(c) Pre-war Germany.

(d) January

World production of coal amounted to 1,550 million tons in 1939; it rose to 1,770 million tons in 1943 and by 1952 had reached 1,880 million tons. Of these quantities, those produced in the British Commonwealth totalled 312 million or 20 per cent. in 1939, 286 million or 16 per cent. in 1943 and 340 million tons or 18 per cent. in 1952.

4. Exports.—(i) *General.* The quantity of coal of Australian production exported to other countries in 1952-53 was 255,832 tons, valued at £1,178,466, shipped mainly from New South Wales. These figures of overseas exports exclude bunker coal supplied to overseas vessels, which in 1952-53 amounted to 42,623 tons, valued at £215,776. The quantities and values of the overseas exports of Australian coal and of bunker coal for overseas vessels for a series of years are shown in the following table.

COAL : OVERSEA EXPORTS AND BUNKERS, AUSTRALIA.

Year.	Oversea Exports.(a)		Bunker Coal for Oversea Vessels.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
1938-39	382,085	347,054	549,453	561,063
1948-49	36,913	97,353	293,707	836,117
1949-50	68,404	206,460	135,059	418,939
1950-51	72,283	242,649	69,299	284,824
1951-52	139,140	608,045	54,207	246,258
1952-53	255,832	1,178,466	42,623	215,776

(a) Excludes bunker coal.

(ii) *New South Wales.* New South Wales is the principal Australian coal-producing State and in addition to meeting requirements within the State, supplies considerable quantities of coal to other States and for export overseas as well as bunker coal for vessels calling at New South Wales ports. According to figures compiled by the Government Statistician, of the total New South Wales coal production in 1952-53 (14,289,711 tons), 11,448,830 tons (80.1 per cent.) were available for consumption in the State, 2,334,104 tons (16.3 per cent.) were exported interstate and 506,777 tons (3.6 per cent.) were exported overseas or supplied as bunker coal for interstate and overseas vessels.

5. Consumption in Australia.—Details of the average annual production of coal and its utilization in Australia are given in the following table for the five years ended 1938-39 and 1951-52, together with similar details of production and utilization for the year 1952-53.

COAL : PRODUCTION AND UTILIZATION IN AUSTRALIA.

Particulars.	Quantity.			Proportion of Total.		
	Average for five years ended—		1952-53.	Average for five years ended—		1952-53.
	1938-39.	1951-52.		1938-39.	1951-52.	

BLACK COAL.

	'000 Tons.	'000 Tons.	'000 Tons.	%	%	%
Source of Supplies—						
Production (a) ..	11,158	16,117	18,545	99.7	98.1	99.2
Imports ..	31	319	146	0.3	1.9	0.8
Total Supplies ..	11,189	16,436	18,691	100.0	100.0	100.0
Utilization—						
Exported Overseas ..	346	77	256	3.1	0.5	1.4
Bunker Coal—						
Oversea Vessels ..	592	167	43	5.3	1.0	0.2
Intrastate and Interstate Vessels ..	377	254	288	3.4	1.6	1.6
Total ..	969	421	331	8.7	2.6	1.8
Consumed as fuel in—						
Electric Light and Power Works ..	1,796	4,174	5,071	16.0	25.4	27.1
Factories (b) ..	2,067	2,749	3,098	18.5	16.7	16.6
Railway Locomotives (c) ..	2,328	3,185	3,110	20.8	19.4	16.6
Total ..	6,191	10,108	11,279	55.3	61.5	60.3
Consumed as raw material in—						
Gas works ..	1,111	1,986	2,081	9.9	12.1	11.1
Coke works ..	1,467	2,277	3,071	13.1	13.8	16.4
Total ..	2,578	4,263	5,152	23.0	25.9	27.5
Balance—Unrecorded consumption, other purposes (d) ..	1,105	1,567	1,673	9.9	9.5	9.0
Grand Total ..	11,189	16,436	18,691	100.0	100.0	100.0

BROWN COAL.

	'000 Tons.	'000 Tons.	'000 Tons.	%	%	%
Production of Brown Coal ..	3,094	7,296	8,075	100.0	100.0	100.0
Utilization—						
As fuel for generation of Electric Light and Power ..	1,673	4,286	4,933	54.1	58.8	61.1
As fuel and as a raw material by Briquette Factory ..	1,391	2,235	2,186	44.9	30.6	27.0
Recorded consumption as fuel in factories ..	(e)	672	837	(e)	9.2	10.4
Balance—Unrecorded consumption, other purposes (d) ..	30	103	119	1.0	1.4	1.5
Total ..	3,094	7,296	8,075	100.0	100.0	100.0

(a) Includes miners' and colliery coal. (b) Estimated when details not available. (c) Government railways only. (d) Includes net change in stocks. (e) Not available; included in "Balance—Unrecorded consumption".

In order to meet the greatly increased demands in Australia, arrangements have been made in recent years to import coal from overseas to augment local supplies. The quantity imported reached a post-war peak of 597,866 tons in 1950-51, but declined in 1951-52 and 1952-53 when local production increased considerably.

6. Coal Value at the Mine in New South Wales.—Particulars of the average values at the mine (or at screens where these are at a distance from the mine) of saleable coal for each district and for New South Wales as a whole are shown in the following table for the years 1938 and 1947 to 1953, according to figures compiled by the State Statistician. Saleable coal is taken to exclude miners' coal, coal consumed at the mines and other producer-consumed coal. For the years 1951 to 1953, stocks of coal held at grass by the Commonwealth Government are also excluded. The figures for the years 1947 and 1948 include Commonwealth subsidy on coal. No deduction has been made in respect of excise duty operative from 1st November, 1949.

AVERAGE SELLING VALUE AT THE MINE PER TON OF SALEABLE COAL : NEW SOUTH WALES.

(s. d.)

Year.	Northern District.	Southern District.	Western District.	Average for State.
1938	12 0	14 0	9 6	12 0
1947 (a)	20 11	23 11	16 10	20 9
1948 (a)	26 1	29 11	20 6	25 8
1949	31 8	34 10	22 6	30 3
1950	36 5	39 1	29 4	35 10
1951	51 5	50 8	42 10	49 8
1952	62 3	60 3	56 7	61 2
1953	61 6	61 0	50 10	59 9

(a) Includes Commonwealth subsidy.

7. Prices in New South Wales, Great Britain, Canada and the United States of America.—In the following table the prices of coal in Canada and the United States of America are compared with the average value per ton of coal in New South Wales and Great Britain.

AVERAGE PRICES OR PRODUCTION VALUES OF COAL PER TON : NEW SOUTH WALES, GREAT BRITAIN, CANADA AND UNITED STATES OF AMERICA.

Country.	1938.	1947.	1948.	1949.	1950.	1951.	1952.	1953.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales—Bituminous(a)	12 0	20 9	25 8	30 3	35 10	49 8	61 2	59 9
Great Britain—Deep mined(b)	16 8	40 3	47 2½	47 11	47 9½	51 2½	57 3	61 1½
	8	8	8	8	8	8	8	8
Canada—Bituminous (c)	4.279	6.748	7.850	8.175	8.200	8.550	9.767	9.800
United States of America—Bituminous (d)	4.327	6.873	(e)8.118	(e)8.631	(e)8.738	(f)5.698	5.748	5.791

(a) Average selling value at the mine per ton of 2,240 lb.; the figures relate to saleable coal and include subsidy from 1945 and excise duty from November, 1949. (b) Average value in sterling at the mine per ton of 2,240 lb. (c) Wholesale price in Canadian currency per ton of 2,000 lb. for domestic bituminous coal, 4" lump, f.o.b. mine Alberta. (d) Wholesale price, car-lots, on trucks, destination, in United States of America currency per ton of 2,000 lb. (e) Figures for 1948 to 1950 represent averages for nine months, nine months and ten months respectively. As a result of changes in the basis of compiling the averages, figures are not strictly comparable from year to year. (f) Prices from February, 1951 onwards are "f.o.b. car at mine" and are not comparable with earlier figures. Average for 1951 relates to eleven months, February to December.

8. **Employment in Coal-mines.**—The number of persons employed, both above and below ground, in coal-mines in each State for 1939 and each of the years 1949 to 1953 is shown in the following table :—

COAL-MINES : PERSONS EMPLOYED.

Year.	New South Wales.	Victoria.		Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
		Black.	Brown.					
1939	16,581	1,376	449	2,615	..	752	238	22,011
1949	18,546	787	811	3,390	347	1,044	312	25,237
1950	18,540	777	889	3,495	408	1,099	334	25,542
1951	18,747	773	898	3,503	434	1,125	329	25,809
1952	20,151	851	932	3,715	220	1,326	349	27,544
1953	19,961	900	797	3,701	250	1,478	345	27,432

The year of maximum employment was 1926 when 31,774 persons were engaged in the coal-mines of Australia. Shortly after that year the industrial depression and a prolonged stoppage of work on one of the principal fields of New South Wales during 1929 and 1930 seriously affected the figures of employment. Since 1933 there has been a gradual increase, but the numbers employed in 1952 were only 87 per cent. of the maximum figure already quoted. In New South Wales in 1953, 6,552,201 tons of coal, or 53.4 per cent. of the total output of underground coal, were cut by machinery, compared with 3,594,000 tons or 32.1 per cent. in 1939. Similar details for other States are not available.

9. **Production of Black Coal per Man-shift.**—(i) *Underground Mines.* The following table shows particulars of estimated black coal output per man-shift worked (a) at the coal face and (b) by all employees in respect of underground mines for each State concerned and for Australia for the years 1949 to 1953. These estimates have been calculated by the Joint Coal Board from data collected fortnightly in respect of coal production and the numbers of man-shifts actually worked. They are not available for years prior to 1948. In South Australia black coal is won only by open-cut mining.

PRODUCTION OF BLACK COAL PER MAN-SHIFT : UNDERGROUND MINES.(a)

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	W. Aust.	Tas.	Australia.
PRODUCTION PER MAN-SHIFT WORKED AT COAL FACE.						
1949	9.83	2.39	5.85	8.40	5.30	8.58
1950	10.28	2.41	6.18	8.80	5.40	9.01
1951	10.82	2.43	6.40	8.22	6.01	9.39
1952	10.06	2.24	6.36	6.82	6.03	8.88
1953	9.72	2.11	6.37	4.86	6.15	8.50

PRODUCTION PER MAN-SHIFT WORKED BY ALL EMPLOYEES.

Year.	N.S.W.	Vic.	Q'land.	W. Aust.	Tas.	Australia.
1949	2.91	0.94	2.46	2.22	2.80	2.74
1950	2.95	0.91	2.52	2.17	2.76	2.78
1951	2.96	0.93	2.55	1.85	3.03	2.78
1952	3.00	0.83	2.55	1.64	3.01	2.81
1953	3.08	0.81	2.53	1.67	3.00	2.84

(a) As calculated by Joint Coal Board. (b) In April, 1952, persons working "at coal face" were re-defined resulting in a considerable increase in persons in this category in New South Wales.

(ii) *Open-cut Mines.* In the next table, the Joint Coal Board's estimates of production of black coal per man-shift worked by all employees in open-cut mines are shown for the years 1949 to 1953. There are no open-cuts producing black coal in Victoria.

PRODUCTION OF BLACK COAL PER MAN-SHIFT : OPEN-CUT MINES.(a)

Year.			N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1949	..	..	7.49	10.62	3.03	7.63	..	6.41
1950	..	..	8.33	10.16	2.17	7.17	5.74	6.57
1951	..	..	8.02	11.80	3.05	6.73	5.28	7.03
1952	..	..	7.92	11.78	3.22	6.13	4.63	7.07
1953	..	..	8.51	10.97	3.57	5.37	..	6.92

(a) Production per man-shift worked by all employees, as calculated by Joint Coal Board.

10. **Commonwealth Board of Inquiry into the Coal-mining Industry.**—Reference to the appointment in 1945 of the Commonwealth Board of Inquiry, its terms of reference and the report issued in 1946 is given in Official Year Book No. 37, page 842.

11. **Joint Coal Board.**—Under war-time emergency legislation, the Commonwealth had wide powers to control the production, distribution and price of coal in Australia. Under peace-time conditions, however, the constitutional powers of the Commonwealth were less effective and, in order to ensure the maintenance of supplies of coal to meet the peace-time needs of industry, it was necessary to seek wider powers.

With this objective in view, the Governments of the Commonwealth and New South Wales, the chief coal-producing State, mutually agreed to create jointly an authority with powers similar to and in some respects wider than those possessed under Commonwealth war-time legislation. Following this agreement, the Joint Coal Board was created and has functioned as from 1st March, 1947. Briefly, it is the responsibility of the Board to ensure that the coal of the State is conserved, developed, worked, distributed and used to the best advantage in the public interest, and to promote the welfare of the workers in the industry. Further details of the powers and functions of the Board are contained in previous issues of the Year Book.

§ 9. Coke and Other By-products from Coal.

1. **Coke.**—The production of metallurgical coke in Australia was limited to about 250,000 tons per annum prior to the 1914–18 War. This was below local requirements and necessitated an annual import of about 27,000 tons. By 1920, production had risen to more than 500,000 tons, by 1938–39 to 1,164,873 tons and in 1952–53 reached the record level of 1,858,428 tons. In recent years, imports have exceeded exports but in 1952–53, exports amounted to 17,069 tons (14,338 tons to New Caledonia) while only 685 tons were imported.

In addition to metallurgical coke referred to above (which is produced by specialized coke works), considerable quantities of coke are produced in gas works as a by-product of the manufacture of gas. Output in gas works in 1952–53 was 1,071,106 tons compared with 757,046 tons in 1938–39.

In order to avoid duplication with coal values, the figures for coke have not been included in the general tables of mineral production in the early part of this chapter.

In the following table, particulars of the production of coke in coke works and gas works in Australia are shown for the years 1938–39 and 1948–49 to 1952–53. The figures exclude output of coke breeze, which in 1952–53 amounted to 164,100 tons.

COKE PRODUCTION(a) : AUSTRALIA.
(Tons.)

Industry.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Coke Works ..	1,164,873	1,150,039	1,182,773	1,515,782	1,636,982	1,858,428
Gas Works ..	757,046	1,181,516	1,094,982	1,111,854	1,203,602	1,071,106
Total ..	1,921,919	2,331,555	2,277,755	2,627,636	2,840,584	2,929,534

(a) Excludes coke breeze; see letterpress above.

2. **Other By-products from Coal.**—In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Details of some of these are given in the following table.

OTHER BY-PRODUCTS FROM COAL : AUSTRALIA.

Commodity.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Tar—Crude (a) .. '000 gals.	34,614	40,844	38,178	41,239	42,886	44,408
Refined (a) .. "	3,752	13,534	12,324	12,449	12,514	15,609
Tar Oils (crude) .. "	1,254	5,234	3,758	3,960	4,101	3,674
Ammoniacal Liquor .. "	5,388	19,272	18,120	24,210	23,449	21,950
Ammonium Sulphate (a) tons	24,251	53,247	48,736	57,893	63,815	70,174

(a) Includes production in works other than coke and gas works.

§ 10. Mineral Oils.

1. **Shale-oil.**—(i) *New South Wales.* Reference to the establishment of the shale-oil industry in Australia will be found in previous issues of the Official Year Book. In 1937 negotiations were completed between the Commonwealth and New South Wales Governments and National Oil Proprietary Ltd., by which the latter company undertook to develop the shale-oil industry in the Newnes-Capertee district of New South Wales. Production of petrol from crude oil commenced at Glen Davis, near Newnes, in 1940. However, because of the continuing uneconomical operation of the project, its small contribution to Australian petroleum supplies, and the doubtful prospect of raising production to a considerably higher figure the company, by arrangement with the Commonwealth Government, ceased to operate on 30th May, 1952. A total quantity of 26,034,403 gallons of petrol had been produced at the time of the closing of the plant.

(ii) *Tasmania.* About 38,000 gallons of crude oil were produced in 1934 from shale treated in Tasmania, while the total quantity of oil distilled from shale up to the end of 1934 was about 357,000 gallons. The plant owned by the Tasmanite Shale Oil Company has not operated since the end of January, 1935.

Interest in the commercial utilization of oil shales of the Mersey Valley for the extraction of fuel oils has been retarded owing to structural and physical conditions for underground mining and the low-grade nature of the shale.

2. **Coal Oil.**—Reference to investigations made into the possibility of establishing plants for the production of oil from coal was made in previous issues of the Official Year Book. (See Official Year Book No. 37, pages 844-5.) Although no plants are operating specifically in recovering oil from coal, considerable quantities of benzol are produced as a by-product of coke and gas manufacture and made available for blending into motor spirit. Total production in 1952-53 was 5,000,373 gallons.

3. *Natural Oil and Gas.*—(i) *Australia.* Natural oil has been proved to exist in Queensland, Victoria and Western Australia, and in the latter State in 1953, potential oil production was found at Rough Range. Many of the conditions favourable to the accumulation of oil in commercial quantities have been shown to be present in Queensland, Western Australia and New South Wales, but in the latter State no strong positive evidence of its existence has been recorded.

Reference is made in § 15 below to the assistance afforded by the Commonwealth Government in the search for oil.

Structure control drilling has been carried out following the Rough Range discovery and field exploration increased enormously, and the drilling of a number of wells has commenced at various places throughout the Commonwealth. These include all the States with the exception of South Australia and Tasmania.

(ii) *Victoria.* Production of crude oil by Lakes Oil Ltd. at Lakes Entrance was discontinued in 1951 because of economic considerations. A seismic survey was carried out near Woodside in South-Eastern Victoria by the Bureau of Mineral Resources, Geology and Geophysics to confirm evidence of an anomaly found in a previous gravity survey. A geological survey of the Murray River Basin was carried out by the State Geological Survey.

(iii) *Queensland.* At Roma, Queensland, Associated Australian Oilfields N.L. completed in February, 1953, the well commenced in October, 1952, but production tests proved the sands to be uneconomical. Another well was drilled in the same area to 3,604 ft. and this also proved uneconomical. Operations then moved to Hospital Hill where gas production at the rate of 870 m.c.f. per day was found at about 3,700 feet. Further drilling is being carried out in this district with a view to extending this reservoir.

Drilling has commenced on Reid's Dome, near Springsure, at Longreach, and in the Maryborough region.

(iv) *South Australia.* Under prescribed conditions, the South Australian Government offers a bonus of £5,000 to the person or body corporate which first obtains from a local bore or well 100,000 gallons of crude petroleum containing not less than 90 per cent. of products obtainable by distillation. Geophysical surveys were undertaken by private interests during 1947, and continued into 1948, in the north-east corner of the State and extending over the border into New South Wales and Queensland, but with little success. Assistance given by the Commonwealth included equipment and a geophysical survey party.

Airborne geophysical surveys over the Eucla Basin in the south-western part of the State were made and extended into Western Australia.

(v) *Western Australia.* Systematic geological mapping and stratigraphic and structural studies have been continued in the Carnarvon area by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics. Western Australian Petroleum Company (an exploration Company formed by Caltex in partnership with Ampol Petroleum Company) landed drilling equipment in the Exmouth Gulf area. This company also continued seismic exploration of the Giralalia, Cape Range, Grant Range and Rough Range Anticlines from 1952. Drilling on the Rough Range Structure commenced in September, 1953 and oil was found in the first well at 3,605 to 3,622 ft. later in that year. Wells drilled to exploit the reservoir have shown that the structural conditions at depth are apparently different from those shown at the surface and further drilling will be necessary before the complete picture will be seen.

In the Fitzroy basin, South Kimberley area, geological surface and geophysical surveys have been continued by the Bureau of Mineral Resources, Geology and Geophysics. Freney Kimberley Oil Co. (1932) N.L. became associated with Associated Australian Oilfields N.L. and have recommenced drilling on the Nerrima Dome.

(vi) *Papua.* Australasian Petroleum Co. Pty. Ltd. and Island Exploration Company continued extensive geological and geophysical surveys over the western areas of Papua. During 1953, three geological parties and 4 geophysical parties (3 seismic and 1 gravity) were operating, and a regional airborne magnetometer survey of the western part was flown. Island Exploration Co's. Omati No. 1 well had reached 13,743 feet where a strong

gas flow was encountered. The drill pipe became stuck as a result of this and, after sidetracking, operations were eventually abandoned. A second well at Omati was commenced on April 7, 1954 and has reached a depth of 9,731 feet.

(vii) *General.* During 1939 efforts were made to secure greater uniformity in State legislation governing the search for oil. A draft Bill based on modern legislation in other countries was prepared by the Commonwealth and submitted to the State Governments. As a result, amending legislation was passed in Victoria, Queensland, South Australia and Western Australia. There was immediate response to this in Queensland, where an agreement has been reached between the State Government and one of the major oil companies, whereby the company has undertaken to spend up to £400,000 in the search for oil in that State.

Further details of action taken by the Commonwealth Government in connexion with the search for oil will be found in § 15. Government Aid to Mining, and Mineral Control, p. 703.

§ 11. Sulphur.

Sulphur, although produced in Australia as a content of certain metallic minerals, is itself non-metallic in character. Sulphides such as zinc concentrate and pyrites, which contain sulphur, are produced in appreciable quantities. There is no production of elemental sulphur (brimstone) in Australia. A large proportion of zinc concentrate produced is exported and therefore lost to Australia for utilization of the sulphur content. The sulphur recovered in Australia is in the form of acid, most of which is used in the manufacture of fertilizers, mainly superphosphate. As this recovery does not at present satisfy local requirements, it is necessary to import elemental sulphur to meet the balance.

A new mine and treatment works is being established at Nairne in South Australia, which, it is estimated, will treat 365,000 tons of pyrite ore a year, producing pyrite concentrate containing 42 per cent. sulphur, equivalent to 33,000 tons of elemental sulphur. The output of this mine will be used in a new sulphuric acid plant, with a capacity of 100,000 tons of sulphuric acid a year, being constructed at Port Adelaide.

The following table shows for the years 1939 and 1950 to 1953, the sulphur content of sulphur-bearing minerals produced, quantities of sulphur recoverable therefrom, production of monohydrate acid (100 per cent. sulphuric acid), and sulphur content of monohydrate acid produced. It will be noted that particulars regarding spent oxide roasted have been included. This has been done to complete the statistics relating to recovery of sulphur and monohydrate acid production.

SULPHUR : PRODUCTION, AUSTRALIA.
(Tons.)

Item.	1939.	1950.	1951.	1952.	1953.
Sulphur contained in—					
Zinc Concentrate	123,968	119,736	113,964	119,515	141,968
Pyrites	27,040	57,177	65,962	93,516	77,811
Spent Oxide Roasted	(a)	(b) 2,930	(b) 3,200	(b) 4,211	(b) 5,432
Total Sulphur Content	151,008	179,843	183,126	217,242	225,211
Recoverable Sulphur(b)	129,709	156,095	159,050	189,436	195,483
Monohydrate Acid Produced	484,493	639,600	652,125	628,302	671,471
Quantity of Sulphur in Mono-					
hydrate Acid produced from—					
Sulphur (Elemental)(d)	b 114,500	134,000	135,683	112,225	123,469
Zinc Concentrate	25,300	32,000	32,850	33,115	31,270
Pyrites	27,040	45,000	50,300	57,891	60,811
Spent Oxide	(a)	2,050	2,230	3,231	3,973
Total	166,840	213,050	221,063	206,462	219,523

(a) Not available.

(b) Estimated.

(c) Year ended 30th June, 1939.

(d) All imported.

§ 12. Other Non-Metallic Minerals.

1. **Salt.**—Salt is obtained in Australia from evaporation of saline lakes and clay pans. Local production satisfies local requirements and provides a considerable surplus for export. Recorded production in South Australia (the chief producing State) is shown in the following table for the years 1939 and 1949 to 1953. Available estimates of total Australian production are also shown.

SALT PRODUCTION.

('000 Tons.)

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
South Australia	79	168	191	219	203	239
Estimated Australian Total ..	(a)	(a)	273	300	277	310

(a) Not available.

2. **Mica.**—Muscovite mica is produced in the Harts Range-Plenty River area of the Northern Territory, output in 1953 being 72,226 lb. valued at £102,243. Mica was formerly produced in Western Australia and some of the other States but no output has been recorded in recent years.

3. **Gems and Gemstones.**—Among the gems and precious stones discovered from time to time in the different States are agate, amethyst, beryl, chialstolite, diamond, emerald, garnet, moonstone, olivine, opal, ruby, sapphire, topaz, tourmaline, turquoise and zircon. The following paragraphs, however, deal only with opal and sapphire, the most important of the more commonly found precious stones in Australia. Reference in some detail to the production of gems and gemstones in earlier years is made in issues of the Official Year Book prior to No. 40.

Opal of a recorded value of £78,014 was produced in Australia in 1953. The recorded value in 1952 was £64,148. The main producing centres are in South Australia on the Andamooka and Coober Pedy fields. Recorded output in this State in 1953 was valued at £76,460. Queensland production in 1953 (£1,350) came from the Quilpie district while opal in New South Wales (£204) was won at Lightning Ridge.

The production of sapphire in Australia in 1953 was valued at £725 and was won at Rubyvale and Sapphire in Queensland. Production in 1952, valued at £6,990, was mainly due to the discovery of a yellow sapphire weighing 322 carats at the Willows field in Central Queensland (this stone, named the "Golden Willow", was subsequently sold for £6,000).

4. **Other Minerals.**—Other minerals produced in Australia include asbestos, barite, clays, diatomite, dolomite, felspar, greensand (glauconite), limestone, magnesite, mineral pigments, phosphate rock, silica and talc. Considerable quantities of sand, gravel, and dimension and broken stone are obtained for direct constructional purposes.

§ 13. Persons Engaged, Wages Paid and Accidents in Mining.

1. **Total Employment in Mining.**—The number of persons engaged in the mining industry in Australia fluctuates according to economic conditions generally, the price of industrial metals, the state of the labour market, and according to the permanence of new finds and the development of the established mines. The following table shows the numbers engaged in the various mining industries in each State and Australia as a whole in 1952. Attention is drawn to § 1, para. 3, Standardization of Mineral Statistics. (pp. 665-6) which outlines the nature of changes adopted in 1950 and 1952 in the reporting of mineral statistics.

EMPLOYMENT IN MINING, 1952. (a)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Aust.
Metal Mining—								
Gold Mining ..	319	738	(b)	(b)	(c) 5,100	..	149	c d 6,563
Silver-Lead-Zinc Mining ..	7,146	..	(b)	6	(b)	(b)	..	(d) 9,497
Copper-Gold Mining ..	152	..	(b)	(b)	(b)	(b)	(b)	(d) 2,112
Tin Mining ..	288	..	227	..	(b)	424	(b)(c)	(d) 995
Other Metal Mining ..	546	(e)	655	(b)	(c) 328	(b)	(c) 174	c d 2,220
Total, Metal Mining	8,451	735	(d) 3,694	(d) 273	c d 5,636	(d) 2,237	(c)(d) 382	(c) 21,411
Fuel Mining—								
Black Coal Mining ..	20,151	851	3,715	220	1,326	349	..	26,612
Brown Coal Mining ..	..	932	..	..	..	..	..	932
Other Fuel Mining ..	112	..	..	..	..	..	..	112
Total, Fuel Mining	20,263	1,783	3,715	220	1,326	349	..	27,656
Non-metal (excluding Fuel)								
Mining ..	1,167	(c)(f) 238	(c) 135	955	(c)(d) 382	(d) 171	(r) 22	(e) 3,070
Total, All Mining ..	29,881	(e) 2,759	(c) 7,544	1,442	(c) 7,344	2,757	(c) 404	(r) 52,137
Construction Material								
Quarrying ..	1,013	c g 1,493	309	933	(g) 342	72	(h)	(c) 4,162
Total, All Mining and Quarrying ..	30,894	(e) 4,252	(c) 7,853	2,381	(c) 7,686	2,829	(e) 404	(c) 56,299

(a) Average employment during period of operation of mines and quarries. (b) Not available for publication. (c) Incomplete. (d) Includes particulars of relevant items marked "(b)". (e) Not available for publication; included with "Non-metal (excluding Fuel) Mining". (f) Includes particulars of "Other Metal Mining". (g) Year ended 30th June, 1953. (h) Not available.

The particulars in the foregoing table exclude the following estimated numbers of fossickers:—Gold mining 277; Tin mining 538; Other mining 1,964.

The following table shows particulars of mining employment in Australia for the years 1938 and 1948 to 1952. Complete particulars of employment in construction material quarrying are not available prior to 1952. The details for 1951 and earlier years include estimates by State Mines Departments of numbers of fossickers which are excluded for 1952. Changes in the bases of collecting and compiling the statistics introduced in 1950, 1951 and 1952 have resulted in some lack of comparability of the data in other respects, particularly in the case of metal mining.

EMPLOYMENT IN MINING : AUSTRALIA.

Industry.	1939.	1948.	1949.	1950.	1951.	1952.
Metal Mining—						
Gold Mining ..	28,840	10,791	10,395	9,478	8,647	6,583
Silver-Lead-Zinc Mining ..	6,095	8,043	8,126	8,807	9,536	9,497
Copper-Gold Mining ..	1,291	1,002	999	2,184	2,047	2,112
Tin Mining ..	4,113	1,665	1,745	1,644	1,577	999
Other Metal Mining ..	(a) 353	(a) 230	(a) 368	1,279	2,028	2,220
Total, Metal Mining ..	40,692	21,731	21,633	23,392	23,835	21,411
Fuel Mining—						
Black Coal Mining ..	21,562	23,740	24,269	24,451	24,861	26,612
Brown Coal Mining ..	449	526	811	889	898	932
Other Fuel Mining ..	71	(b)	(b)	183	147	112
Total, Fuel Mining ..	22,082	24,266	25,080	25,523	25,906	27,656
Non-metal (excluding Fuel)						
Mining ..	(c) 3,015	c d 3,186	c d 3,825	3,117	3,035	3,070
Total, All Mining ..	65,789	49,183	50,538	52,032	52,776	52,137
Construction Material Quarrying ..	(e)	(e)	(e)	(e)	(e)	4,162
Total, All Mining and Quarrying ..	(e)	(e)	(e)	(e)	(e)	56,299

(a) Incomplete; some metal mining included with "Total Non-metal (excluding Fuel) Mining". (b) Not available separately; included with "Non-metal (excluding Fuel) Mining". (c) Includes some Metal Mining. (d) Includes Other Fuel Mining. (e) Not available.

NOTE.—Estimates of the numbers of fossickers are included for years up to 1951 but are excluded for 1952.

2. **Wages Paid in Mining.**—Information regarding rates of wages paid in the mining industry is shown in the *Labour Report* issued by this Bureau and in Chapter VIII.—Labour, Wages and Prices (page 260).

3. **Accidents in Mining.**—Particulars of numbers of persons killed and injured in accidents in mines and associated treatment plants are recorded by State Mines Departments. Numbers injured are not reported on a uniform basis from State to State as varying criteria are used in determining what constitutes injury for the purpose of these records. In 1952, 38 persons were recorded as having been killed and 1,485 as having been injured in mining accidents (excluding accidents in construction material quarrying). Of the total of 38 persons killed, 17 were in black coal mines, 13 in gold mines and 8 in other mines. Reported injuries were highest in black coal mines (475), gold mines (458) and silver-lead-zinc mines (353).

§ 14. Oversea Trade in Minerals and Metals.

Particulars of the quantity and value of imports and exports of the principal minerals and metals for Australia are shown in the following table for the years 1950–51, 1951–52 and 1952–53. In addition to the unfabricated metals shown, considerable quantities of partly fabricated metals (bars, rods, wire, etc.) enter into Australia's overseas trade.

IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND METALS : AUSTRALIA.

Item.	Unit of Quantity.	Quantity.			(Value £A.).		
		1950–51.	1951–52.	1952–53.	1950–51.	1951–52.	1952–53.

IMPORTS.							
Minerals—							
Antimony Ore and Concentrate	cwt.	19,236	18,234	5,404	133,944	189,253	39,763
Asbestos	ton	650,492	493,725	575,757	1,712,796	1,546,998	1,888,651
Coal	ton	597,866	285,409	145,634	1,865,737	873,738	488,093
Coke and other Hydrocarbons .. ..	..	37,789	38,830	27,673	249,226	564,908	395,275
Industrial Diamonds ..	carat	178,032	196,406	240,556	362,762	442,482	541,912
Sulphur	cwt.	3,318,686	1,682,588	2,644,058	3,515,936	981,146	2,550,325
Metals—							
Aluminium (Pigs, Ingots, etc.) .. ..	..	171,363	233,214	135,919	1,368,948	2,065,925	1,384,631
Copper (Pigs, Ingots, etc.) .. ..	..	412,045	441,066	367,205	4,206,374	6,173,984	4,753,878
Gold Bullion (Ingot, Bar, etc.)	fine oz.	158,661	208,127	228,387	2,457,994	3,259,138	3,595,656
Iron and Steel—							
Pig Iron	cwt.	401,488	185,061	11	401,133	348,630	10
Ingots, Blooms, Slabs, etc. .. ..	..	14,432	47,539	18,693	37,985	192,081	99,096
Nickel (Pigs, Ingots, Blocks, etc.) .. ..	..	3,796	9,591	11,659	95,287	270,896	346,817
Tin (Ingots) .. ..	..	23,794	30,061	3,600	1,602,566	2,336,028	205,375

EXPORTS.							
Minerals—							
Coal	ton	72,283	139,140	255,832	242,649	608,045	1,178,466
Silver-Lead and Zinc Ores and Concentrates—							
Silver-Lead Ore and Concentrate	cwt.	266,634	801,410	824,429	814,759	3,420,642	2,722,797
Zinc Concentrate .. ..	..	2,974,321	3,829,915	4,896,311	6,202,983	11,092,409	11,054,881
Other .. ..	..	358,716	97,477	3,133	1,333,155	484,735	12,597
Titanium and Zirconium Concentrate .. ..	..	1,152,504	1,355,892	1,369,914	934,823	1,535,486	2,270,465
Tungsten (Scheelite and Wolfram) Concentrate .. ..	..	24,335	37,548	44,101	1,380,711	3,320,996	3,444,003
Metals—							
Gold Bullion (Ingot, Bar, Dust, Sheet, etc.)	fine oz.	19	416,652	1,250,162	294	6,989,188	20,397,933
Lead (Pig)	cwt.	2,145,798	2,136,439	2,840,756	15,756,312	20,721,505	17,171,800
Lead (Bullion) .. ..	..	716,001	475,491	977,760	5,728,960	4,949,779	7,955,453
Zinc (Ingots, Blocks, etc.) .. ..	..	641,402	619,331	899,293	5,282,783	6,867,260	6,086,302

§ 15. Government Aid to Mining, and Mineral Control.

1. Aid to Mining.—(i) *Commonwealth.* (a) *Rewards for Discovery of Uranium Ore.* To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards up to a maximum of £25,000 for any one deposit.

(b) *Bureau of Mineral Resources, Geology and Geophysics.* The Bureau of Mineral Resources, Geology and Geophysics has sections dealing with geology, geophysics, mining engineering, petroleum technology and mineral economics. The geological section conducts all surveys required in Commonwealth Territories, detailed and regional surveys in conjunction with or by arrangement with the State Mines Departments, surveys of possible oil-fields in Australia and New Guinea, surveys of mines for which financial assistance is sought, and investigations of deposits of radio-active minerals. The geophysical section conducts investigations throughout Australia and New Guinea connected with the search for metalliferous, radio-active and other mineral deposits; investigations connected with exploration for coal, oil and water; regional magnetic and gravity surveys; engineering and military geophysics; and the operation of geophysical (magnetic and seismic) observatories. The Bureau works in close co-operation with the Mines Departments of the States. It has assumed full responsibility for geological and geophysical surveys in Commonwealth Territories, but suitable arrangements have been made to ensure that the local Administrations have the necessary technical advice directly available to them. The Bureau has recently carried out extensive scout boring in New South Wales to prove deposits of coal suitable for working by open-cut methods.

(c) *Diamond Drills.* Two of the heavy diamond drills mentioned in Official Year Book No. 37, page 849, have been on hire to various mining companies. Five more light drills are on order and will be used in prospecting for uranium in the Northern Territory.

(d) *Search for Oil.* No variation has been made in the policy described in Official Year Book No. 37, page 850, regarding the search for petroleum throughout Australia and its Territories. In addition to its activities set out in that Year Book, the Bureau of Mineral Resources, Geology and Geophysics furnishes field laboratories and trained personnel to assist small companies in recording scientific information obtained while drilling for oil.

The Commonwealth Government has encouraged the search for oil in Australia, Papua and New Guinea; details of the efforts made are outlined in earlier issues of the Official Year Book and in § 10. Mineral Oils (p. 698). A considerable amount of geological and geophysical work and test drilling has been conducted under the provisions of the Petroleum Oil Search Act 1936.

(e) *Survey of North Australia.* Reference to this survey which was completed at the end of 1940 appears in Official Year Book No. 35, page 744.

(f) *Ore-dressing and mineragraphic investigations.* These investigations are conducted by the Commonwealth Scientific and Industrial Research Organization as required by the industry. Ore-dressing investigations are carried out conjointly with appropriate State institutions, the three laboratory centres being the School of Mines, Kalgoorlie, the School of Mines and Industries, Adelaide, and the University of Melbourne.

The grant of £22,000 mentioned in Official Year Book No. 37, page 851, was expended by 1947; since that year funds to continue the investigations have been included in an investigational vote approved annually for the Commonwealth Scientific and Industrial Research Organization. In 1948 the Government expended approximately £5,000 on ore-dressing and £6,100 on mineragraphic investigations.

(g) *Petroleum Legislation.* The petroleum ordinances of Papua and New Guinea have been amended and combined in a single ordinance entitled Petroleum (Prospecting and Mining) Ordinance 1951. Further minor amendments were passed early in 1954. A new Petroleum Ordinance for the Northern Territory was brought into force on 27th May, 1954.

(ii) *States.* (a) *General.* In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining industry where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

(b) *New South Wales.* State aid to assist metalliferous mining consisted of grants to assist the prospecting and/or mining for gold and minerals and for the purchase, removal and installation of mining plant or equipment.

(c) *Victoria.* Grants may be made to assist prospecting and development or the purchase of machinery. The Mines Department has 24 stamp batteries in different parts of the State to crush ore for prospectors at nominal rates. Small mining companies may avail themselves of these facilities.

(d) *Queensland.* The Mines Department maintains a treatment works for tin ores, etc., at Irvinebank, an assay office at Cloncurry and diamond-drilling plants in several parts of the State. The Venus State Mill at Charters Towers is available for the treatment of gold-bearing ores and another State battery is located at Kidston. In addition, many departmental compressor plants, pumping plants and other mining equipment are provided and made available on hire on the principal mining fields.

(e) *South Australia.* During 1940 the Premier announced that assistance would be given to copper-mining in the form of financial help towards such development work as was absolutely necessary for a mine to enter upon reasonably continuous production. On 5th November, 1942, the Leigh Creek Coal Act was passed to develop the Leigh Creek Coalfield. As a result of extensive drilling operations, development of open-cut mining was commenced in January, 1943. The State maintains batteries and cyanide works at Mount Torrens, Peterborough, Mongolata, Tarcoola and Glenloth and assays for public purposes are made at the School of Mines.

(f) *Western Australia.* The Mines Department has about twenty batteries throughout the mining fields where prospectors and others can have their ore treated.

(g) *Tasmania.* During 1951 the Department of Mines reported that the policy of assistance to mining was maintained to the extent provided for under the provisions of the Aid to Mining Act but little advantage was taken thereof.

Other assistance rendered to the industry is provided by a well-equipped metallurgical laboratory at Launceston where ore-dressing and other metallurgical problems can be investigated for the mine-owner, and advice given regarding the most suitable type of plant to install.

(h) *Northern Territory.* The Commonwealth Government has maintained a ten-head battery at Tennant Creek for the treatment of ore by miners. Another battery has been leased. A ten-head battery is situated on the Maranboy tin-field and crushes ore for all parties on the field. Assistance has been given to miners on the mica fields to purchase air-compressors and other mining plant on liberal terms. The Commonwealth Government has purchased most of the mica produced on the fields. Roads and water supply services are provided and maintained for all mines and mineral-producing areas throughout the Territory.

2. *Control of Minerals.*—(i) *Minerals Committee and Controller of Minerals Production.* With the ending of the 1939–45 War, the activities of the Minerals Committee and Controller of Minerals Production were merged with the Bureau of Mineral Resources, Geology and Geophysics. Operations conducted by the Controller taken over by the Director of the Bureau were the Dorset Tin Dredge and the Commonwealth Mica Pool. The Dorset Tin Dredge is in active operation and produces about 150 tons of tin concentrate annually.

(ii) *Mica Production.* The Bureau, for the Department of Supply, operates the Commonwealth Mica Pool which purchases mica won in the Harts Range, Northern Territory, thus ensuring the miners a ready market for their product at fixed prices and also permitting an orderly distribution of mica to the trade. Under a Cabinet decision, the Commonwealth Mica Pool will operate until the end of 1959.

(iii) *Control of Exports of Metals and Minerals.* Certain metals and minerals produced in Australia are subject to export control for one or more of the following reasons :—

- (a) the necessity to conserve resources (e.g., iron ore and manganese) ;
- (b) inadequacy of local production to fulfil domestic demand (e.g., tin ore, concentrates and metal ; mica, manganese ore, copper, iron and steel) ;
- (c) the strategic importance of the minerals (e.g., beryllium ores, concentrates and metal ; monazite ; tantalite and tantalum products ; uranium ore, concentrates, residues and metal ; mica).

Mixed concentrates of beach sand minerals are prohibited exports, but rutile, zircon and ilmenite may be exported. Non-ferrous scrap is also subject to control.

(iv) *Radio-active Minerals.* Since the discovery of the possibility of using atomic energy considerable attention has been paid to the occurrence of uranium in Australia. To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards for such discoveries.

Up to the end of 1949 important deposits had been found only in the northern part of South Australia where the Mt. Painter and Radium Hill fields had been investigated, largely by the South Australian Government, but in that year the presence of uranium was discovered in the Rum Jungle district of the Northern Territory, and investigations carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics in the years 1949–1952 proved that these deposits are of substantial importance.

Towards the end of 1952 the Commonwealth Government placed the Rum Jungle deposits, together with other deposits which are known to occur, but which have not yet been adequately investigated, under the control of Territory Enterprises Pty. Ltd., a subsidiary of Consolidated Zinc Corporation Limited, to carry on the investigations on its behalf and to mine and treat the ore. The treatment plant at Rum Jungle was officially opened by the Prime Minister on 17th September, 1954. Investigation of an area adjacent to Rum Jungle was carried out by the Bureau, using an airborne scintillometer. This survey indicated the presence of many radio-active anomalies, and demonstrated the effectiveness of this method of search. During 1952, arrangements were completed between the Governments of the United States of America, South Australia and the Australian Commonwealth, for the purchase of ores by the United States.

In South Australia, the South Australian Government extensively explored the Radium Hill deposit by underground development and diamond drilling. The production of ore is now proceeding and treatment plants are being erected.

The Bureau of Mineral Resources is carrying out further airborne scintillometer surveys and extensive geological, geophysical and geochemical surveys and diamond drilling operations, with a view to discovering further deposits and to assessing the value of known deposits.

During 1953 Commonwealth Legislation was enacted to set up an Atomic Energy Commission which is responsible, in an overall sense, for the production and utilization of uranium in Australia. This Act, the Atomic Energy Act No. 31 of 1953, supersedes the Atomic Energy (Control of Materials) Act No. 34 of 1946, but contains a provision of that Act which provides for control of substances which could be used for production or use of atomic energy. It gives the Commonwealth power to acquire such substances in their natural state and in waste materials from mining operations, to carry on mining and other operations necessary for the recovery of such substances, and to pay compensation for such acquisition. It also gives the Commonwealth power to obtain possession of such substances held by any person.

Further reference to the Atomic Energy Commission appears in Chapter XXVII.—Defence.

CHAPTER XIX.

PASTORAL PRODUCTION.

NOTE.—Except where otherwise indicated, values of Australian oversea trade shown throughout this chapter are expressed as f.o.b., Australian currency, port of shipment.

§ 1. Initiation and Growth of Pastoral Industry.

1. General.—A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given in previous issues of the Year Book. The numbers recorded between 1800 and 1860 are regarded as somewhat defective. Doubtless the growth of population, the expansion in the area settled and the increase in private ownership made it difficult in those early times to secure accurate returns. Since 1860 however, the annual enumerations have been based, with few exceptions, on actual collections made through the agency of the State Police or by post and reliably record the movement in livestock numbers from year to year.

2. Livestock Numbers since 1860.—Particulars concerning the numbers of each of the principal kinds of livestock in Australia at decennial intervals from 1860 to 1940 and from 1949 onwards in single years are given in the following table, and are shown continuously on the graph on page 713.

LIVESTOCK : AUSTRALIA.
(‘000.)

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	432	3,958	20,135	351	1930 ..	1,793	11,721	110,568	1,072
1870 ..	717	4,276	41,594	543	1940 ..	1,699	13,080	119,305	1,455
1880 ..	1,069	7,527	62,184	816					
1890 ..	1,522	10,300	97,881	891	1949 ..	1,115	14,124	108,735	1,196
1900 ..	1,610	8,640	70,603	950	1950 ..	1,057	14,640	112,891	1,123
					1951 ..	999	15,229	115,596	1,134
1910 ..	2,166	11,745	98,066	1,026	1952 ..	937	14,893	117,647	1,022
1920 ..	2,416	13,500	81,796	764	1953 ..	895	15,247	123,072	993

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of droughts which have from time to time left their impress on the pastoral history of Australia. These occurred in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41 and 1944-45 to 1946-47.

The years in which the numbers of livestock attained their maxima are as follows :—Horses, 1918 (2,527,000); cattle, 1953 (15,247,000); sheep, 1942 (125,189,000); and pigs, 1941 (1,797,000).

The distribution throughout Australia of beef cattle, dairy cattle, sheep and pigs as at 31st March, 1948 was shown in the graphs on pages 905-8 of Official Year Book No. 39.

The numbers of horses, beef cattle and sheep in each State and Territory are shown later in this chapter; similar information for dairy cattle and pigs appears in Chapter XXI.—Farmyard, Dairy and Bee Products.

3. Minor Classes of Livestock.—Statistics of the minor classes of livestock (goats, camels, mules, donkeys, etc.) have not been collected in recent years. The last year in which all States, other than Victoria, collected this information was 1941, when total numbers were as follows :—Goats, 80,366; camels, 2,267; and mules and donkeys, 10,881. Of these, goats were most numerous in Queensland, and camels, mules and

donkeys in Western Australia. In the raising of goats, some attention has been devoted to the angora goat and its product (mohair), and upwards of 5,000 angora goats are included in the number shown above. Of these, 1,640 were in New South Wales, 1,000 in Queensland, 1,531 in South Australia, and 284 in Tasmania.

New South Wales ceased collecting these details after 1941 and Queensland, South Australia, and Tasmania after 1942.

4. Value of Pastoral Production.—(i) *Gross, Local and Net Values, 1952-53.* Values of pastoral production for each State are shown for 1952-53 in the following table. Further details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXIX. —Miscellaneous. Maintenance costs have not been computed in all States and depreciation has not been deducted; consequently the net values are inflated to the extent of these costs.

GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1952-53.
(£'000.)

State.	Gross Production Valued at Principal Markets. (a)	Marketing Costs.	Gross Production Valued at Farm.	Farm Costs.		Net Value of Production. (b)
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in Process of Production.	
N.S. Wales ..	226,312	14,510	211,802	3,005	(c) 1,925	206,872
Victoria ..	124,305	10,449	113,856	1,169	4,228	108,459
Queensland ..	96,142	8,970	87,172	3,380	1,350	82,442
Sth. Australia	54,577	3,091	51,486	688	880	49,918
W. Australia ..	45,319	2,644	42,675	1,469	2,564	38,642
Tasmania ..	10,840	599	10,241	2,558	(c) 271	7,412
Total ..	557,495	40,263	517,232	12,269	11,218	493,745

(a) Excludes £15,140,000 comprising an interim distribution of profits under the Wool Disposals Plan made in March, 1953. (b) No deduction has been made for depreciation and maintenance. (c) No allowance has been made for costs of power, power kerosene, petrol and other oils.

(ii) *Net Values, 1934-35 to 1952-53.* The net value of pastoral production by States and the net value per head of population for the years 1948-49 to 1952-53 together with the average for the years 1934-35 to 1938-39 are shown below.

NET VALUE OF PASTORAL PRODUCTION.(a)

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (b)	Australia.
NET VALUE.(c) (£'000.)							
Average, 1934-35 to 1938-39 ..	30,592	16,784	13,384	4,583	4,307	1,429	71,079
1948-49 ..	95,640	53,714	43,869	21,456	20,802	5,374	240,855
1949-50 ..	140,027	77,629	57,327	28,558	26,442	7,138	337,121
1950-51 ..	302,642	162,409	100,526	65,797	61,463	11,972	701,809
1951-52 ..	154,386	99,808	67,080	38,965	34,442	5,812	400,493
1952-53 ..	206,872	108,459	82,442	49,918	38,642	7,412	493,745

For footnotes see following page.

NET VALUE OF PASTORAL PRODUCTION—*continued*.

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (b)	Australia.
NET VALUE PER HEAD OF POPULATION.(c) (£ s. d.)							
Average, 1934-35 to 1938-39	11 8 0	9 1 3	13 11 10	7 15 6	9 9 2	6 2 7	10 8 8
1948-49 ..	31 4 3	25 8 4	38 13 3	32 5 2	39 16 9	20 0 8	31 0 2
1949-50 ..	44 2 11	35 15 4	49 5 9	41 11 7	48 8 11	25 14 8	41 17 7
1950-51 ..	92 8 9	72 12 2	84 5 5	92 10 10	107 11 6	41 12 7	85 3 9
1951-52 ..	46 0 1	43 7 4	54 18 8	53 8 6	58 5 3	19 9 4	47 2 7
1952-53 ..	60 9 8	45 18 3	66 0 4	66 12 0	63 1 3	23 19 10	56 14 8

(a) Excludes payments to wool-growers of profits from the war-time wool disposal plan. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils. (c) No deduction has been made for depreciation and maintenance.

5. Indexes of Quantity and Price of Pastoral Production, 1948-49 to 1952-53.—For details of the methods of calculating these indexes and of the weights used see Chapter XXIX.—Miscellaneous.

INDEXES OF QUANTITY AND PRICE OF PASTORAL PRODUCTION :
AUSTRALIA.

(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantity produced—					
Wool ..	108	115	116	112	131
Other products ..	101	109	100	95	119
Total Pastoral ..	105	112	109	105	126
Total per Head of Population ..	92	96	90	84	97
Price—					
Wool ..	366	483	1,098	552	623
Other products ..	230	264	386	423	409
Total Pastoral ..	313	396	818	501	539

6. Consumption of Meats.—The quantity of meat (including cured and canned meat) in terms of carcass weight and edible offal available for consumption in Australia in 1952-53 was 878,267 tons. This is equivalent to 224.9 lb. per head compared with 216.5 lb. per head in 1951-52, 226.6 lb. in 1950-51 and an average of 253.0 lb. during the years 1936-37 to 1938-39.

Although it is not easy to obtain strictly comparable particulars for other countries, it appears from data published by the Food and Agricultural Organization of the United Nations in its *Food Balance Sheets* that in recent years consumption of meat in Australia has been at approximately twice the level of that in Canada and about one and a half times the level of that in the United States of America.

7. *Marketing of Meat.*—(i) *General.* The Australian Meat Board, consisting of representatives of producers, processors, exporters and the Commonwealth Government, is responsible for the control of all exports of Australian meat and meat products. Further information on the powers, etc., conferred on the Board under the Meat Export Control Act 1935–1953 was given on p. 801 of Official Year Book No. 40.

(ii) *War-time Marketing.* Details of arrangements for the marketing of meat during the 1939–45 War were given on page 1107 of Official Year Book No. 36.

(iii) *United Kingdom Long-term Purchase Agreements.* Details of the long-term meat contracts with the United Kingdom Government from the outbreak of the 1939–45 War up to 30th June, 1952 and of the Fifteen Year Meat Agreement (1952–67) were given on page 1107 of Official Year Book No. 36, page 903 of Official Year Book No. 38 and page 903 of Official Year Book No. 39.

The Fifteen Year Meat Agreement (1952–67) between the United Kingdom and Australian Governments has as its objectives the promotion of meat production in Australia enabling increased exports to be made to the United Kingdom and the provision of a satisfactory market in the United Kingdom for that meat. It covers chilled and frozen beef, frozen veal, frozen mutton and lamb, frozen cattle and sheep sundries and edible offal.

The following table sets out the prices of representative descriptions of Australian beef and lamb which have been sold to the United Kingdom on a Government-to-Government basis from the beginning of the 1939–45 War to the cessation of bulk purchasing in 1954.

CONTRACT PRICES : BEEF AND LAMB SOLD TO THE UNITED KINGDOM.

Beef.			Lamb.		
Contract approved from—	First Quality Ox Sides.		Contract approved from—	First Quality. (37–42 lb.)	
	Per lb. Sterling.	Per lb. Australian.		Per lb. Sterling.	Per lb. Australian.
	d.	d.		d.	d.
October, 1939..	3.406	4.266	October, 1939 ..	5.438	6.811
„ 1941..	3.781	4.736	„ 1941 ..	5.813	7.281
December, 1943..	3.969	4.971	„ 1944 ..	6.250	7.828
January, 1946..	4.344	5.441	„ 1946 ..	7.790	9.757
October, 1946..	4.844	6.067	„ 1948 ..	8.667	10.855
April, 1948..	5.344	6.693	„ 1949 ..	9.688	12.134
October, 1948..	6.063	7.594	July, 1949 ..	9.688	12.134
„ 1949..	7.063	8.846	„ 1950 ..	10.438	13.074
„ 1950..	7.906	9.902	„ 1951 ..	12.26	15.33
„ 1951..	10.90	13.63	„ 1952 ..	14.30	17.87
„ 1952..	12.594	15.74	„ 1953 ..	15.37	19.21
„ 1953..	13.248	16.56			

Pig meats were not included in the Fifteen Year Meat Agreement, but a two-year arrangement terminating on 30th September, 1954 was negotiated. This arrangement did not limit shipments of pig meats to other markets.

(iv) *Cessation of Bulk Purchasing.* Following the announcement in September, 1953 that the United Kingdom Ministry of Food would cease bulk purchasing of meat, arrangements were made between the Australian Meat Board and the Ministry for the reversion to private trading in the United Kingdom. The main features of the arrangements are :—

- (a) Mutton and lamb exported after 1st July, 1954 and beef, veal and pig meats exported after 1st October, 1954 direct to United Kingdom importers are to be sold on the open market under methods similar to those which applied pre-war.

- (b) A schedule of minimum prices to operate until 30th September, 1955 was drawn up. These prices represented in the case of beef 95 per cent., lamb 93 per cent. and mutton 75-93 per cent. of the contract prices for 1953-54. Minimum prices to operate after 30th September, 1955 are to be negotiated before that date.
- (c) In the event of market prices for the various classifications of meat averaging below the minimum, the Ministry is to make a payment to the Australian Government corresponding to the amount of the deficiency. So as to determine the extent of any deficiency, a procedure designed to measure as accurately as possible the weighted average level of wholesale prices of Australian meat on the United Kingdom market has been agreed upon.

§ 2. Horses.

1. Distribution throughout Australia.—The States of New South Wales, Queensland and Victoria together depasture about 80 per cent. of the total number of horses in Australia. In the following table figures are shown for each State and Territory for the years 1949 to 1953 in comparison with the average for the years 1935 to 1939 :—

HORSES : NUMBER.

('000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
Average, 1935 to 1939 ..	537	355	444	198	154	31	33	1	1,753
1949 ..	358	213	325	94	69	22	33	1	1,115
1950 ..	343	200	317	83	59	21	33	1	1,057
1951 ..	329	187	307	71	55	20	29	1	999
1952 ..	311	169	289	63	53	19	32	1	937
1953 ..	298	154	282	57	50	18	35	1	895

The number of horses in Australia attained its maximum during 1918, when a total of 2,527,149 was recorded. The United States of America made its highest recording in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming. During the period 1918 to 1953 the decrease in numbers averaged 46,000 per annum, the rate of decline being 54,000 per annum during the five years ended 1953.

The number of horses in Australia from 1860 onwards may be obtained from the graph on page 713.

The proportion per cent. of the number of horses in each State and Territory for 1953 was :—New South Wales, 33.3 ; Victoria, 17.2 ; Queensland, 31.5 ; South Australia, 6.4 ; Western Australia, 5.6 ; Tasmania, 2.0 ; Northern Territory, 3.9 ; and Australian Capital Territory, 0.1.

2. Oversea Trade in Horses.—(i) *Exports.* The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914-18 War. Since then, exports have gradually declined and averaged only about 4,000 for the five years ended 1938-39 and 1,000 for the five years ended 1952-53.

(ii) *Imports.* The few horses imported into Australia consist mainly of valuable stud animals from the United Kingdom and racehorses from New Zealand. During the five years ended 1952-53 an average of 394 horses valued at £323,000 (equivalent to £820 per head) was imported annually.

§ 3. Cattle.

1. **Purposes for which Raised.**—Cattle-raising is carried out in all the States, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and an improvement in quality of the dairy herds in the coastal districts of Victoria, New South Wales and southern Queensland in particular, the portion of Australia in the temperate zone which is best adapted to this industry. On the other hand, beef-producing cattle are more widely distributed particularly in the eastern States and are raised in areas unsuitable for dairy cattle, such as the tropical area of northern Queensland, the Northern Territory, and the Kimberley district in the north of Western Australia.

2. **Distribution throughout Australia.**—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland occupied the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,312,000 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,063,000 in 1902. Following the disastrous drought which terminated in the latter year the herds were gradually built up, and, despite recurring droughts, they continued to increase up to 14,441,000 in 1921. After that year the number dropped continuously till 1929, largely owing to the decline in the overseas demand for frozen beef. With the expansion of dairying it recovered to 14,049,000 in 1934, but from that year declined continuously to 1939 when it stood at 12,862,000. The upward movement which commenced in 1940 was continued until 1944, the total number of cattle (14,184,000) in the latter year being at its highest level since 1923. Drought conditions and other factors during 1944-45 and 1945-46 caused a decline in numbers to 14,133,000 in 1945, to 13,878,000 in 1946 and to 13,427,000 in 1947. This was followed by an upward movement in numbers to 15,229,000 in 1951, and a slight decline in 1952 to 14,893,000. In 1953 cattle numbers reached 15,247,000, the highest number yet recorded. A graph showing the number of cattle in Australia from 1860 appears on page 713.

The numbers of cattle (beef and dairy) in the several States and Territories in each year 1949 to 1953 compared with the average for the years 1935 to 1939 are shown below.

CATTLE : NUMBER.
('000.)

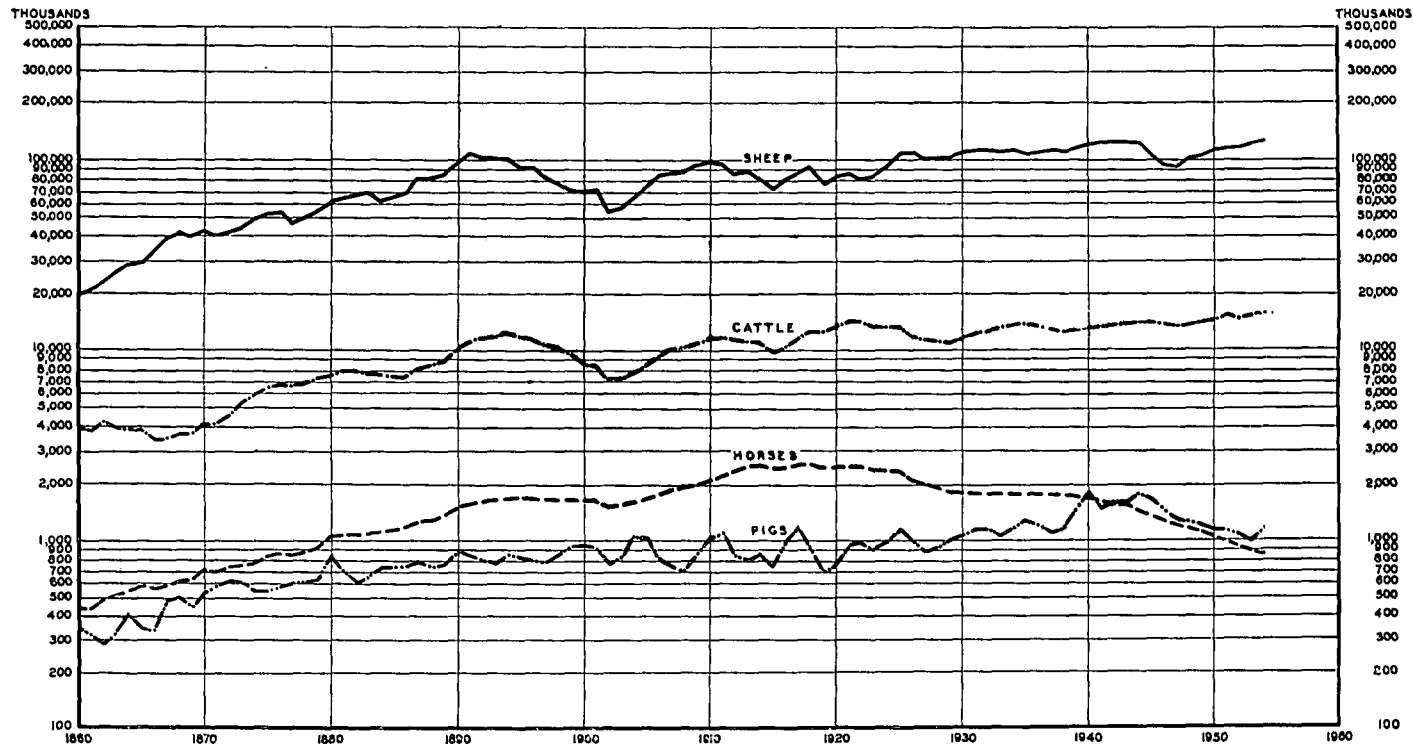
Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
Average, 1935 to 1939	3,198	1,952	6,018	331	819	262	889	9	13,478
1949	3,253	2,225	5,992	461	864	266	1,053	10	14,124
1950	3,440	2,231	6,305	464	865	275	1,049	11	14,640
1951	3,703	2,216	6,734	433	841	272	1,019	11	15,229
1952	3,621	2,215	6,434	437	852	266	1,058	10	14,893
1953	3,649	2,297	6,751	483	846	275	936	10	15,247

Although the proportion is not as high as it has been in the past, Queensland was carrying 44.3 per cent. of the cattle in Australia in 1953. The percentage in each State and Territory during that year was :—New South Wales, 23.9; Victoria, 15.1; Queensland, 44.3; South Australia, 3.2; Western Australia, 5.5; Tasmania, 1.8; Northern Territory, 6.1; Australian Capital Territory, 0.1.

Graphs indicating the distribution of beef and dairy cattle separately in Australia at 31st March, 1948 were shown on pages 905-6 of Official Year Book No. 39. A graph showing the distribution in 1924-25 of the total cattle in Australia appeared on page 660 of Official Year Book No. 22, while in Official Year Book No. 34 similar graphs showing for 1938-39 the distribution of total cattle and of dairy cows may be found on pp. 453-4.

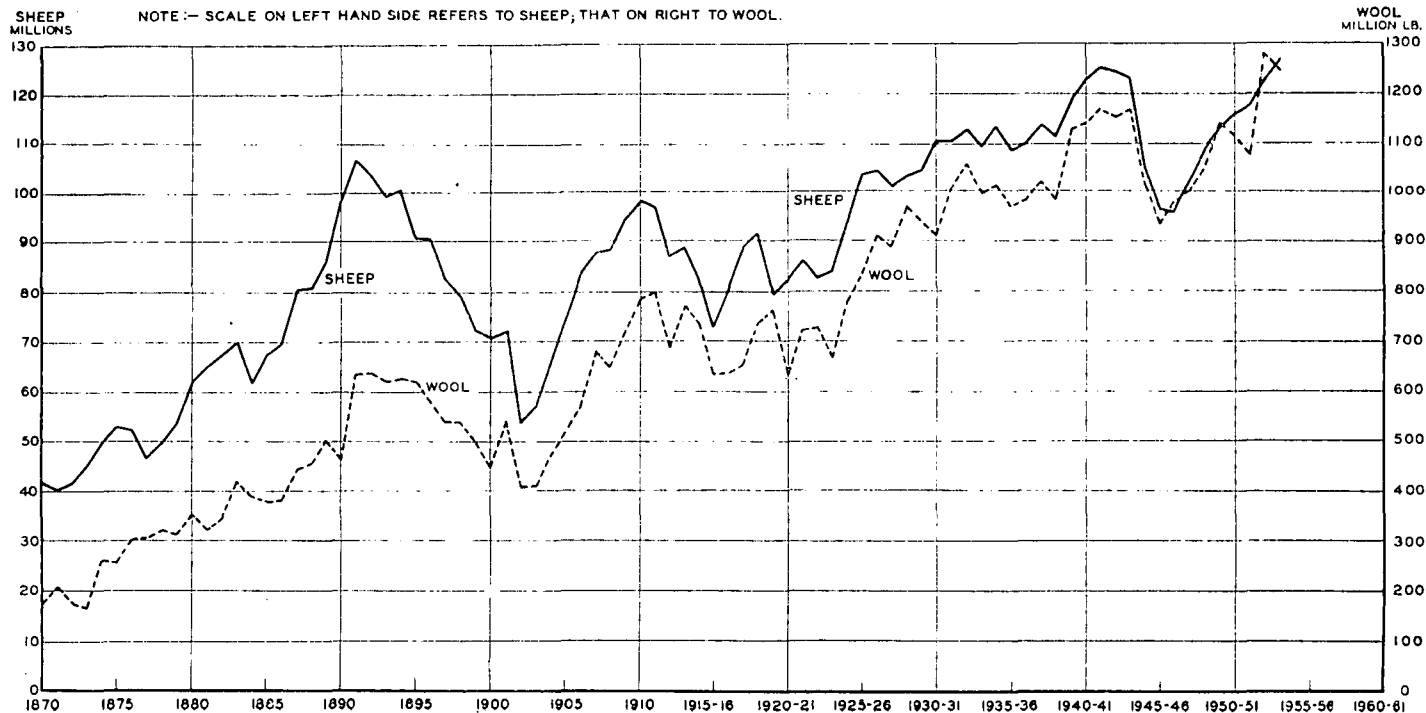
LIVESTOCK : AUSTRALIA, 1860 to 1954

RATIO GRAPH



NOTE:- VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE, ACTUAL NUMBERS ARE INDICATED BY SCALE.

SHEEP NUMBERS AND WOOL PRODUCTION: AUSTRALIA 1870 to 1953-54



3. **Classification of Cattle According to Purpose.**—Of the total number of cattle in Australia in 1953, 10,501,000 or 68.9 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1943 and 1949 to 1953 were as follows:—

BEEF CATTLE : NUMBER.
(‘000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1943	1,676	577	4,893	171	605	102	978	5	9,007
1949	1,994	711	4,569	182	634	111	1,053	7	9,261
1950	2,167	706	4,872	193	638	117	1,049	8	9,750
1951	2,457	727	5,293	189	618	115	1,019	8	10,426
1952	2,416	776	5,138	201	621	110	1,058	7	10,327
1953	2,405	820	5,378	231	612	113	936	6	10,501

A classification of numbers on this basis is not available prior to 1943.

Particulars relating to dairy cattle numbers will be found in Chapter XXI.—Farm-yard, Dairy and Bee Products.

4. **Size Classifications of Cattle Herds.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1949–50 and published in Primary Industries Bulletin No. 44. The tables relating to beef and dairy cattle show classifications according to size of herd and area of the holdings.

5. **Comparison with other Countries.**—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world for the years 1936–40 and at the latest available date. The figures, which, in general, have been compiled by the United States Department of Agriculture for publication in *Foreign Crops and Markets*, relate to areas embraced by post-war boundaries, but do not cover identical areas for the two periods in all cases.

CATTLE : NUMBER IN VARIOUS COUNTRIES.
(‘000.)

Country.	Average, 1936–40.(a)	Year and Month.	Number.
India(b)	180,000	1952 (January) ..	193,200
United States of America	66,706	1953 (January) ..	93,637
Brazil	40,807	1952 (December) ..	55,854
U.S.S.R.	59,800	1953 (January) ..	56,600
Argentina	33,762	1953 (July) ..	41,000
Pakistan(b)	33,000	1952 (January) ..	29,049
Ethiopia	18,000	1954	20,000
China	23,081	1948 (April) ..	18,200
France	15,504	1953 (October) ..	16,280
Colombia	8,010	1951 (December) ..	15,090
Australia	13,285	1953 (March) ..	15,247
Mexico	11,716	1952 (December) ..	15,000
Germany, Federal Republic of	12,114	1952 (December) ..	11,641
Union of South Africa	11,636	1952 (August) ..	11,767
Turkey(b)	8,611	1952 (December) ..	11,708

(a) In some cases census for a single year, and in others an average for two to four years. (b) Includes buffaloes.

6. **Imports and Exports of Cattle.**—The products of the cattle-raising industry figure largely in the export trade of Australia, although the export of live cattle has never been large. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for stud purposes. Details for the years 1948–49 to 1952–53 compared with the average for the years 1934–35 to 1938–39 are as follows:—

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CATTLE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39	295	£'000 22	308	£'000 6	13	— 16
1948-49 ..	147	76	1,087	48	940	— 28
1949-50 ..	160	89	485	40	325	— 49
1950-51 ..	201	123	876	70	675	— 53
1951-52 ..	318	214	681	58	363	— 156
1952-53 ..	494	201	1,643	81	1,149	— 120

NOTE.—The minus sign (—) signifies net imports.

The average value per head of the cattle imported during the last five years was £533, while the average value per head of the cattle exported during the same period was £62.

7. **Cattle Slaughtered.**—The numbers of cattle slaughtered during each of the years ended June, 1949 to 1953 compared with the average for the years 1934-35 to 1938-39 are shown in the following table :—

CATTLE (INCLUDING CALVES) SLAUGHTERED.
('000.)

Year ended June—	Slaughterings passed for Human Consumption.									Total Slaughterings including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average, 1934-35 to 1938-39 ..	(a) 1,112	812	1,046	(b) 156	(b) 124	45	(b) 4	2	3,301	3,331
1949	1,136	850	1,089	195	159	45	15	5	3,494	3,523
1950	1,156	893	1,102	213	166	58	14	6	3,608	3,648
1951	1,160	915	1,181	226	160	70	15	8	3,735	3,794
1952	1,247	966	1,029	197	152	71	15	9	3,686	3,738
1953	1,406	848	1,272	194	154	70	14	8	3,966	4,008

(a) Year ended March.

(b) Year ended previous December.

8. **Production of Beef and Veal.**—Details of the production of beef and veal in each State and Territory are shown in the following table for the years indicated :—

PRODUCTION OF BEEF AND VEAL (BONE-IN WEIGHT) : AUSTRALIA.
('000 tons.)

Year ended June—	N.S.W.	Vic.	Qld.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average 1935 to 1939	(a) 173	115	181	(b) 25	(b) 27	9	(b) 1	..	531
1949 ..	180	118	202	30	33	10	3	1	577
1950 ..	186	125	212	33	35	12	3	1	607
1951 ..	193	137	232	36	34	14	4	2	652
1952 ..	184	138	178	31	32	14	3	2	582
1953 ..	217	124	253	31	32	14	3	1	675

(a) Year ended March.

(b) Year ended previous December.

9. **Consumption of Beef and Veal.**—For the three pre-war years 1936-37 to 1938-39 the average annual production of beef and veal in Australia was 569,000 tons of which 127,000 tons were exported, leaving a balance of 442,000 tons (or the carcass equivalent of 144 lb. per head per annum) available for consumption as fresh and canned meat.

Due mainly to the effects of rationing, civilian consumption during the war and immediate post-war years was considerably lower than previously but following the return to more normal conditions it rose to 131.6 lb. per head in 1950-51. In 1951-52, consumption fell again, to 121.8 lb. per head, and in 1952-53 to 118.3 lb. per head.

In the following table details of the production and disposal of beef and veal are shown for the periods stated.

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (BONE-IN WEIGHT) :
AUSTRALIA.
(‘000 tons.)**

Year.	Changes in Stock.	Production.	Exports.	For Canning.	Consumption in Australia as Human Food.	
					Total.	Per Head per Annum.
Average, 1936-37 to 1938-39 .. ..	.. ..	569	127	(a)	442	lb. 144.1
1948-49	— 4	577	98	61	422	121.3
1949-50	— 9	607	94	75	447	124.3
1950-51	+ 10	651	81	72	488	131.6
1951-52	— 4	582	52	70	464	121.8
1952-53	+ 6	675	96	111	462	118.3

(a) Included with exports.

10. Exports of Frozen Beef and Veal.—The export of frozen meat from Australia dates from about 1881, and since that year the trade has grown considerably. The quantity of frozen beef and veal exported in 1938-39 amounted to 271,964,000 lb., valued at £4,324,000, but there was a decline during the war years owing to reduced production and the diversion of supplies to meet the requirements of the Australian and Allied Services based on Australia. By 1947-48 the quantity exported had risen again to 237,150,000 lb., valued at £6,193,000, but this was followed by a steady decline until 1951-52 when exports amounted to only 95,876,000 lb. valued at £5,230,000. There was a marked increase in 1952-53 when 192,500,000 lb. valued at £13,782,000 was exported. The quantities and values of frozen beef and veal exported during the five pre-war years ended 1938-39 and in each year 1948-49 to 1952-53 are shown in the following table :—

EXPORTS OF FROZEN BEEF AND VEAL : AUSTRALIA.

Year.	Exports of Frozen and Chilled Beef.		Exports of Frozen Veal.	
	Quantity.	Value.	Quantity.	Value.
	‘000 lb.	£’000	‘000 lb.	£’000
Average, 1934-35 to 1938-39	231,355	3,188	10,353	165
1948-49	189,007	5,716	2,646	100
1949-50	178,128	6,522	4,233	182
1950-51	154,832	6,440	3,478	207
1951-52	92,926	5,009	2,950	221
1952-53	189,176	13,443	3,324	339

Prior to the war the largest purchaser of Australian beef and veal was the United Kingdom, which during 1938-39 took about 90.2 per cent. of the total shipments. However, at the request of the United Kingdom Government there was a considerable diversion from that country to nearer British possessions during the war years. In 1952-53 shipments to the United Kingdom were valued at £9,690,000 or 70.3 per cent. of the total value of beef and veal exports compared with £2,031,000 or 38.8 per cent. in 1951-52. Exports to other British countries amounted to £2,832,000 or 20.5 per cent. of the total in 1952-53 and £2,489,000 or 47.6 per cent. in 1951-52.

In view of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to United Kingdom in a chilled condition. Trial shipments of 254,000 lb. in 1932-33 and 1,515,000 lb. in 1933-34 were made, and the exports in

subsequent years increased to a maximum of 58,963,000 lb. in 1938-39. However, the advent of war seriously affected the export trade in chilled beef, which declined to a negligible amount after 1939-40.

§ 4. Sheep.

1. **Initiation of the Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool were, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. **Movement in Sheep Numbers in Australia.**—Fluctuations in the number of sheep recorded in Australia for each year from 1860 onwards may be seen from the graph on page 714. Up to 1945 there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945 the sheep flocks exceeded 100 million, reaching 125.2 million in 1942, the greatest number recorded in Australia. At no previous period have such large numbers been depastured continuously, and the development took place despite an increase in the annual slaughter for the meat trade over this period, from about 10 million to 25 million.

However, a sharp decline to 105 million occurred in 1945, followed by a further reduction to 96.4 million in 1946 and to 95.7 million in 1947. This represented a loss from all causes other than slaughtering of about 37 million sheep (30 per cent.) since 1944 and was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The passing of the drought and consequent re-stocking has resulted in a steady increase in sheep numbers which at 31st March, 1953 amounted to 123.1 million or only about 2 million below the record number in 1942.

The following table shows the approximate movement in sheep numbers in Australia in 1938-39 and 1948-49 to 1952-53.

SHEEP AND LAMBS : ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA.
(‘000.)

Season.	Lambs Marked.	Excess of Exports.	Sheep and Lambs Slaughtered.	Estimated Number of Deaths from Disease, Drought, etc.(a)	Number at 31st March.	Annual Net Increase (+) or Decrease (-)
1938-39 ..	25,469	67	18,900	8,817	(b) 111,058	- 2,315
1948-49 ..	30,642	84	17,745	6,637	108,735	+ 6,176
1949-50 ..	30,382	96	20,929	5,201	112,891	+ 4,156
1950-51 ..	29,816	84	16,083	10,944	115,596	+ 2,705
1951-52 ..	27,183	79	15,116	9,637	117,647	+ 2,051
1952-53 ..	31,778	84	21,097	5,172	123,072	+ 5,425

(a) Balance figure.

(b) As at commencement of last year shown.

3. **Distribution throughout Australia.**—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing about one half of the sheep of Australia.

A graph indicating the distribution of sheep in Australia at 31st March, 1948, is shown on page 907 of Official Year Book No. 39. Similar graphs for the years 1938-39 and 1924-25 were published in Official Year Books No. 34, page 452 and No. 22, page 659, respectively.

The numbers of sheep in the several States and Territories for each year 1949 to 1953 compared with the average for the years 1935 to 1939 are shown in the following table :—

SHEEP : NUMBER.
('000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
Average, 1935 to 1939	51,774	17,555	21,061	8,515	9,839	2,312	23	240	111,319
1949	50,404	19,170	16,499	9,366	10,872	2,160	26	238	108,735
1950	53,298	19,161	17,582	9,477	10,923	2,170	26	254	112,891
1951	54,111	20,012	17,478	10,166	11,362	2,181	29	257	115,596
1952	53,676	21,537	16,164	11,470	12,188	2,338	31	243	117,647
1953	57,461	21,368	17,030	12,036	12,475	2,421	34	247	123,072

Except when affected by drought, the relative number of sheep depastured in the different States in recent years has remained fairly constant.

The percentage distribution in 1953 was :—New South Wales, 46.7; Victoria, 17.4; Queensland, 13.8; South Australia, 9.8; Western Australia, 10.1; Tasmania, 2.0; Northern Territory, 0.0; Australian Capital Territory, 0.2.

4. Classification of Sheep According to Age, Sex and Breed.—In the following table numbers of sheep in Australia are classified according to age and sex at 31st March of the years 1943 and 1949 to 1953. Data in this form are not available prior to 1943.

SHEEP : AGE AND SEX, AUSTRALIA.
('000.)

Description.	31st March—					
	1943.	1949.	1950.	1951.	1952.	1953.
Rams, 1 year and over	1,651	1,443	1,497	1,473	1,507	1,560
Breeding ewes (including ewes intended for mating)	56,674	50,855	52,122	52,794	52,954	55,351
Other ewes, 1 year and over	9,636	6,796	6,982	6,760	7,451	7,039
Wethers, 1 year and over	31,986	26,199	29,251	31,516	34,032	34,304
Lambs and hoggets, under 1 year	24,667	23,442	23,039	23,053	21,703	24,818
Total, Sheep and Lambs	124,614	108,735	112,891	115,596	117,647	123,072

Particulars relating to the principal breeds of sheep at 31st March, 1953 are shown in the following table :—

SHEEP : PRINCIPAL BREEDS, 31st MARCH, 1953.
('000.)

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Australia.
Merino	43,713.7	8,271.3	16,776.0	10,135.2	11,273.5	278.6	33.3	223.4	90,705.0
Other recognized breeds	3,541.5	5,220.4	54.2	818.8	461.2	1,100.1	.1	15.6	11,211.9
Merino combed-backs(b)	4,141.8	2,251.0	50.0	209.1	185.6	338.5	.1	2.9	7,179.0
Crossbreds(c)	6,064.0	5,025.5	149.4	873.4	554.4	704.3	.3	4.9	13,976.2
Total	57,461.0	21,368.2	17,029.6	12,036.5	12,474.7	2,421.5	33.8	246.8	123,072.1

(a) As at 31st December, 1952. Distribution between categories has been estimated. (b) Merino combed-back is the progeny of a crossbred merino ewe and a merino ram, i.e., finer than half-bred. (c) Half-bred and coarser.

5. Numbers of Sheep on Rural Holdings.—A special series of tabulations relating to rural holdings in Australia was compiled for 1949–50 and published in *Primary Industries Bulletin* No. 44. The tables relating to sheep farming show classifications according to areas of the holdings on which the sheep were carried.

6. Comparison with other Countries.—As regards the size of its flocks and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world. In 1952–53, Australian flocks numbered

123 million sheep, compared with the estimate of 162 million for the U.S.S.R., China and Eastern Europe, with about 55 million in Argentina and about 46 million in India and Pakistan together. The total world population was estimated at about 814 million in 1952-53. Further details of sheep numbers in the principal wool producing countries of the world for 1938-39, 1951-52 and 1952-53 are given in the table on p. 725.

7. **Oversea Imports and Exports of Sheep.**—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively little importance. On 27th November, 1929, the export of stud sheep was prohibited, except with the approval of the Minister for Trade and Customs. Sheep for breeding purposes were being exported in increasing numbers up to the outbreak of war in the Pacific, and shipments in 1939-40 amounted to 23,329 sheep valued at £80,000, compared with 940 valued at £28,000 in 1952-53. The chief countries to which sheep for breeding purposes were consigned in 1939-40 were New Zealand, South Africa, Japan and Korea and, in 1952-53 to New Zealand and Japan. During the last five years the principal consignments of ordinary sheep have been made to Singapore from Western Australia. The following table shows the imports and exports of breeding and flock sheep for the years 1948-49 to 1952-53 compared with the average for the years 1934-35 to 1938-39.

SHEEP : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£'000.		£'000.		£'000.
Average, 1934-35 to 1938-39	3,795	30	65,188	67	61,393	37
1948-49 ..	303	12	84,278	207	83,975	195
1949-50 ..	260	10	96,595	245	96,335	235
1950-51 ..	103	11	83,799	343	83,696	332
1951-52 ..	300	14	79,177	369	78,877	355
1952-53 ..	267	10	84,397	278	84,130	268

8. **Sheep Slaughtered.**—The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1949 to 1953 compared with the average for the years ended June, 1935 to 1939 :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED. (‘000.)

Year.	Slaughtering Passed for Human Consumption.									Total Slaughtering including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average, 1934-35 to 1938-39 ..	a 6,474	7,797	1,101	b 1,703	b 1,178	358	(b) ..	25	18,636	18,693
1948-49 ..	6,456	6,692	994	2,208	1,515	420	3	48	18,336	18,384
1949-50 ..	6,787	8,366	959	2,284	1,347	508	3	59	20,313	20,386
1950-51 ..	5,493	5,799	745	1,892	1,230	485	1	51	15,696	15,782
1951-52 ..	5,521	6,082	820	1,680	1,319	482	1	53	15,967	16,019
1952-53 ..	7,065	8,405	1,076	2,740	1,817	577	3	68	21,751	21,833

(a) Average, years ended March.

(b) Average, years ended previous December.

9. **Production of Mutton and Lamb.**—Details of the production of mutton and lamb in each State and Territory are shown below :—

PRODUCTION OF MUTTON AND LAMB. (Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1934-35 to 1938-39	103,706	135,149	20,166	29,710	20,476	6,035	1	396	315,639
1948-49 ..	114,338	114,738	18,440	39,452	24,872	7,574	83	886	320,383
1949-50 ..	119,815	148,254	17,073	39,913	22,446	8,926	57	1,049	358,133
1950-51 ..	92,463	103,052	13,567	34,012	21,550	8,661	27	921	274,253
1951-52 ..	94,076	108,983	14,420	31,222	23,686	8,973	34	960	282,356
1952-53 ..	125,731	153,030	20,371	51,484	32,506	10,656	82	1,230	395,090

10. **Consumption of Mutton and Lamb.**—For the three pre-war years 1936–37 to 1938–39 the annual production of mutton and lamb averaged 319,000 tons of which 89,000 tons were exported leaving a balance of 230,000 tons (or the carcass equivalent of 74.9 lb. per head per annum) available for consumption.

Civilian consumption of mutton and lamb during the war years rose substantially. This was a direct result of the preference of the Defence Service and export demand for beef and of the system of rationing which was introduced (the coupon rating for mutton and lamb being low compared with beef). Consumption per head fell steeply in 1946–47 and up to 1951–52 was lower than in pre-war years. In 1952–53 consumption per head rose again to 77.8 lb.

In the following table details of the production and disposal of mutton and lamb are shown for the periods stated :—

PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (BONE-IN WEIGHT) :
AUSTRALIA.
(‘000 tons.)

Year.	Changes in Stock.	Pro- duction.	Exports.	For Canning and Dehydration.	Consumption in Australia.	
					Total.	Per Head per Annum (lb.)
MUTTON.						
Average 1936-37 to 1938-39	..	201	17	..	184	59.8
1948-49	+ 6	181	12	7	156	44.9
1949-50	- 3	206	31	14	164	45.7
1950-51	+ 3	162	4	13	142	38.4
1951-52	+ 5	176	3	11	157	41.0
1952-53 .. .. .	..	249	36	21	192	49.1
LAMB.						
Average 1936-37 to 1938-39	..	118	72	..	46	15.0
1948-49	+ 2	139	39	..	98	28.2
1949-50	- 1	152	55	..	98	27.4
1950-51	+ 1	112	20	..	91	24.6
1951-52	+ 4	107	11	..	92	24.0
1952-53	- 5	146	39	..	112	28.8

11. **Exports of Frozen Mutton and Lamb.**—The export trade in mutton and lamb preserved by cold process expanded rapidly up to 1913 when 205 million lb. were shipped. Progress was interrupted during the 1914–18 War and, owing probably to high wool prices, the exports of mutton and lamb for a number of years after were considerably less than earlier shipments. Exports commenced to rise again in 1929–30 and from that year onwards they continued to expand almost uninterruptedly until 1942–43, in which year 203,682,000 lb. of mutton and lamb, valued at £5,496,000, were exported. In earlier years shipments consisted mainly of frozen mutton, but in 1923–24 lamb supplanted mutton and the exports of lamb were largely responsible for the increase in total shipments during the ten years to 1942–43. Due to reduced production as a result of drought conditions and the diversion of supplies to meet the requirements of the Australian and Allied Services based in Australia, there was subsequently a marked decline in mutton and lamb exports, which fell to 56,575,000 lb., valued at £1,540,000, in 1945–46. The maximum quantity exported in the post-war years amounted to 193,092,000 lb. (£7,453,000) in 1949–50. In 1950–51 exports fell steeply to 54,108,000 lb. (£2,684,000) and in 1951–52 to 31,153,000 lb. (£1,918,000), the lowest quantity recorded this century with the single exception of the war year 1917–18. There was a substantial recovery in 1952–53 when 166,844,000 lb. (£8,761,000) were shipped.

The quantities and values of exports of frozen mutton and lamb in each year 1948-49 to 1952-53 compared with the average for the five years ended 1938-39 are shown in the following table :—

EXPORTS OF FROZEN MUTTON AND LAMB : AUSTRALIA.

Year.	Exports of Frozen Mutton.		Exports of Frozen Lamb.		Exports of Frozen Mutton and Lamb.	
	Quantity.	Value.	Quantity.	Value.	Quantity	Value.
	'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.
Average, 1934-35 to 1938-39	40,584	656	153,606	4,208	194,190	4,864
1948-49	27,509	651	87,355	3,571	114,864	4,222
1949-50	69,744	1,695	123,348	5,758	193,092	7,453
1950-51	8,424	290	45,684	2,394	54,108	2,684
1951-52	5,907	297	25,246	1,621	31,153	1,918
1952-53	80,774	2,790	86,070	5,971	166,844	8,761

As with beef, the principal customer in this trade is normally the United Kingdom. In 1952-53 exports of mutton and lamb to this country represented 88.4 per cent. and 87.1 per cent., respectively of the total quantities exported.

§ 5. Wool.

1. **General.**—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep Australia produces more than one-quarter of the world's wool and of the total fine-quality merino wool, Australia produces about one-half. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonized wool and wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The remainder which is used by Australian manufacturers amounted to only 6 per cent. of total production (greasy basis) in 1952-53.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on p. 725.

2. **Greasy and Scoured Wool.**—Whether the weight of the wool clip should be stated as "in the grease" or as "scoured and washed" is a matter which seriously affects comparisons between the clips of different seasons and of different countries. The quantity of grease and other extraneous matter in a fleece differs, not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep.

Commencing with 1946-47, the Australian Wool Realization Commission has assessed annually the clean yield of the Australian wool clip. A steady rise has been recorded from 53.4 per cent. clean yield from greasy in 1946-47 to 57.5 per cent. in 1951-52 and 1952-53. A standard factor of 93 per cent. is taken as the clean yield of Australian scoured wools.

Wool scoured, washed and carbonized in Australia before export however, has a clean yield of only about 44 per cent., because the grade of greasy wool treated locally for export as scoured, washed or carbonized includes a large proportion of dirty and low-grade wool. The quantity of this wool exported during the five years ended 1952-53 was approximately 20.0 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

3. **Production.**—The bulk of the Australian wool production is shorn from live sheep; in recent years, approximately 4 per cent. has been obtained by fellmongering and about 5 per cent. has been on skins exported. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table shows the production for the five years 1948-49 to 1952-53 compared with average production for the five years ended 1938-39. Particulars of the gross value of wool produced are based in the case of shorn wool upon the average price realized for greasy wool sold at auction and in the case of skin wools on prices recorded by fellmongers and skin exporters.

WOOL : TOTAL PRODUCTION (AS IN THE GREASE).

Particulars.	Average, 1934-35 to 1938-39	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
New South Wales ..	480,670	463,208	515,043	492,130	437,837	556,552
Victoria ..	165,586	204,080	225,243	218,266	224,958	252,195
Queensland ..	164,971	156,655	162,256	154,667	138,767	163,149
South Australia ..	85,120	114,905	121,248	125,384	135,484	158,658
Western Australia(a) ..	81,543	99,429	98,889	107,341	120,401	128,148
Tasmania ..	15,504	16,846	16,958	17,250	20,513	19,807
Northern Territory(b) ..	35	305	230	235	252	332
Australian Capital Territory	1,827	1,977	2,123	2,266	1,765	2,245
Australia—						
Shorn(includingCrutchings)	888,677	958,860	1,027,949	1,029,149	998,708	1,168,699
Dead and Fellmongered ..	50,396	45,478	51,910	45,337	36,124	45,493
Exported on Skins ..	56,183	53,067	62,131	43,953	45,145	66,894
Total—Quantity ..	995,250	1,057,405	1,141,990	1,117,539	1,079,977	1,281,086
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
„ Value ..	51,182	201,959	289,205	651,902	322,615	425,807

(a) For year ended previous December.

(b) Estimated.

Production for 1953-54 was 1,244 million lb., valued at £412,000,000 (subject to revision).

4. Care Needed in Comparing Clips.—In comparing successive clips allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

5. Average Weights of Fleeces Shorn.—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and the Australian Capital Territory are shown in the following table for each season 1948-49 to 1952-53 compared with the average for the five seasons 1934-35 to 1938-39.

AVERAGE WEIGHT OF SHEEP AND LAMB FLEECES SHORN.

(lb.)

State.	Average, 1934-35 to 1938-39. (a)	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
SHEEP.						
New South Wales ..	8.87	9.97	9.82	9.68	8.43	10.18
Victoria ..	7.84	9.37	9.76	9.92	9.62	9.63
Queensland ..	7.98	9.57	9.83	9.10	8.08	9.78
South Australia ..	10.06	11.65	12.28	12.52	12.62	13.14
Western Australia ..	8.53	9.43	8.97	9.61	10.27	10.16
Tasmania ..	7.62	8.03	7.63	7.63	8.88	8.17
Australian Capital Territory	8.32	9.29	9.36	9.19	7.66	9.81
Australia(b) ..	8.57	9.85	9.89	9.83	9.18	10.26
LAMB.						
New South Wales ..	2.75	3.29	3.20	3.02	2.74	3.24
Victoria ..	2.14	2.89	2.72	2.83	2.87	2.83
Queensland ..	2.89	4.00	3.80	3.49	3.23	3.72
South Australia ..	2.57	3.56	3.52	3.67	3.70	3.83
Western Australia ..	2.57	2.68	2.62	2.73	2.90	2.82
Tasmania ..	1.37	1.91	1.76	1.91	2.05	2.10
Australian Capital Territory	1.11	1.51	1.17	1.30	1.04	1.26
Australia(b) ..	2.57	3.21	3.09	3.05	2.94	3.19

(a) Mean of average weights in each season.

(b) Excludes Northern Territory.

6. **Wool classified according to Quality.**—Under control exercised during the 1939-45 War, records were kept of the classification of each lot of wool appraised according to quality, degree of fault and combing or carding type for each of the years 1940-41 to 1945-46. From the resumption of auctions in 1946-47 to 23rd October, 1953 this analysis was continued by the Australian Wool Realization Commission and from 23rd October, 1953 by the Wool Statistical Service, but the basis of the data has been changed to the catalogues of auction sales, and not upon appraisal as previously. The following table provides a detailed analysis of wool appraised or sold at auction according to quality, for the years 1949-50 to 1952-53 compared with 1940-41, according to the records compiled by the Australian Wool Realization Commission. "Quality" ("64's, 60's, 58's," etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1lb. of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1lb. of tops (combed wool) of that particular wool.

**CLASSIFICATION OF GREASY WOOL APPRAISED OR SOLD AT AUCTION :
AUSTRALIA.**

(Bales of approximately 300 lb.)

Pre-dominating Quality.	1940-41.(a)		1949-50.(b)		1950-51.(b)		1951-52.(c)		1952-53.(c)	
	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
70's and finer	200,951	6.2	132,931	4.0	124,877	3.7	141,234	4.3	110,903	3.0
64/70's ..	679,377	20.8	518,492	15.4	523,670	15.0	579,117	17.6	451,393	12.0
64's ..	866,117	26.7	618,226	18.4	625,749	18.6	536,872	16.4	557,885	14.9
64/60's ..	236,138	7.2	305,412	9.1	296,029	8.8	229,026	7.0	418,288	11.2
60/64's ..	408,534	12.5	524,380	15.6	525,883	15.7	458,170	13.9	690,981	18.4
60's and 60/58's ..	387,164	11.9	415,646	12.3	427,673	12.7	449,716	13.7	580,944	15.5
Total 60's and finer	2,781,281	85.3	2,515,087	74.8	2,523,881	75.1	2,395,035	72.9	2,810,394	75.0
58's ..	270,371	8.3	369,930	11.0	371,143	11.1	406,786	12.4	413,901	11.0
56's ..	135,232	4.2	307,876	9.2	300,375	9.0	306,996	9.4	324,074	8.6
50's ..	39,619	1.2	114,482	3.4	112,295	3.3	119,758	3.7	131,823	3.5
Below 50's	21,089	0.6	31,413	0.9	27,978	0.8	30,460	0.9	35,821	1.0
Oddments ..	12,955	0.4	21,918	0.7	23,107	0.7	24,643	0.7	35,617	0.9
Grand total	3,260,547	100.0	3,360,706	100.0	3,358,779	100.0	3,283,678	100.0	3,751,630	100.0

(a) Appraised greasy wool reserves were applicable.

(b) Greasy wool sold at auction to which Joint Organization's buyer".

(c) All greasy wool sold at auction except "wool re-offered account

7. **World Sheep Population and Wool Production.**—The following table shows particulars of the sheep population and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred and carpet type wool for each season 1951-52 and 1952-53 compared with pre-war years. The data for countries other than Australia have been taken from reports published by the Commonwealth Economic Committee compiled from questionnaires prepared by the Committee and the International Wool Textile Organization.

In 1952-53 Australia produced 30 per cent. of the world total of all types of wool, the share of the British Commonwealth representing approximately 50 per cent. The principal wool producers, other than Australia, are New Zealand with 10 per cent. of the world total, Argentina, 9 per cent., United States of America, 6 per cent., and Union of South Africa, 6 per cent. Production in the U.S.S.R., China and Eastern European countries together amounted to 13 per cent. World production of wool (all types) in 1952-53 was about 528 million lb. (11 per cent.) greater than the average for 1934-38.

Australia's wool clip is predominantly merino; New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type. While world production of merino wool in 1952-53 was at about the same level as pre-war, the production of crossbred types has risen by about 24 per cent. Carpet wool production has risen by about 14 per cent.

ESTIMATED WORLD SHEEP POPULATION AND PRODUCTION OF WOOL.

Country and Type.	Sheep Numbers ('000,000).			Wool Production ('000,000 lb.—in terms of greasy).		
	1938-39.	1951-52.	1952-53. (a)	Average, 1934-38.	1951-52.	1952-53. (a)
British Commonwealth—						
Australia	111.1	117.6	123.1	595	1,080	1,281
New Zealand	31.9	35.4	36.2	300	407	418
South Africa(b)	39.0	34.8	35.5	261	249	268
Other Commonwealth	99.0	95.2	97.2	230	211	220
Total	281.0	283.0	292.0	1,786	1,947	2,187
Foreign—						
U.S.S.R., China, Eastern Europe(c)	134.0	153.0	162.0	450	557	570
Argentina	45.9	55.0	54.7	376	420	407
United States of America	51.3	32.1	31.9	446	260	277
Uruguay	18.0	26.0	27.0	114	188	190
Other Foreign	224.8	236.9	246.4	630	679	699
Total	474.0	503.0	522.0	2,016	2,104	2,143
Grand Total	755.0	786.0	814.0	3,802	4,051	4,330
Type of Wool.						
Apparel Type—						
Merino .. ..	..	..	..	1,475	1,325	1,524
Crossbred .. ..	..	..	..	1,518	1,820	1,880
Carpet type .. ..	..	..	..	809	906	926

(a) Provisional. (b) Basutoland and S.W. Africa Territory excluded from sheep population, but included in wool production. (c) Comprising U.S.S.R., Poland, Czechoslovakia, Hungary, Romania, Bulgaria, Eastern Germany, Albania, China and Dependencies, Outer Mongolia and Tibet.

8. War-time Contracts.—(i) *Wool.* Details of the contract entered into between the Governments of Australia and the United Kingdom for the purchase of the surplus wool clip of Australia for the duration of the war and one full clip thereafter (1939-40 to 1945-46) will be found in Official Year Book No. 36, page 1106.

(ii) *Sheepskins.* Details of the war-time contract arrangements for the period April, 1940 to June, 1946 between the Australian and United Kingdom Governments for the purchase of Australia's exportable surplus of woolled sheepskins will be found in Official Year Book No. 37, page 875.

9. Australian Wool Realization Commission.—The Australian Wool Realization Commission was the Australian subsidiary of a Joint Organization set up by the Governments of the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand and the Union of South Africa, under the title of "U.K.—Dominion Wool Disposals Limited" (commonly referred to as "J.O.") to dispose of accumulated war-time stocks of Dominion wool held by the United Kingdom Government at the end of the war. Details of the functions and operations of these organizations appear in earlier issues of the Year Book, particularly No. 38 (pages 919-923).

By the end of 1951 the Joint Organization had disposed of all stocks of wool held and shortly after, it went into voluntary liquidation. Liquidation proceedings were completed on 15th February, 1954.

Australia's share of the profits arising from the operations of J.O. amounted to approximately £92 million and, of this amount, £80.5 million had been distributed by the Australian Wool Realization Commission to growers up to June, 1954.

10. Australian Wool Bureau.—(i) *General.* The Australian Wool Bureau was constituted under the Wool Use Promotion Act 1953. It replaced the Australian Wool Board which was originally set up in 1936 to take measures for improving the production and increasing the use of wool.

The Bureau consists of seven members, one the Commonwealth Wool Adviser or the Deputy Commonwealth Wool Adviser appointed by the Minister for Commerce and Agriculture, and six members (three nominated by the Australian Woolgrowers' Council and three by the Australian Wool and Meat Producers' Federation) appointed by the Governor-General for a period of three years.

Particulars of the wool promotional activities of the Bureau are given in paragraph 12, Wool Publicity and Research.

(ii) *Wool Statistical Service.* The Wool Statistical Service, formerly conducted by the Australian Wool Realization Commission, was taken over by the Australian Wool Bureau on 23rd October, 1953. The Statistical Service is responsible for the preparation and publication of statistical material relating to the Australian wool market and the composition of the Australian clip and other special statistical work which may be assigned to it.

It is financed out of the income received by the Australian Wool Bureau from wool sources under its control and from an annual contribution by the Commonwealth Government.

A Statistical Service Committee, consisting of the representatives of the Australian Wool Bureau, the Commonwealth Government, and wool buyers, wool growers and wool selling brokers' organization, acts in an advisory capacity to the Australian Wool Bureau.

(iii) *Wool Stores.* Some three hundred wool stores, formerly the property of the Joint Organization and purchased from it by the Commonwealth Government, were transferred to the ownership of the Australian Wool Bureau by virtue of the Wool Stores Act 1953. The Bureau formally assumed control of these stores on 11th January, 1954, and at the same time received a substantial sum of accumulated rentals and receipts from sales of the stores which had come to hand whilst the stores were held by the Commonwealth Government. Under the Act the Bureau may only dispose of these stores with the permission of the Minister for Commerce and Agriculture and, in the event of war, may be required to return the stores without compensation to the Commonwealth Government. The stores are being let by the Wool Bureau as a commercial proposition. The rental income is used partly to defray the cost of operating the Wool Statistical Service and the remainder to help finance the wool promotion activities of the Bureau.

(iv) *The Contributory Charge.* Associated legislation, viz., the Wool (Contributory Charge) Act 1945 (subsequently replaced by the Wool (Contributory Charge) Act (No. 1) 1950-1951 and the Wool (Contributory Charge) Act (No. 2) 1950-1951 and the Wool (Contributory Charge) Assessment Act 1945-1951 provided for a contributory charge to be imposed on all wool produced in Australia and sold, purchased or processed by a manufacturer or exported on or after a date fixed by proclamation. The charge in 1951-52 was limited to a rate (one-eighth of one per cent.) which, it was calculated, would equal the amount which would otherwise have been raised by the Wool Tax for payment into the Wool Use Promotion Fund. The passage of amending Wool Tax legislation in June, 1952 made it possible to cease collection of the contributory charge at 30th June, 1952, and the legislation under which it was imposed was repealed. Further particulars of the Wool Contributory Charge and the amounts collected appear in Year Book No. 40, pages 675 and 819.

(v) *The Wool Tax.* Whilst the contributory charge legislation, mentioned above, was in force, the Wool Tax, which was imposed by the Wool Tax Act 1936 and the Wool Tax Assessment Act 1936, was not collected. When the Wool Tax was first imposed in 1936, the rate of tax was 6d. per bale, 3d. per fadge or 1d. per bag of wool delivered into the store of a wool dealer or wool selling broker or exported. The proceeds were paid into the Wool Publicity and Research Fund administered by the Australian Wool Board.

When collection of the contributory charge ceased, the Wool Tax again became operative (i.e. from 1st July, 1952) but for the years 1952-53 and 1953-54 at a higher rate of 4s. per bale, 2s. per fadge and 8d. per bag of wool. The new rate was provided for in the Wool Tax Act (No. 1) 1952 and the Wool Tax Act (No. 2) 1952, which also provided that in subsequent years the rate could be prescribed, by regulation, between limits of 2s. per bale and 5s. per bale.

11. *Marketing of Wool.*—(i) *Minimum Reserve Price Plan.* Details of the minimum reserve price plan which was completed by the Governments of Australia, New Zealand, South Africa and the United Kingdom in May, 1951, and which was subsequently rejected at a referendum of wool-growers in Australia will be found in Official Year Book No. 39, page 925.

(ii) *Subsidy on Woollen Goods, 1950-51.* In order to reduce the effects of greatly increased wool prices in the 1950-51 season (*see* para. 17 following), the Commonwealth Government paid a subsidy on woollen goods manufactured for consumption in Australia from wool sold during the 1950-51 season. The subsidy was equivalent to about 45d. per lb. of all greasy wool (1950-51 clip) consumed in Australia, the total amount paid being approximately £17,000,000.

12. *Wool Publicity and Research.*—(i) *Wool Use Promotion.* The Wool Use Promotion Act of 1953 defines the powers and functions of the Australian Wool Bureau as including measures for improving the production of wool and the encouragement of research in Australia and other countries directed to the promotion of the use of wool.

The Bureau is also authorized to make arrangements with other bodies in Australia and overseas likely to be conducive to promoting the use of wool, improving the production of wool in Australia and encouraging research. By virtue of this power the Bureau is represented on the International Wool Secretariat, which was established in 1937 with head-quarters in London, to promote the use of wool through a broad programme of publicity, education and research.

The activities of the Australian Wool Bureau are financed from the Wool Use Promotion Fund, into which are paid the proceeds of the Wool Tax.

(ii) *Research.* Until 1945 the Australian Wool Board was responsible for the supervision of economic and scientific research but in that year the Commonwealth Scientific and Industrial Research Organization was made responsible for scientific, technical and biological research into sheep raising and wool production, as well as wool textile research. Economic wool research is the responsibility of the Bureau of Agricultural Economics, a division of the Commonwealth Department of Commerce and Agriculture. The economic research work falls into two main categories, viz., farm production economics dealing with economics of wool growing and sheep-station management generally, and commodity research dealing with the economic aspects of the wool industry in Australia and of wool as a commodity in world trade.

Finance for research is provided from a Wool Research Trust Account into which, since 1945, has been paid annually from the Commonwealth Consolidated Revenue a sum equal to the amount which is raised by the wool tax or its equivalent. In 1952-53 the Commonwealth's contribution to the Wool Research Trust Account was set at one-half of the amount raised under the wool tax at its new rate. In addition, expenditure on items of a capital nature for the research programme may be met from the Wool Industry Fund which was constituted as a Trust Account from various moneys accumulated by the Central Wool Committee in war-time.

Ample opportunity is afforded for co-operation in these research activities, with State Departments of Agriculture and other organizations.

13. *Consumption of Wool.*—(i) *Consumption of Raw Wool.* Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonized wool used on the woollen and worsted systems (mill consumption) plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects as they disregard oversea trade in semi-processed wool (e.g. tops and yarn) as well as woollen goods. They are, however, comparatively simple to calculate and are useful in providing an approximate indication of trends in wool consumption. Estimates of raw wool consumption on the woollen and worsted systems and by felt manufacturers in Australia are shown below for the years 1938-39 and 1948-49 to 1952-53.

ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA.

('000 lb.)

Year.	Greasy Basis.			Clean Basis.		
	Used on Woollen and Worsted Systems.	Used for Felt Manufacture (including Hats).	Total.	Used on Woollen and Worsted Systems.	Used for Felt Manufacture (including Hats).	Total.
1938-39 ..	77,947	2,248	80,195	39,599	1,068	40,667
1948-49 ..	109,430	13,382	122,812	60,794	6,356	67,150
1949-50 ..	97,281	9,356	106,637	54,046	4,444	58,490
1950-51 ..	90,891	8,700	99,591	51,397	4,133	55,530
1951-52 ..	72,868	5,546	78,414	42,731	2,634	45,365
1952-53 ..	70,213	5,620	75,833	41,689	2,669	44,358

(ii) *Consumption of Locally Processed Wool.* As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series entitled "Consumption of Locally Processed Wool" provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown below for the years 1938-39 and 1948-49 to 1952-53. Briefly the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes (since 1949-50) and scoured wool used for felt manufacture. No allowance has been made for oversea trade in woollen piece goods, clothing, etc., because of the obvious difficulties of accurately estimating the wool content of these products.

ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.

('000 lb.)

Year.	Greasy Basis.				Clean Basis.			
	Worsted Yarn Used. (a)	Woollen Yarn Used.	Scoured Wool used for Felt Manufacture (including Hats).	Total.	Worsted Yarn Used. (a)	Woollen Yarn Used.	Scoured Wool used for Felt Manufacture (including Hats).	Total.
1938-39 ..	31,568	21,393	2,248	55,209	16,353	11,130	1,068	28,551
1948-49 ..	48,461	38,642	13,382	100,485	26,752	22,384	6,356	55,492
1949-50 ..	53,821	37,724	9,356	100,901	29,730	21,557	4,444	55,731
1950-51 ..	47,215	34,069	8,700	89,984	26,050	19,818	4,133	50,001
1951-52 ..	41,354	25,079	5,546	71,979	23,603	15,081	2,634	41,318
1952-53 ..	37,806	23,567	5,620	66,993	22,135	14,402	2,669	39,206

(a) Includes hand knitting yarns used from 1949-50.

14. *Exports of Wool.*—(i) *Greasy—Quantities.* Prior to the 1939-45 War, Australian greasy wool exported overseas was sent principally to the United Kingdom and other European countries. In 1938-39, 41.9 per cent. of total shipments were sent to the United Kingdom, other important consignees being France, 20.4 per cent., Belgium, 13.1 per cent., and Japan, 9.1 per cent. During the war, exports to the United Kingdom declined and shipments to the European continent and to Japan virtually ceased, while the quantity shipped to the United States of America showed great expansion. Of the total quantity of greasy wool exported overseas during the five years ended 1952-53, 11.4 per cent. was sent to the United States of America and 33.7 per cent. to the United Kingdom. Of the total shipments in 1952-53, 36.0 per cent. went to the United Kingdom, 15.7 per cent. to France, 15.0 per cent. to Japan and 9.5 per cent. to Italy. The following table shows the quantities of greasy wool exported, and the principal countries of recorded destination.

EXPORTS OF GREASY WOOL (AUSTRALIAN PRODUCE).

('000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	288,436	355,403	379,804	274,442	238,748	353,195
Other British Countries ..	2,158	6,848	7,652	8,773	4,589	8,705
Belgium ..	107,928	94,944	120,913	93,147	58,936	76,327
France ..	100,476	195,855	142,528	131,117	134,199	154,441
Germany ..	36,955	16,801	53,338	37,321	25,437	40,446
Italy ..	21,748	104,252	66,632	63,359	84,212	92,943
Japan ..	131,302	22,561	55,392	69,383	96,002	147,612
United States of America ..	25,739	70,338	116,743	154,203	129,691	69,021
Other Foreign Countries ..	48,138	115,034	114,651	75,686	52,149	38,803
Total ..	762,880	982,036	1,057,653	907,431	823,963	981,493

(ii) *Scoured and Washed and Carbonized—Quantities.* The exports of "scoured and washed" wool, whether carbonized or not, are shown below according to principal countries of destination for selected years.

EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED (AUSTRALIAN PRODUCE).

('000 lb. actual weight.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	32,806	55,088	66,537	42,365	19,977	32,629
Canada ..	2,394	10,076	10,545	7,648	4,572	5,593
Other British Countries ..	935	3,869	1,183	1,472	886	1,181
Belgium ..	8,226	7,465	9,695	5,057	4,651	4,837
France ..	9,301	25,328	11,630	6,974	7,218	7,291
Germany ..	3,007	882	5,450	3,118	3,692	4,264
Italy ..	360	10,523	6,010	6,081	6,821	5,913
Japan ..	724	98	934	7,186	1,085	6,596
United States of America ..	668	4,867	11,630	21,793	23,215	8,012
Other Foreign Countries ..	5,754	20,525	22,711	13,281	10,155	7,782
Total ..	64,175	138,721	146,325	114,975	82,272	84,098

(iii) *Tops, Noils and Waste.* Particulars of the exports of tops, noils and waste are shown in the following table.

EXPORTS OF WOOL TOPS, NOILS AND WASTE (AUSTRALIAN PRODUCE).

('000 lb. actual weight.)

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Tops ..	5,948	4,827	3,946	2,633	3,725	8,423
Noils ..		5,076	3,715	2,728	2,647	2,805
Waste—Soft wool ..		3,399	3,324	2,815	1,438	2,960
Hard wool ..		4,135	5,672	4,450	7,692	9,258

(iv) *Total Exports—Greasy and Clean Bases.* The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1938-39 and 1948-49 to 1952-53.

EXPORTS OF WOOL—GREASY AND CLEAN BASES.
(’000 lb.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
GREASY BASIS.						
Raw Wool—						
Greasy	795,728	982,036	1,057,653	907,446	823,963	981,493
Scoured and Washed ..	137,391	289,792	307,627	243,154	172,150	176,973
and Carbonized ..	58,187	53,067	62,131	43,053	45,145	66,894
Exported on Skins ..						
Total ..	991,306	1,324,895	1,427,411	1,193,653	1,041,258	1,225,360
Semi-processed Wool—						
Tops	10,124	9,461	7,458	5,003	7,078	15,330
Yarn	58	1,965	1,029	1,321	861	54
Total Wool..	1,001,488	1,336,321	1,435,898	1,199,977	1,049,197	1,240,744
CLEAN BASIS.						
Raw Wool	(a)	719,899	778,339	666,602	589,674	696,985
Semi-processed Wool ..	5,071	6,336	4,652	3,520	4,552	8,959
Total Wool..	(a)	726,235	782,991	670,122	594,226	705,944

(a) Not available.

(v) *Total Value of Exports.* The value of wool of Australian origin exported from Australia during the five years ended 1952-53 averaged 52.7 per cent. of the total value of exports of merchandise of Australian origin, and during 1952-53 the proportion was 47.9 per cent. The value during the period under review, together with the principal countries to which wool was exported, is shown in the following table.

VALUE OF WOOL EXPORTS (AUSTRALIAN PRODUCE).
(£’000.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	19,233	80,495	114,983	193,598	89,067	142,277
Other British Countries ..	703	5,804	6,248	14,169	5,999	6,837
Belgium	5,863	15,808	24,124	42,161	17,036	23,897
France	5,618	40,262	34,851	76,352	43,813	54,910
Germany	2,602	3,877	15,504	23,822	11,443	17,147
Italy	1,340	23,680	17,627	40,027	30,357	38,287
Japan	7,727	4,808	14,003	51,524	40,624	66,686
United States of America ..	2,252	20,722	40,162	132,570	59,047	30,992
Other Foreign Countries ..	3,429	35,940	45,634	59,075	26,042	21,572
Total ..	48,767	231,396	313,136	633,298	323,428	402,905

15. *Local Sales of Wool.*—In 1946-47 following the cessation of the war-time acquisition scheme which ended with the 1945-46 season, auction sales were resumed in Australia. Sales are conducted at Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart and Launceston, and are attended by buyers representing manufacturers and merchants in the United Kingdom, France, the United States of America, Japan, U.S.S.R. and many other countries. More than 95 per cent. of the Australian wool clip is now disposed of at auction in Australia.

16. *Stocks of Wool.*—Stocks of raw wool held in Australia at 30th June, 1953 amounted to 64.0 million lb. (as in the grease) of which 50.2 million lb. (36.6 million lb. as greasy and 13.6 million lb. as scoured and carbonized) were held by woollen mills, wool scourers and fellmongers and 13.8 million lb. (unsold wool assumed to be all greasy) were held by brokers. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

Stocks at 30th June, 1953 were slightly higher than at 30th June, 1952 when, at 56.1 million lb., they were the lowest recorded since the outbreak of the war. During the war-time and post-war years up to 1951 raw wool stocks were exceptionally high because of the large quantities held in Australia by the Australian Wool Realization Commission on account of Joint Organization. They reached a maximum of 1,749.9 million lb. at 30th June, 1945, but declined in each successive year to 30th June, 1952 by which time all Joint Organization stocks had been sold.

17. **Price.**—Wool is the chief factor in the pastoral wealth of Australia and the nation's prosperity is largely dependent upon its satisfactory sale. During the three years ended 1952–53 the price of greasy wool sold in the selling centres of Australia averaged 99.5d. per lb. compared with the average United Kingdom contract price of 14.59d. per lb. during the years 1939–40 to 1945–46 and the average selling price of 11.5d. per lb. during the ten years ended 1938–39. The average for the nine years ended 1928–29 was 18d. per lb., and for the seven years ended 1913–14, 9d. per lb.

As indicated in para. 8 above, the price of wool during the 1939–45 War was determined by the British Government wool contract. With the return to auction sales since 1945–46, the average price of greasy wool sold rose rapidly from the contract price of 15.45d. per lb. applicable to 1945–46 to the unprecedented level of 144.19d. per lb. in 1950–51. This was followed by a sharp fall in 1951–52 to 72.42d. per lb. or slightly more than half the price in 1950–51. There was, however, a partial recovery to 81.80d. per lb. in 1952–53.

The following table shows the average auction room price of greasy wool in Australia for 1938–39 and 1948–49 to 1952–53 as compiled by the National Council of Wool Selling Brokers. This latter price represents the average price realized for all greasy wool of whatever type or quality marketed during the year indicated.

WOOL : AVERAGE MARKET PRICE PER LB.(a)
(Pence.)

Description.	1938–39.	1948–49.	1949–50.	1950–51.	1951–52.	1952–53.
Greasy	10.39	48.07	63.35	144.19	72.42	81.80

(a) Average price realized for all greasy wool of whatever type or quality marketed in Australia during the year. (Source—National Council of Wool Selling Brokers of Australia).

18. **Value.**—Fluctuation in Australian wool prices has a marked effect on the nation's rural income. In 1945–46 the gross value of wool production was £58,597,000 representing 17.4 per cent. of the gross value of all Rural Industries whilst in 1950–51, when prices reached a peak wool was valued at £651,902,000 or 55.6 per cent. of the total for all Rural Industries. The value of wool production fell to £322,615,000 in 1951–52 but rose again to £425,807,000 in 1952–53.

Details of the value of wool production for the years 1948–49 to 1952–53 compared with the average for the three pre-war years are shown below.

WOOL (AS IN THE GREASE)—ESTIMATED GROSS VALUE OF TOTAL
PRODUCTION.(a)
(£'000.)

Season.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(b)	A.C.T.	Aust.
Average, 1936–37 to 1938–39	26,276	9,322	9,247	4,111	3,389	980	2	98	53,425
1948–49 . .	86,095	38,895	32,623	20,134	20,000	3,765	61	386	201,959
1949–50(c) . .	126,948	57,415	46,878	28,134	25,193	4,765	58	514	289,905
1950–51 . .	288,697	32,946	88,818	66,247	61,575	12,113	135	1,371	654,902
1951–52(c) . .	135,864	63,638	47,190	36,197	33,187	5,891	86	562	322,615
1952–53(c) . .	192,174	78,761	59,903	48,579	33,104	6,380	103	793	425,807

(a) Including shorn, dead and fellmongered wool and wool exported on skins.

(b) Estimated.

(c) Excludes distributions of profits under the Wool Disposal Plan: 1949–50, £23,662,000; 1951–52, £23,662,000; 1952–53, £15,140,000.

19. **United Kingdom Importation of Wool.**—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following

statement of the quantities of wool imported into that country from the principal wool-producing countries during 1938 and each year 1949 to 1953.

WOOL(a) : IMPORTS INTO UNITED KINGDOM.
(’000 lb.)

Country of Origin.	1938.	1949.	1950.	1951.	1952.	1953.
Australia	365,519	472,500	383,643	255,941	320,653	365,135
New Zealand	197,995	209,449	180,144	138,546	190,007	191,826
Union of South Africa ..	106,601	59,596	59,747	45,900	64,015	57,213
India and Pakistan	46,049	27,194	30,269	27,184	26,492	30,932
Other British Countries ..	14,269	13,392	15,932	11,747	13,772	19,167
Argentina	79,303	4,223	2,280	7,698	23,643	60,954
France	25,211	19,210	19,450	8,793	13,812	16,847
Other Foreign Countries ..	46,379	8,793	11,375	10,103	42,479	85,637
Total Quantity ..	881,326	814,357	702,840	505,912	694,873	827,711
Total Value (£’000 sterling)	40,996	126,781	185,118	238,394	170,957	229,506

(a) Greasy and Scoured.

Australian wool represented 50.7 per cent. of the total quantity imported into the United Kingdom during the five years ended 1953. New Zealand supplied 26.3 per cent. and South Africa 8.3 per cent., while the total quantity received from British countries constituted 90.3 per cent. of all United Kingdom imports.

20. **Principal Importing Countries and Sources of Supply.**—The following table furnishes in respect of the principal importing countries details of their production and imports of wool for 1953 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured except in the case of the United States of America where estimated clean content of raw wool is quoted.

WOOL : PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1953.
(Million lb.)

Importing Country.	Pro- duction of Importing Country. (a)	Quantity Imported from(b)—					Total Imports.
		Australia.	Union of South Africa.	Argen- tina.	New Zealand.	Other Countries.	
United Kingdom	96	365.1	57.2	61.0	191.8	152.6	827.7
Belgium ..	(c)	91.9	10.7	38.0	14.0	26.2	180.8
France ..	49	181.6	43.8	19.2	64.9	28.7	338.2
Germany (Federal Republic) ..	(c)	56.0	35.2	33.6	24.1	54.0	202.9
Italy ..	37	104.3	27.7	12.3	16.0	41.0	201.3
Japan ..	(c)	127.4	13.8	30.3	5.5	20.3	197.3
United States of America ..	277	(d) 46.2	(d) 11.2	(d) 109.5	(d) 34.2	(d) 93.2	(d) 294.3

(a) As in the grease, 1952-53. (b) Actual weight of greasy and scoured wool. (c) Not available. (d) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 448.9 million lb.

As a considerable transit trade exists between continental countries it must not be assumed that the whole of the imports recorded by these countries are retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom (10 per cent. of total imports re-exported in 1953), Belgium and France.

§ 6. Trade in Hides and Skins.

1. **Extent of Trade.**—In addition to the hides and skins treated locally, considerable quantities are exported: the value of cattle and horse hides, and sheep and other skins, sent overseas during the five years ended 1952-1953 amounted to £91,833,000 or an average of £18,367,000 per annum.

2. **Sheepskins with Wool.**—The exports of sheepskins with wool, aggregating £68,732,000 during these five years, constitute the most important item in the values referred to in the preceding paragraph. During 1938-39 France was the largest purchaser of sheepskins with wool, taking 74 per cent. of the total consignments, while the United Kingdom ranked next with 15 per cent., followed by Germany with 7 per cent. In 1952-53, France obtained 74.9 per cent. of total exports and the United Kingdom 14.7 per cent. The exports of sheepskins with wool during each of the years 1948-49 to 1952-53 compared with the average for the years 1934-35 to 1938-39 were as follows:—

EXPORTS OF SHEEPSKINS WITH WOOL : AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number	.. '000	12,009	11,255	14,919	10,201	10,611	15,681
Value	.. £'000	2,780	7,339	10,877	20,773	13,159	16,584

3. **Sheepskins without Wool.**—Up to 1943-44 sheepskins without wool were exported chiefly to the United States of America. During the year mentioned this country accounted for 97 per cent. of the total shipments while the remaining 3 per cent. were exported to the United Kingdom, Canada and the U.S.S.R. There has, however, since been a decline in shipments to the United States of America and an increase in the quantities shipped to the United Kingdom and other countries; in 1952-53 the United States of America received 73 per cent. of total shipments; the United Kingdom 20 per cent. and other countries 7 per cent. Quantities and values for the five years 1948-49 to 1952-53 compared with the average for the years 1934-35 to 1938-39 are shown in the table hereunder:—

EXPORTS OF SHEEPSKINS WITHOUT WOOL : AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number	.. '000	808	814	3,441	3,000	1,454	3,242
Value	.. £'000	70	108	826	1,272	518	749

4. **Hides.**—(i) *Exports.* The export trade in cattle hides and calf skins during 1952-53 was distributed as follows:—Japan, £711,000; Turkey, £123,000; United Kingdom, £120,000; Italy, £52,000; Sweden, £49,000 and other countries, £106,000.

The exports during each of the five years 1948-49 to 1952-53 compared with the average for the years 1934-35 to 1938-39 are shown in the table below:—

EXPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number	.. ..	1,677,402	292,390	287,850	210,871	178,714	281,625
Value	.. £'000	957	1,186	1,358	1,345	1,109	1,161

Exports of horse hides during the five years ended 1952-53 numbered 286,179, valued at £1,095,000.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly large, the chief sources of supply being New Zealand and the Pacific Islands. The quantities and values of cattle hides, including calfskins, imported into Australia during the years 1948-49 to 1952-53 compared with the average for the years 1934-35 to 1938-39 were as follows :—

IMPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Quantity .. cwt.	70,781	14,245	13,490	12,126	28,590	11,183
Value .. £ '000	279	82	76	112	402	64

5. *Furred Skins.*—The exports of furred skins were valued as follows :—

EXPORTS OF FURRED SKINS : AUSTRALIA.

(£'000.)

Description.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Rabbit and Hare ..	(a) 1,150	3,004	1,640	2,995	1,358	924
Opossum ..	125	7	44	6	26	31
Kangaroo ..	173	408	187	309	530	181
Fox ..	58	5	7	14	6	1
Wallaby ..	18	5	6	14	8	6
Other ..	11	(b)	4	17	4	8
Total ..	1,535	3,429	1,888	3,355	1,932	1,151

(a) Excludes hare skins. (b) Less than £500.

These skins were shipped principally to the United States of America, the United Kingdom and Belgium and Luxemburg, the values taken by each in 1952-53 being shown in the following table :—

FURRED SKINS : EXPORTS TO PRINCIPAL COUNTRIES OF DESTINATION, 1952-53.

(£'000.)

Country.	Rabbit and Hare Skins.	Kangaroo Skins.	Other (Opossum, Wallaby, Fox, etc.)	Total.
United Kingdom ..	35	8	15	58
United States of America ..	705	172	28	905
Belgium and Luxemburg ..	63	..	(a)	63
Other Countries ..	61	1	3	65
Total ..	924	181	46	1,151

(a) Less than £500.

6. *Marketing of Hides and Skins.*—(i) *Sheepskins with Wool.* Details of the war-time agreement between the United Kingdom and Commonwealth Governments for the purchase by acquisition of the "exportable surplus" of woolled sheepskins in Australia were given in Official Year Book No. 37, page 886. The contract expired on 30th June, 1946, and sheepskins are marketed at open auction.

(ii) *Sheep and Lamb Pelts.* Details of the marketing control of sheep and lamb pelts were given in Official Year Book No. 38, page 930. Pelts have reverted to open marketing without export restrictions.

(iii) *Hides and Leather.* A hide acquisition and marketing scheme operated from November, 1939 to August, 1954. Until 31st December, 1948, the scheme operated under the National Security Regulations. From 1st January, 1949, it continued under Commonwealth Act and supporting State Acts. In June, 1952 the Tasmanian legislation lapsed and the scheme did not operate in Tasmania after that date. By August, 1954, the wide differential which had existed between fixed local prices and export prices for hides and leather had almost disappeared and, having in view certain legal weaknesses which had hampered the operation of the scheme for some time, the Commonwealth Government decided on its immediate termination.

The Australian Hide and Leather Industries Board, which administered the scheme acquired all cattle hides and yearling and calf skins produced in Australia at set prices and allocated them to tanners at these prices. Until May, 1952 the prices were 15 per cent. to 20 per cent. above August, 1939 levels but in May, 1952 they were increased by 50 per cent. Surplus hides were disposed of by tender or open auction. The Board retained the amounts realized in excess of appraised values, and supplemented the price to the producers in cases where the realized amount was less than the appraisement values.

Pre-war, about 40 to 45 per cent. of Australian production was exported, but with the development of the local tanning industry, the proportion is approximately 12½ per cent.

Returns from export sales of hides and deferred payments levied on leather exported based on the difference between world and Australian prices for the hides involved were paid into a fund by the Board. From this fund, premiums were paid to producers as a proportion of appraised values. These premiums compensated hide producers to some extent for the margin between local and oversea prices. Further details of the war-time operations of the scheme will be found in Official Year Book No. 37, page 887 and Official Year Book No. 38, pages 930-1.

(iv) *Rabbit Skins.* A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940 and terminated in April, 1949. Details of the scheme will be found in Official Year Book No. 38, page 931.

§ 7. Tallow and Lard.

1. **Production.**—Australia's production of tallow and lard is in excess of local requirements and considerable quantities are normally available for export. The recorded production in factories is incomplete, as production in establishments which do not come within the definition of a factory is excluded. Details of production of tallow and lard were collected on a calendar year basis from slaughtering establishments up to 1951. These also proved defective in certain respects and, as a result, the table appearing in issues of the Official Year Book up to No. 39 has been deleted until more complete information becomes available.

2. **Consumption of Tallow in Factories.**—Details of consumption are collected from the principal factories using tallow (soap and candle, chemical and woolscouring works).

Total consumption of tallow in factories as shown in the table below for the year 1938-39 and 1948-49 to 1952-53 is however deficient to the extent that no allowance is made for the small unrecorded amounts used in other types of establishments.

TALLOW : CONSUMPTION IN FACTORIES, AUSTRALIA.

(Cwt.)

Year.	Quantity Used.	Year.	Quantity Used
1938-39.. ..	539,095	1950-51	1,217,027
1948-49.. ..	1,054,040	1951-52	1,205,307
1949-50.. ..	1,063,194	1952-53	1,068,181

3. Exports of Tallow and Lard.—Particulars of exports of edible (including lard) and inedible tallow are shown in the following table for the five years 1948-49 to 1952-53 in comparison with the average for the five years ended 1938-39.

TALLOW AND LARD : EXPORTS, AUSTRALIA.
(cwt.)

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Edible	(a)	60,171	75,497	31,957	27,346	111,020
Inedible	606,934	142,179	348,214	260,569	126,618	430,227
Total	(a)	202,350	423,711	292,526	153,964	541,247

(a) Not available.

4. Marketing of Tallow.—Until 30th September, 1952 the bulk of Australia's exportable surplus tallow, other than collar white mutton tallow was sold to the United Kingdom Ministry of Food under a series of annual contracts. The 1951-52 contract was not renewed and on 9th November, 1952 tallow export control was removed following termination of the industry's equalization pool arrangement and price de-control in most states.

Price control on tallow now operates only in Queensland and there are no restrictions on the export of tallow to any destination from any part of Australia.

§ 8. Net Exports Of Principal Pastoral Products.

The quantities and values by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1938-39, 1951-52 and 1952-53 were as follows :—

NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

Product.	Unit of Quantity.	Quantity.			Value (£'000).		
		1938-39.	1951-52.	1952-53.	1938-39.	1951-52.	1952-53.
Animals (living)—							
Cattle	No.	405	363	1,149	1	156	120
Horses	"	2,294	283	893	..	124	46
Sheep	"	66,739	78,877	84,130	43	356	268
Bones	cwt.	21,497	26,447	19,880	11	59	41
Glue-pieces and Sinews ..	"	11,145	18,505	13,258	7	66	41
Glycerine	'000 lb.	79	1,754	1,487	1	293	205
Hair and Bristles	"	1,003	13	1,595	7	1,192	261
Hoofs	cwt.	(a)	10,095	11,484	8	24	20
Horns	"	(a)	7,220	10,144	19	48	61
Meats—							
Frozen Beef and Veal(b)	'000 lb.	271,949	95,876	192,500	4,323	5,230	13,782
" Mutton and Lamb	"	186,488	31,110	166,714	4,807	1,915	8,752
" Rabbits and Hares	'000 prs.	(a)	16,667	11,391	232	4,500	3,400
" Other	'000 lb.	19,588	20,505	23,207	419	1,148	1,530
Potted and Concentrated	"	(a)	1,033	1,848	28	286	921
Preserved in Tins, etc. ..	"	14,779	112,177	202,213	494	13,101	27,858
Other (excluding Bacon and Ham)	"	308	3,479	2,801	6	313	302
Sausage Casings	cwt.	8,673	5,220	15,712	209	533	1,144
Hides and Skins—							
Cattle	No.	(a)	94,629	207,803	690	760	1,083
Calf	"	(a)	44,124	11,873	133	52	13
Horse	"	(a)	59,615	83,778	7	281	313
Sheep and Lamb	"	(a)	11,935,629	18,885,011	2,340	13,607	17,321
Rabbit and Hare	cwt.	37,544	57,660	508,018	397	1,333	907
Tallow (Edible and Inedible)	"	(c) 560,241	144,975	508,018	(c) 481	889	16
Wool—							
Greasy	'000 lb.	779,782	820,198	978,980	36,688	277,315	355,649
Scoured, Tops, Noils, Waste	"	70,300	97,165	106,540	5,282	44,705	46,401
Total					56,547	364,520	479,611

(a) Quantity not available.

(b) Includes chilled beef.

(c) Inedible Tallow only.

NOTE.—Minus sign (—) signifies net imports.

CHAPTER XX.

AGRICULTURAL PRODUCTION.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

§ 1. Introductory.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by farmers (an average of 245,600 during the past ten years) who utilize one acre or more of land for agricultural or pastoral purposes. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Australian Capital Territory. Particulars for the Northern Territory have not been available in recent years. The returns are collected on a substantially uniform basis in all States at 31st March each year and relate to areas sown and crops produced in the previous twelve months. Where harvests are not completed by March (e.g. potatoes) provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources, these are used in conjunction with the "census" returns. Except where otherwise stated the "agricultural" years hereafter mentioned are taken as ending on 30th June.

§ 2. Progress of Agriculture.

1. **Early Records.**—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797", Governor Hunter gives the acreage of crops as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

A brief reference to the attempts at cultivation by the first settlers in New South Wales and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813 and west of the Blue Mountains thereafter is contained in early issues of the Official Year Book. (*See No. 22, p. 670.*)

By the year 1850 the area of crops had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the eleven seasons ended 1952–53, and on page 747 there is a graph showing the area of crops in Australia from 1860 onward.

AREA OF CROPS.

('000 Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1860-61	246	387	4	350	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,311	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1942-43	5,297	3,816	1,743	3,437	2,820	300	(a)	7	17,420
1943-44	4,797	3,463	1,757	2,761	2,782	335	(a)	7	15,902
1944-45	5,045	4,310	1,797	3,179	2,790	343	(a)	8	17,472
1945-46	6,087	5,327	1,822	3,824	2,945	412	(a)	9	20,426
1946-47	6,512	5,103	1,617	3,885	3,590	361	(a)	9	21,077
1947-48	7,168	5,023	1,849	3,852	4,026	342	(a)	11	22,271
1948-49	5,711	4,645	1,953	3,757	4,215	345	(a)	10	20,636
1949-50	5,670	4,480	2,057	3,617	4,399	368	(a)	10	20,601
1950-51	4,761	4,351	2,077	3,676	4,650	366	(a)	6	19,917
1951-52	4,704	4,271	2,022	3,696	4,693	410	(a)	6	19,802
1952-53	4,837	4,286	2,423	3,581	4,816	422	(a)	6	20,371

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860 to 1915-16, when, as the result of a special effort to raise wheat during the 1914-18 War, 18.5 million acres were cultivated in Australia. Four years later the area of crops declined to 13.3 million acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to a new maximum of 25.2 million acres in 1930-31. Thereafter the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935-36. Subsequently the area increased and reached a maximum of 23.5 million acres in 1938-39. Thereafter it declined to less than 16 million acres in 1943-44, rising in each succeeding year up to and including 1947-48, when the area of crops amounted to 22.3 million acres. This upward trend was reversed in 1948-49, the area of crops declining in that year and each succeeding year until 1951-52 when 19.8 million acres were sown to crops. The total area of crops in 1952-53 amounted to 20.4 million acres, an increase of 0.6 million acres over the preceding year. As the area under wheat in Australia constitutes a large proportion of the total areas cropped (56 per cent. during the ten years ended 1952-53) fluctuations in the latter follow broadly the same pattern as changes in wheat areas.

3. **Area under Sown Pastures.**—In all the States there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in "area of crops", have expanded from about 5.3 million acres in 1929-30 to about 20.5 million acres in 1952-53.

4. **Australian Agricultural Council.**—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Ministers for Commerce and Agriculture and for Territories, and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are:—(i) the promotion of the welfare and development of agricultural industries generally; (ii) exchange of information on agricultural production

and marketing; (iii) the improvement of the quality of agricultural products and the maintenance of high grade standards; (iv) to ensure, as far as possible, balance between production and available markets; and (v) organized marketing, etc.

In addition a permanent Standing Committee on Agriculture was formed to advise the Council; secure co-operation and co-ordination in agricultural research; advise State and Commonwealth Governments on the initiation and development of agricultural research and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

At a Council meeting in April, 1952, a programme of expansion of rural industries was approved. Production aims to be achieved by 1957-58 were set for major rural products having regard to existing conditions and methods of production. These aims did not represent a maximum level of production but a balanced expansion between the different commodities within the limits of physical capacity.

In determining production aims it was assumed that Governments would continue their efforts to expand agricultural production; that supplies of machinery, farm materials, fertilizers and labour would be adequate; land development schemes and irrigation projects would be intensified and that relative prices would not provide undue incentive to produce any one commodity at the expense of another.

Details of the 1957-58 production aims for the principal rural products as agreed on by the Council compared with actual production in 1952-53 are shown in the following table.

RURAL PRODUCTION 1952-53 AND PRODUCTION AIMS SET FOR 1957-58 BY THE AUSTRALIAN AGRICULTURAL COUNCIL.

A. CROP PRODUCTION.

B. LIVE STOCK PRODUCTION.

Commodity.	Pro- duction. 1952-53.	Pro- duction aims. 1957-58.	Per- centage Increase on Decrease. 1957-58 on 1952-53.	Commodity.	Pro- duction. 1952-53.	Pro- duction Aims. 1957-58.	Per- centage Increase on Decrease 1957-58 on 1952-53.
Wheat for Grain	'000 bus. 195,208	'000 bus. 191,000	- 2	Total Milk	mill. gals. 1,219	mill. gals. 1,350	11
Oats for Grain ..	43,623	42,000	- 4	Butter	'000 tons. 167	'000 tons. 170	2
Barley for Grain	35,046	25,000	-39	Cheese	47	40	-15
Maize for Grain	4,966	7,200	45	Processed Milk	122	190	56
Grain Sorghum ..	3,328	6,000	80	Beef and Veal (b)	675	672	..
Linseed ..	40	2,000	4,900	Lamb(b)	146	190	30
Rice ..	3,964	4,000	1	Mutton(b)	249	213	-14
Cotton (raw) ..	'000 lb. 2,184	'000 lb. 10,000	358	Pigmeats(b)	83	100	20
Tobacco ..	6,507	14,900	129	Eggs(c)	mill. doz. 105	mill. doz. 129	23
Sugar(a)	'000 tons. 949	'000 tons. 1,228	29	Wool(d)	mill. lb. 1,281	mill. lb. 1,200	- 6

(a) Raw sugar 94 net titre. (b) Carcass weight, bone-in. (c) Commercial production only
(d) Total production of shorn and skin wools.

§ 3. Distribution, Production and Value of Crops.

1. Area of Crops in States and Territories.—The following table shows the areas in the several States and the Australian Capital Territory of each of the crops for the season 1952-53. Similar details for the season 1951-52 appear in *Primary Industries Bulletin* No. 46, Part I.—*Rural Industries*.

AREA OF CROPS, 1952-53.

(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Cereals for Grain—								
Barley—								
2 Row ..	12,481	205,960	53,103	818,457	24,873	7,659	..	1,122,533
6 Row ..	5,116	28,637	18,776	119,064	82,088	380	..	254,061
Malze ..	60,647	5,175	108,230	..	13	9	..	174,074
Oats ..	729,961	756,129	56,403	369,350	832,170	20,049	198	2,764,260
Panicum, Millet and Setaria ..	..	1,067	16,461	..	..	..	..	17,528
Rice ..	34,494	..	25	..	..	..	..	34,519
Rye ..	1,481	31,690	522	57,041	10,287	352	..	101,373
Sorghum ..	4,982	..	190,619	..	..	..	..	195,601
Wheat ..	2,702,359	2,232,097	724,495	1,543,762	2,999,475	6,688	609	10,209,485
Hay ..	387,823	752,932	66,249	213,552	227,082	110,140	3,237	1,761,315
Green Fodder ..	661,757	(b) 40,303	572,212	(c) 285,857	574,790	179,353	1,108	2,315,390
Other Stock Fodder ..	5,745	7,899	15,234	26,047	6,191	20,321	..	81,437
Grass Seed—								
Lucerne ..	8,659	(d) ..	591	20,924	(e) ..	21	..	(f) 30,195
Clover ..	2,265	1,626	..	7,435	9,214	899	(e) ..	21,439
Other ..	2,843	6,316	5,891	5,306	125	1,410	199	22,090
Industrial Crops—								
Broom Millet ..	3,260	285	233	(g) ..	7	..	..	(f) 3,785
Canary Seed ..	1,095	..	21,124	17	..	..	..	22,236
Cotton ..	..	..	5,866	..	..	..	..	5,866
Flax—								
For Fibre ..	..	2,840	..	1,618	2,423	..	..	6,881
For Linseed ..	15,439	1,063	25,875	3,961	..	..	..	46,338
Hops ..	..	367	..	..	(g) ..	1,332	..	(f) 1,699
Peanuts ..	789	..	18,920	..	10	..	..	19,719
Sugar-cane—								
Productive ..	5,202	..	274,757	..	..	..	..	279,959
Unproductive ..	8,858	..	145,077	..	..	..	..	153,935
Sunflowers ..	202	67	3,254	..	..	..	..	3,523
Tobacco ..	445	1,613	4,339	..	1,525	..	..	7,922
Vegetables for Human consumption—								
Onions ..	363	3,866	2,813	552	414	49	9	3,066
Potatoes ..	18,119	52,851	11,641	9,231	8,079	35,347	127	135,395
Other Vegetables ..	53,376	36,143	36,246	8,528	6,688	10,833	77	151,891
Vineyards—								
Bearing ..	15,604	42,710	2,565	55,914	8,059	..	..	124,852
Not Bearing ..	2,402	3,258	243	4,689	1,174	..	..	11,766
Orchards and other Fruit Gardens—								
Bearing ..	72,042	52,729	23,891	21,912	18,493	24,567	87	213,721
Not Bearing ..	18,089	14,505	13,389	6,737	2,999	1,508	5	57,232
Nurseries and Cut Flowers ..	1,027	2,660	237	174	171	158	8	4,444
All Other Crops ..	420	973	3,220	79	63	1,385	26	6,166
Total Area ..	4,837,355	4,285,770	2,422,501	3,580,507	4,816,413	422,460	5,690	20,370,696

(a) Excludes Northern Territory, details for which are not available. (b) Excludes 35,175 acres of pasture land sown to lucerne and 179,235 acres sown to oats, for grazing. (c) Excludes 190,838 acres of pasture land sown to lucerne for grazing. (d) Not available. Included in "All Other Crops". (e) Not available. Included in "Other Grass Seed". (f) Incomplete. See footnotes to individual States. (g) Not available for publication. Included in "All Other Crops".

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories to the total area of crops for the season 1952-53 is shown in the next table. Similar details for the season 1951-52 appear in *Primary Industries Bulletin* No. 46, *Part I.—Rural Industries*. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are wheat, green fodder and sugar-cane. and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing more than 50 per cent. of the total area of crops in 1952-53.

RELATIVE AREAS OF CROPS, 1952-53.
(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Wheat (Grain) ..	55.9	52.1	29.9	43.1	62.3	1.6	10.7	50.1
Oats (Grain) ..	15.1	17.6	2.3	10.3	17.3	4.7	3.5	13.6
Green Fodder(b) ..	13.7	0.9	23.6	8.0	12.0	42.5	19.5	11.4
Hay ..	8.0	17.6	2.7	6.0	4.7	26.1	56.9	8.6
Barley (Grain) ..	0.4	5.5	3.0	26.2	2.2	1.9	..	6.8
Sugar-cane, Crushed	0.1	..	11.3	..	..	..	..	1.4
Orchards and Fruit	..	..	..	..	..	..	..	..
Gardens ..	1.9	1.6	1.6	0.8	0.5	6.2	1.6	1.3
Maize (Grain) ..	1.3	0.1	4.5	..	..	..	..	0.9
Vineyards ..	0.4	1.1	0.1	1.7	0.2	..	..	0.7
Potatoes ..	0.4	1.2	0.5	0.3	0.2	8.4	2.2	0.7
All other ..	2.8	2.3	20.5	3.6	0.6	8.6	5.6	4.5
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Excludes Northern Territory, details for which are not available. (b) Includes green forage except in Victoria and in South Australia where pasture land sown to lucerne is excluded.

3. Area of Principal Crops in Australia.—The area of the principal crops during each of the five seasons ended 1952-53, compared with the average for the decennium ended 1938-39 is shown hereunder :—

AREA OF PRINCIPAL CROPS : AUSTRALIA.
(’000 Acres.)

Crop.	Average, ten years ended 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Cereals for Grain—						
Barley, 2 Row ..	428	899	927	963	965	1,123
Maize ..	295	182	194	169	170	174
Oats ..	1,393	1,770	1,748	1,757	2,365	2,764
Rice ..	22	33	38	37	36	35
Wheat ..	14,345	12,583	12,240	11,663	10,384	10,209
Hay ..	2,994	1,580	1,605	1,377	1,549	1,761
Green Fodder ..	1,272	2,011	2,178	2,224	2,522	2,315
Vegetables for Human Consumption—						
Onions ..	8	10	8	8	9	8
Potatoes ..	130	120	134	127	118	135
Other vegetables for human consumption ..	(a) 83	176	155	156	162	152
Industrial Crops—						
Cotton ..	43	6	3	3	4	6
Hops ..	1	2	2	2	2	2
Sugar-cane ..	332	384	398	397	403	434
Tobacco ..	12	4	5	6	8	8
Vineyards ..	118	135	135	137	136	137
Orchards ..	276	287	280	275	271	271
All other Crops ..	206	454	551	616	698	837
Total ..	21,938	20,636	20,601	19,917	19,802	20,371

(a) Incomplete. Market gardens and pulse only.

4. Weights and Measures.—Details of the weights and measures used in recording production of Agricultural commodities appear in the introduction to *Primary Industries Bulletin No. 47—Part I.—Rural Industries.*

5. Production of Crops in States and Territories.—The following table shows production of crops in the various States and the Australian Capital Territory for the season 1952-53 :—

PRODUCTION OF CROPS, 1952-53.

Crop.	Unit of Quantity.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	A.C.T.	Aust.(a)
Cereals for Grain—									
Barley—									
2 Row	'ooo bus.	247	4,203	1,551	23,044	381	207	..	29,633
6 Row	" "	93	532	558	2,857	1,362	10	..	5,412
Maize	" "	2,113	204	2,650	..	..	..	..	4,967
Oats	" "	12,326	12,599	1,303	6,666	10,440	286	3	43,623
Panicum, Millet and Setaria	" "	..	13	211	..	..	..	..	224
Rice	" "	3,964	..	..	..	..	..	..	3,964
Rye	" "	75	257	15	400	70	4	..	770
Sorghum	" "	89	3,239	..	..	..	..	..	3,328
Wheat	" "	56,670	50,335	18,662	33,919	35,458	156	8	195,208
Hay	" tons	579	1,245	136	318	290	192	5	2,765
Grass Seed—									
Lucerne	cwt.	4,221	..	568	11,860	..	..	..	16,649
Clover	" "	4,427	2,827	..	17,654	16,078	840	(b)	(c)41,826
Other	" "	1,609	8,043	15,171	2,928	189	1,518	125	29,583
Industrial Crops—									
Broom Millet—									
Fibre	" "	22,660	1,441	764	(d)	60	..	..	(c)24,925
Grain	bus.	23,706	796	..	..	..	..	..	24,502
Canary Seed	" "	13,446	..	339,135	362	..	..	..	352,943
Cotton, Unginned	'ooo lb.	..	..	2,184	..	..	..	..	2,184
Flax—									
Straw	ton	..	4,379	..	2,967	2,856	..	..	10,202
Linseed	" "	2,678	176	6,526	551	..	..	..	9,931
Hops (Dry Weight)	cwt.	..	5,202	..	(d)	26,914	..	..	(c)32,116
Peanuts	" "	8,185	..	168,760	..	139	..	..	177,684
Sugar-cane, Crushed	'ooo tons	126	..	6,841	..	..	..	..	6,967
Sunflower Seed	cwt.	1,524	261	12,122	..	..	..	..	13,907
Tobacco, Dried Leaf	'ooo lb.	514	1,472	3,431	..	1,068	..	..	6,485
Vegetables for human consumption—									
Onions	ton	1,171	23,690	11,542	5,500	5,409	196	55	47,563
Potatoes	" "	51,132	133,148	35,051	43,880	52,759	114,500	663	431,133
Vineyards—									
Grapes—									
For Drying	" "	42,164	238,735	..	90,097	11,052	..	..	382,048
Table	" "	3,651	5,835	2,649	1,247	1,875	..	..	15,257
Wine	" "	22,953	11,403	180	124,392	3,827	..	..	162,755

(a) Excludes Northern Territory, details for which are not available. (b) Not available.
(c) Incomplete. See footnotes to individual States. (d) Not available for publication.

6. Production of Principal Crops in Australia.—The following table shows the production of the principal crops for the five years ended 1952-53, and the average for the decennium ended 1938-39 :—

PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Cereals for Grain—							
Barley, 2 Row	'ooo bus.	7,480	15,929	17,569	20,811	19,476	29,633
Maize	" "	7,228	5,188	5,906	4,729	4,018	4,967
Oats	" "	16,437	23,601	27,391	25,128	34,506	43,623
Rice	" "	2,005	2,739	3,783	4,118	3,048	3,964
Wheat	" "	169,308	190,703	218,221	184,244	159,725	195,208
Hay	" tons	3,490	2,292	2,430	2,063	2,345	2,765
Vegetables for human consumption—							
Onions	" "	43	57	48	35	53	48
Potatoes	" "	351	460	471	412	509	431
Industrial Crops—							
Cotton, Unginned	lb.	15,667	1,821	719	1,102	1,406	2,184
Hops (dry weight)	cwt.	18,989	(a)17,073	(a)22,993	(a)26,147	(a)17,914	(a)32,116
Sugar (from Cane)	'ooo tons	658	943	937	921	745	949
Tobacco (Dried leaf)	lb.	5,113	3,416	4,138	4,211	7,553	6,485
Vineyards—							
Grapes	" tons	381	436	434	362	475	560
Wine made(b)	" gals.	16,104	32,818	32,675	26,036	35,255	30,023
Raisins and Currants	" tons	70	65	68	56	72	101

(a) Excludes Western Australia. (b) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

7. **Average Yield per Acre of Principal Crops in Australia.**—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1952-53 and the average for the decennium ended 1938-39.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Cereals for Grain—							
Barley, 2 Row ..	bushel.	17.5	17.7	19.0	21.6	20.2	26.4
Maize ..	"	24.5	28.5	31.0	27.9	23.7	28.5
Oats ..	"	11.8	13.3	15.7	14.3	14.6	15.8
Rice ..	"	93.0	83.8	100.8	111.5	85.5	114.8
Wheat ..	"	11.8	15.2	17.8	15.8	15.4	19.1
Hay ..	ton	1.17	1.45	1.51	1.50	1.51	1.57
Vegetables for human consumption—							
Onions ..	"	5.54	5.81	6.34	4.61	6.13	5.90
Potatoes ..	"	2.71	3.84	3.52	3.24	4.31	3.18
Industrial Crops—							
Cotton, Unginned ..	lb.	366	293	267	373	314	372
Hops (dry weight) (a) ..	cwt.	17.88	11.28	14.76	16.32	10.79	19.31
Sugar (from Cane) (a) ..	ton	2.76	3.54	3.33	3.39	2.65	3.39
Tobacco (Dried leaf) ..	lb.	463	918	903	651	921	819
Vineyards—							
Grapes (a) ..	ton	3.45	3.53	3.53	2.91	3.78	4.49

(a) Per acre of productive crops.

8. **Gross Value of Principal Crops in Australia.**—The following table shows the gross value of principal crops at the principal markets in Australia for the five years ended 1952-53 and the average for the decennium ended 1938-39.

GROSS VALUE OF PRINCIPAL CROPS : AUSTRALIA.

(£'000.)

Crop.	Average, ten years ended 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53
Cereals for Grain—						
Barley ..	1,214	7,394	10,709	13,339	17,739	27,512
Maize ..	1,537	2,640	2,806	3,048	3,809	4,039
Oats ..	1,937	5,458	8,254	10,293	19,005	15,301
Rice ..	392	1,032	1,053	2,171	2,108	3,338
Wheat (a) ..	30,125	112,465	148,596	124,740	120,734	154,656
Hay ..	11,413	14,561	17,770	17,931	26,193	29,249
Green Fodder ..	2,775	(b) 3,635	(b) 3,894	(b) 5,001	(b) 6,934	(b) 6,209
Vegetables for human consumption—						
Onions ..	245	863	1,058	1,086	2,019	1,106
Potatoes ..	2,314	8,125	9,142	10,265	15,982	14,706
Other vegetables for human consumption ..	(c) 2,203	12,920	14,835	20,200	27,123	24,543
Industrial Crops—						
Cotton, Unginned ..	(a) 298	48	26	54	127	107
Hops ..	157	(b) 284	(b) 465	(b) 620	(b) 517	(b) 1,021
Sugar-cane ..	7,895	17,996	18,581	19,046	19,635	30,495
Tobacco (Dried leaf) ..	474	695	1,146	1,622	2,379	2,578
Vineyards ..	3,907	7,475	8,886	10,125	14,084	15,751
Orchards ..	(a) 7,953	20,160	26,273	30,656	43,838	42,032
All other Crops ..	2,651	7,186	7,795	8,441	10,098	10,465
Total Gross Value ..	77,400	222,937	281,889	278,638	332,324	383,108

(a) Includes Government assistance.

(b) Incomplete, excludes Western Australia

(c) Incomplete. Market gardens and pulse only.

9. **Value of Production and Indexes of Price and Quantity of Production.**—(i) *Gross and Net Values, 1952-53.* Values of agricultural production for each State are shown for 1952-53 in the following table. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXIX.—Miscellaneous.

In computing the net value of production no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant; consequently, the figures stated are inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1952-53.
(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net value of Production. (a)
				Seed used and Fodder for Farm Stock.	Value of other Materials used in process of production.	
New South Wales	89,931	15,220	74,711	5,291	(b) 2,797	66,623
Victoria	93,350	12,958	80,392	11,119	4,206	65,067
Queensland	71,124	7,390	63,734	5,250	4,800	53,684
South Australia	69,580	11,405	58,175	3,468	3,463	51,244
Western Australia	43,563	5,073	38,490	2,718	6,795	28,977
Tasmania	15,411	2,817	12,594	1,304	(b) 487	10,803
Total	382,959	54,863	328,096	29,150	22,548	276,398

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance made for costs of power, power kerosene, petrol and other oils.

(ii) *Net Values, 1929-30 to 1952-53.* In the following table the net value of agricultural production and the net value per head of population are shown by States for the years 1948-49 to 1952-53 in comparison with the averages for the decennial periods ended 1938-39 and 1951-52 :—

NET VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a) (£'000.)							
Average, ten years 1929-30 to 1938-39	13,304	10,568	10,189	6,540	4,903	1,824	47,268
1948-49	46,205	39,352	28,977	23,951	21,875	4,012	164,372
1949-50	69,078	53,905	30,953	32,790	26,605	5,372	218,703
1950-51	44,492	53,465	32,001	36,402	33,126	8,644	208,130
1951-52	58,333	64,084	35,622	46,903	31,027	10,716	246,685
Average, ten years 1942-43 to 1951-52	42,697	36,747	23,845	24,701	17,554	5,466	151,010
1952-53	66,623	65,067	53,684	51,244	28,977	10,803	276,398

NET VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, ten years 1929-30 to 1938-39	5 1 2	5 14 11	10 13 0	11 3 10	11 0 9	7 18 5	7 1 4
1948-49	15 1 7	18 12 5	25 10 9	36 0 2	41 17 9	14 19 1	21 3 3
1949-50	21 15 7	24 16 9	26 12 3	47 14 10	48 14 11	19 7 4	27 5 8
1950-51	13 11 9	23 18 1	26 16 6	51 3 11	57 19 7	30 1 1	25 3 1
1951-52	17 7 8	27 16 11	29 3 5	64 6 2	52 9 8	35 17 10	29 0 8
Average, ten years 1942-43 to 1951-52	13 17 8	17 6 2	21 2 0	36 14 8	32 15 8	20 8 4	19 6 3
1952-53	19 9 7	27 10 10	42 19 9	68 7 5	47 5 10	34 19 5	31 15 2

(a) No deduction has been made for depreciation and maintenance.

(iii) *Quantum and Price Indexes of Agricultural Production.* Quantum and price indexes of agricultural production shown in the following table have been calculated by the fixed-base weighted aggregative method. Further details on weights used, &c., are to be found in Chapter XXIX.—Miscellaneous.

QUANTUM AND PRICE INDEXES OF AGRICULTURAL PRODUCTION.
(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantum Produced—					
Wheat	116	133	112	97	119
Other Crops	102	107	105	107	123
Total, All Crops ..	108	117	108	103	121
Total per Head of Population	95	100	89	83	95
Price—					
Wheat	294	341	338	378	397
Other Crops	186	218	255	338	337
Total, All Crops ..	234	272	291	355	364

§ 4. Wheat.

1. **Royal Commission on the Wheat Industry.**—A Royal Commission was appointed in January, 1934, to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat-growing industry, the third that of baking, the fourth the flour-milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

2. **Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to enquire into and report upon :—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of cost could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth was 6s. per bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—Details of the operations of the Wheat Stabilization Board in licensing wheat growing during the seasons 1941-42 to 1948-49 will be found in Official Year Book No. 38, pp. 940, 941. The Board ceased to function on 31st December, 1948.

4. **Legislation relating to Wheat Industry.**—(i) *Financial Assistance to Wheat Growers.* Reference to financial assistance during 1951-52 and 1952-53 will be found in § 23, Financial Assistance to Primary Producers, hereafter. Details of financial assistance rendered by the Commonwealth Government prior to 1950-51 appear in Official Year Books No. 37, No. 38, No. 39 and No. 40.

(ii) *Stabilized Marketing.* A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the permanent Wheat Stabilization Plan in 1948, was given in the Appendix to Official Year Book No. 37 (pp. 1295-99).

(iii) *The Australian Wheat Board.* The Australian Wheat Board was constituted in September, 1939 under National Security (Wheat Acquisition) Regulations to purchase sell or dispose of wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired and such other matters as were necessary to give effect to the regulations.

The Board was reconstituted, with similar powers, under the Commonwealth Wheat Stabilization Act 1948 to administer the stabilization plan. The new Board commenced to function on the 18th December, 1948.

(iv) *Wheat Stabilization Plan.* (a) 1947-48 to 1952-53. Details of the wheat stabilization plan which operated during the seasons 1947-48 to 1952-53, inclusive were published in Official Year Book No. 40, pp. 841 and 842, and previous issues. All contributions paid into the Fund established as a part of the Plan have now been refunded.

(b) 1953-54 to 1957-58. Agreement was reached in July, 1954, at a conference of Premiers and Ministers for Agriculture on the terms of a new wheat industry stabilization plan. The plan was submitted to polls of wheat growers in the mainland producing States with the following result :—

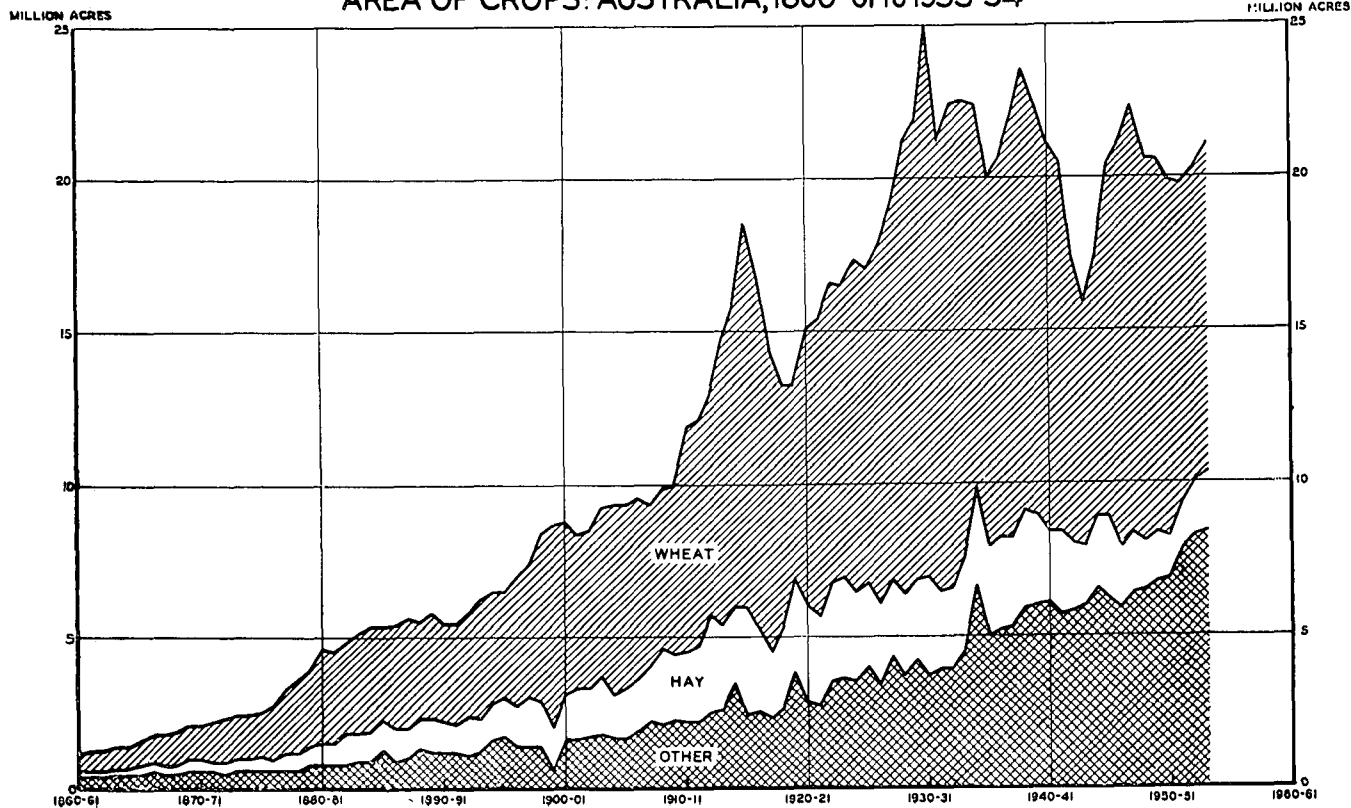
State.					For.	Against.	In Favour. (Per cent.)
New South Wales	..	..	..	..	14,110	914	93.9
Victoria	..	..	..	..	12,280	260	97.9
Queensland	..	..	..	..	3,407	81	97.7
South Australia	..	..	..	..	8,907	760	92.1
Western Australia	..	..	..	..	7,880	919	89.5
Total	..	..	..	..	46,584	2,934	94.1

The necessary legislation was subsequently passed by Commonwealth and State Governments and the Plan operated from the 1953-54 season.

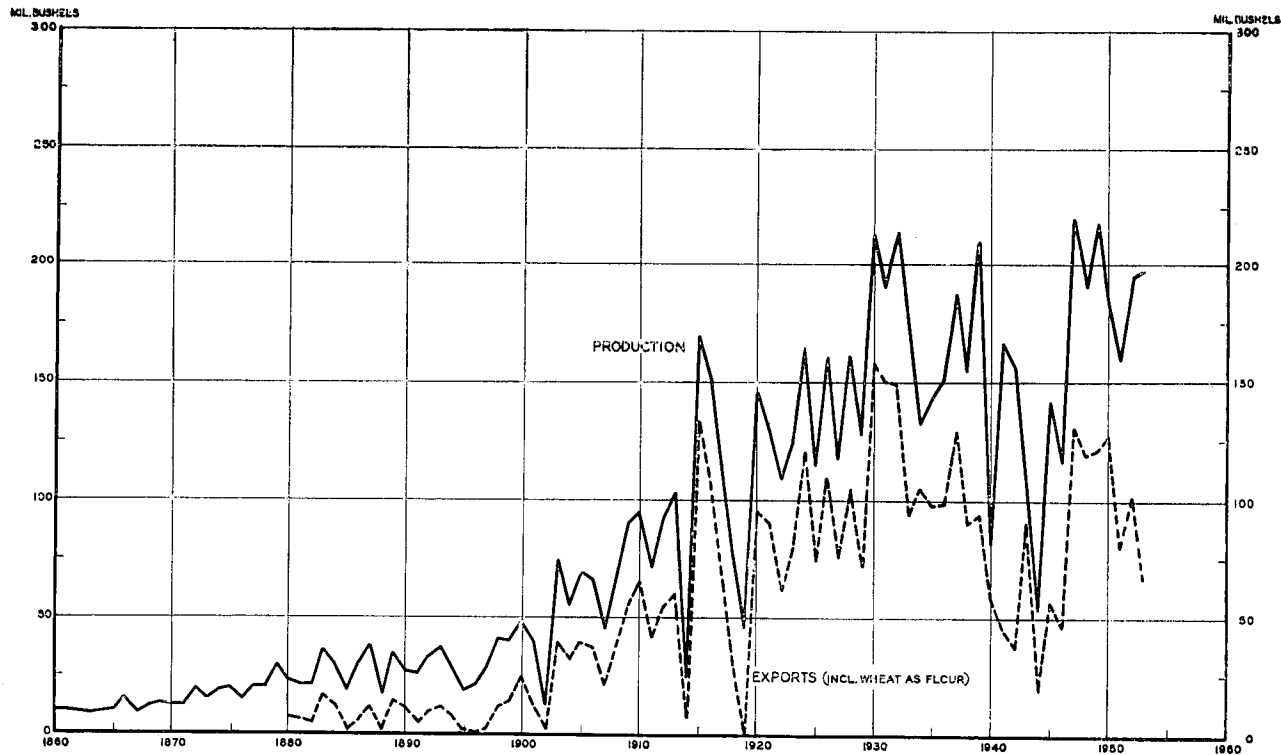
The principal features of the Plan are as follows :—

- (i) The period of the Wheat Stabilization Plan to be five years, 1953-54 to 1957-58, inclusive.
- (ii) The Australian Wheat Board will be the sole authority for marketing wheat within Australia and wheat and flour for export from Australia.
- (iii) The Commonwealth Government will guarantee a return to growers of the ascertained cost of production in respect of up to 100 million bushels of wheat exported from Australia from each of the crops covered by the plan.
- (iv) The home consumption price will not be less than the guaranteed price. Subject to this understanding, the home consumption price will be fixed at 14s. per bushel, bulk f.o.r. ports, but will vary downwards to conform with the International Wheat Agreement price current at the commencement of each season. If no international agreement is operating the home consumption price will vary downwards with the current export price fixed by the Wheat Board.
- (v) A premium of 3d. per bushel on wheat grown in Western Australia and exported from that State will be paid in recognition of the natural freight advantage applying to that State.
- (vi) The home consumption price will be loaded by an amount necessary to cover the cost of freight on wheat to Tasmania. For 1953-54 this amount is 1½d. per bushel.
- (vii) A Stabilization Fund will be established by means of an export tax of 1s. 6d. per bushel when wheat export prices exceed the costs of production by this amount or more, and by that portion of 1s. 6d. by which the export prices exceed the costs of production when the excess is less than 1s. 6d. per bushel.
- (viii) The maximum amount of the Stabilization Fund will be £20 million. As the Fund accumulates beyond this figure, repayments will be made to the oldest contributing pool.
- (ix) When average export realizations fall below costs of production, export returns will be raised, in respect of up to 100 million bushels, first by drawing upon the Stabilization Fund and when that Fund is exhausted the Commonwealth Government will make the necessary payments

AREA OF CROPS: AUSTRALIA, 1860-61 to 1953-54

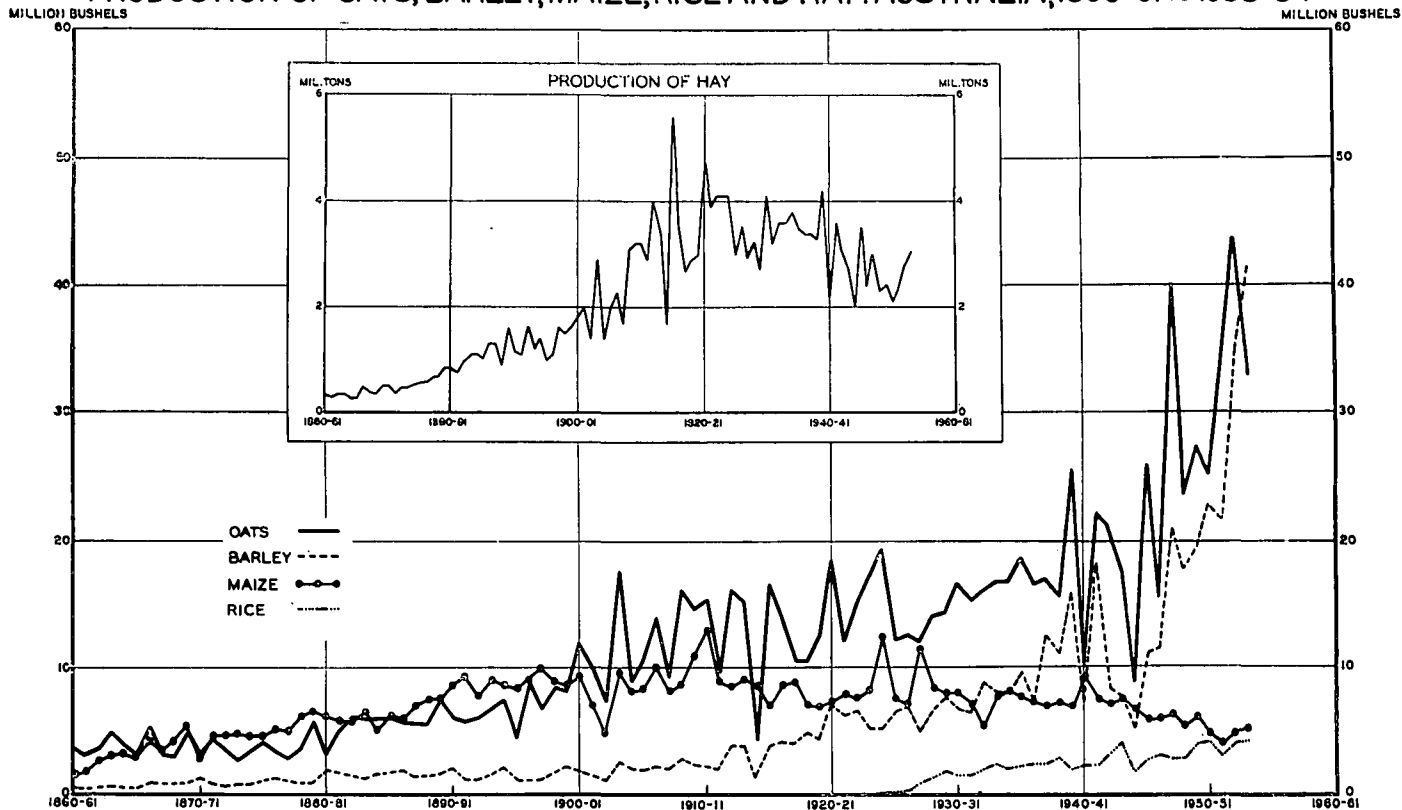


WHEAT PRODUCTION AND EXPORTS: AUSTRALIA, 1860-61 to 1953-54



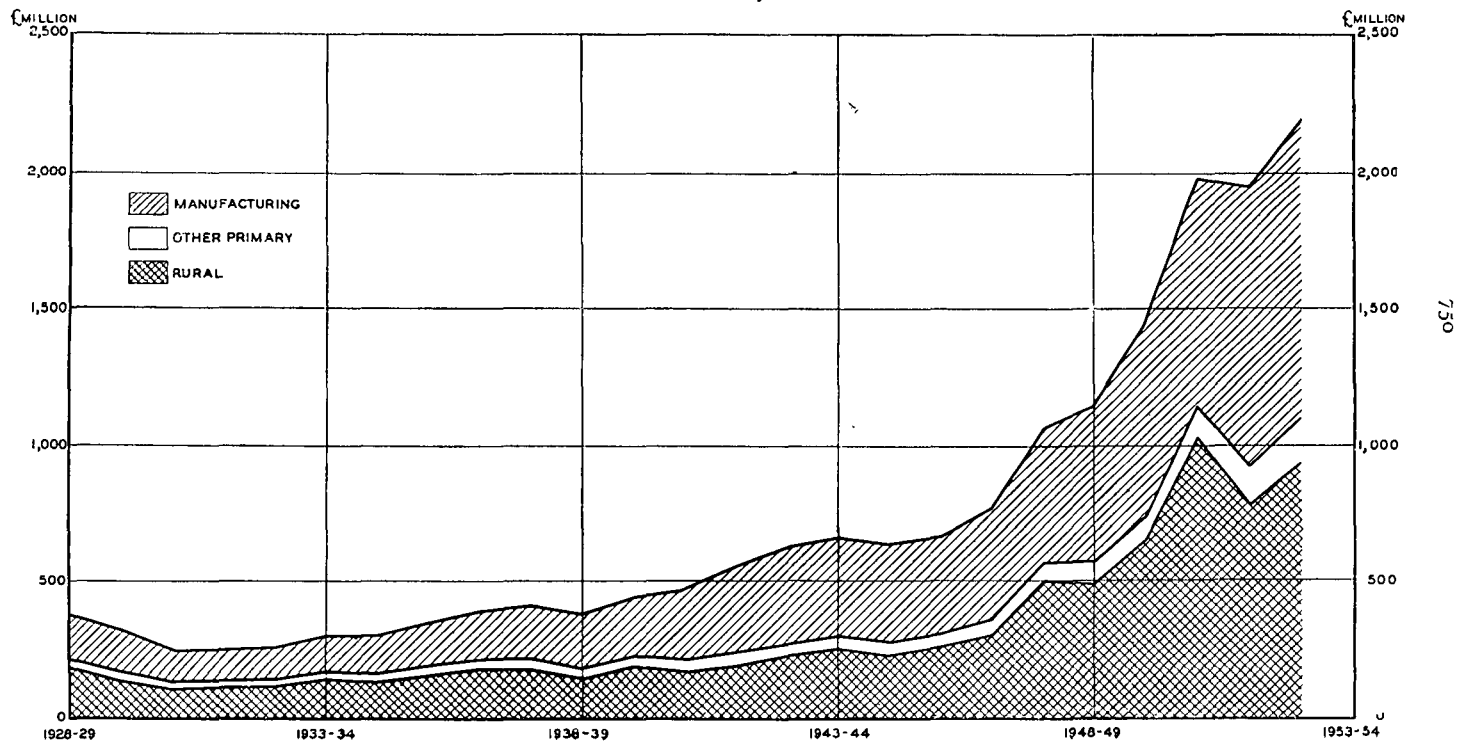
NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY : AUSTRALIA, 1860-61 to 1953-54



NET VALUE OF PRODUCTION: AUSTRALIA

ALL RECORDED INDUSTRIES, 1928-29 to 1952-53



5. Marketing of Wheat.—(i) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1948–49 to 1953–54 harvests are shown in the following table :—

AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED, 1948–49 TO 1953–54.
(’000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
12	1948–49	58,358	46,661	13,544	23,515	32,828	103	175,009
13	1949–50	75,450	55,238	11,195	26,377	34,581	88	202,929
14, 14A and 14B	1950–51	37,292	49,430	7,712	29,523	46,088	60	170,105
15	1951–52	33,852	43,765	6,169	23,773	36,412	48	146,021
16	1952–53	51,608	47,465	16,776	32,171	31,703	87	179,805
17	1953–54	57,844	52,219	9,102	27,111	36,161	161	183,195

(b) *Wheat Disposal.* Details relating to the disposal of wheat during the years ended 30th November, 1949 to 1954 are shown in the following table :—

AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT, 1949 TO 1954.(a)
(’000 Bushels.)

Particulars.	1949.	1950.	1951.	1952.	1953.	1954.
Sold for export as wheat ..	67,225	80,931	85,227	46,192	59,517	40,547
Sold for export as flour ..	41,938	30,947	42,454	36,693	41,255	26,871
Sold for local consumption as flour ..	34,493	35,484	37,577	39,049	39,108	35,860
Sold for other purposes ..	24,109	25,499	29,556	26,233	20,605	20,261

(a) Years ended 30th November.

(ii) *Finance.* The Wheat Acquisition Regulations empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. The Wheat Industry Stabilization Act 1948 included similar provisions for advances to the reconstituted Board established under that Act.

AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS, POOLS Nos. 12 to 16.
(£.)

Particulars.	No. 12 Pool.(a) (1948–49 Harvest).	No. 13 Pool.(a) (1949–50 Harvest).	Nos. 14, 14A and 14B Pools. (a) (1950–51 Harvest).	No. 15 Pool.(a) (1951–52 Harvest).	No. 16 Pool.(b) (1952–53 Harvest).
Paid to growers	96,748,162	129,469,276	105,633,151	100,000,768	127,178,660
Rail freight	4,629,297	6,300,839	6,063,658	7,620,657	11,146,200
Expenses	3,110,979	4,393,660	4,798,292	5,415,288	5,958,879
Total Payments	104,488,438	140,163,775	116,495,101	113,036,713	144,283,739
Value of sales delivered	c 104,488,438	d 140,163,775	e 116,495,101	f 113,036,713	144,283,739

(a) Complete. (b) Incomplete. (c) Includes £12,495,973 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest, £464,027. (d) Includes £15,244,895 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £394,285. (e) Includes £11,070,976 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £400,712. (f) Includes £9,166,550 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948, plus interest £282,291.

NOTE.—Details of earlier pools will be found in previous issues of the Year Book.

(iii) *Advances to Growers.* Details of advances made to wheat growers in respect of the various pools are published in *Statistical Bulletin : The Wheat Industry, Australia*, last issued in April, 1955.

6. **International Wheat Agreement.**—Details of the International Wheat Agreement operative from 1st August, 1949 to 31st August, 1953 were published in Official Year Book No. 40, pp. 844-5, and previous issues.

The table below shows guaranteed sales and purchases and actual transactions recorded during 1952-53, the last year of the Agreement.

INTERNATIONAL WHEAT AGREEMENT : GUARANTEED ANNUAL SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1952-53.
(Million Bushels.)

Exporting Country.	Guaranteed Annual Sales.(a)	Sales Recorded 1952-53.	Importing Country.	Guaranteed Annual Purchases.(a)	Purchases Recorded 1952-53.
United States of America ..	253.1	251.1	United Kingdom ..	177.1	177.1
Canada	235.0	231.1	Germany	66.1	66.3
Australia	88.7	86.7	Italy	40.4	34.6
France	4.1	3.4	India	55.1	55.1
			Netherlands ..	24.8	24.8
			Belgium	20.2	20.2
			Union of South Africa ..	11.0	10.6
			Remaining Importing Countries	186.2	183.6
Total	580.9	572.3	Total	580.9	572.3

(a) Wheat and wheat flour as wheat.

A further agreement covering a period of three years from 1st August, 1953 to 31st July, 1956 was signed in Washington in April, 1953. Italy, Sweden and the United Kingdom have withdrawn membership and Jordan, Korea, Vatican City and Yugoslavia have joined the new agreement. Australia's quota was fixed originally at 48 million bushels but this was subsequently adjusted to 44.4 million bushels.

7. **Wheat Farms.**—(i) *Number.* Particulars of the number of farms growing 20 acres and upwards of wheat for grain during each of the years 1948-49 to 1952-53, compared with the average for the five years ended 1938-39, are shown in the following table. It should be noted that a farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING 20 ACRES AND UPWARDS OF WHEAT FOR GRAIN.

State.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	15,657	15,674	15,594	14,279	13,147	13,167
Victoria	12,393	12,105	11,491	11,203	10,076	10,049
Queensland	2,403	3,804	3,744	3,862	3,005	4,970
South Australia ..	12,255	9,405	9,346	8,416	8,345	8,432
Western Australia ..	8,859	7,779	7,808	7,814	7,766	7,751
Tasmania	269	123	58	79	51	95
Australia(a) ..	51,836	48,890	48,041	45,653	42,390	44,464

(a) Excludes Australian Capital Territory.

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1949-50. The tabulations, which covered, *inter alia*, a series of size classifications of wheat farms, have been published in detail in *Primary Industries Bulletin*, 1949-50, No. 44. A similar tabulation was made for the year 1947-48, a summary of the results being published in *Production Bulletin* No. 42, Part II.—*Primary Industries* and Official Year Book No. 38, page 947.

8. **Area, Production and Average Yield.**—(i) *Area.* Wheat is the principal crop grown in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery

of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphates as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area, production and average yield per acre of wheat for grain in each State are shown below for the years 1948-49 to 1952-53 in comparison with the averages for the decennial periods ended 1938-39 and 1950-51 :-

WHEAT FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1948-49 ..	4,038	2,996	608	2,063	2,867	7	4	12,583
1949-50 ..	4,012	2,828	600	1,896	2,894	6	4	12,240
1950-51 ..	3,329	2,735	559	1,848	3,185	5	2	11,663
1951-52 ..	2,753	2,464	453	1,613	3,094	4	1	10,384
Average, 1942-43 to 1951-52 ..	3,599	2,708	427	1,965	2,390	5	3	11,097
1952-53 ..	2,702	2,232	724	1,544	2,999	7	1	10,209
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1948-49 ..	64,704	49,064	14,317	26,136	36,250	156	76	190,793
1949-50 ..	81,939	57,434	11,778	28,351	38,500	127	92	218,221
1950-51 ..	43,273	51,236	8,785	30,936	49,900	95	19	184,244
1951-52 ..	39,689	45,995	6,632	27,301	40,000	94	14	159,725
Average, 1942-43 to 1951-52 ..	51,936	39,433	7,816	26,065	29,696	108	47	155,101
1952-53 ..	56,070	50,335	18,662	33,919	35,438	156	8	195,208
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	13.0	12.5	14.9	9.8	11.3	21.7	20.6	11.8
1948-49 ..	16.0	16.4	23.6	12.7	12.6	22.7	18.2	15.2
1949-50 ..	20.4	20.3	19.6	15.0	13.3	23.3	20.6	17.8
1950-51 ..	13.0	18.7	15.7	16.7	15.7	17.8	10.1	15.8
1951-52 ..	14.4	18.7	14.6	16.9	12.9	26.1	14.0	15.4
Average, 1942-43 to 1951-52 ..	14.4	14.6	18.3	13.3	12.4	20.0	18.4	14.0
1952-53 ..	21.0	22.6	25.8	22.0	11.8	23.4	12.7	19.1

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 747 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1947-48 appeared on pp. 977-8 of issue No. 39. Similar maps showing the distribution of wheat areas in 1924-25 and 1938-39 appeared in Official Year Book No. 22, p. 695, and Official Year Book No. 34, p. 451, respectively.

(ii) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season and inconsistencies in this respect are reflected in the yearly production.

It should be noted, however, that with improved farming methods, including the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during five decades to 1952 have shown a continued improvement.

The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports from the mainland to satisfy its needs, though partly in exchange it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to two-thirds of the crop is exported overseas.

Australia's wheat production in 1952-53 was 195.2 million bushels, representing an average yield of 19.1 bushels per acre. This was 40.1 million bushels more than the average for the ten years ended 1951-52 and 25.8 million bushels more than the average for the ten years ended 1938-39.

(iii) *Average Yield.* Short-term variations in this are due chiefly to the vagaries of the seasons. The best average yields per acre for single seasons since 1901 were obtained in 1920-21, 16.1 bushels; in 1942-43, 16.8 bushels; in 1949-50, 17.8 bushels; and in the 1952-53 season when a record yield of 19.1 bushels was recorded.

(iv) *Decennial Averages, 1861-70 to 1944-53.* The following table shows the average area, production and yield per acre for decennial periods since 1861.

WHEAT FOR GRAIN: AVERAGE AREA AND PRODUCTION, AUSTRALIA.

Period.				Area.	Production.	Yield per Acre.
				'000 Acres.	'000 Bushels.	Bushels.
1861-70	..	..	..	831	10,622	12.8
1871-80	..	..	..	1,646	17,711	10.8
1881-90	..	..	..	3,258	26,992	8.3
1891-1900	..	..	..	4,087	29,934	7.3
1901-10	..	..	..	5,711	56,058	9.8
1911-20	..	..	..	8,928	95,480	10.7
1921-30	..	..	..	11,291	135,400	12.0
1931-40	..	..	..	14,176	177,758	12.5
1941-50	..	..	..	11,358	145,599	12.8
1944-53	..	..	..	11,190	157,950	14.1

9. *Varieties of Wheat Sown.*—(i) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample, with which have accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of the principal varieties grown during each season is restricted to about 40.

(ii) *States, 1952.* The principal varieties of wheat sown and the percentage of each to the total area sown in the five main producing States during 1952 were as follows:—New South Wales, Bencubbin (34.5), Gabo (15.8), Kendee (7.2); Victoria, Insignia (38.3), Quadrat (32.1), Pinnacle (17.8); Queensland, Gabo (19.3), Charter (17.4); South Australia, Gabo (23.3), Bencubbin (12.5); Western Australia, Bungulla (26.6), Bencubbin (22.4), Kondut (10.6). A detailed table of wheat varieties sown in these five States appears in *Primary Industries Bulletin No. 47, Part I.—Rural Industries.*

10. *F.A.Q. Standard of Wheat.*—The Chambers of Commerce in each of the four main wheat States each year determine the "f.a.q." standard for the State. "F.a.q." means "fair average quality", and the standard is used as the basis for sales of the season's crop. It represents the average quality for the season, and this average varies from year to year, and from State to State. "F.a.q." is an Australian term, and the method differs from that of other countries which sell according to sample, or (as in Canada) according to grades which are fixed, and do not vary from year to year.

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined by the use of the Schopper 1-litre scale chondrometer.

The f.a.q. weight of a bushel of wheat used in each of the four main wheat-producing States for the 1953-54 season's crop was as follows (1952-53 details in parentheses)—New South Wales, 64 lb. (64 lb.); Victoria, 64½ lb. (64½ lb.); South Australia, 63½ lb. (63½ lb.); and Western Australia, 64½ lb. (64½ lb.).

11. Price of Wheat.—(i) *Home Consumption.* The price charged by the Australian Wheat Board for wheat sold to millers for gristing into flour for consumption in Australia and for wheat sold as stock feed is shown in the table below for the years indicated.

**AUSTRALIAN WHEAT BOARD'S PRICE FOR WHEAT FOR HOME CONSUMPTION :
AUSTRALIA.**

(s. d. per Bushel, Bulk Basis.)

Particulars.	1949.	1950.(a)	1951.	1952.	1953.	1954.
For Flour	6 8	6 8	7 10	10 0	11 11	(b)14 1½
For Stock Feed	6 8	6 8	7 10	(c)12 0	(c)13 11	(b)14 1½

(a) Excludes 5d. per bushel subsidy paid by the Commonwealth Government, making the total return to growers 7s. 1d. per bushel, bulk basis. (b) Of this 1½d. is to be used to meet freight charges incurred on wheat shipped to Tasmania. (c) Excludes subsidy of 4s. 1d. in 1952 and 2s. 2d. in 1953 paid by the Commonwealth Government. In Western Australia the price in 1952 was 10s., exclusive of subsidy.

(ii) *Export Wheat Prices—Australian Wheat Board's Basic Selling Price.*—The Wheat Board basic export selling prices averaged 16s. 7d. for the season ended 31st July, 1954, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.

The maximum and minimum prices fixed under the 1953-56 International Wheat Agreement are expressed in terms of "Canadian currency per bushel, at the parity of the Canadian dollar determined for the purposes of the International Monetary Fund as at 1st March, 1949 for No. 1 Manitoba Northern wheat in bulk in store Fort William—Port Arthur." Expressed in terms of Australian currency the maximum price for f.a.q. Australian wheat sold under the Agreement is approximately 18s. 5½d. per bushel and the minimum price between 13s. 10d. and 14s. 9d. according to difference in freight rates between Canada—the United Kingdom and Australia—the United Kingdom.

Details of export wheat prices in previous years, including those received for wheat sold under the terms of the 1949-1953 International Wheat Agreement, are given in Official Year Book No. 40, pp. 849-50, and *Statistical Bulletin: The Wheat Industry, Australia*, No. 86, of April, 1954, and in previous issues of these publications.

12. Value of the Wheat Crop.—The estimated gross value of the wheat crop in each State and in Australia during the season 1952-53 and the value per acre are shown below.

WHEAT FOR GRAIN : VALUE OF CROP(a), 1952-53.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	43,612	39,270	15,401	28,651	27,597	119	6	154,656
Value per acre ..	£16/2/9	£17/11/10	£21/5/2	£18/11/2	£9/4/0	£17/14/9	£9/18/4	£15/3/0

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms.

13. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the years ended 30th November, 1949 to 1953 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 see graph, p. 748).

WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

(Million Bushels.)

Particulars.	Average, Three Years ended 30th Nov. 1939.	Year ended 30th November—				
		1949.	1950.	1951.	1952.	1953.
Opening stocks (including flour as wheat)	10.2	26.3	19.0	43.8	19.4	16.9
Production	164.7	190.7	218.2	184.2	159.7	195.2
Total Available Supplies	174.9	217.0	237.2	228.0	179.1	212.1
Exports—						
Wheat	75.0	82.5	82.8	85.9	45.6	60.7
Flour as wheat	30.6	35.7	36.9	41.6	35.2	41.3
Local Consumption—						
Flour as wheat	30.9	34.5	35.5	37.6	39.0	39.1
Stock feed	9.3	22.6	23.5	27.4	23.9	18.4
Seed	14.6	12.2	11.6	10.5	10.3	10.8
Breakfast foods and other uses	(a)	4.2	3.0	4.3	3.8	3.0
Balance retained on farm (excluding seed)	(b)	3.5	3.7	3.7	3.4	4.6
Closing stocks (including flour as wheat)	14.5	19.0	43.8	19.4	16.9	37.7
Total Disposals	174.9	214.2	240.8	230.4	178.1	215.6
Excess (+) or Deficiency (—) of Disposals in respect of Available Supplies (c) .. .. .	..	—2.8	+3.6	+2.4	—1.0	+3.5

(a) Included with flour (local consumption). (b) Included with stock feed. (c) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

14. **Exports of Wheat and Flour.**—(i) *Quantities.* The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1948–49 to 1952–53 compared with the average for the five years ended 1938–39. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 46.3 bushels of grain. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900; in 1902–3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914–15 to supplement the yield of 25 million bushels produced in that season. During the five years ended 1952–53 exports in terms of wheat averaged 112,893,000 bushels, compared with the average of 106,432,000 bushels for the five years ended 1938–39.

WHEAT AND FLOUR : EXPORTS FROM AUSTRALIA.

Year.	Quantity.				Value. (£'000.)		
	Wheat.	Flour.		Total as Wheat.	Wheat.	Flour.	Total.
		As Flour.	As Wheat. (a)				
	'000 bushels.	Tons. (2,000 lb.)	'000 bushels.	'000 bushels.			
Average, 1934-35 to 1938-39 ..	76,473	664,073	29,959	106,432	14,813	(b)5,058	19,871
1948-49 ..	83,030	860,578	39,845	122,875	64,705	33,916	98,621
1949-50 ..	78,426	775,499	35,906	114,332	62,173	26,482	88,655
1950-51 ..	86,782	886,533	41,046	127,828	74,151	33,022	107,173
1951-52 ..	62,921	791,470	36,645	99,566	55,287	33,107	88,394
1952-53 ..	59,508	871,096	40,331	99,839	51,970	37,471	89,441

(a) One ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat. (b) Excludes wheatmeal for baking.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1952-53 and the average for the five years ended 1938-39.

WHEAT : EXPORTS FROM AUSTRALIA.
('000 Bushels.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	45,195	34,523	9,435	20,017	17,932	21,956
India ..	1,662	16,939	35,254	16,742	7,372	10,767
New Zealand ..	1,537	7,395	5,756	4,863	9,649	5,808
Other British Countries ..	7,863	10,226	4,677	5,821	7,321	10,760
Egypt ..	503	8,510	6,511	17,075	3,980	..
Germany, Federal Republic of	(a)235	..	..	2,336	4,734	2,847
Italy ..	3,152	5	325	7,965	6,473	2,068
Other Foreign Countries ..	16,326	5,432	16,468	11,963	5,460	5,302
Total ..	76,473	83,030	78,426	86,782	62,921	59,508

(a) Pre-war Germany.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1952-53, and the average for the five years ended 1938-39.

FLOUR : EXPORTS FROM AUSTRALIA.
(Tons of 2,000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39. (a)	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	142,912	233,544	35,236	112,953	96,432	139,941
Ceylon ..	16,915	187,987	131,348	190,674	187,134	261,845
India ..	2,732	72,192	188,358	54,609	83,142	79,921
Malaya, Federation of	63,309	100,445	78,372	79,930	60,030	65,074
Singapore ..	(b)	15,282	21,399	58,339	52,238	66,691
Other British Countries	109,609	105,025	174,706	120,173	88,195	92,122
Egypt ..	24,284	42,869	53,759	121,001	65,143	23,078
Indonesia, Republic of	..	..	4,472	62,890	62,322	90,774
Other Foreign Countries	287,312	103,234	87,849	85,964	96,834	51,650
Total ..	647,073	860,578	775,499	886,533	791,470	871,096

(a) Excludes wheatmeal for baking.

(b) Included with Malaya, Federation of.

15. **Stocks of Wheat and Flour.**—Stocks of wheat and flour in terms of wheat held by each State at 30th November in each year 1939 and 1949 to 1953 are shown in the following table. These data are based on stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

**WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT) : STOCKS AT 30TH
NOVEMBER.(a)
(Bushels.)**

30th November—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1939	6,674,033	4,702,088	549,219	6,133,986	2,512,576	240,728	20,812,630
1949	7,863,597	4,932,344	1,022,181	2,203,210	2,758,154	130,511	18,970,197
1950	16,875,191	12,596,836	1,880,457	6,658,635	5,556,227	221,856	43,789,202
1951	3,595,558	6,250,683	565,049	5,557,175	3,248,883	162,826	19,380,174
1952	5,880,929	4,432,261	5,000	4,253,930	2,107,632	187,226	16,866,978
1953	9,887,570	11,549,969	2,236,564	7,576,520	6,307,443	187,731	37,745,797

(a) One ton of flour is treated as equivalent to 46.3 bushels of wheat.

16. **Bulk Handling and Storage of Wheat in Australia.**—(i) *Description and Development of the Bulk Handling System.* A detailed description of the bulk handling system including its advantages and disadvantages compared with other methods of handling appeared on pages 954–8 of Official Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, but until recently no efforts have been made to introduce such a system in the other States.

Late in 1953 it became clear that Australia could not clear its stocks of wheat as quickly as in past years and in April, 1954 the Commonwealth Government arranged to finance the construction of additional storage space in New South Wales, Victoria and South Australia (Western Australia and Queensland were later included in the scheme). The Australian Wheat Board was authorized to control the expenditure of the money provided, amounting to £3½ million.

(ii) *Bulk Handling and Storage in the States.* Particulars of the operation of the bulk handling and storage system and projected extensions in the States concerned are set out below :—

(a) *New South Wales.* At the end of 1954 there were 180 elevators operated by Government Grain Elevators and situated at the more important wheat receiving stations throughout the State as well as terminal elevators at Sydney and Newcastle. The storage capacity of the country elevators is 25,422,000 bushels. In 1953–54, 61 per cent. of the total crop was handled compared with 76 per cent. in 1952–53 and 48 per cent. in 1940–41.

Additional storage capacity is being constructed at several country centres and the sub-terminals at Junee, Temora and Werris Creek are being enlarged to a total capacity of 4.5 million bushels each as part of the plan to meet the general shortage in storage capacity.

Temporary bulkheads have also been erected to meet shortages and in 1951–52, 75 of these were used.

(b) *Victoria.* The Victorian Grain Elevators Board operates 148 elevators with a storage capacity of 17,034,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Storages for 18 million bushels, adjacent to the permanent terminal, are being constructed at Geelong.

Temporary measures for extending bulk handling facilities have been adopted and sub-terminals were constructed or acquired at Dunolly, Murtoa and Warracknabeal with a capacity of 22,000,000 bushels. Temporary bulkheads have also been used and in 1952–53 and 1953–54 there were 86 in use with a total storage for 6,885,000 bushels.

In 1953-54, 96 per cent. of the total crop was received in elevators, compared with 95 per cent. in 1952-53 and 24 per cent. in 1939-40.

(c) *Queensland.* In 1952-53 a temporary silo was provided at Pinkenba and a number of concrete silos and temporary bulkheads have subsequently been erected at country centres. Plans to extend this programme include the provision of a permanent bulk terminal at Pinkenba.

(d) *South Australia.* In 1951-52 a bulk terminal was erected by the Wheat Board at Ardrossan with a storage capacity of 1,000,000 bushels. Approximately 4,115,000 bushels were handled in 1952-53.

Additional storages are being constructed at Port Adelaide, Kadina, Gladstone and Cummins with a total capacity of 10,650,000 bushels.

(e) *Western Australia.* The system of storage in Western Australia differs from that in the eastern States in that horizontal storages made of timber and galvanized iron are used. These are relatively cheap and may be moved from place to place as required. These storages are operated by the Co-operative Bulk Handling Ltd. which is controlled and managed by wheat growers.

In 1953-54 there were 277 sidings equipped with bulk handling facilities and 36,138,000 bushels, comprising the whole of the marketed wheat crop, were received.

Extension of storage facilities now being undertaken involves the erection of a storage for 5 million bushels at Midland Junction.

(f) *Tasmania.* Bulk handling of wheat has not been found necessary in this State but it is planned to erect installations at Hobart and Launceston to store wheat imported from the mainland.

17. **World Area and Production of Wheat.**—The details in the following table of the world area and production of wheat by principal countries and by continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

WHEAT : AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1952.	1953.(b)	Average 1935-39.	1952.	1953 (b)	Average 1935-39.	1952.	1953.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,595	25,995	25,513	312,399	687,922	613,962	12.2	26.5	24.1
United States ..	57,293	70,926	67,603	758,629	1,298,957	1,168,536	13.2	18.3	17.3
Total(c) ..	84,170	98,450	94,740	1,086,000	2,005,000	1,807,000	12.9	20.4	19.1
Europe—									
France..	12,560	11,000	10,600	286,505	310,000	330,000	22.8	28.2	31.1
Italy ..	12,577	12,000	12,100	278,366	295,000	332,000	22.1	24.6	27.4
Spain ..	(d)11,253	10,625	10,605	(d)157,986	170,000	125,000	14.0	16.0	11.8
Total(c) ..	74,850	71,050	71,260	1,600,000	1,640,000	1,725,000	21.4	23.1	24.2
U.S.S.R. ..	104,000	(f)	(f)	1,240,000	(f)	(f)	11.9	(f)	(f)

See next page for footnotes.

WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—continued.

Continent and Country.	Area.(a)			Production.			Yield per Acre.		
	Average 1935-39.	1952.	1953.(b)	Average 1935-39.	1952.	1953.(b)	Average 1935-39.	1952	1953.(b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Africa—Total(c) ..	13,850	16,940	16,900	143,000	173,000	193,000	10.3	10.2	11.4
Asia—									
China ..	(e) 49,000	56,000	(f)	(e) 750,000	800,000	(f)	(e) 15.3	14.3	(f)
India ..	(e) 25,460	23,235	24,040	(e) 262,100	215,340	252,000	(e) 10.3	9.3	10.5
Pakistan ..	(e) 9,305	10,220	9,510	(e) 117,000	114,240	105,000	(e) 12.6	11.2	11.0
Turkey ..	8,973	13,400	15,790	135,690	239,000	294,000	15.1	17.8	18.6
Total(c) ..	108,190	118,160	126,430	1,498,000	1,605,000	1,690,000	13.8	13.6	13.4
South America—									
Argentina ..	15,834	13,790	12,510	221,769	280,500	220,440	14.0	20.3	17.6
Total(c) ..	20,490	19,440	19,000	281,000	370,000	325,000	13.7	19.0	17.1
Oceania—									
Australia ..	13,128	10,209	10,751	169,744	195,208	197,961	12.9	19.1	18.4
Total(c) ..	13,349	10,336	10,871	176,873	199,733	202,561	13.2	19.3	18.6
World Total(c)	418,900	448,380	458,200	6,025,000	7,276,000	7,219,000	14.4	16.2	15.8

(a) Figures refer to harvested areas as far as possible. (b) Preliminary. (c) Totals (estimates) include allowances for any missing data for countries shown and for other producing countries not shown. (d) 1935 only. (e) Average for less than five years. (f) Not available. See footnote (c).

18. Exports—Principal Countries.—The following table shows the quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1951 and 1952 according to statistics recently published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service.

While Australia's production of wheat ranges between 2 and 4 per cent. of the world's total, its exports account for a much higher proportion of the total quantities shipped. During the five years 1934-38 Australia's share of world wheat exports was 16 per cent., but in 1952 the proportion fell to 8 per cent., although the actual quantity shipped was only 20 per cent. lower.

WHEAT(a) : EXPORTS, PRINCIPAL COUNTRIES.

Exporting Country.	Average, 1934-38.		1951.		1952.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
Canada	175,294	27.6	289,663	27.0	393,712	38.8
Argentina	122,740	19.3	91,512	8.5	2,392	0.2
Australia.	102,406	16.1	122,891	11.5	81,661	8.1
United States of America ..	46,274	7.3	474,066	44.2	415,920	41.0
U.S.S.R. (Russia) ..	26,631	4.2	(b) 25,720	2.4	(b) 44,092	4.4
France	18,316	2.9	30,107	2.8	14,150	1.4
All other	143,993	22.6	38,937	3.6	62,180	6.1
Total	635,654	100.0	1,072,896	100.0	1,014,107	100.0
World Production (mil. bus.)	6,024		6,480		7,276	
Proportion of Australia's Production to World Production	%		%		%	
	2.8		2.5		2.7	

(a) Includes flour expressed in terms of wheat.

(b) Unofficial.

19. Imports—Principal Countries.—The principal importers of wheat, together with quantities imported or the periods indicated, are shown in the following table:—

WHEAT(a) : IMPORTS, PRINCIPAL COUNTRIES.

Importing Country.	Average, 1934-38.		1951.		1952.	
	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
	'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
United Kingdom	208,737	33.8	176,910	17.4	171,020	17.2
Brazil	36,387	5.9	51,058	5.0	46,296	4.7
Italy	26,043	4.2	60,115	5.9	49,669	5.0
Germany, Federal Republic of ..	(b) 25,606	(b) 4.1	109,208	10.8	79,291	8.0
Netherlands	22,593	3.7	31,908	3.2	31,390	3.1
Japan	11,552	1.9	61,563	6.1	61,497	6.2
India and Pakistan	1,826	0.3	113,635	11.2	104,530	10.5
Egypt	588	0.1	42,104	4.1	33,139	3.3
All other	283,950	46.0	367,606	36.3	418,903	42.0
Total	617,282	100.0	1,014,107	100.0	995,735	100.0

(a) Includes flour expressed in terms of wheat.

(b) Pre-war Germany.

§ 5. Oats.

1. **Area, Production and Average Yield.**—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1952-53 accounted for 50.1 per cent., oats grown for grain represented only 13.6 per cent. of the area of crops. The area, production and average yield per acre of oats for the years 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are shown in the following table :—

OATS FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	229	478	5	282	369	30	..	1,393
1948-49 ..	378	540	21	286	532	12	I	1,770
1949-50 ..	375	483	21	261	585	23	..	1,748
1950-51 ..	332	527	17	271	586	24	..	1,757
1951-52 ..	596	676	21	387	657	27	I	2,365
Average, 1942-43 to 1951-52 ..	481	542	22	296	478	18	..	1,837
1952-53 ..	730	756	57	369	832	20	..	2,764

PRODUCTION ('000 BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1948-49 ..	5,779	7,490	419	2,643	6,998	262	10	23,601
1949-50 ..	7,016	8,718	338	3,464	7,268	577	10	27,391
1950-51 ..	3,994	9,034	221	3,534	7,914	429	2	25,128
1951-52 ..	9,395	11,151	263	5,405	7,689	594	9	34,506
Average, 1942-43 to 1951-52 ..	6,805	7,726	358	3,337	5,444	411	7	24,088
1952-53 ..	12,326	12,599	1,303	6,666	10,440	286	3	43,623

AVERAGE YIELD PER ACRE (BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	15.7	12.0	12.8	7.9	10.8	28.2	22.4	11.8
1948-49 ..	15.3	13.9	19.7	9.2	13.2	22.4	14.1	13.3
1949-50 ..	18.7	18.0	16.5	13.4	12.4	25.3	28.8	15.7
1950-51 ..	12.0	17.1	13.0	13.0	13.5	18.3	7.0	14.3
1951-52 ..	15.8	16.5	12.6	14.0	11.7	22.4	15.4	14.6
Average, 1942-43 to 1951-52 ..	14.1	14.3	16.4	11.3	11.4	23.4	14.1	13.1
1952-53 ..	16.9	16.7	23.1	18.0	12.5	14.3	17.2	15.8

(a) 40 lb. per bushel.

A graph showing the area sown to oats appears on page 749.

The principal oat-growing States are New South Wales, Victoria and Western Australia, which produce on the average more than 80 per cent. of the total quantity grown in Australia. South Australia also produces considerable quantities, but in Queensland and Tasmania the output is small.

During the five seasons ending 1952-53 an average of 9.8 million bushels were exported; 2.2 million bushels were used in factories, mainly for oatmeal; and 6.3 million bushels were used for seed purposes; leaving a balance of 12.5 million bushels for unprocessed stock feed.

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1944-45, namely 4.4 bushels, while the largest in the ten years ended 1952-53 was that of the season 1947-48, amounting to 19.3 bushels per acre, this being the highest yield since 1920-21.

2. **Price of Oats.**—The average wholesale price in the Melbourne market for oats of good milling quality in 1952-53 was 7s. 3½d. per bushel. This represents a decrease of 31.1 per cent. on the price in 1951-52 (10s. 6½d.) and an increase of 109.9 per cent. on the price in 1938-39 (3s. 5½d.).

3. **Value of Oat Crop.**—The estimated gross value of the oat crop in each State for the 1952-53 season and the value per acre were as follows:—

OATS : VALUE OF CROP, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value	£'000	4,366	3,932	977	2,142	3,762	121	15,301
Value per acre	£5/19/9	£5/4/0	£17/6/5	£5/16/0	£4/10/5	£6/1/2	£5/2/3	£5/10/8

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a regular export trade. The quantities and values of oats exported from Australia during the years 1948-49 to 1952-53 compared with the average for the years 1934-35 to 1938-39 are shown hereunder:—

OATS : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantity	'000 bus.	286	14,854	6,626	7,947	12,971
Value	£'000	36	6,161	2,394	3,529	8,001
						11,846
						4,851

The quantity of oats imported into Australia is usually not very large, although in 1945-46 imports exceeded exports by 802,000 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was 1927-28 (by 461,000 bushels), when New Zealand was the main supplier. In 1952-53 the principal countries of destination of the exports were the United Kingdom, the Union of South Africa, Belgium, Luxemburg, Italy and the Netherlands.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1952-53 to 381,237 cwt., equivalent to about 2,135,000 bushels of oats, or about 4.9 per cent. of the total production. Prior to the 1939-45 War the exports of oatmeal were small, but in recent years a considerable export trade has developed and in 1952-53 the quantity shipped amounted to 173,330 cwt., or 37.5 per cent. of total production.

6. **World Production.**—The world's production of oats for the year 1953, excluding production in the U.S.S.R., according to preliminary details released by the Food and Agriculture Organization of the United Nations, amounted to 3,348 million bushels, harvested from 90 million acres, representing an average yield of 37.2 bushels per acre. This compared with the production in the previous year of 3,452 million bushels from an area of 92 million acres giving an average yield of 37.5 bushels per acre. The world's average production, including that of the U.S.S.R., for the years 1935 to 1939 amounted to 4,336 million bushels from 139 million acres giving an average yield of 31.3 bushels per acre. In comparison with the average return per acre for world production in 1953 that of Australia for the same period (15.8 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages in excess of 50 bushels per acre.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1952-53 season being 168,877 acres, or 97 per cent. of the total for Australia. In all States except South Australia the crop is grown to a greater or lesser extent for green fodder, particularly in connexion with the dairying industry.

2. **Area, Production and Average Yield.**—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 225,687 acres during the ten years ended 1952-53. Compared with the previous year, the area in 1952-53 increased by 4,534 acres but was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

There has been a considerable increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing average yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize necessitates a parallel development in the specialized industry of growing hybrid strains of seed.

The area, production and average yield per acre of maize for grain in each State for the years 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales and Queensland for 1952-53.

MAIZE FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1948-49 ..	77,820	6,460	97,598	3	72	5	..	181,958
1949-50 ..	72,872	5,136	115,550	..	20	10	3	193,591
1950-51 ..	52,674	4,089	112,467	..	107	2	..	169,339
1951-52 ..	54,216	4,115	111,181	..	8	18	2	169,540
Average, 1942-43 to 1951-52 ..	84,795	6,096	134,714	..	72	9	1	225,687
1952-53—								
Hybrid ..	28,614	} 5,175	{ 24,891	}	13	9	..	174,074
Other ..	32,033		{ 83,339					
PRODUCTION ('000 BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1948-49 ..	2,476	260	2,451	..	1	..	..	5,188
1949-50 ..	2,408	194	3,393	..	1	..	..	5,996
1950-51 ..	1,512	187	3,029	..	1	..	..	4,729
1951-52 ..	1,410	168	2,439	..	..	1	..	4,018
Average, 1942-43 to 1951-52 ..	2,325	238	3,277	..	1	..	..	5,841
1952-53—								
Hybrid ..	1,142	} 204	{ 589	}	..	..	..	4,967
Other ..	971		{ 2,061					
AVERAGE YIELD PER ACRE (BUSHEL). (a)								
Average, 1929-30 to 1938-39 ..	26.7	34.3	21.8	29.8	10.0	..	8.5	24.5
1948-49 ..	31.8	40.2	25.1	6.7	6.3	19.2	..	28.5
1949-50 ..	33.1	37.8	29.4	..	22.1	20.5	10.0	31.0
1950-51 ..	28.7	45.7	26.9	..	14.3	12.5	..	27.9
1951-52 ..	26.0	40.8	21.9	..	13.9	34.8	3.0	23.7
Average, 1942-43 to 1951-52 ..	27.4	39.1	24.3	..	11.1	16.1	7.8	25.9
1952-53—								
Hybrid ..	39.9	} 39.3	{ 23.7	}	22.6	12.0	..	28.5
Other ..	30.3		{ 24.7					

(a) 56 lb. per bushel.

The average yield for Australia for the ten-year period was 25.88 bushels per acre. Among principal producing countries the United States of America during 1953 averaged 39.44 bushels per acre and Italy 40.14 bushels.

3. **Price of Maize.**—The average wholesale price of maize in the Melbourne market in 1952-53 was 20s. 6½d. per bushel compared with 21s. 3½d. in 1951-52. No comparable pre-war price is available, but that in the Sydney market in 1938-39 was 4s. 6½d.

4. **Value of Crop.**—The estimated gross value of the crop in each State for the 1952-53 season and the value per acre were as follows :—

MAIZE FOR GRAIN : VALUE OF CROP, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value .. £'000	1,963	170	1,905	..	1	..	4,039
Value per acre	£32/7/4	£32/15/10	£17/12/1	..	£39/4/7	..	£23/4/0

5. **Exports of Maize and Maize Products.**—Details of exports of maize for the five years ended 1952-53 compared with the average of the five years ended 1938-39 are shown below.

MAIZE : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantity '000 bus.	57	127	1,201	1,189	188	782
Value .. £'000	9	106	614	786	149	703

In recent years only small quantities of maize have been imported.

Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1952-53 2,114,000 lb., valued at £95,000, were exported, compared with an annual average of only 37,000 lb. during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat. Imports of cornflour into Australia are negligible.

6. **World Production.**—According to preliminary details released by the Food and Agriculture Organization of the United Nations, world production of maize, excluding that of the U.S.S.R., in the year 1953, amounted to 5,630 million bushels, harvested from 213 million acres, giving an average yield per acre of 26.5 bushels. This compared with production in the previous year of 5,460 million bushels from 210 million acres, yielding an average per acre of 26.0 bushels. Production (including that of the U.S.S.R.) over the years 1935 to 1939 averaged 4,725 million bushels from 216 million acres, giving an average yield per acre of 21.9 bushels.

The United States of America is the most important maize-producing country in the world and during the three years ended 1953 the area sown to maize in that country averaged 81 million acres or 39 per cent. of the world total. During the same period production averaged 3,118 million bushels or about 58 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the above-mentioned world totals as the area, and an estimate of grain equivalent, of maize used as green fodder are included. In recent years maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

§ 7. Barley.

1. Area, Production and Average Yield.—The area sown to barley for grain expanded considerably during the ten years preceding the 1939-45 War—from 383,000 acres in 1930-31 to 836,000 acres in 1939-40. This increase was followed by a decline to 443,000 acres in 1943-44, but the area sown has increased in succeeding years, and in 1952-53 reached the record level of 1,377,000 acres. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 68 per cent. of the Australian acreage in 1952-53. Victoria was next in importance with 17 per cent., leaving a balance of about 15 per cent. distributed among the other States. The totals here given relate to the areas harvested for grain; small areas are sown for hay, but more considerable quantities are cut for green forage. These, however, are not included in this section. The area, production and average yield per acre of barley for grain in the several States for the years 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are shown in the following table:—

BARLEY FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	11	107	8	331	31	7	..	495
1948-49 ..	19	196	28	698	64	7	..	1,012
1949-50 ..	13	236	25	694	68	4	..	1,040
1950-51 ..	9	217	26	765	59	3	..	1,079
1951-52 ..	11	186	28	832	57	4	..	1,118
Average, 1942-43 to 1951-52 ..	19	156	19	542	63	5	..	804
1952-53—								
Malting (2-Row)	13	206	53	818	25	8	..	1,123
Other (6-Row)	5	29	19	119	82	..	..	254
Total ..	18	235	72	937	107	8	..	1,377
PRODUCTION ('000 BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	173	1,976	132	5,714	371	186	1	8,553
1948-49 ..	322	3,548	622	12,104	981	208	..	17,785
1949-50 ..	265	4,676	578	12,725	968	131	..	19,543
1950-51 ..	129	4,510	489	16,727	925	91	..	22,871
1951-52 ..	167	3,620	450	16,826	695	150	1	21,909
Average, 1942-43 to 1951-52 ..	273	2,691	389	10,400	764	139	1	14,657
1952-53—								
Malting (2-Row)	247	4,203	1,551	23,044	381	207	..	29,633
Other (6-Row)	94	531	558	2,858	1,361	10	..	5,412
Total ..	341	4,734	2,109	25,902	1,742	217	..	35,045
AVERAGE YIELD PER ACRE (BUSHELS).(a)								
Average, 1929-30 to 1938-39 ..	16.6	18.4	16.7	17.3	11.9	25.2	18.9	17.3
1948-49 ..	16.9	18.1	22.5	17.4	15.3	28.4	..	17.6
1949-50 ..	0.6	20.7	23.1	18.3	14.2	30.1	..	18.8
1950-51 ..	15.6	20.8	18.7	21.8	15.6	27.8	..	21.2
1951-52 ..	15.0	19.4	16.0	20.2	12.3	35.3	26.1	19.6
Average, 1942-43 to 1951-52 ..	14.2	17.2	20.4	19.2	12.1	26.8	13.8	18.2
1952-53—								
Malting (2-Row)	19.8	20.4	29.2	28.2	15.3	27.1	..	26.4
Other (6-Row)	18.3	18.6	29.7	24.0	16.6	25.1	..	21.3
Total ..	19.4	20.2	29.3	27.6	16.3	27.0	..	25.5

(a) 50 lb. per bushel.

Taking Australia as a whole, about 82 per cent. of the area of barley for grain in 1952-53 was sown with malting or 2-row barley while the remainder consisted of 6-row, or feed, varieties. The proportion, however, varied considerably in the several States.

The consumption of barley during the season 1952-53 was as follows:—malt works, 6,505,000 bushels; flour and other grain mills, 195,000 bushels; distilleries, 158,000 bushels; exports, 22,239,000 bushels; leaving a balance of 5,948,000 bushels for feed, seed and other purposes.

The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52.

BARLEY, MALTING AND OTHER: AREA AND PRODUCTION, AUSTRALIA.

Season.	Area. (⁰⁰⁰ Acres.)			Production. (⁰⁰⁰ Bushels.)			Average Yield per Acre. (Bus.)		
	Malting (2-row).	Other (6-row).	Total.	Malting (2 row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
Average, 1929-30 to 1938-39 ..	428	67	495	7,480	1,073	8,553	17.5	16.0	17.3
1948-49 ..	899	113	1,012	15,930	1,855	17,785	17.7	16.5	17.6
1949-50 ..	927	113	1,040	17,569	1,974	19,543	18.9	17.5	18.8
1950-51 ..	963	116	1,079	20,811	2,060	22,871	21.6	17.8	21.2
1951-52 ..	965	153	1,118	19,477	2,432	21,909	20.2	15.9	19.6
Average, 1942-43 to 1951-52 ..	697	107	804	13,023	1,634	14,657	18.7	15.3	18.2
1952-53 ..	1,123	254	1,377	29,633	5,412	35,045	26.4	21.3	25.5

During the last ten-year period shown the average area of barley of the malting, or 2-row, class was more than four times the corresponding figure for barley of the 6-row, or feed, class. The average yield per acre for malting barley was 22 per cent. higher than that for 6-row barley.

2. Australian Barley Board.—Following the outbreak of war in 1939, the Australian Barley Board, representative of the industry, was formed, and the Commonwealth Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board was responsible for the marketing and storage of barley, and, like the Australian Wheat Board, appointed licensed receivers to receive grain on its behalf and to act as agents for all local and oversea sales.

Following the decision of the Commonwealth Government not to acquire barley in the smaller producing States after 1941-42, the Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

The Commonwealth Government did not acquire barley after the 1947-48 crop, and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948-49 and subsequent crops of the two States. Details of these acquisitions are shown in the table below.

AUSTRALIAN BARLEY BOARD: BARLEY ACQUIRED, SOLD, ETC.,

Pool.			Quantity Acquired.	Quantity. Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade less freight.	Total Net Payments to Growers.
			⁰⁰⁰ bushels.	⁰⁰⁰ bushels.	s. d.	£
No. 10 (1948-49 Crop)	..	..	13,986	14,087	(b) 7 11.9	5,377,137
„ 11 (1949-50 „ )	..	..	16,250	16,336	(b) 10 2.2	7,905,902
„ 12 (1950-51 „ )	..	..	19,976	20,154	(b) 11 2.488	10,721,180
„ 13 (1951-52 „ )	..	..	19,340	19,488	15 8.28	14,563,936
„ 14 (1952-53 „ )	..	..	29,087	29,103	16 2.01	21,359,168

(a) Includes surplus in out-turn. (b) Paid to growers in the northern part of South Australia. Growers in the south-east of South Australia and Victoria received an additional 2d. per bushel.

3. **Prices.**—The average wholesale price for 2-row English malting barley in the Melbourne market during 1952-53 was 15s. 3d. compared with 10s. 1½d. in 1951-52 and 3s. 5½d. in 1938-39.

4. **Value of Barley Crop.**—The estimated gross value of the barley crop in each State for the 1952-53 season and the value per acre are shown in the following table :—

BARLEY FOR GRAIN : VALUE OF CROP, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Aggregate value .. £'000	317	3,558	1,273	21,064	1,118	182	27,512
Value per acre ..	£17/19/11	£15/3/4	£17/14/1	£22/9/4	£10/9/2	£22/14/0	£19/19/9

5. **Exports.**—Australian exports of barley during the five years ended 1952-53 averaged 13,618,000 bushels, South Australia being the principal exporting State and the United Kingdom, the Netherlands and Japan the principal countries to which barley was shipped. Particulars of Australian exports for the years 1948-49 to 1952-53 together with the average for the five years ended 1938-39 are shown in the following table :—

BARLEY : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantity '000 bus.	3,279	10,876	10,703	12,208	12,062	22,239
Value .. £'000	483	6,864	6,433	9,053	11,154	19,245

Imports of barley in recent years have been negligible.

In addition to exports of barley grain, there is also an export of Australian pearl and Scotch barley, the total for 1952-53 amounting to 204,267 lb., valued at £9,109, consigned mainly to Ceylon.

6. **Malt.**—(i) *Production.* Details of the quantity of grain used and the production of barley malt are given in the following table :—

BARLEY MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Grain used '000 bus.	3,730	5,048	5,294	5,543	6,063	6,505
Malt produced '000 bus. (a)	3,621	4,989	5,438	5,550	6,073	6,620

(a) 40 lb. per bushel.

(ii) *Imports and Exports.* The production of malt in Australia was sufficient to meet local requirements and to provide a margin for export until 1947-48 but from 1948-49 to 1951-52 imports exceeded exports by an increasing quantity, the net imports reaching 266,000 bushels in 1951-52. In 1952-53, however, there was a small net export amounting to 4,000 bushels valued at £7,000.

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1953 were Canada and the United States of America. China is also normally a major producer, but details for 1953 are not yet available. Australian production in that year was less than one per cent. of the world total.

According to preliminary results compiled by the Food and Agriculture Organization of the United Nations, world production of barley in the year 1953, excluding that of the U.S.S.R., amounted to 2,489 million bushels harvested from 100.3 million acres, equivalent to an average yield per acre of 24.8 bushels. This compared with the production of 2,448 million bushels in the previous year from 99.8 million acres, giving an average yield per acre of 24.5 bushels. Production, including that of U.S.S.R., over the years 1935-39 averaged 2,338 million bushels from 114.2 million acres, representing an average yield of 20.5 bushels per acre.

§ 8. Rice.

Rice-growing is confined almost entirely to Asia although limited quantities are grown in other countries. In Australia, rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924-25 when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Area until local requirements were met and a small surplus became available for export. The area sown is controlled, being limited by the quantity of water available.

The area sown reached a maximum in 1943-44 when 40,690 acres yielded 4,015,000 bushels. The highest production was recorded in 1950-51 when the yield was 4,117,600 bushels.

The bulk of Australia's exports of rice, which had gone to the United Kingdom in years prior to 1938-39, is shipped now to islands in the South-East Asia area.

Details relating to area, production and trade for the years 1948-49 to 1952-53, compared with the averages for the years 1934-35 to 1938-39, are shown in the following table :—

RICE : AREA, PRODUCTION AND TRADE, AUSTRALIA.(a)

Season.	No. of Growers.	Area.	Production (Paddy Rice).		Average Yield (Paddy) per acre.	Imports.		Exports.	
			Quantity.	Gross Value. (b)		Un-cleaned.	Cleaned.	Un-cleaned.	Cleaned.
		Acres.	'000 Bushels.c	£'000.	Bushels.c	Centals.	Centals.	Centals.	Centals.
Average, 1934-35 to 1938-39 ..	(d) 313	22,823	2,274	450	99.7	2,124	38,272	9,357	271,851
1948-49 ..	404	32,689	2,739	1,032	83.8	..	549	8,658	610,497
1949-50 ..	444	37,540	3,783	1,653	100.8	..	6,685	225	597,759
1950-51 ..	462	36,945	4,118	2,171	111.5	1	63	2,065	657,267
1951-52 ..	452	35,664	3,048	2,108	85.5	3	18	4,140	559,395
1952-53 ..	496	34,519	3,964	3,338	114.8	136	2,223	2,126	532,828

(a) Rice-growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland in the 1950-51, 1951-52 and 1952-53 seasons. (b) Excludes the value of straw. (c) 42 lb. per bushel. (d) 1938-39 figure, previous years not collected.

§ 9. Sorghum for Grain.

1. Area, Production and Average Yield.—The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939-40, but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to livestock and is becoming an important source of supply for supplementing other coarse grains for the feeding of livestock. Other sorghums are grown in Australia mainly as green fodder, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet). Particulars of the area and production of sorghum grown for grain are given in the following table.

GRAIN SORGHUM : AREA, PRODUCTION AND AVERAGE YIELD, AUSTRALIA.

Season.	Area.			Production.(a)			Average Yield per Acre.(a)		
	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939-40 ..	(c)	4,397	(d) 4,397	(c)	57,936	(d) 57,936	(c)	13.2	d 13.2
1948-49 ..	4,732	48,011	52,745	83,244	899,136	982,389	17.6	18.7	18.6
1949-50 ..	3,575	99,362	102,937	67,809	2,157,717	2,225,526	19.0	21.7	21.6
1950-51 ..	4,466	166,311	170,778	73,773	3,683,286	3,757,064	16.5	22.2	22.0
1951-52 ..	7,101	169,558	176,660	41,487	2,651,799	2,693,280	5.8	15.6	15.3
1952-53 ..	4,982	190,619	195,601	88,905	3,239,133	3,328,038	17.9	17.0	17.0

(a) 60 lb. per bushel.

(b) Includes small areas sown and quantities produced in other States.

(c) Not available.

(d) Queensland only.

2. **Queensland-British Food Corporation Project.**—A brief outline of the activities of the Queensland-British Food Corporation appeared in Official Year Book No. 40, page 368, and previous issues.

§ 10. Potatoes.

1. **Area, Production and Average Yield.**—Victoria possesses peculiar advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, and the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 79 per cent. of the total for Australia in 1952-53.

The area sown, production and average yield per acre of potatoes in each State during the years 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are shown hereunder :—

POTATOES : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to								
1938-39	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1948-49	18,101	45,785	11,184	5,860	6,344	32,319	89	119,682
1949-50	23,369	50,651	11,624	7,245	6,895	34,110	108	134,002
1950-51	18,374	52,482	10,783	6,969	6,780	34,581	142	127,111
1951-52	19,034	42,108	11,465	6,971	6,885	31,514	168	118,145
Average, 1942-43 to								
1951-52	23,431	57,525	12,414	7,705	7,611	45,135	125	153,946
1952-53	18,119	52,851	11,641	9,231	8,079	35,347	127	135,395
PRODUCTION (TONS).								
Average, 1929-30 to								
1938-39	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1948-49	61,265	166,105	27,511	33,054	39,516	131,800	561	459,812
1949-50	69,395	167,881	30,681	40,984	39,459	122,000	637	471,037
1950-51	43,102	139,391	24,725	35,955	43,887	124,000	660	411,720
1951-52	52,020	178,399	33,001	43,898	49,930	150,500	1,017	508,765
Average, 1942-43 to								
1951-52	62,536	200,892	28,822	38,539	41,110	177,677	689	550,265
1952-53	51,132	133,748	35,051	43,880	52,759	114,500	663	431,133
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929-30 to								
1938-39	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1948-49	3.38	3.63	2.46	5.64	6.23	4.08	6.30	3.84
1949-50	2.07	3.31	2.64	5.66	5.72	3.58	5.90	3.52
1950-51	2.35	2.66	2.29	5.16	6.47	3.93	4.65	3.24
1951-52	2.73	4.24	2.88	6.30	7.25	4.78	6.05	4.31
Average, 1942-43 to								
1951-52	2.67	3.49	2.32	5.00	5.40	3.94	5.51	3.57
1952-53	2.82	2.52	3.01	4.75	6.53	3.24	5.22	3.18

After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes increased rapidly and reached a maximum of 241,803 acres in 1944-45. Areas sown in subsequent seasons were considerably less, however, and showed a general decline to the figure for the 1952-53 season, 135,395 acres.

Compared with the average yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, in 1952-53 averaged 5.17 tons per acre from an area of about 18,000 acres, as compared with a record yield of 4.31 tons per acre in Australia in 1951-52, and 3.18 tons per acre in 1952-53.

2. **Gross Value of Potato Crop.**—The estimated gross value of the potato crop of each State for the 1952-53 season and the value per acre are shown in the following table.

POTATOES : VALUE OF CROP, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	1,612	4,641	1,077	1,142	1,664	4,548	22	14,706
Value per acre	£88/19/3	£87/16/4	£92/9/9	£123/15/5	£205/19/10	£128/7/6	£172/8/10	£108/12/6

3. **Consumption.**—The annual consumption of potatoes in Australia during each of the three years 1950-51 to 1952-53 amounted to 341,700 tons, 412,900 tons, and 365,100 tons respectively, or 92.1 lb., 108.3 lb. and 93.5 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938-39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. **Marketing.**—Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948 with the completion of sales of the 1947-48 crop.

Potato Marketing Boards were subsequently established in all States under separate State legislation. Boards now operate in five States only as the tenure of the Queensland Board was not continued when its term expired in March, 1954.

5. **Exports.**—Prior to the 1939-45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war, an expanded export trade has been developed. Until 1950-51 this was principally with Eastern countries but in 1951-52 and 1952-53 New Zealand received the bulk of the exports. Details showing exports for the years 1948-49 to 1952-53 and the annual average for the period 1934-35 to 1938-39 are given in the following table :—

POTATOES : EXPORTS, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantity .. tons	18,838	15,074	15,183	6,231	12,468	37,570
Value .. £'000	17	244	341	190	437	1,237

Imports of potatoes are negligible.

§ 11. Onions.

1. **Area, Production and Average Yield.**—Australia's supply of onions comes chiefly from Victoria, which accounted for 47.9 per cent. of the total area and 49.8 per cent. of the quantity produced in 1952-53. Queensland came next with 34.9 per cent. of the area and 24.3 per cent. of the production, leaving a balance of 17.2 per cent. of area and 25.9 per cent. of production distributed among the remaining four States. The Victorian crop consists almost entirely of brown onions of good keeping qualities, and the bulk of the crop is grown in a small section of the Western Division of the State, where soil conditions have been found to be particularly suitable for onion-growing on a commercial scale. Details of the area, production and average yield per acre are given in the following table for the years 1948-49 to 1952-53 together with averages for the ten-year periods ended 1938-39 and 1951-52.

ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	124	6,159	840	450	109	5	3	7,690
1948-49 ..	322	5,554	2,828	498	499	31	4	9,736
1949-50 ..	225	4,093	2,371	435	371	28	3	7,526
1950-51 ..	211	4,148	2,399	506	379	19	5	7,667
1951-52 ..	401	4,745	2,527	620	334	50	5	8,682
Average, 1942-43 to 1951-52 ..	569	5,968	2,244	551	405	47	6	9,790
1952-53 ..	363	3,866	2,813	552	414	49	9	8,066

ONIONS: AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1948-49	1,242	33,684	12,535	4,971	3,930	180	27	56,569
1949-50	770	25,436	13,137	4,607	3,611	130	22	47,713
1950-51	539	18,182	7,256	5,242	4,033	89	26	35,367
1951-52	1,937	31,150	9,691	6,302	3,855	243	38	53,216
Average, 1942-43 to 1951-52 ..	1,994	35,634	9,531	5,079	3,398	172	29	55,837
1952-53	1,171	23,690	11,542	5,500	5,409	196	55	47,563
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929-30 to 1938-39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1948-49	3.86	6.06	4.43	9.98	7.88	5.81	6.75	5.81
1949-50	3.42	6.21	5.54	10.59	9.73	4.64	7.33	6.34
1950-51	2.55	4.38	3.02	10.36	10.64	4.68	5.20	4.61
1951-52	4.83	6.56	3.83	10.16	11.54	4.86	7.60	6.13
Average, 1942-43 to 1951-52 ..	3.50	5.97	4.25	9.22	8.39	3.66	4.83	5.70
1952-53	3.23	6.13	4.10	9.96	13.07	4.00	6.11	5.90

Details of the area and production of fresh vegetables other than potatoes and onions are given in § 17.

2. **Gross Value of Onion Crop.**—The estimated gross value of the onion crop and the value per acre are shown in the following table for the 1952-53 season:—

ONIONS: VALUE OF CROP, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	39	598	193	115	153	6	2	1,106
Value per acre ..	£107/16/6	£154/14/6	£68/11/0	£209/4/9	£368/16/6	£114/1/8	£204/8/11	£137/1/10

3. **Consumption.**—The annual consumption of onions in Australia averaged 44,300 tons or 11.6 lb. per head of population during the three years ended 1952-53, compared with 40,600 tons or 13.2 lb. per head during the three years ended 1938-39. These figures exclude an estimated wastage which averaged 2,200 tons and 2,100 tons respectively.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. In 1952-53 exports amounted to 8,283 tons, valued at £249,000, and were shipped mainly to Singapore, Hong Kong and Canada. The quantity of exports in 1951-52 was 3,673 tons, valued at £179,000. There were no imports in 1952-53 but 2,397 tons were imported in 1951-52, principally from New Zealand.

§ 12. Hay.

1. General.—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. Up to and including 1946-47 hay was next in importance but since that year it has been third to oats (for grain).

In 1952-53 the hay area represented 8.6 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 749. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area, production and average yield per acre of hay of all kinds in the several States during the years 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are shown below:—

HAY : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average, 1929-30 to 1938-39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1948-49 ..	374,392	591,341	59,642	234,292	226,779	90,579	2,486	1,579,511
1949-50 ..	339,091	606,525	55,108	294,590	216,320	91,335	2,271	1,605,240
1950-51 ..	238,931	557,454	44,934	260,856	176,990	96,388	1,609	1,377,162
1951-52 ..	334,007	640,418	43,586	257,005	173,855	97,763	2,306	1,548,940
Average, 1942-43 to 1951-52 ..	507,536	722,261	61,875	332,233	244,651	94,155	2,884	1,965,595
1952-53 ..	387,823	752,932	66,249	213,852	227,082	110,140	3,237	1,761,315
PRODUCTION (TONS).								
Average, 1929-30 to 1938-39 ..	958,549	1,263,127	104,297	577,100	463,981	119,826	2,830	3,489,710
1948-49 ..	496,873	933,983	117,339	311,997	277,329	150,699	4,064	2,292,284
1949-50 ..	496,081	1,000,855	116,412	384,604	272,052	155,653	4,332	2,429,989
1950-51 ..	314,940	894,585	101,319	362,162	226,703	160,722	2,509	2,062,940
1951-52 ..	450,774	1,046,764	79,763	379,978	211,629	172,286	3,655	2,344,849
Average, 1942-43 to 1951-52 ..	620,076	1,006,555	115,143	412,972	275,457	147,317	3,923	2,581,443
1952-53 ..	578,651	1,245,217	135,673	317,462	290,296	192,381	4,971	2,764,651
AVERAGE YIELD PER ACRE (TONS).								
Average, 1929-30 to 1938-39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1948-49 ..	1.33	1.58	1.97	1.33	1.22	1.66	1.63	1.45
1949-50 ..	1.46	1.65	2.11	1.31	1.26	1.70	1.91	1.51
1950-51 ..	1.32	1.60	2.25	1.30	1.28	1.67	1.56	1.50
1951-52 ..	1.35	1.63	1.83	1.48	1.22	1.76	1.58	1.51
Average, 1942-43 to 1951-52 ..	1.22	1.39	1.86	1.24	1.13	1.56	1.36	1.31
1952-53 ..	1.49	1.65	2.05	1.48	1.28	1.75	1.54	1.57

Owing to various causes, the principal being the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is apt to fluctuate considerably. The area under hay in Australia during the season 1915-16, 3,597,771 acres, was the largest on record, whilst the average for the ten years ended 1951-52 was 1,965,595 acres.

(ii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1952-53 are given in the following table.

HAY : AREA UNDER VARIOUS KINDS GROWN, 1952-53.
(Acres.)

State.	Wheat.	Oaten.	Lucerne.	Other.	Total.
New South Wales ..	94,503	127,795	95,839	69,686	387,823
Victoria ..	32,552	219,448	44,907	456,025	752,932
Queensland ..	8,284	7,062	45,806	5,097	66,249
South Australia ..	49,626	99,458	9,935	54,833	213,852
Western Australia ..	55,754	119,505	152	51,671	227,082
Tasmania ..	3,644	25,398	764	80,334	110,140
Australian Capital Territory ..	140	1,078	1,287	732	3,237
Total ..	244,503	599,744	198,690	718,378	1,761,315

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1952-53 were 34 per cent. for oaten, 14 per cent. for wheaten, 11 per cent. for lucerne, and 41 per cent. for other hay. In that year, oaten hay predominated in the States of New South Wales, South Australia and Western Australia, lucerne in Queensland, and meadow and grass in Victoria and Tasmania.

2. **Value of Hay Crop.**—The following table shows the estimated gross value, and the value per acre, of the hay crop of the several States for the 1952-53 season :—

HAY : VALUE OF CROP, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000.	8,120	12,634	1,972	2,539	2,186	1,707	91	29,249
Value per acre ..	£20/18/9	£16/8/5	£29/15/3	£11/17/5	£9/12/7	£15/9/11	£28/2/11	£16/12/1

3. **Farm Stocks of Hay.**—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1949 to 1953 are given in the table below.

STOCKS OF HAY HELD ON FARMS.

(Tons.)

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1949 ..	691,608	969,242	84,170	404,813	177,502	88,098	3,345	2,418,778
1950 ..	680,498	1,014,747	101,222	341,888	188,167	116,549	2,530	2,445,601
1951 ..	608,416	940,537	102,487	321,873	154,094	112,887	1,774	2,242,068
1952 ..	500,596	1,129,163	29,766	418,734	142,711	129,893	2,702	2,353,565
1953 ..	628,977	1,347,363	97,492	402,477	186,523	145,375	5,119	2,813,326

4. **Imports and Exports.**—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the imports and exports of Australia. During 1952-53 exports amounted to 2,670 tons, valued at £65,925.

§ 13. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. The areas recorded in respect of green fodder include areas of crops cut for feeding to livestock as green fodder, together with areas fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to livestock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar-cane also are so used. In 1952-53 the area under green fodder (2,315,390 acres) consisted of oats (1,405,514 acres), lucerne (227,994 acres), wheat (116,423 acres), sorghum (55,368 acres), maize (52,879 acres), barley (62,888 acres), rye (25,612 acres), sugar-cane (2,420 acres) and other crops (366,292 acres). Particulars concerning the area of green fodder in the several States during each of the years 1948-49 to 1952-53 are given in the following table together with the average for the periods of ten years ended 1938-39 and 1951-52.

GREEN FODDER : AREA.
(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39	482,089	120,355	347,804	106,820	189,332	24,255	656	1,272,211
1948-49	548,106	50,847	544,660	291,688	447,411	125,961	2,150	2,010,832
1949-50	584,541	44,928	581,811	277,265	550,690	136,412	2,249	2,177,896
1950-51	528,214	41,279	583,304	340,727	556,312	163,153	1,214	2,224,203
1951-52	672,633	45,661	604,190	385,079	636,728	176,319	1,225	2,521,835
Average, 1942-43 to 1951-52	598,408	63,142	575,093	256,553	439,540	112,291	1,770	2,046,797
1952-53	661,767	40,303	572,212	285,857	574,790	179,333	1,108	2,315,399

2. Value of Green Fodder Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1952-53, excluding Western Australia, may be taken as approximately £6,209,000.

§ 14. Sugar-cane.

1. Area.—Sugar-cane growing appears to have commenced in Australia in or about 1862, and is confined to New South Wales and Queensland. A brief outline of the development of the industry was included in earlier issues of the Official Year Book (see No. 38, page 985). The area of sugar-cane in Australia for the seasons 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are shown in the following table. In 1952-53 the total area of sugar-cane (excluding areas cut for green fodder) was a record at 433,894 acres, an increase of 7.7 per cent. over the 1951-52 area of 402,867 acres.

SUGAR-CANE : AREA.(a)
(Acres.)

Season.	New South Wales.			Queensland.			Australia.			
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Total.
Average, 1929-30 to 1938-39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1948-49 ..	8,386	8,761	312	257,944	97,434	10,664	266,330	106,195	10,976	383,501
1949-50 ..	8,517	8,081	297	272,812	97,878	10,639	281,329	105,959	10,936	398,224
1950-51 ..	8,207	7,134	236	263,666	106,903	10,976	271,873	114,037	11,212	397,122
1951-52 ..	8,354	5,974	191	273,370	101,731	13,247	281,724	107,705	13,438	402,867
Average, 1942-43 to 1951-52 ..	7,883	7,880	279	240,414	89,160	12,327	248,297	97,040	12,606	357,943
1952-53 ..	5,202	8,581	277	274,757	131,724	13,353	279,959	140,305	13,630	433,894

(a) Excludes areas cut for green fodder.

2. Productive and Unproductive Cane.—The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1952-53 amounted to 2,420 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.

3. Production of Cane and Sugar.—For Queensland, statistics of the production of sugar-cane are not available for seasons prior to 1897-98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 7,051,555 tons in 1950-51.

The average production of cane during the ten seasons ended 1951-52 was 5,207,545 tons, and of raw sugar 721,337 tons. Particulars of the total production of cane and sugar for the years 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are as follows.

SUGAR-CANE : PRODUCTION OF CANE AND SUGAR.
(Tons.)

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.(a)	Cane.	Sugar.(a)	Cane.	Sugar.(a)
Average, 1929-30 to 1938-39	241,402	30,317	4,461,988	626,789	4,703,390	657,106
1948-49	273,974	33,003	6,433,556	910,049	6,707,530	943,052
1949-50	330,738	40,706	6,518,042	896,413	6,848,780	937,119
1950-51	359,849	41,258	6,691,706	879,844	7,051,555	921,102
1951-52	321,388	41,060	5,005,172	704,341	5,326,560	745,401
Average, 1942-43 to 1951-52	285,731	35,873	4,921,814	685,464	5,207,545	721,337
1952-53	125,714	14,272	6,841,536	934,614	6,967,250	948,886

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1952-53 amounted to 948,886 tons manufactured from 6,967,250 tons of cane, compared with the previous record production of 943,052 tons in 1948-49, and production of 745,491 tons in 1951-52.

Official annual data are not available regarding the total number engaged in the sugar industry in Queensland other than the number of separate holdings growing cane (6,214 in 1952-53).

According to data obtained from the population census of 30th June, 1947, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland comprised 15,789 males and 287 females, a total of 16,076 persons, of whom 2,521 were employers and 4,549 were self-employed.

4. **Average Production of Cane Sugar.**—Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1951-52 were 36.25 tons for New South Wales, and 20.47 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.55 tons and 2.85 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1951-52 were 20.97 tons and 2.91 tons respectively, as compared with 19.73 tons and 2.76 tons for the ten years ended 1938-39.

SUGAR-CANE AND SUGAR : YIELD PER ACRE.
(Tons.)

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
Average, 1929-30 to 1938-39	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1948-49	32.67	3.94	8.30	24.94	3.53	7.07	25.19	3.54	7.11
1949-50	38.83	4.78	8.13	23.89	3.29	7.27	24.34	3.33	7.31
1950-51	43.85	5.03	8.72	25.38	3.34	7.61	25.94	3.39	7.66
1951-52	38.47	4.92	7.83	18.31	2.58	7.11	18.91	2.65	7.15
Average, 1942-43 to 1951-52	36.25	4.55	7.97	20.47	2.85	7.18	20.97	2.91	7.22
1952-53	24.17	2.74	8.81	24.90	3.40	7.32	24.89	3.39	7.34

5. **Quality of Cane.**—The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season. For the ten years ended 1951-52 it required on the average 7.22 tons of cane to produce 1 ton of sugar, or 13.85 per cent.

of its total weight, as compared with 7.15 tons for the ten years ended 1938-39. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased, and in 1937-38 only 6.78 tons of cane were required to produce 1 ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

6. **Production and Utilization.**—Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1948-49 to 1952-53 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stocks.	Production.	Exports. (a)	Miscel- laneous Uses.(b)	Consumption in Australia. (a)	
					Total.(c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to						
1938-39	+ 6.2	779.3	435.3	11.2	326.6	106.5
1948-49	+ 7.3	897.3	461.0	19.5	409.5	117.6
1949-50	- 10.4	902.5	483.4	19.5	410.0	116.2
1950-51	+ 5.8	906.9	433.3	21.8	446.0	120.2
1951-52	+ 24.7	702.2	206.1	23.8	447.6	117.6
1952-53	+ 4.7	948.3	500.8	18.6	424.2	108.8

(a) Includes sugar content of manufactured products.
in refining.

(b) Includes industrial uses and losses

(c) In terms of refined sugar.

7. **Consumption in Factories.**—The quantity of sugar used in factories in 1952-53 amounted to 242,096 tons compared with 273,190 tons in 1951-52 and 123,883 tons in 1938-39. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1952-53 consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 62,708 tons and by those producing confectionery, ice cream, etc., amounted to 49,231 tons.

8. **Control of Cane Production in Queensland.**—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. On 1st September, 1946, a Sugar Agreement Act came into operation fixing wholesale and retail prices of sugar and in June, 1951 a new agreement was signed to cover the period to 31st August, 1956. Details of prices are shown in para. 14 of this section (*see* page 779).

The Queensland Government acquires the whole of the sugar production of that State and New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and a uniform price paid to mills.

Sugar production barely met local requirements in 1923 but increased rapidly until 1925 when approximately 44 per cent. of the production was exported. Steps were taken by the Government to restrict planting of new areas and production was fairly stable until 1929. In this year the pool was reorganized and mills received full pool price for sugar up to the amount of their previous maximum production, further supplies being acquired at export prices.

Between 1929 and 1939 production rose by more than 70 per cent. despite the restrictions mentioned above and the fact that export prices were generally less than half the pool price.

In 1939 following the International Sugar Agreement, which limited exports, the Queensland Government limited the pool (mill peaks) to 737,000 tons (874,000 in 1948) in respect of Queensland production. Mill quotas were allotted on the understanding that mills would allot quotas to individual growers. Mill peaks have been raised to 942,300 tons in 1950, 1,045,000 tons in 1953 and 1,170,900 tons in 1954. These latter increases followed the negotiation of the Commonwealth Countries Sugar Marketing Agreement of 1949, which allowed the Queensland Government to initiate a planned expansion of the industry.

9. **Sugar Agreement in Australia—Embargo on Imports, etc.**—Reference was made in Official Year Book No. 37 (pp. 940-41) to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. A new agreement operating from 7th July, 1951 covers the period up to 31st August, 1956.

10. **International Sugar Agreement.**—The International Sugar Agreement of 1937 was superseded by a new agreement which came into force on 1st January, 1954. Details of the 1937 Agreement were given in Official Year Book No. 40, pp. 881 and 882, and previous issues.

The new agreement, which was negotiated by 38 countries, is designed to assure supplies of sugar to importing countries and markets to exporting countries at stable and equitable prices. It is also aimed at increasing world consumption of sugar. Basic export quotas have been allocated with provision for reductions or increases to maintain prices within a specified range.

The British Commonwealth, as a whole, has been granted an export quota of 2,375,000 tons, rising to 2,450,000 tons in 1956, which is not subject to the fluctuations mentioned above. The allocation of this total between exporting members of the British Commonwealth is a matter for the countries and territories themselves, Australia's share being fixed at 600,000 tons. Details of the marketing arrangements for Australian sugar are given in para. 15 below.

11. **Net Return for Sugar Crop.**—Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1938-39 and 1948-49 to 1952-53 will be found in the following table:—

RAW SUGAR(a) : NET RETURNS, AUSTRALIA.

Year.	Proportion Exported. (b)	Net Value of Exports per Ton. (b)	Average Price per Ton for Whole Crop.	Estimated Value of Crop.
	Per cent.	£ s. d.	£ s. d.	£'000.
1938-39	55.78	8 4 3	15 3 11	12,806
1948-49	47.00	28 2 0	25 8 6	23,905
1949-50	46.92	29 7 6	26 13 8	25,362
1950-51	43.73	32 16 6	28 3 4	26,132
1951-52	21.12	36 15 6	34 7 0	24,912
1952-53	49.66	41 2 0	42 12 9	40,781

(a) 94 net titre.

(b) As supplied by the Queensland Sugar Board.

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated represent the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges, but including concessions to the fruit industry and other rebates which in 1952-53 amounted to £112,713. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been

divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

12. **Exports of Sugar.**—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938-39 and for each year from 1948-49 to 1952-53 as follows :—

SUGAR : EXPORTS, AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantity tons		377,930	415,194	432,711	387,841	167,431	459,370
Value £'000		3,481	13,199	14,147	14,792	6,896	21,655

13. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the amounts used for distilling, fuel, manure and other purposes will be found in Chapter XXIV.—Manufacturing Industry.

Boards are now being made from the residue of crushed fibre after the removal of the sugar content from sugar-cane. These boards are used in the building industry for walls and ceilings and possess high insulating and sound-absorbing properties.

14. **Sugar Prices.**—The prices of sugar in Australia from 1948 to 1952 in the case of raw sugar, and from 1947 to 1956 in the case of refined sugar, are shown in the following table.

SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar, 94 Net Titre.			Refined Sugar.		
	Average Return per Ton received by millers and growers for—			Date of Determination.	Wholesale Price per Ton.	Retail Price per lb.
	Home Consump- tion.	Exports.(a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1948 ..	23 1 0	28 2 0	25 8 6	4.12.47 to 28.10.49	37 6 8	4½
1949 ..	24 6 0	29 7 6	26 13 8	29.10.49 to 6.7.51	41 9 4	5
1950 ..	24 11 0	32 16 6	28 3 4	7.7.51 to 23.3.52..	53 6 8	6½
1951 ..	33 14 0	36 15 6	34 7 0	24.3.52 to 12.10.52	65 12 10	8
1952 ..	44 3 0	41 2 0	42 12 9	13.10.52 to 31.8.56	73 16 11	9

(a) Including "Excess" Sugar.

15. **Marketing Arrangements.**—Since 1939 the British Ministry of Food has purchased Australia's surplus raw sugar at prices negotiated annually and varying from £ stg. 11 5s. in 1939 to £ stg. 41 in 1954 including tariff preference (for prices in other years see earlier issues of the Year Book). From 1953 the negotiated price applies to 314,000 tons of exports annually, the balance of exports being sold at world prices.

In December, 1949, the United Kingdom Government undertook to find a market for Australia's sugar exports until the end of 1952 when a new British Commonwealth Sugar Agreement came into operation. The new arrangement provides for Australia to export a maximum of 600,000 tons annually from 1953 to 1958. The United Kingdom Government agreed to take 314,000 tons at annually negotiated prices, the balance to be sold at world prices, plus preference if sold in the United Kingdom or Canada.

16. **Fruit Industry Sugar Concession Committee and Sugar Rebates.**—The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund to which the Queensland Government contributes £216,000 annually on behalf of the Sugar Industry (contributions were suspended temporarily whilst funds exceeded £500,000).

A rebate of £2 4s. per ton of refined sugar used in processing approved fruit products is paid to Australian manufacturers provided they buy the fresh fruit at prices not lower than those declared by the Committee as reasonable.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for Australian sugar than the price for which the cheapest imported sugar could be landed duty free in Australia.

Any money remaining may be used for advertising fruit products or for scientific research.

17. Sugar Inquiry Committee.—The Sugar Inquiry Committee was constituted in March, 1952, to investigate the sugar industry and in particular the Sugar Agreement between the Commonwealth and Queensland Governments. As a result of its findings the wholesale and retail prices of sugar were increased from 13th October, 1952 by £8 per ton and 1d. per lb. respectively.

Other amendments were also made although they have not yet been incorporated in the *Sugar Agreement Act*.

18. Bulk Handling of Sugar.—Bulk handling facilities have been established at the ports of Mackay and Lucinda Point following successful tests and consideration of two independent reports by the Sugar Board. Experiments with improvised railway trucks have also been made with a view to providing bulk rail transport facilities for sugar.

§ 15. Vineyards.

1. Progress of Cultivation.—(i) *Area of Vineyards.* Since the early days of Australian settlement the expansion of the cultivation of vines has been most rapid in Victoria and South Australia, the area under vineyards in the 1953 season in these two States comprising 78 per cent. of the total area. The purposes for which grapes are grown in Australia are (a) for wine-making, (b) for table use, and (c) for drying. The total area of vines in the several States during each of the years 1948–49 to 1952–53 and the averages for the ten-year periods ended 1938–39 and 1951–52 are shown in the following table.

VINEYARDS : AREA.
(Acres.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.(a)
Average, 1929–30 to 1938–39	15,777	40,563	2,142	54,156	5,666	118,304
1948–49 ..	16,568	45,609	3,265	59,806	10,014	135,262
1949–50 ..	16,931	45,386	3,135	60,253	9,676	135,381
1950–51 ..	16,917	45,313	3,045	61,971	9,258	136,504
1951–52 ..	17,047	45,267	2,819	61,214	9,358	135,705
Average, 1942–43 to 1951–52	16,454	43,940	3,037	59,017	9,825	132,273
1952–53—						
Wine ..	8,308	5,842	314	43,898	2,561	60,923
Table ..	2,673	1,811	2,494	256	1,434	8,668
Drying ..	7,025	38,315	..	16,449	5,238	67,027
Total ..	18,006	45,968	2,808	60,603	9,233	136,618

(a) Excludes particulars for Australian Capital Territory.

(ii) *Wine Production, Bounties, etc.* The production of wine in Australia has shown a marked increase in recent years, rising from 14.3 million gallons in 1938–39 to 30.0 million gallons in 1952–53. In the same period consumption in Australia has expanded

from 4.5 million gallons (0.7 gallons per head of population) to 11.9 million gallons (1.4 gallons per head of population). For many years prior to the 1939-45 War a bounty was paid on wine shipped overseas under the provisions of the Wine Export Bounty Act 1930, as amended from time to time. Details of the bounty, payment of which was discontinued in 1947, may be found in Official Year Book No. 39, page 992.

The quantity of wine produced in the several States during the 1948-49 to 1952-53 seasons, together with the averages for the ten-year periods ended 1938-39 and 1951-52, is shown in the following table:—

WINE : PRODUCTION.(a)
(’000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 1929-30 to 1938-39	2,099	1,449	36	12,127	393	16,104
1948-49 ..	4,127	3,081	36	24,952	622	32,818
1949-50 ..	5,185	3,230	45	23,702	513	32,675
1950-51 ..	4,372	2,358	43	18,611	652	26,036
1951-52 ..	5,465	3,472	33	25,495	790	35,255
Average, 1942-43 to 1951-52	3,935	2,358	34	19,933	616	26,876
1952-53 ..	4,250	2,267	42	22,733	731	30,023

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

2. Imports and Exports of Wine.—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the 1939-45 War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The bulk of the post-war wine imports have been obtained from France. Imports for 1952-53 amounted to 7,683 gallons valued at £16,350 compared with 79,791 gallons valued at £166,761 in the previous year and an average of 36,685 gallons valued at £39,577 for the five years ended 1938-39.

(ii) *Exports.* Before the 1939-45 War practically all wine exported was sent to the United Kingdom, only about 200,000 gallons per annum being sent elsewhere. Exports in 1952-53 totalled 1,167,000 gallons, of which the United Kingdom received 686,000 gallons, New Zealand 101,000 gallons, Canada 279,000 gallons, and other countries 101,000 gallons.

Exports for the five years ended 1952-53 are shown in the following table in comparison with average exports during the five years ended 1938-39:—

WINE : EXPORTS FROM AUSTRALIA.

Year.	Quantity (Gallons).			Value (£).		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average, 1934-35 to 1938-39	3,772	3,559,094	3,562,866	5,400	938,195	943,595
1948-49 ..	5,180	1,873,083	1,878,263	11,558	982,401	993,959
1949-50 ..	6,093	1,097,225	1,103,318	6,323	509,516	515,839
1950-51 ..	3,651	1,219,258	1,222,909	7,121	627,741	634,862
1951-52 ..	6,685	1,155,610	1,162,295	18,983	711,554	730,537
1952-53 ..	7,373	1,160,088	1,167,461	21,277	742,649	763,926

3. **Oversea Marketing of Wine.**—(i) *The Wine Overseas Marketing Act 1929-1953.* This Act was introduced to place the oversea marketing of surplus wine on an orderly basis. The Australian Wine Board (formerly The Wine Overseas Marketing Board), consisting of representatives from wineries and distilleries, grape-growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board has a London agency which advises on marketing conditions.

(ii) *The Wine Grapes Charges Act 1929-1941.* This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

4. **Other Viticultural Products.**—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 6 per cent. of the productive area of grapes. The greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes produced during the season 1952-53 in each State are shown in § 3 of this chapter. (See p. 742.)

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1948-49 to 1952-53 and the averages for the ten-year periods ended 1938-39 and 1951-52 are shown in the following table. Production in 1952-53 was 100,733 tons and is a near record output, being exceeded only by the 1943-44 production of 103,410 tons.

RAISINS(a) AND CURRANTS : PRODUCTION.

(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australa.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average, 1929-30 to 1938-39 ..	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1948-49 ..	3,819	1,090	35,705	7,967	6,829	6,250	478	2,766	46,831	18,073
1949-50 ..	5,721	898	42,194	6,930	5,895	4,244	289	1,685	54,099	13,757
1950-51 ..	4,419	971	28,007	6,081	7,870	5,830	402	2,547	40,698	15,429
1951-52 ..	7,095	537	44,834	3,858	7,999	4,730	391	2,522	60,319	11,647
Average, 1942-43 to 1951-52 ..	6,068	1,022	40,648	7,091	10,536	6,161	582	2,737	57,834	17,011
1952-53 ..	9,551	990	55,098	6,589	18,486	7,256	302	2,461	83,437	17,296

(a) Sultanas and lexias.

5. **Production and Disposal of Dried Vine Fruit.**—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export. The quantities disposed of in Australia and overseas, as recorded by the Commonwealth Dried Fruits Control Board for the season ended December, 1953, totalled 97,716 tons, Australian consumption amounting to 19,308 tons and oversea exports 78,408 tons. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The following table shows the oversea exports of raisins and currants during each of the years 1948-49 to 1952-53 compared with the average for the five years ended 1938-39.

RAISINS AND CURRANTS(a) : EXPORTS, AUSTRALIA.

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£'000.	Tons.	£'000.	Tons.	£'000.
Average, 1934-35 to 1938-39	43,191	1,686	15,054	549	58,245	2,235
1948-49 ..	37,077	2,369	13,696	741	50,773	3,110
1949-50 ..	28,558	1,819	7,063	409	35,621	2,228
1950-51 ..	27,122	2,586	7,231	717	34,353	3,303
1951-52 ..	32,669	3,961	5,003	646	37,672	4,607
1952-53 ..	58,886	6,395	10,387	1,053	69,273	7,448

(a) Excludes quantities exported as mincemeat which amounted to 1,243 tons in 1952-53 valued at £179,156.

The chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1952-53 being 48,492 tons, 3,944 tons and 15,253 tons respectively.

6. *Post-war Contracts.*—Agreements were negotiated between the Governments of the United Kingdom and Australia for the purchase of Australian dried vine fruits during the period 1946-1953. Up to and including 1951 the quantity of fruit to be purchased was limited but in 1952 and 1953 there was no restriction. In April, 1953, it was agreed to extend the contract for one year but in August, 1953 the United Kingdom Government abolished all controls and on 1st December of that year exports reverted to a trader to trader basis.

The British Ministry of Food will subsidize returns from sales of fruit from the 1954 crop, until 31st March, 1955 if average returns are less than support prices which have been agreed upon as follows: Currants 1 and 2 crown, £87 10s. per ton, Currants 3 and 4 crown, £93 15s.; sultanas 1 crown and upwards, £100; Lexias 4 and 5 crown seeded £112 10s., unseeded £100.

The contract prices for the years 1946-1953 are shown in the following table.

DRIED VINE FRUITS : CONTRACT PRICES PER TON TO UNITED KINGDOM.
(£A. s. d., f.o.b. Australian Ports.)

Fruit.	Grade.	1946 to 1948.	1949 and 1950.	1951.	1952.	1953.
Currants ..	1 Crown and upwards	50 0 0	60 0 0	93 15 0	100 0 0	96 17 6
Sultanas ..	1 Crown and upwards	65 0 0	70 0 0	125 0 0	123 2 6	117 10 0
Lexias ..	4 and 5 Crown ..	64 7 6	64 7 6	125 0 0	123 2 6	117 10 0

7. *Oversea Marketing of Dried Fruits.*—(i) *The Dried Fruits Export Control Act 1924-1953.* This Act was passed to organize oversea marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of growers and Government representatives and members with commercial experience and experience in marketing dried fruits, controls the sale and distribution of dried fruit exports and recommends the conditions under which export licences will be issued.

In conjunction with its London agency the Board has improved dried fruit marketing overseas by its system of appraisement, regulation of shipments and advertising.

(ii) *Dried Fruits Export Charges Act 1924-1929.* This Act provides for a levy on exports of dried fruits to defray costs and expenses incurred by the Board. Provision is made for exemption from the levy upon recommendations by the Board.

§ 16. Orchards and Fruit-Gardens.

1. *Area.*—The largest area of orchards and fruit-gardens prior to the 1939-45 War was 281,899 acres which was attained in 1933-34. From that year until 1942-43, 2233/54.—24

when 260,384 acres were under fruit, there was a gradual decline. In each subsequent year there was a continuous upward movement to 1947-48 when the area reached a new peak of 290,320 acres. Subsequently there was a continuous decline to about 271,000 acres in 1951-52 and 1952-53. The total area of orchards and fruit-gardens in the several States during the years 1948-49 to 1952-53 compared with the averages for the ten seasons 1929-30 to 1938-39 and the ten seasons 1942-43 to 1951-52 is shown in the following table :—

ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39	84,025	76,643	32,437	29,365	20,703	32,627	69	275,869
1948-49	95,421	71,746	37,735	29,732	22,585	29,448	84	286,751
1949-50	94,725	71,046	35,986	26,858	22,744	28,471	98	279,928
1950-51	91,477	69,911	35,241	28,686	22,013	27,130	103	274,561
1951-52	89,362	68,715	35,049	29,375	21,719	26,552	110	270,882
Average, 1942-43 to 1951-52	88,742	70,177	34,659	27,982	21,830	30,207	104	273,701
1952-53	90,131	67,234	37,280	28,649	21,492	26,075	92	270,953

2. *Varieties of Crops.*—The varieties grown differ in various parts of the States, ranging from such fruits as pineapples, papaws and mangoes of the tropics, to strawberries, raspberries and currants of the colder parts of the temperature zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are extensively grown. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, bananas, pineapples, apples, oranges, mandarins, peaches and plums are the varieties most largely cultivated. In South Australia, in addition to apples, oranges, apricots, plums, peaches and pears, almonds and olives are extensively grown. In Western Australia, apples, oranges, lemons, pears, plums, peaches, apricots and figs are the chief varieties. In Tasmania, apples occupy over two-thirds of the fruit-growing area, but small fruits, such as currants, raspberries and gooseberries are extensively grown, while the balance of the area is mainly taken up with pears, apricots and plums. The following table shows the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity and value of fruit produced.

ORCHARDS AND FRUIT-GARDENS, 1952-53.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA, BEARING AND NON-BEARING (ACRES).								
Apples	14,762	19,641	7,796	6,851	12,308	18,755	81	80,194
Apricots	1,980	5,011	299	4,065	400	1,134	1	12,899
Bananas	19,947	..	7,260	..	517	..	..	27,724
Cherries	2,382	1,740	7	912	37	81	1	5,160
Citrus—								
Oranges	26,618	5,236	3,802	6,260	3,786	..	..	45,702
Mandarins	2,002	96	1,477	111	224	..	..	3,910
Lemons and Limes	3,390	1,629	475	326	542	..	..	6,362
Other	724	325	117	294	171	..	..	1,631
Nuts	509	787	217	3,056	223	..	..	4,794
Peaches	6,882	12,335	1,460	2,191	780	106	1	23,755
Pears	3,457	13,117	341	1,659	1,008	1,819	3	21,404
Pineapples	415	..	10,064	..	..	..	..	10,479
Plums and Prunes	4,533	3,076	1,260	1,504	869	240	3	11,485
Small Fruits	10	560	194	160	10	3,888	..	4,822
Other Fruits	2,520	3,681	2,511	1,260	608	52	..	10,632
Total	90,131	67,234	37,280	28,649	21,492	26,075	92	270,953

ORCHARDS AND FRUIT-GARDENS, 1952-53—continued.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION.								
Apples bus.	1,063,069	1,962,604	204,754	588,621	1,650,634	3,757,000	4,140	9,230,822
Apricots ..	190,379	399,813	16,803	531,268	48,160	78,742	..	1,265,165
Bananas ..	1,790,265	..	384,836	..	68,903	..	..	2,244,004
Cherries ..	125,184	60,753	41	47,210	1,306	4,826	..	239,320
Citrus—								
Oranges ..	2,621,697	579,151	242,555	969,314	375,107	..	..	4,787,824
Mandarins ..	152,850	18,014	103,390	29,087	16,995	..	..	320,336
Lemons and Limes ..	342,927	154,715	68,634	46,299	87,279	..	..	699,854
Other ..	129,414	46,133	17,174	41,329	21,569	..	..	255,619
Nuts .. lb.	193,672	218,183	38,580	1,776,358	30,680	..	40	2,257,513
Peaches bus.	868,177	1,419,969	81,691	223,455	73,588	9,609	24	2,676,513
Pears ..	390,360	2,438,616	29,103	216,131	114,852	323,914	63	3,513,039
Pineapples ..	49,566	..	2,356,464	..	..	..	..	2,406,030
Plums and Prunes ..	437,148	193,189	73,893	94,564	68,662	45,823	58	913,277
Small Fruits cwt.	244	10,897	7,345	2,249	201	98,678	..	119,614

GROSS VALUE OF PRODUCTION.

(£'000.)

Apples ..	2,000	2,453	502	712	2,276	3,988	8	11,939
Apricots ..	456	500	45	859	84	59	..	2,003
Bananas ..	4,948	..	879	..	344	..	..	6,171
Cherries ..	571	198	..	189	12	6	..	976
Citrus—								
Oranges ..	3,678	769	398	1,449	451	..	..	6,745
Mandarins ..	206	28	190	57	31	..	..	512
Lemons and Limes ..	252	170	71	31	61	..	..	585
Other ..	107	39	19	26	17	..	..	208
Nuts ..	16	31	2	178	4	..	..	231
Peaches ..	1,053	1,562	164	397	123	6	..	3,305
Pears ..	509	2,439	45	307	181	430	..	3,911
Pineapples ..	60	..	2,461	..	..	..	..	2,521
Plums and Prunes ..	935	144	170	186	134	17	..	1,586
Small Fruits ..	2	77	74	26	5	355	..	539
Other Fruits ..	256	73	283	120	66	..	..	800
Total ..	15,040	8,483	5,303	4,537	3,789	4,803	8	42,032

3. Principal Fruit Crops.—The area, production and gross value of the principal fruit crops during the periods 1948-49 to 1952-53 compared with the average for the ten seasons 1929-30 to 1938-39, and the average for the ten seasons 1942-43 to 1951-52, are shown hereunder :—

PRINCIPAL FRUIT CROPS : AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION.

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
AREA, BEARING AND NON-BEARING (ACRES).							
Average, 1929-30 to 1938-39	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1948-49 ..	83,802	13,564	32,263	56,126	28,353	22,634	12,540
1949-50 ..	81,744	13,277	29,669	57,367	27,318	21,579	12,226
1950-51 ..	80,486	13,302	27,515	57,265	26,197	21,737	12,163
1951-52 ..	80,206	13,282	26,021	58,410	25,603	20,957	11,841
Average, 1942-43 to 1951-52	83,664	12,902	27,309	53,713	26,930	22,253	12,397
1952-53 ..	80,194	12,899	27,724	57,605	23,755	21,404	11,485

PRINCIPAL FRUIT CROPS: AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION—continued.

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
PRODUCTION ('000 BUSHELS).							
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,934	2,130	948
1948-49	8,313	1,347	3,147	7,056	2,204	3,125	820
1949-50	9,225	1,463	3,428	6,394	2,303	2,861	806
1950-51	9,711	1,309	3,224	7,645	2,435	3,549	940
1951-52	10,743	1,492	2,740	6,168	2,822	3,534	845
Average, 1942-43 to 1951-52	11,320	1,293	2,778	6,000	2,404	3,100	906
1952-53	9,231	1,265	2,244	6,064	2,677	3,513	913

**GROSS VALUE OF PRODUCTION.
(£.)**

Average, 1929-30 to 1938-39	2,677	326	1,072	1,808	679	559	286
1948-49	5,381	983	3,404	4,019	1,342	1,585	612
1949-50	7,710	1,328	3,880	5,350	1,687	2,108	786
1950-51	9,105	1,464	4,532	5,036	2,068	2,927	1,107
1951-52	13,346	2,307	6,742	8,355	3,274	3,752	1,379
Average, 1942-43 to 1951-52	6,294	1,124	3,614	4,878	1,626	1,770	788
1952-53	11,939	2,003	6,171	8,050	3,305	3,911	1,586

4. **Production of Jams and Jellies and Preserved Fruit.**—Considerable quantities of fruit are used in the production of jams and jellies and preserved fruit in Australia. In 1952-53 output of jams and jellies amounted to 77,521,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 221,142,000 lb. Production of preserved apples was 7,238,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 161,791 tons in 1952-53.

5. **Consumption of Fruit and Fruit Products.**—Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1953-54 are shown in Chapter XXIX.—Miscellaneous, of this Year Book.

6. **Imports and Exports of Fruit.**—(i) *General.* The imports of fresh fruit into Australia are negligible, whilst those of dried fruit consist mainly of dates.

A considerable export trade in both fresh and dried fruit is carried on by Australia with overseas countries. The values of the shipments in 1952-53 amounted to £9,569,000 and £8,030,000 respectively. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruit and pears are fairly considerable. Shipments of raisins and currants have increased greatly since 1914-15 and are mainly responsible for the growth in the dried fruit exports, although dried tree fruit also figures amongst the exports.

(ii) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit are shown in the following table:—

FRESH AND FROZEN FRUIT : EXPORTS, AUSTRALIA.

Year.	Apples.		Pears.		Citrus.		Total.(a)	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
Average, 1934-35 to 1938-39 ..	4,591	1,396	632	268	533	234	5,865	1,981
1948-49	2,116	1,771	621	604	611	552	3,449	3,117
1949-50	3,010	2,438	572	639	563	650	4,225	3,934
1950-51	3,263	3,393	885	1,301	619	761	4,854	5,227
1951-52	3,263	4,285	808	1,492	432	779	4,601	6,895
1952-53	4,696	6,740	937	1,675	433	742	6,181	9,569

(a) Total, including exports of all other fresh and frozen fruit.

(iii) *Dried Tree Fruit.* The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the five years ending 1952-53, compared with the average for the five years 1934-35 to 1938-39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq.

DRIED TREE FRUIT(a) : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.
Average, 1934-35 to 1938-39	12,225	80	4,315	117	-7,910	37
1948-49 ..	11,316	240	4,796	343	-6,520	103
1949-50 ..	10,125	212	10,218	661	93	449
1950-51 ..	11,666	285	24,336	1,366	12,670	1,081
1951-52 ..	12,680	293	4,520	414	-8,160	121
1952-53 ..	5,851	142	3,966	403	-1,885	261

(a) Excludes raisins and currants referred to separately under Vineyards, § 15, par. 5.

NOTE.—Minus sign (—) denotes net imports.

(iv) *Jams and Jellies.* Exports of jams and jellies reached large proportions immediately following the 1939-45 War and in 1946-47 amounted to 65,434,000 lb., compared with the average for the five years ended 1938-39 of 7,118,000 lb. Since 1949-50, when exports totalled 65,229,000 lb. there has been a marked decline and in 1952-53 exports amounted to only 10,736,000 lb., valued at £660,000. Imports of jams and jellies are negligible.

(v) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1952-53 was 321,000 lb. valued at £18,000. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938-39 amounting to £1,271,525. In 1952-53 the value of exports had increased to £9,301,705. In addition, the exports of pulped fruits during 1952-53 amounted to 11,650,000 lb. valued at £848,000. Quantities of fruit preserved in liquid exported from Australia in 1952-53 amounted to 143,309,000 lb. compared with average exports of 68,896,000 lb. for the five years ended 1938-39. Exports in 1952-53 were principally made up of peaches (55,028,000 lb.), pears (43,692,000 lb.), apricots (20,334,000 lb.) and pineapples (16,124,000 lb.).

7. *Marketing of Apples and Pears.*—(i) *Apple and Pear Organization Act 1938-1953.* This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board comprised of representatives of growers, exporters, employees and the Commonwealth Government. Oversea representatives may also be appointed by the Board.

The function of the Board is the organization and control of exports of fresh apples and pears and it has the power to regulate shipments, determine export quotas and allocate consignments from each State.

(ii) *Apple and Pear Export Charges Act 1938-1947.* This Act provides for an export levy to meet the expenses of the Board.

(iii) *Apple and Pear Acquisition.* Exports of apples and pears were seriously curtailed during the war and the 1940 to 1948 crops were acquired and marketed under National Security and Defence Regulations. Details of the acquisition scheme will be found on pages 1003 and 1004 of Official Year Book No. 38 and in earlier issues.

8. *Overseas Marketing of Canned Fruit.*—(i) *The Canned Fruits Export Control Act 1926-1953.* This legislation was introduced with the object of organizing the overseas marketing of canned fruit. The Australian Canned Fruits Board, comprising members

representing canneries, pineapple interests and the Commonwealth Government, was appointed with functions mentioned above and also to recommend conditions under which export licences are issued.

The system of marketing adopted by the Board has resulted in the satisfactory disposal of the exportable surplus of canned fruits.

(ii) *The Canned Fruits Export Charges Act 1926-1938*. This Act provides for a levy on exports to meet the Board's expenses. Provision has been made for certain exemptions when recommended by the Board.

§ 17. Vegetables for Human Consumption.

1. *Area and Production of Fresh Vegetables.*—Details of the areas planted and production of individual kinds of vegetables, excluding potatoes and onions referred to in §§ 10 and 11 of this chapter, are shown below for the seasons 1950-51 to 1952-53. Comparable figures prior to the 1942-43 season are not available.

FRESH VEGETABLES^(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1950-51.		1951-52.		1952-53.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French ^(b) ..	14,752	19,822	15,111	19,469	14,556	19,748
Beans, Navy ..	2,254	355	2,185	446	2,068	533
Beetroot ..	2,243	13,116	2,440	16,345	2,075	12,429
Cabbages and Brussels Sprouts ..	8,095	91,831	8,160	81,321	7,347	78,126
Carrots ..	5,237	39,139	5,396	41,761	4,589	33,038
Cauliflowers ..	7,253	92,163	7,506	76,910	7,868	79,713
Lettuces ..	3,468	13,678	3,644	13,838	4,084	15,341
Parsnips ..	1,394	12,224	1,677	13,445	1,631	12,469
Peas, Blue ..	8,695	4,826	7,668	5,332	3,567	1,977
Peas, Green ..	36,630	30,178	41,056	36,231	42,213	41,360
Pumpkins ..	27,062	70,316	29,522	76,754	25,524	72,359
Tomatoes ..	18,066	89,342	17,339	102,092	18,443	101,292
Turnips, Swede and White ..	7,067	26,937	6,977	26,435	5,037	19,268
All Other ..	13,590	..	13,142	..	12,889	..
Total ..	155,806	..	161,823	..	151,891	..

^(a) Excludes potatoes and onions in "All Other".

^(b) Excludes french beans harvested dry; these are included

2. *Production of Canned and Dehydrated Vegetables.*—Total production of canned vegetables in 1952-53 amounted to 66,306,000 lb., which was considerably higher than pre-war production, but only approximately 56 per cent. of the peak war-time production. The principal canned vegetables produced in 1952-53 were green peas 29,117,000 lb., green beans 3,328,000 lb., baked beans (including pork and beans) 9,268,000 lb., tomatoes 7,985,000 lb. and asparagus 5,129,000 lb.

The production of dehydrated vegetables, which was initiated during the 1939-45 War by the Commonwealth Government, rose to a maximum of 22 million lb. in 1945-46, but in recent years has declined to an annual output of less than one million lb.

3. *Imports and Exports of Vegetables.*—Oversea exports of pulse and fresh vegetables during 1952-53 consisted of:—Pulse, 16,397 tons, £100,000; onions, 8,288 tons, £249,000; potatoes, 37,570 tons, £1,237,000; other vegetables, 1,965 tons, £185,000. Imports of pulse amounted to 4,626 tons valued at £350,000 whilst imports of fresh vegetables were negligible.

In 1952-53 exports of vegetables preserved in liquid consisted of :—Peas, 528,000 lb., £39,000; tomatoes, 3,965,000 lb., £278,000; other vegetables, 3,417,000 lb., £266,000.

4. **Consumption of Vegetables.**—Details of the estimated consumption of vegetables for a series of years ending with 1953-54 are shown in Chapter XXIX.—Miscellaneous, of this Year Book.

§ 18. Tobacco.

1. **States, Area and Production.** Tobacco-growing promised years ago to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888-89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to more than 2,000 acres, and that in Queensland to more than 1,000 acres, the total area declined considerably.

The expansion of the tobacco-growing industry was hoped for as a 1939-45 war-time measure but, after increasing slightly during the first three war years, the acreage planted decreased to 1948-49, but by 1952-53 had recovered to 70 per cent. of the annual average for the ten years ended 1938-39. Owing to improvement in average yields, however, the production of dried leaf in 1952-53 was 27 per cent. higher than the pre-war average.

In the following table particulars of the area and production of tobacco are given by States for each of the seasons 1948-49 to 1952-53, together with averages for the ten-year periods ended 1938-39 and 1951-52 :—

TOBACCO : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
AREA (ACRES).							
Average, 1929-30 to 1938-39	1,274	6,237	2,865	292	502	89	11,259
1948-49	428	994	1,678	..	620	..	3,720
1949-50	327	919	2,677	..	661	..	4,584
1950-51	342	1,021	4,142	..	967	..	6,472
1951-52	432	1,500	5,038	..	1,229	..	8,199
Average, 1942-43 to 1951-52	460	1,334	2,696	..	894	..	5,384
1952-53	445	1,613	4,339	..	1,525	..	7,922
PRODUCTION OF DRIED LEAF ('000 lb.).							
Average, 1929-30 to 1938-39	860	2,354	1,400	83	361	56	5,114
1948-49	402	793	1,626	..	595	..	3,416
1949-50	299	668	2,540	..	631	..	4,138
1950-51	184	971	2,144	..	972	..	4,271
1951-52	518	1,381	4,667	..	988	..	7,554
Average, 1942-43 to 1951-52	414	854	2,087	..	720	..	4,075
1952-53	514	1,472	3,431	..	1,068	..	6,485

(a) Excludes Northern Territory.

2. **The Tobacco Industry.**—(i) *Marketing.* The Australian Tobacco Board controlled the marketing of Australian-grown tobacco leaf during the period 1941 to 1948 but subsequent crops have been marketed at open auction in the respective States. Queensland has had its own Tobacco Leaf Marketing Board since 1948 and leaf sold in that State has a reserved price, determined by the Board's appraiser. Growers in New South Wales, voluntarily, submit their leaf to the Queensland Board.

(ii) *Tariff Board Inquiries.* The tobacco industry has been the subject of a number of investigations. The Tariff Board inquired into the industry in 1926, 1931 and 1940 and reports were issued.

(iii) *Tobacco Inquiry Committee.* Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1953, were given in Official Year Book No. 40, pages 895, 896 and in previous issues.

Manufacturers of Australian cigarettes and tobacco are entitled to a lower rate of duty on imported tobacco leaf provided it is blended with certain minimum percentages of Australian leaf. These percentages have risen from 3 per cent. for cigarettes and 5 per cent. for tobacco in November, 1946 to 6 per cent. and 12½ per cent. respectively from 1st July, 1954 and it is proposed to make further increases from 1st July, 1955.

The Commonwealth Scientific and Industrial Research Organization has been investigating many fundamental problems connected with tobacco culture. One of the major achievements of this organization was the development of a technique to control "Field Blue Mould" and investigations are now being made into the control of this disease in the field. State Departments of Agriculture are also carrying out investigations being concerned mainly with variety trials, crop rotation, fertilizer application, etc.

(iv) *Tobacco Factories.* In 1952-53 the quantity of cured leaf used in tobacco factories in Australia amounted to 32.6 million lb. of which 4.2 million was of local origin, the balance being imported, chiefly from the United States of America.

3. *Oversea Trade.*—Imports of tobacco and manufactures thereof into Australia during 1952-53 were valued at £15.5 million, including 35.3 million lb. of unmanufactured tobacco valued at £11.5 million. Exports of tobacco and manufactures thereof during 1952-53 were valued at £265,000.

§ 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1952-53 being 1,699 acres, of which 1,332 acres were in Tasmania, and 367 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901-2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883-84 being 1,758 acres.

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1948-49 to 1952-53 in comparison with the average for the five years ended 1938-39.

HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production.		Imports.	Exports.	Net Available Supplies. (a)	Quantity used in Breweries.
	Quantity.	Gross Value.				
	Cwt.	£'000.	Cwt.	Cwt.	Cwt.	Cwt.
Average, 1934-35 to 1938-39	20,576	173	1,020	78	21,518	18,992
1948-49	17,073	284	6,159	..	23,232	29,543
1949-50	22,993	465	12,047	..	35,040	31,997
1950-51	26,147	620	20,596	11	46,732	36,011
1951-52	17,914	517	24,592	..	42,506	38,012
1952-53	32,116	1,021	12,512	11	44,617	40,845

(a) Disregards movements in stocks.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

§ 20. Flax.

For many years flax was grown intermittently in parts of Victoria and unsuccessful attempts were made to introduce its cultivation in some of the other States.

During the 1914-18 and 1939-45 Wars there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government, the area sown reaching a maximum of more than 61,000 acres in 1944-45. Government assistance was again provided in 1950 and a bounty on scutched flax fibre used was paid during the period July, 1950 to March, 1953, when increased customs duties were introduced. Following recent Tariff Board enquiries the Government has decided to reintroduce the bounty on flax fibre for a period of two years to permit the modernization of plant and machinery. The amount of the bounty is related to the difference between oversea prices and local production costs and it came into operation on 1st November, 1954.

The Government has also decided to proceed with the establishment of a Flax Commission to direct and control Commonwealth flax undertakings previously handled by the Flax Production Committee.

Details of the area under flax and the production of straw are given in the following table :—

FLAX FOR FIBRE : AREA AND PRODUCTION.

Season.	Victoria.	S. Australia.	W. Aust.	Australia.
AREA (ACRES).				
Average, 1934-35 to 1938-39..	1,021	..	..	(a) 1,030
1948-49	6,971	3,099	1,816	11,886
1949-50	5,261	1,753	2,441	9,455
1950-51	3,633	1,198	1,957	6,788
1951-52	2,821	1,599	1,965	6,385
1952-53	2,840	1,618	2,423	6,881
PRODUCTION (TONS OF STRAW)				
Average, 1934-35 to 1938-39..	61	..	..	61
1948-49	11,062	3,631	2,213	16,906
1949-50	6,925	1,511	2,629	11,065
1950-51	5,071	1,365	2,264	8,700
1951-52	4,065	2,214	1,573	7,852
1952-53	4,379	2,967	2,856	10,202

(a) Includes nine acres of unproductive flax in Queensland.

Prior to 1948-49, the growing of flax for linseed oil had not been developed extensively in Australia. Action has since been taken to develop this industry, however, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements. The area sown in 1952-53 was slightly lower than in 1951-52 but production set a new record of 9,931 tons. It is anticipated that there will be a considerable reduction in acreage and production in 1953-54. Details are shown in the following table for the seasons 1948-49 to 1952-53.

FLAX FOR LINSEED : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AREA (ACRES).							
1948-49	5,048	3,793	4,193	959	389	357	14,739
1949-50	6,085	8,148	9,533	3,737	899	453	28,855
1950-51	14,630	9,370	14,986	8,161	543	146	47,836
1951-52	15,785	4,431	28,580	4,853	12	80	53,741
1952-53	15,439	1,063	25,875	3,901	..	..	46,338
PRODUCTION (TONS OF LINSEED).							
1948-49	757	688	875	277	24	76	2,697
1949-50	1,602	1,449	2,249	885	55	153	6,393
1950-51	1,163	1,724	3,561	1,438	36	32	7,954
1951-52	1,617	705	4,174	857	1	39	7,393
1952-53	2,678	176	6,526	551	..	..	9,931

§ 21. Peanuts.

The production of peanuts, or groundnuts, in Australia is mainly confined to Queensland, although small quantities are grown in New South Wales, Western Australia and the Northern Territory. Details of the area and production are given in the table below.

PEANUTS : AREA AND PRODUCTION, AUSTRALIA.

Season.	Area (Acres).				Production (Tons).			
	N.S.W.	Q'land.	W. Aust.	Australia (a)	N.S.W.	Q'land.	W. Aust.	Australia (a)
Average, 1929-30 to 1938-39 ..	29	8,320	100	8,449	(b) 11	3,715	24	3,750
1948-49	129	24,290	32	24,451	67	9,928	14	10,009
1949-50	133	17,697	27	17,857	52	7,907	9	7,968
1950-51	225	16,656	92	16,973	103	5,312	18	5,433
1951-52	374	13,312	15	13,701	222	4,535	9	4,766
Average, 1942-43 to 1951-52 ..	100	22,381	30	22,511	52	10,576	8	10,636
1952-53	789	18,920	10	19,719	409	8,438	7	8,854

(a) Excludes Northern Territory.

(b) Average for five years.

The gross value of the 1952-53 crop was £906,000.

Considerable quantities of peanut kernels were formerly imported annually, chiefly from India, for oil expression purposes. These imports were suspended from 1946 to 1949, but have since been resumed on an increasing scale. Total supplies available for consumption in Australia in 1952-53 of 8,893 tons (shell equivalent) consisted of 4,766 tons grown locally in the 1951-52 season and 4,127 tons imported.

§ 22. Cotton.

1. **General.**—The production of cotton in Australia is restricted to Queensland, where cultivation began in 1860. Details of areas sown for years prior to 1930 and of Government financial assistance to growers up to 1940 appear in Official Year Book No. 39 and earlier issues.

Australia produces only portion of its requirements of raw cotton, the balance being obtained in 1952–53 chiefly from Pakistan, the United States of America, Egypt, India and Brazil. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods and payment of bounties but so far have not met with much success. Production was increased very considerably during the early war years—it reached a peak of 17,550,000 lb. unginned cotton in 1939–40—but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXIV.—Manufacturing Industry.

The Raw Cotton Bounty Act 1940 provided an extension until 31st December, 1946 of assistance previously granted by way of bounty. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947. It was superseded by the Cotton Bounty Act 1951, which guaranteed a net average return of 9½d. per lb. of seed cotton for five years from 1st January, 1951. The 1951 Act was amended in 1952 to provide for a guaranteed return of 14d. per lb. of seed cotton for the 1953 crop, and for variation by regulation of the guaranteed return, in succeeding seasons, with a minimum of 9½d. per lb. The Government has decided that the return for the 1954 and 1955 crops will remain at 14d. per lb., and has also undertaken to consider, at a later date, a further long-term guarantee to the industry.

2. **Area and Production.**—The area under cultivation and the production in Queensland for the years 1948 to 1952 are shown hereunder together with the averages for the periods of ten years ended 1939 and 1951:—

COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended September—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned- Equivalent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
	Acres.	'000 lb.	£'000	'000 lb.	Bales.	lb.	lb.
Average, 1930 to 1939	58,436	16,617	291	5,564	11,181	284	95
1948	6,222	1,821	48	713	1,439	293	115
1949	2,688	719	26	255	522	267	95
1950	2,952	1,102	54	402	806	373	136
1951	4,480	1,406	127	549	1,124	314	123
Average, 1942 to 1951	15,565	4,406	113	1,556	3,156	283	100
1952	5,866	2,184	107	755	1,483	372	129

(a) Bales of approximately 500 lb.

3. **Consumption of Raw Cotton.**—The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938–39.

RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA.

('000 lb.)

Year.	Production.	Imports.	Total.	Consumption in Cotton Mills.
Average, 1936-37 to 1938-39..	5,180	9,882	15,062	12,523
1948-49	713	37,234	37,947	31,077
1949-50	255	28,357	28,612	33,823
1950-51	402	45,201	45,603	40,907
1951-52	549	43,296	43,845	39,030
1952-53	755	24,796	25,551	31,128

§ 23. Financial Assistance to Primary Producers.

NOTE.—See also Chapter XVII.—Public Finance, pages 609-10.

1. *Bounties.*—Bounties paid by the Commonwealth Government during the year ended 30th June 1953 amounted to £2,797,000 compared with £4,729,000 in 1951-52. Brief details of the various Bounty Acts under which these amounts were paid are given below :—

(i) *Wheat Bounty Act 1951.* This Act provided for the payment of bounty for two years from 1st December, 1951 on wheat sold by the Australian Wheat Board as feed for poultry, pigs or dairy cattle up to a maximum of 26 million bushels, the rate to be the lesser amount by which 16s. 1d. per bushel exceeds—(a) the guaranteed price of wheat for the season plus 2s., or (b) 14s. The rate of bounty during 1952-53 (from 1st December, 1952) was 2s. 2d. per bushel and a total amount of £1,950,000 was paid on 18,000,000 bushels.

(ii) *Tractor Bounty Act 1950.* This Act provides for the payment to manufacturers of tractors produced in a factory in the Commonwealth of a bounty based on the belt pulley horse-power of the engine. Payments for 1951-52 were made on 1,275 tractors produced, and amounted to £103,000, and for 1952-53 on 320 tractors produced, and amounted to £38,000.

2. *Subsidies and other Assistance.*—Subsidies and other assistance paid to Primary Producers by the Commonwealth Government amounted to £19,902,000 in 1951-52 and to £16,779,000 in 1952-53. The principal subsidies paid were as follows :—

(i) *Dairy Industry.* Under the provisions of the Dairy Industry Assistance Act, 1943 subsidy was paid on a flat rate basis on milk supplied for the manufacture of butter, cheese and processed milk products during 1951-52 and for butter and cheese only during 1952-53. The subsidy was designed to ensure a return to dairymen equal to the average cost of production of their produce. In 1951-52 the rate of subsidy on butter was 121s. 4d. per cwt. and on cheese 31s. 5d. per cwt., total payments amounting to £17,845,000. The respective rates in 1952-53 were 85s. and 32s. per cwt. and total payments £15,719,000.

(ii) *Artificial Fertilizers.* Prices charged to primary producers for superphosphate and nitrogenous fertilizers (other than sulphate of ammonia produced locally as a by-product on which a surcharge is fixed) have been less than cost, the balance being met by the surcharge on sulphate of ammonia and by Commonwealth subsidy. Total subsidy payments in 1951-52 amounted to £1,521,000 and in 1952-53, £289,000.

§ 24. Fertilizers.

1. *General.*—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. The introduction of the modern seed-drill, acting also as a fertilizer-distributor, has greatly facilitated the use of artificial manures and much land formerly regarded as useless for cultivation has now been made productive.

In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

2. *Imports and Exports.*—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate and is sufficient for local requirements.

The chief sources of Australia's supplies of rock phosphate are Nauru, Gilbert Islands Group and Christmas Island. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1952-53, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table:—

ARTIFICIAL FERTILIZERS : IMPORTS INTO AUSTRALIA.

Fertilizer.		Average, 1934-35 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Ammonium	tons	26,090	10,200	27,259	42,736	40,848	384
Sulphate	£'000	215	228	662	1,050	1,016	10
Potash Salts	tons	10,641	9,220	12,924	14,605	15,978	14,467
	£'000	82	139	266	336	369	314
Rock Phosphate	tons	635,097	909,764	1,185,402	1,101,678	1,014,100	1,271,139
	£'000	776	2,023	2,559	2,217	2,258	2,478
Sodium Nitrate	tons	7,199	7,173	13,416	5,679	15,802	7,848
	£'000	63	107	273	130	363	185
Other	tons	3,430	534	673	1,369	2,735	1,837
	£'000	8	35	25	47	120	15
Total	tons	682,457	936,891	1,239,674	1,166,087	1,089,463	1,295,675
	£'000	1,144	2,532	3,785	3,780	4,126	3,002

Exports of fertilizers (practically all of which are manufactured locally) amounted to 1,511 tons valued at £33,000 in 1952-53 compared with 1,472 tons valued at £80,000 in 1951-52 and 4,826 tons valued at £34,000 for the average of the five years ended 1938-39. Superphosphate is the principal fertilizer exported and amounted to 1,298 tons in 1952-53.

3. *Quantities Locally Used.*—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1952-53 season is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1952-53.

State or Territory.	Area Fertilized ('000 Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales	2,092	2,215	4,307	87,338	108,786	196,124
Victoria	3,702	7,947	11,649	185,285	434,042	619,327
Queensland	368	5	373	81,700	522	82,222
South Australia	3,139	2,322	5,461	158,451	125,775	284,226
Western Australia	4,687	3,691	8,378	235,151	174,808	409,959
Tasmania	177	617	794	25,234	39,205	64,439
Australian Capital Territory ..	3	28	31	245	1,309	1,554
Total	14,168	16,825	30,993	773,404	884,447	1,657,851

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1948-49 to 1952-53, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

QUANTITY OF ARTIFICIAL FERTILIZERS USED.
(Tons.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	148,277	305,969	50,651	200,566	230,713	30,272	276	966,724
1948-49 ..	171,738	467,690	62,084	250,107	333,622	39,109	860	1,325,210
1949-50 ..	174,171	550,020	72,298	243,768	357,632	53,874	1,098	1,452,861
1950-51 ..	160,871	563,086	73,761	255,781	377,083	56,224	822	1,487,628
1951-52 ..	177,120	579,022	72,610	270,046	399,304	56,719	1,033	1,548,854
1952-53 ..	196,124	619,327	82,222	284,226	409,959	64,439	1,554	1,657,851

As mentioned in § 23 the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers. In 1952-53 subsidy was paid only on nitrogenous fertilizers.

4. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1952-53 was 51, made up as follows :—New South Wales, 13 ; Victoria, 9 ; Queensland, 9 ; South Australia, 7 ; Western Australia, 5 and Tasmania, 8. The production of superphosphate in Australia during 1952-53 amounted to 1,581,001 tons.

§ 25. Ensilage.

1. **Government Assistance in Production.**—The several State Governments devote a considerable amount of attention to the education of the farming community in regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the ensilage.

2. **Quantity Made and Stocks Held on Farms.**—Information regarding production and farm stocks of ensilage for the years ended 31st March, 1951, 1952 and 1953 are given in the following table.

ENSILAGE : PRODUCTION AND FARM STOCKS.

(Tons.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Production during—								
1950-51 season..	55,470	26,105	8,775	3,842	12,188	10,649	119	117,148
1951-52 „	47,920	24,591	7,654	8,234	11,433	10,638	4	110,474
1952-53 „	85,135	45,043	12,808	11,670	14,103	17,861	9	187,229
Farm Stocks, as at—								
31st March, 1951	87,253	(a)	12,825	1,802	2,952	8,979	108	(a)
„ „ 1952	74,042	(a)	5,973	5,580	2,235	10,289	101	(a)
„ „ 1953	102,812	(a)	12,980	11,186	3,530	13,588	84	(a)

(a) Not available.

The drought of 1902-3 drew increased attention to the value of stocks of ensilage, and during the four seasons ended 1909-10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939-40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output declined to the extremely low level of 94,744 tons during the drought year 1944-45 rising to 180,622 tons in 1947-48 but decreasing again in succeeding years to 110,474 tons in 1951-52. Production in 1952-53 increased again to 187,229 tons.

§ 26. Agricultural Colleges and Experimental Farms.

Agricultural colleges, administered by State Departments of Agriculture, have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agricultural work and live stock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying or animal husbandry, according to the course undertaken.

Experimental farms have been set up by State Departments of Agriculture in all States. They are primarily concerned with agricultural research and experimentation, each farm concentrating on problems specific to the district in which it is located. The results of the work undertaken are passed on to farmers at field days, which are held at regular intervals, through publication in various agricultural or scientific journals and through the agricultural extension officers of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations scattered throughout Australia, and sometimes undertakes joint research with the appropriate State authorities. In general, however, the Commonwealth Scientific and Industrial Research Organization concentrates on fundamental research, except when otherwise specifically invited, while the State Departments of Agriculture study problems of particular significance within their own boundaries. The universities also carry out valuable research work on their own experimental farms.

§ 27. Tractors on Rural Holdings.

The growth of mechanization in agriculture is indicated by the increase in the number of tractors on rural holdings from 41,943 in 1939 to 158,382 in 1953 or by 278 per cent. Since 1943, the first year in which the collection was made by types, wheeled type tractors have increased by 216 per cent., and crawler types by 110 per cent.

The table below sets out the total number of tractors on rural holdings in 1939, and the number of wheeled type and crawler tractors for the five years ended 1953.

TRACTORS ON RURAL HOLDINGS.

March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
WHEELED TYPE TRACTORS.								
1949 ..	21,283	18,480	17,980	8,891	8,527	2,069	71	77,301
1950 ..	25,533	23,235	20,616	11,184	10,323	2,464	84	93,439
1951 ..	30,061	28,132	24,406	13,562	12,331	3,056	107	111,655
1952 ..	35,302	33,678	26,953	15,396	14,579	3,857	142	129,907
1953 ..	39,229	37,484	29,579	16,729	15,381	4,550	158	143,110

CRAWLER OR TRACK TYPE TRACTORS.

1949 ..	1,649	770	2,781	2,380	1,693	173	2	9,448
1950 ..	1,831	884	3,111	2,525	1,796	201	8	10,356
1951 ..	2,145	926	3,388	2,566	2,223	264	6	11,518
1952 ..	2,828	1,187	3,941	2,788	2,498	342	6	13,590
1953 ..	3,179	1,271	4,419	3,021	2,932	442	8	15,272

TOTAL TRACTORS.

1939(b) ..	12,926	8,802	8,541	5,969	5,680	(c)	25	(d) 41,943
1949 ..	22,932	19,250	20,761	11,271	10,220	2,242	73	86,749
1950 ..	27,364	24,119	23,727	13,709	12,119	2,665	92	103,795
1951 ..	32,206	29,058	27,794	16,128	14,554	3,320	113	123,173
1952 ..	38,130	34,865	30,894	18,184	17,077	4,199	148	143,497
1953 ..	42,408	38,755	33,998	19,750	18,313	4,992	166	158,382

(a) Excludes Northern Territory.
(d) Excludes Tasmania.

(b) At commencement of year.

(c) Not available.

§ 28. Number and Area of Rural Holdings and Employment Thereon.

1. **Number and Area.**—A holding in Australia has been defined by Statisticians on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate any comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of live stock or the products of live stock.

There is considerable fluctuation from time to time in numbers of very small holdings and it is very difficult to determine in some cases whether or not they are rural holdings within the definition.

In addition in the very dry parts such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia there are large areas of marginal lands sporadically occupied under short-term lease or other arrangement and the areas so occupied tend to fluctuate with the season. Similarly, there are rugged areas in the mountain country of some States which are also sporadically occupied.

The following table shows the recorded number and area of the holdings in each State for the seasons 1938-39 and 1948-49 to 1952-53.

RURAL HOLDINGS : NUMBER AND AREA.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Australia. (a)
NUMBER OF RURAL HOLDINGS.								
1938-39..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1948-49..	74,303	71,049	41,986	28,110	19,754	11,739	214	247,155
1949-50..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267
1950-51..	73,195	69,698	41,499	28,248	19,289	11,468	229	243,626
1951-52..	73,122	69,298	41,641	28,698	19,515	11,414	226	243,914
1952-53..	72,940	69,353	42,382	28,832	19,655	11,812	213	245,187
TOTAL AREA OF RURAL HOLDINGS. (⁰⁰⁰ ACRES.)								
1938-39..	174,660	40,791	317,782	144,682	211,720	6,778	371	806,784
1948-49..	167,637	38,867	356,422	146,723	210,658	6,123	376	926,806
1949-50..	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606
1950-51..	168,375	38,108	350,606	151,731	213,362	6,476	395	938,053
1951-52..	168,250	37,935	358,320	151,785	215,386	6,438	395	938,509
1952-53..	167,907	37,868	358,332	152,689	215,858	6,559	394	939,607

(a) Excludes Northern Territory.

It is not possible to classify these holdings according to the purpose for which they are used. This arises from a number of factors, the chief of which is mixed farming. The general trend in Australia is for farmers to diversify their activities and consequently it is very difficult to determine whether the purpose of many holdings is mainly agricultural, pastoral or dairying, or any of these in combination.

An approximate classification was, however, made for New South Wales for 1945-46 and details may be found on page 1018 of Official Year Book No. 39.

2. Special Tabulation Relating to Rural Holdings, 1949-50.—With the co-operation of State Statisticians, the second series of special tabulations relating to rural holdings was undertaken for all States for the 1949-50 season. These tabulations have been published in detail in Primary Industries Bulletin No. 44, 1949-50. The following table shows particulars of the number and area of rural holdings classified according to the size of holdings.

RURAL HOLDINGS : NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1949-50.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
NUMBER OF HOLDINGS.								
Under 3 ..	941	408	214	317	463	157	..	2,500
3- 4 ..	1,391	967	239	432	469	178	1	3,677
5- 9 ..	3,160	2,445	634	927	1,036	437	14	8,653
10- 24 ..	4,563	6,016	1,596	2,690	1,569	977	9	18,320
25- 49 ..	4,080	5,520	1,852	2,192	761	1,168	15	15,888
50- 99 ..	5,200	7,676	4,060	2,182	663	2,048	9	21,847
100- 149 ..	4,627	6,816	3,733	1,187	745	1,662	4	18,774
150- 249 ..	6,656	8,742	6,720	1,732	1,279	1,708	6	26,843
250- 499 ..	9,034	11,118	7,386	2,969	1,699	1,472	16	33,694
500- 749 ..	6,478	7,047	3,380	2,650	898	510	18	20,981
750- 999 ..	4,657	3,794	1,527	1,897	887	226	16	13,004
1,000- 1,499 ..	6,605	4,128	1,957	2,631	1,905	288	34	17,638
1,500- 2,499 ..	5,925	2,881	1,549	2,584	3,083	256	46	16,324
2,500- 4,999 ..	5,559	1,401	1,523	1,991	2,718	229	21	13,442
5,000- 9,999 ..	2,517	424	1,185	806	746	134	7	5,819
10,000-19,999 ..	1,107	123	1,200	311	143	59	2	2,945
20,000-49,999 ..	232	61	1,640	173	52	32	3	2,793
50,000-99,999 ..	369	11	608	78	37	7	..	1,110
100,000 and over ..	187	8	557	151	412	..	..	1,315
Total ..	73,987	70,486	41,560	27,900	19,565	11,548	221	245,267

(a) Excludes Northern Territory.

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES
1949-50—continued.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
AREA OF HOLDINGS. (’000 ACRES.)								
Under 3	2	1	..	..	1	..	..	4
3- 4.. ..	5	3	1	..	2	1	..	13
5- 9.. ..	20	16	4	6	7	3	..	56
10- 24.. ..	71	113	25	45	24	16	..	294
25- 49.. ..	148	197	68	77	26	43	..	559
50- 99.. ..	375	555	301	157	47	148	..	1,583
100- 149.. ..	561	824	457	144	90	197	..	2,273
150- 249.. ..	1,292	1,680	1,264	339	246	324	1	5,146
250- 499.. ..	3,249	3,931	2,633	1,112	595	502	6	12,028
500- 749.. ..	3,976	4,345	2,060	1,630	549	308	11	12,879
750- 999.. ..	4,050	3,288	1,315	1,647	796	194	14	11,304
1,000- 1,499.. ..	8,173	5,021	2,362	3,205	2,302	345	41	21,449
1,500- 2,499.. ..	11,374	5,410	3,009	4,876	6,048	496	93	31,306
2,500- 4,999.. ..	19,090	4,677	5,301	6,703	9,275	811	60	46,016
5,000- 9,999.. ..	16,932	2,809	8,349	5,470	4,810	904	56	39,330
10,000-10,999.. ..	14,918	1,672	17,274	4,344	1,869	763	25	40,865
20,000-49,999.. ..	26,454	1,756	51,240	5,406	1,879	899	87	87,721
50,000-99,999.. ..	25,780	685	42,108	5,502	2,711	457	..	77,243
100,000 and over ..	33,557	1,359	218,032	105,809	179,780	..	..	538,537
Total	170,027	38,342	355,803	146,563	211,057	6,411	403	928,606

(a) Excludes Northern Territory.

3. **Employment on Rural Holdings.**—The following table shows, for each State of Australia, the recorded number of persons permanently and temporarily engaged on rural holdings as at 31st March, 1953. Additional particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

RURAL HOLDINGS: PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT AS AT 31st MARCH, 1953.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
Permanent—								
Owners, Lessees or Share-farmers Males	70,682	69,047	44,001	27,435	20,398	9,626	179	241,368
Females	1,723	4,519	10,435	3,204	1,761	201	3	21,846
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary Males	7,569	5,987	5,301	1,688	2,043	559	10	23,157
Females	6,441	1,269	5,772	825	3,571	67	3	17,948
Employees, including Managers and Relatives working for wages or salary Males	33,904	16,342	19,934	9,141	7,842	4,572	129	91,864
Females	1,717	1,229	3,737	926	589	224	18	8,440
Total Permanent Males	112,155	91,376	69,236	38,264	30,283	14,757	318	356,389
Females	9,881	7,017	19,944	4,955	5,921	492	24	48,234
Persons	122,036	98,393	89,180	43,219	36,204	15,249	342	404,623
Temporary—								
Males	28,781	17,813	23,474	12,864	4,232	4,461	31	91,656
Females	1,769	935	1,225	2,740	270	1,094	4	8,037
Persons	30,550	18,748	24,699	15,604	4,502	5,555	35	99,693
Total Persons ..	152,586	117,141	113,879	58,823	40,706	20,804	377	504,316

(a) Excludes Northern Territory.

The next table shows for Australia as a whole the number of persons permanently engaged full-time on rural holdings as at 31st March of the six years 1948 to 1953.

RURAL HOLDINGS : PERMANENT FULL-TIME AND TEMPORARY EMPLOYMENT, AUSTRALIA.(a)

Particulars.	As at 31st March—					
	1948.	1949.	1950.	1951.	1952.	1953.
Permanent—						
Males—						
Owners, Lessees or Share-farmers	240,992	236,467	235,302	237,251	236,330	241,368
Relatives of Owner, Lessee or Share-farmer over 14 years of age, not receiving wages or salary	28,171	25,195	25,889	24,676	24,589	23,157
Employees, including managers and relatives working for wages or salary	90,502	91,177	90,924	91,226	88,264	91,864
Total, Males	359,665	352,839	352,115	353,153	349,183	356,389
,, Females	47,509	47,933	53,348	52,346	46,603	48,234
Total Permanent ..	407,174	400,772	405,463	405,499	395,786	404,623
Temporary—						
Total, Males	(b)	(b)	83,227	83,190	88,356	91,656
,, Females	(b)	(b)	8,862	8,663	8,576	8,037
Total Temporary ..	(b)	(b)	92,089	91,853	96,932	99,693
Grand Total	(b)	(b)	497,552	497,352	492,718	504,316

(a) Excludes Northern Territory.

(b) Not available.

4. **Salaries and Wages Paid to Employees on Rural Holdings.**—Particulars of salaries and wages paid to permanent and temporary employees (including amounts paid to contractors) working full-time on rural holdings have been collected uniformly in all States from 1949-50. Details for each State are set out below for the year 1952-53 and for Australia as a whole for the years 1949-50 to 1952-53.

RURAL HOLDINGS : SALARIES AND WAGES (a) PAID TO PERMANENT AND TEMPORARY EMPLOYEES, 1952-53.
(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(b)
Permanent—Males ..	17,473	8,603	10,303	4,759	4,154	2,231	100	47,623
Females ..	383	359	1,168	224	144	47	5	2,270
Temporary(c)—Males ..	14,569	7,464	13,867	3,084	4,437	1,231	63	44,715
Females ..	428	173	198	172	50	129	1	1,151
Total	32,853	16,599	25,476	8,239	8,785	3,638	169	95,759

(a) Including value of keep.

(b) Excludes Northern Territory.

(c) Includes amounts paid to contractors.

**RURAL HOLDINGS: SALARIES AND WAGES (a) PAID TO PERMANENT AND
TEMPORARY EMPLOYEES, AUSTRALIA.(b)**

(£'000.)

Particulars.				1949-50.	1950-51.	1951-52.	1952-53.
Permanent—Males				27,262	34,022	41,328	47,623
Females				1,391	1,749	2,046	2,270
Temporary(c)—Males				22,686	29,317	39,735	44,715
Females				700	773	910	1,151
Total				52,039	65,861	84,019	95,759

(a) Including value of keep.
to contractors.

(b) Excludes Northern Territory.

(c) Includes amounts paid

CHAPTER XXI.

FARMYARD, DAIRY AND BEE PRODUCTS.

NOTE.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

§ 1. Introductory.

1. *General.*—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this publication. It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossings of strains have resulted in an increased and improved milk supply. In Australia dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and in certain districts rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. It has been demonstrated that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.

2. *Mixed Farming.*—Dairying is not, as formerly, wholly confined to agriculturists, since many graziers in a large way of business also give it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established. The extent to which dairy cattle were run in conjunction with pig raising and wheat growing in 1949-50 is shown in the relevant tables published in the section "Special Tabulations Relating to Rural Holdings, 1949-50" of *Primary Industries Bulletin* No. 44, 1949-50.

3. *Employment.*—The numbers of persons employed in rural industries are ascertained at the annual census of rural production. The particulars collected are in respect of those persons who were permanently engaged in the actual work of the farm and include owners, lessees, tenants or sharefarmers, relatives over 14 years of age not receiving wages, and other permanent employees, including managers and relatives, working for wages or salary. For some earlier years and uniformly from March, 1950, particulars have also been collected as to numbers of temporary employees at 31st March, of each year. Details of the numbers so engaged are given in Chapter XX.—Agricultural Production, § 28.

For the years up to 1939-40, information was also collected which enabled the classification of each holding according to the chief purpose for which it was used, thus obtaining a distribution of employment in the three main classes, viz., Agriculture, Pastoral and Dairying. However, because of difficulties in determining with precision the chief purpose for which holdings are used, this information has since been omitted from the schedules. Consequently it has not been possible to continue to compile details of employment in the dairying industry from data obtained from this source.

Details of the number of persons who described themselves at the population census of 30th June, 1947 as being engaged in dairy farming were shown for each State in Official Year Book No. 38, page 1025. They comprised 96,508 males and 10,018 females, a total of 106,526 persons.

4. **Growth of the Dairying Industry.**—The following table gives some indication of the growth of the dairying industry since 1918-19 :—

DAIRYING INDUSTRY : AUSTRALIA.

Year.	Number of Dairy Cows at 31st March.			Production of—			Milking Machines (No. of Stands). (a)
	In Milk.	Dry.	Total.	Milk for all Purposes.	Butter (Factory and Farm).	Cheese (Factory and Farm).	
				Million Gallons.	Tons.	Tons.	
1918-19 ..	1,319,588	582,448	1,902,036	529.6	81,162	10,621	(b)
1928-29 ..	1,744,728	600,342	2,345,070	815.4	129,817	13,490	(b)
1938-39 ..	2,600,707	608,812	3,209,519	1,189.2	203,500	29,304	(b)
1948-49 ..	2,339,885	818,725	3,158,610	1,212.6	165,830	43,202	144,916
1949-50 ..	2,354,217	837,218	3,191,435	1,241.8	173,599	44,796	155,218
1950-51 ..	2,252,741	895,930	3,148,671	1,199.7	163,934	44,309	165,788
1951-52 ..	2,098,560	874,192	2,972,752	1,051.3	135,319	40,598	171,712
1952-53 ..	2,223,410	863,133	3,086,543	1,218.4	167,480	46,606	179,853

(a) " Number of Stands " indicates the number of cows that can be milked simultaneously—i.e., the cow capacity of installed milking machines. (b) Not available.

5. **Official Supervision of Dairying Industry.**—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of *personnel* and *matériel*, prevails.

The export trade is regulated by the terms of the Commonwealth Customs Act 1901-1953 and the Commonwealth Commerce (Trade Descriptions) Act 1905-1950, and regulations thereunder. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

6. **Australian Agricultural Council.**—General information on the constitution and functions of the Australian Agricultural Council is given on pages 738-9 of Chapter XX.—Agricultural Production. Details were given on pages 833-4 of Official Year Book No. 40, of the production aims for the five-year period ended 1957-58 (including specific targets for the principal dairy products) as set by the Council at its 36th Meeting in April, 1952.

§ 2. Value of Farmyard, Dairy and Bee Production and Indexes of Price and Quantum of Production.

1. **Gross Value of Farmyard, Dairy and Bee Production, 1936-37 to 1952-53.**—The following table shows the gross value of recorded farmyard and dairy production at the principal markets in Australia.

GROSS VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.(a)
(£'000.)

Particulars.	Average 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Whole Milk(b) used for—						
Butter	22,550	34,655	39,414	36,692	38,875	58,995
Cheese	1,505	4,943	5,451	5,398	6,700	9,377
Condensing, Concentrating, etc.	1,094	5,241	5,900	6,223	7,948	10,860
Human Consumption and other purposes	7,971	19,428	24,511	28,315	37,261	46,092
Subsidy Paid on Whole Milk for—						
Butter, Cheese, Condensing, Concentrating, etc. ..	..	5,540	8,062	13,629	15,041	15,265
Human Consumption ..	..	320	..	..	..	..
Total Whole Milk (in- cluding Subsidy) ..	33,120	70,127	83,338	90,257	105,825	140,589
Pigs Slaughtered ..	5,526	12,325	14,281	15,358	18,516	21,703
Dairy Cattle Slaughtered ..	1,591	2,769	3,492	4,872	5,966	6,569
Eggs	9,117	23,870	25,766	28,047	37,534	43,637
Poultry	2,386	7,146	7,726	9,408	10,985	11,231
Honey	154	1,597	787	871	800	1,113
Beeswax	10	87	50	71	62	84
Total	51,904	117,921	135,440	148,884	179,688	224,926

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.

(b) Excludes Commonwealth subsidy which is shown separately below.

2. Gross and Net Values, 1952-53.—The values of dairy, poultry and bee farming on gross, local and net bases are shown in the following table. Further information on values, including definitions of the terms used is given in Chapter XXIX.—Miscellaneous.

GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION,
1952-53.

(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Pro- duction. (a)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Pro- duction.	

DAIRY PRODUCTION.

New South Wales ..	55,723	5,944	49,779	3,891	(b) 220	45,668
Victoria	51,865	2,042	49,823	4,676	2,460	42,687
Queensland	36,138	960	35,178	4,170	850	30,158
South Australia ..	11,764	245	11,519	1,022	1,070	9,427
Western Australia ..	7,671	196	7,475	2,073	1,491	3,911
Tasmania	5,700	246	5,454	1,314	(b) 246	3,894
Total	168,861	9,633	159,228	17,146	6,337	135,745

(a) No deduction has been made for depreciation and maintenance.
made for costs of power, power kerosene, petrol and other oils.

(b) No allowance has been

**GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE
PRODUCTION, 1952-53—continued.**
(£'000.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Pro- duction. (a)
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Production.	

POULTRY PRODUCTION.

New South Wales ..	22,252	2,162	20,090	5,475	(b)	14,615
Victoria ..	21,824	1,636	20,188	5,302	(b)	14,886
Queensland ..	2,317	365	1,952	730	75	1,147
South Australia ..	3,815	398	3,417	1,359	(b)	2,058
Western Australia ..	2,858	521	2,337	888	(b)	1,449
Tasmania ..	1,802	135	1,667	609	(b)	1,058
Total ..	54,868	5,217	49,651	14,363	(c) 75	35,213

BEE PRODUCTION.

New South Wales ..	400	41	359	..	} (b) }	359
Victoria ..	305	36	269	..		269
Queensland ..	102	5	97	..		97
South Australia ..	255	32	223	..		223
Western Australia ..	116	16	100	..		100
Tasmania ..	19	1	18	..		18
Total ..	1,197	131	1,066	..	(b)	1,066

TOTAL FARMYARD, DAIRY AND BEE PRODUCTION.

New South Wales ..	78,375	8,147	70,228	9,366	(d) 220	60,642
Victoria ..	73,994	3,714	70,280	9,978	2,460	57,842
Queensland ..	38,557	1,330	37,227	4,900	925	31,402
South Australia ..	15,834	675	15,159	2,381	1,070	11,708
Western Australia ..	10,645	733	9,912	2,961	1,491	5,460
Tasmania ..	7,521	382	7,139	1,923	246	4,970
Total ..	224,926	14,981	209,945	31,509	6,412	172,024

(a) No deduction has been made for depreciation and maintenance. (b) Not available.
(c) Incomplete, Queensland only. (d) Incomplete, see individual industries above.

3. Net Value of Production, 1934-35 to 1952-53.—In the following table the net values of farmyard, dairy and bee production (total and per head of population) are shown by States.

NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION.(a)

Year.	N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
NET VALUE. (£'000.)							
Average, 1934-35 to 1938-39	11,848	12,238	7,118	1,938	979	943	35,064
1948-49..	28,991	30,335	17,443	7,366	2,897	2,225	89,257
1949-50..	33,943	35,643	19,537	9,140	3,326	2,484	104,073
1950-51..	38,852	39,650	21,141	8,513	3,886	2,755	114,797
1951-52..	44,508	51,935	19,412	11,029	5,265	3,955	136,104
1952-53..	60,642	57,842	31,402	11,708	5,460	4,970	172,024

NET VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, 1934-35 to 1938-39	4 8 3	6 12 2	7 4 7	3 5 11	2 3 0	4 0 10	5 2 11
1948-49..	9 9 3	14 7 1	15 7 5	11 1 6	5 11 0	8 5 11	11 9 10
1949-50..	10 14 0	16 8 6	16 15 11	13 6 2	6 1 11	8 19 1	12 19 9
1950-51..	11 17 6	17 14 6	17 14 6	11 19 6	6 16 0	9 11 8	13 17 6
1951-52..	13 5 3	22 11 4	15 17 11	15 2 5	8 18 2	13 4 11	16 0 4
1952-53..	17 14 8	24 9 8	25 2 11	15 12 5	8 18 3	16 1 9	19 5 6

(a) No deduction has been made for depreciation and maintenance or for costs of materials used in the process of production in the Poultry (for States other than Queensland) and Bee-farming Industries.
 (b) No deduction has been made for costs of power, power kerosene, petrol and other oils.

4. Indexes of Quantum and Price of Farmyard, Dairy and Bee Production, 1948-49 to 1952-53.—For details of the methods of calculating these indexes and of the weights used see Chapter XXIX.—Miscellaneous.

INDEXES OF QUANTUM AND PRICE OF FARMYARD, DAIRY AND BEE PRODUCTION : AUSTRALIA.

(Base : Average 3 years ended June, 1939 = 100.)

Particulars.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Quantum of Production—					
Milk	106	109	105	92	107
Other products	120	115	109	108	110
Total Farmyard and Dairy	111	111	106	97	108
Total per Head of Population	98	95	88	78	85
Price—					
Milk	189	220	244	319	373
Other products	216	248	295	363	423
Total Farmyard and Dairy	197	228	258	332	387

§ 3. Dairy Cattle and Dairy Products.

1. Dairy Herds.—Owing to the lack of uniformity in the schedules used by the several States in the collection of live-stock statistics, it is not possible to measure with precision the growth of the dairy herds of Australia prior to 1943. However, statistics of dairy cows, which provide a reliable measurement of this development, show that in 1918-19 there were 1,902,036 dairy cows (in milk and dry), compared with 2,345,070 in 1928-29 and 3,209,519 in 1938-39. The numbers remained at this level until March, 1944, but have since declined, the number recorded at 31st March, 1953 being 3,086,537. In New South Wales, Victoria, South Australia and Tasmania the proportion of dairy to all cattle is high. In Queensland, the Northern Territory and Western Australia there is a great preponderance of other cattle, the main object in these areas being the production of beef. Since 1939 there have been substantial decreases in the number of dairy cows in New South Wales and Queensland. The numbers of dairy cows for 1949 to 1953 shown in the following table refer to those recorded by farmers as being in milk and dry as at 31st March. The figures shown for the years 1935 to 1939 cover the same categories, but the period differs in some States (see footnote (a)). To this extent the figures lack comparability.

NUMBER OF CATTLE AND DAIRY COWS (IN MILK AND DRY) AT 31st MARCH.

State.		Average, 1935-39. (a)	1949.	1950.	1951.	1952.	1953..
N.S. Wales	{ All Cattle ..	3,054,164	3,252,752	3,440,461	3,702,848	3,620,953	3,648,733
	{ Dairy Cows..	1,024,761	872,431	875,988	855,882	820,518	847,932
Victoria	{ All Cattle ..	1,892,465	2,224,543	2,230,948	2,216,253	2,214,530	2,297,208
	{ Dairy Cows..	912,621	930,252	956,558	943,039	914,809	947,061
Queensland	{ All Cattle ..	6,047,726	5,091,797	6,304,778	6,733,548	6,434,374	6,751,395
	{ Dairy Cows..	924,875	963,473	962,752	967,959	859,434	903,621
South Australia	{ All Cattle ..	331,488	461,086	464,141	432,566	437,468	482,578
	{ Dairy Cows..	154,870	172,865	174,835	160,204	152,192	155,956
W. Australia	{ All Cattle ..	796,473	864,131	864,936	841,204	851,534	846,261
	{ Dairy Cows..	121,127	133,219	129,365	127,544	130,625	133,923
Tasmania	{ All Cattle ..	260,267	266,419	274,740	271,784	266,263	275,131
	{ Dairy Cows..	93,708	84,433	80,546	91,859	92,833	96,040
Nor. Territory	{ All Cattle ..	893,925	1,052,811	1,048,875	1,019,149	1,057,906	935,602
	{ Dairy Cows(b)	..	..	..	..	..	..
Anst. Cap. Ter.	{ All Cattle ..	8,261	10,071	11,161	11,477	10,293	9,700
	{ Dairy Cows..	1,019	1,937	2,391	2,184	2,341	2,010
Australia	{ All Cattle ..	13,284,769	14,123,610	14,640,040	15,228,829	14,893,321	15,246,608
	{ Dairy Cows..	3,232,981	3,158,610	3,191,435	3,148,671	2,972,752	3,086,543

(a) As at 31st March for New South Wales and Australian Capital Territory : 1st March for Victoria ; 1st January for Queensland, South Australia, Western Australia and Tasmania. (b) No information available ; assumed to be " nil."

In the next table the dairy cattle in each State are shown in various categories as at 31st March, 1951, 1952 and 1953. Information in this detail was not collected uniformly in all States prior to 1943.

NUMBER OF DAIRY CATTLE.

State.	At 31st March.	Dairy Cows.		Dairy Heifers 1 year and over.	Dairy Calves under 1 year.	Dairy Bulls.	Total Dairy Cattle.
		In Milk.	Dry.				
New South Wales	1951	672,871	183,011	204,056	161,991	23,827	1,245,756
	1952	632,718	187,800	201,604	159,435	23,313	1,204,870
	1953	673,710	174,222	216,203	156,024	24,083	1,244,242
Victoria	1951	674,011	269,028	281,795	227,203	37,356	1,489,393
	1952	655,127	259,682	275,987	210,758	36,969	1,438,523
	1953	673,975	273,036	270,383	220,273	39,263	1,476,980
Queensland	1951	666,398	301,561	229,800	215,070	27,369	1,440,198
	1952	572,448	286,986	224,350	185,990	26,876	1,296,659
	1953	641,400	262,221	231,810	209,093	28,474	1,372,998
South Australia	1951	105,765	54,439	42,341	33,483	7,597	243,625
	1952	103,658	48,534	40,166	36,718	7,499	236,575
	1953	100,880	55,076	45,941	41,694	8,342	251,933
Western Australia	1951	60,873	66,671	41,365	48,097	5,869	222,875
	1952	60,092	70,533	40,292	53,556	5,996	230,469
	1953	57,805	76,118	42,379	51,391	6,173	233,869
Tasmania	1951	71,633	20,226	27,148	33,926	4,091	157,024
	1952	73,329	19,504	26,007	32,749	3,947	155,536
	1953	74,400	21,640	26,660	35,422	4,090	162,212
Australian Capital Territory	1951	1,190	994	678	655	56	3,573
	1952	1,188	1,153	452	686	66	3,545
	1953	1,240	770	770	640	50	3,470
Australia	1951	2,252,741	895,930	827,183	720,425	106,165	4,802,444
	1952	2,098,560	874,192	808,858	679,901	104,666	4,566,177
	1953	2,223,410	863,133	834,146	714,560	110,475	4,745,704

A map showing the distribution of dairy cattle in Australia at 31st March, 1948, appears on page 906 of Official Year Book No. 39.

2. *Size of Dairy Herds.*—A series of special tabulations relating to rural holdings, undertaken for all States for the year 1949–50, covered, *inter alia*, a classification of holdings with dairy cattle according to size of herd. Details of these tabulations are published in *Primary Industries Bulletin* No. 44, 1949–50.

3. *Factory System.*—(i) *General.* Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators, etc., may be profitably worked at the larger establishments. The product is also of a more uniform quality, and whereas formerly, the average quantity of milk used per pound of hand-made butter was about 3 gallons, factory butter requires less than 2½ gallons.

(ii) *Number of Factories.* In 1952–53 the factories in Australia for the manufacture of butter, cheese and condensed milk numbered 383 and were distributed among the States as follows:—New South Wales, 79; Victoria, 137; Queensland, 89; South Australia, 40; Western Australia, 15; and Tasmania, 23. More details regarding numbers of factories, output, etc., are given in Chapter XXIV.—Manufacturing Industry.

4. *Butter and Cheese—Stabilization Schemes.*—(i) *Voluntary Plan.* During the period from January, 1926 to April, 1934, a voluntary scheme known as the “Paterson Plan” was in operation and had the effect of stabilizing the price of butter in Australia. Details of this scheme may be found on page 1028 of Official Year Book No. 38 and in earlier issues.

(ii) *Compulsory Plan.* On 1st May, 1934 the “Paterson Plan” was superseded by a compulsory price equalization plan, details of which were shown on page 1029 of Official Year Book No. 38 and earlier issues. This compulsory plan was invalidated by the decision in 1936 of the Privy Council which declared in the James (Dried Fruits) Case that the Commonwealth had no power under the Constitution to regulate trade between the States.

(iii) *Equalization Scheme.* Since the Privy Council decision, the butter price stabilization scheme has continued to operate by voluntary action based on the agreements between the manufacturers and the Commonwealth Dairy Produce Equalization Committee Limited. The Committee, which comprises members of the State Dairy Products Boards and other persons representing the industry, enters into agreements with manufacturers to secure to them equal rates from sales of butter and cheese, and for this purpose may fix basic prices at which these products sold in Australia or abroad are to be taken into account. The effect is that local and export trade are distributed in equitable proportions among the manufacturers by means of quotas. The Committee fixes basic prices and equalizes returns to factories through an Equalization Fund. The States originally participating in the scheme were New South Wales, Victoria, Queensland and Tasmania in respect of both butter and cheese, and South Australia in respect of cheese. South Australia and Western Australia entered the scheme in respect of butter on 1st April, 1946 and Western Australia extended its participation to include cheese in January, 1947.

The home consumption prices of butter and cheese were fixed by the Commonwealth Prices Commissioner up to 19th September, 1948, from which date prices have been controlled by State Governments.

5. *Commonwealth Subsidies.*—(i) *Butter, Cheese and Processed Milk Products.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided subsidies on milk supplied for the manufacture of butter, cheese and processed milk products. Subsidies were paid on a seasonal basis prior to 1st April, 1946, but from that date have been on a flat rate basis. Subsidies are distributed by the Commonwealth Dairy Produce Equalization Committee Limited through factories to milk producers by payments on butter, cheese and processed milk products manufactured. Subsidy on milk supplied for the manufacture of processed milk products was discontinued from 1st July, 1948 to 30th June, 1949 and again from 1st July, 1952.

The following table shows particulars, in respect of butter and cheese, of the rates realized on local, interstate and overseas sales and the average equalization and subsidy rates in operation for the years ended June, 1939 and 1950 to 1954.

BUTTER AND CHEESE : RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS.

(Rates s. d. per cwt.)

Year ended 30th June.	Rates Realized on Sales.			Average Equalization Rate.	Rate of Subsidy.	Rate of Overall Return to Manu- facturers.
	Local.	Interstate.	Overseas.			
BUTTER.						
1939..	154 5.5	146 5.5	121 7.5	136 3.5	..	136 3.5
1950..	209 9.6	196 2.0	293 2.4	248 11.2	43 11.2	292 10.4
1951..	208 6.4	193 11.9	307 11.2	241 8.4	82 3.9	324 0.3
1952..	291 9.6	291 7.6	429 1.1	307 8.9	121 4.2	429 1.1
1953..	404 6.0	381 4.0	389 0.0	398 0.4	85 0.0	483 0.4
1954..	(a)	(a)	(a)	400 5.1	89 10.3	490 3.4
CHEESE.						
1939..	(b) 94 8.6		59 3.2	71 7.6	..	71 7.6
1950..	122 9.5		162 3.3	141 4.8	23 10.9	165 3.7
1951..	123 9.8		171 4.2	144 1.6	37 10.9	182 0.5
1952..	184 1.1		240 4.2	208 11.6	31 4.6	240 4.2
1953..	244 3.3		203 4.1	232 4.8	32 0.0	264 4.8
1954..	(a)		(a)	232 4.7	32 0.0	264 4.7

(a) Not yet available.
consumption.

(b) A lower rate was determined for cheese sold for processing for local

(Source : Commonwealth Dairy Produce Equalisation Committee Limited.)

Following representations by industry organizations, the Commonwealth Government established the Joint Dairy Industry Advisory Committee in November, 1946, comprising a chairman nominated by the Government, four representatives of Commonwealth Government Departments and four industry representatives from the several States. The Committee's functions, broadly, were to advise and assist in conducting cost and other surveys of dairy farm production and to act as an advisory body to the Government in these matters. From 1st April, 1947 to 30th June, 1952, the rates of overall return to milk producers determined by the Commonwealth Government for the purpose of subsidy payments were based on recommendations made by the Committee following surveys of production costs in the dairy industry.

Under the Five-year Stabilization Plan which came into operation on 1st July, 1952, the Commonwealth Government, with the approval of the States, determines each season the ex-factory prices of butter and cheese, guarantees to dairy farmers a return, based upon costs of efficient production, in respect of quantities of butter and cheese sold within the Commonwealth, plus an additional 20 per cent. (if produced), and hence determines the amount of subsidy it will make available to lift the return on that part of output covered by the guarantee to the guaranteed level.

Early in 1953, the Dairy Industry Investigation Committee, an independent body consisting of three members was appointed to advise the Commonwealth Government on the guaranteed return to producers during 1953-54. The Committee was re-established in March, 1954, to advise the Government on the guaranteed return for each year of the remaining three year period of the Stabilization Plan.

Amounts realized on exports of butter and cheese in excess of the f.o.b. equivalent of the guaranteed return have been credited to the Dairying Industry Stabilization Fund, which was established in July, 1948 for the purpose of stabilizing returns from exports. During 1951-52 the Stabilization Fund met the deficiency in respect of all exports which did not return sufficient to meet the basic return to the factory. Since 1st July, 1952, it has been available to the industry to be used, in whatever manner considered desirable by it, to make good any deficiency in respect of all exports other than the 20 per cent. provided for under the Commonwealth Government's Five-year Stabilization Plan. After allowing for outstanding debits the amount standing to the credit of the Dairying Industry Stabilization Fund at 30th June, 1954 totalled approximately £1,948,000.

(ii) *Whole Milk.* In addition to the subsidies referred to above, the Commonwealth Government subsidized the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Official Year Book No. 38, page 1031.

6. **Total Dairy Production.**—The dairy production for each State in 1952-53 is shown below:—

DAIRY PRODUCTION, 1952-53.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
MILK ('000 GALLONS).								
Used for—								
Butter ..	(a) 186,906	(b) 267,991	(c) 223,201	33,734	30,036	33,233	35	775,136
Cheese ..	7,153	47,776	20,474	22,151	2,062	608	..	100,224
Condensing and concentrating								
Other purposes ..	24,245	51,726	41,858	28,364	17,732	10,428	653	83,411
	99,081	68,924						259,600
Total ..	317,385	436,417	285,533	84,249	49,830	44,269	688	1,218,371
BUTTER (TONS)								
In Factories	(d) 37,087	(e) 57,323	(f) 49,008	7,630	6,480	6,059	..	163,587
On Dairy and other Farms ..	1,788	855	417	332	163	313	5	3,893
Total ..	38,875	58,178	49,425	7,982	6,643	6,372	5	167,480
CHEESE (TONS).								
In Factories	3,162	22,377	(g) 9,439	10,454	805	265	..	46,592
On Dairy and other Farms ..	1	9	..	..	3	1	..	14
Total ..	3,163	22,386	9,439	10,454	808	266	..	46,606

(a) Includes 4,703,000 gallons of milk, the produce of New South Wales, sent as cream to factories in Victoria and Queensland. (b) Includes 1,006,000 gallons of milk, the produce of Victoria, sent as cream to New South Wales. (c) Includes 787,000 gallons of milk, the produce of Queensland, sent as cream to New South Wales. (d) Includes 390 tons of butter made from cream, the produce of Victoria and Queensland. (e) Includes 876 tons of butter made from cream, the produce of New South Wales. (f) Includes 136 tons of butter made from cream, the produce of New South Wales. (g) Includes 218 tons of cheese made in establishments not classified as factories.

7. Whole Milk.—(i) *Production and Utilization.* During the five years ended 1938-39 approximately 80 per cent. of Australia's milk supply was used for butter-making, 4 per cent. for cheese manufacture, 2 per cent. for condensery products and 14 per cent. for fluid consumption and other purposes. There has since been a considerable decline in the proportion of milk used for butter-making, with corresponding increases in the quantities used for other purposes. In 1952-53, 63.6 per cent. of the total milk supply was used for butter, 8.2 per cent. for cheese, 6.9 per cent. for condensery products and 21.3 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each year 1948-49 to 1952-53 in comparison with the average for the years 1934-35 to 1938-39:—

PRODUCTION AND UTILIZATION OF WHOLE MILK : AUSTRALIA.

('000 Gallons.)

Year.	Total Production.	Quantity used for—			
		Butter (Factory and Farm).	Cheese (Factory and Farm).	Condensery Products.	Other purposes.
Average, 1934-35 to 1938-39	1,149,559	913,754	48,595	28,116	159,094
1948-49	1,212,644	781,230	93,720	87,653	250,041
1949-50	1,241,759	806,682	96,757	89,565	248,755
1950-51	1,199,716	762,692	96,532	84,828	255,664
1951-52	1,051,287	630,771	87,360	76,324	256,832
1952-53	1,218,371	775,136	100,224	83,411	259,600

In the following table, particulars of production of whole milk in the several States are shown for the years 1948-49 to 1952-53, compared with the average for the five years ended 1938-39. Victoria is the principal milk-producing State and in 1952-53 output from that State, viz., 436.4 million gallons, represented 35.8 per cent. of total production. Output from New South Wales was 317.4 million gallons or 26.0 per cent. of the total and that of Queensland 285.5 million gallons (23.5 per cent.). Production in the remaining States accounted for 14.7 per cent. of the total Australian output.

TOTAL PRODUCTION OF WHOLE MILK.

('000 Gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	331,963	402,447	278,226	63,538	40,394	32,659	332	1,149,559
1948-49	291,915	462,446	277,152	91,319	50,612	38,541	659	1,212,644
1949-50	311,580	469,253	281,125	89,388	49,476	40,243	694	1,241,759
1950-51	298,159	445,671	278,111	83,545	52,407	41,136	687	1,199,716
1951-52	241,209	446,818	181,148	86,482	48,937	46,100	593	1,051,287
1952-53	317,385	436,417	285,533	84,249	49,830	44,269	688	1,218,371

(ii) *Production per Cow.* The annual quantity of milk produced per dairy cow reaches as high as 1,000 gallons, varying greatly with breed, locality and season. For the whole of Australia for all dairy cows and for all seasons prior to 1916 it averaged considerably less than 300 gallons per annum. In recent years not only has there been an

improvement in the quality of the cattle, but the application of scientific methods has been continually extended, and the 300-gallon average has been exceeded in each year since 1924. In 1952-53 the yield of 402 gallons constituted a record. The annual average yields per cow shown in the following table are based on the approximate number of dairy cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year. It should be noted that there are many difficulties attending the collection of particulars of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with reasonable accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend :—

AVERAGE MILK PRODUCTION PER DAIRY COW.

(Gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1934-35 to								
1938-39	322	440	306	412	334	348	347	357
1948-49	337	506	290	537	381	471	355	388
1949-50	356	497	292	514	377	463	321	391
1950-51	344	469	288	499	408	454	300	378
1951-52	288	481	198	554	379	499	262	343
1952-53	380	469	324	547	377	469	316	402

8. Butter Production.—There was a steady increase in the annual output of butter for many years prior to the 1939-45 War. The average annual production rose from 126,000 tons for the five years ended 1928-29 to 195,000 tons for the five years ended 1938-39.

Following the record output of 211,988 tons in 1939-40 the general trend of butter production declined until 1946-47, when 143,308 tons were produced. Output increased again to 173,599 tons in 1949-50, but in 1950-51 decreased to 163,934 tons and in 1951-52 to 135,319 tons. Production increased to 167,480 tons in 1952-53. The foregoing figures include butter produced on farms which has shown a decline from 8,714 tons in 1938-39 to 3,893 tons in 1952-53.

The following table shows production of butter in factories in each State for the years 1948-49 to 1952-53, compared with the average for the five years ended 1938-39.

BUTTER PRODUCTION IN FACTORIES.

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Average, 1934-35 to							
1938-39	52,949	62,489	53,255	7,570	5,459	3,811	185,533
1948-49	33,267	60,039	47,197	8,800	6,966	4,821	161,090
1949-50	36,817	63,358	48,196	8,236	6,769	5,069	168,445
1950-51	34,318	57,982	47,447	7,377	6,797	5,710	159,631
1951-52	23,438	59,236	27,850	7,767	6,705	6,170	131,166
1952-53	37,087	57,323	49,008	7,630	6,480	6,059	163,587

(a) Northern Territory and Australian Capital Territory : nil.

The table below shows the monthly production of factory butter in Australia in each of the years 1938-39 and 1948-49 to 1952-53. The annual output of farm butter is also shown.

PRODUCTION OF BUTTER IN FACTORIES AND ON FARMS : AUSTRALIA.

(Tons.)

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Factories—						
July	9,415	7,892	7,393	7,338	7,013	7,862
August	11,645	10,411	10,169	10,355	9,119	10,325
September	15,531	13,335	13,903	14,417	11,511	15,139
October	20,485	17,487	19,083	19,897	16,748	19,329
November	22,561	18,166	21,524	21,245	16,051	19,468
December	20,710	18,481	21,334	20,629	13,889	19,537
January	15,872	17,101	17,389	18,181	12,337	16,905
February	15,816	14,246	14,725	13,791	9,501	15,052
March	17,729	15,380	15,126	12,619	10,197	14,063
April	16,583	12,153	11,146	8,841	9,132	10,440
May	15,568	9,139	9,484	6,584	8,219	8,286
June	12,871	7,299	7,169	5,734	7,449	7,181
Factory Total(a) ..	194,786	161,090	168,445	159,631	131,166	163,587
Made on Farms(b) ..	8,714	4,740	5,154	4,303	4,153	3,893
Grand Total ..	203,500	165,830	173,599	163,934	135,319	167,480

(a) Year ended June.

(b) Year ended March.

9. **Cheese Production.**—Until 1916 the annual production of cheese had not reached 10,000 tons. From 1916 to 1926-27 it ranged between 10,000 and 13,000 tons with two years (1921 and 1924) having more than 14,000 tons. For the next five years between 13,500 and 14,800 tons were produced each year. In 1932-33 production rose to 16,488 tons, and, with some reversals of trend, continued to rise reaching an output of 44,796 tons in 1949-50. Production decreased slightly in 1950-51 and more substantially in 1951-52 to 40,598 tons but rose sharply in 1952-53 to a record output of 46,606 tons. The States contributing chiefly towards the general increase over the years are Victoria, Queensland and South Australia.

The following table shows production of cheese in factories in each State in the years 1948-49 to 1952-53 in comparison with average output during the years 1934-35 to 1938-39 :—

CHEESE PRODUCTION IN FACTORIES.

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Average, 1934-35 to 1938-39 ..	3,332	6,177	5,071	5,437	390	1,210	21,617
1948-49 ..	2,490	18,352	9,390	11,654	870	404	43,160
1949-50 ..	2,827	21,193	9,050	10,587	701	418	44,776
1950-51 ..	2,960	22,570	8,678	8,932	748	412	44,300
1951-52 ..	1,995	22,240	4,700	10,615	624	408	40,582
1952-53 ..	3,162	22,377	9,439	10,454	895	265	46,592

(a) Northern Territory and Australian Capital Territory : nil.

The monthly production of cheese in factories in Australia, together with the annual output from farms, is shown in the table below for 1938-39 and each of the years 1948-49 to 1952-53.

PRODUCTION OF CHEESE IN FACTORIES AND ON FARMS: AUSTRALIA.

(Tons.)

Month.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Factories—						
July	1,517	2,051	1,995	1,654	2,135	2,218
August	1,950	3,143	3,104	3,020	3,050	3,607
September ..	2,820	4,572	4,625	5,064	4,666	5,246
October	4,028	5,978	6,265	6,975	6,290	6,837
November ..	3,990	5,802	6,525	7,175	6,112	6,923
December ..	3,462	5,317	6,208	6,175	5,158	6,297
January	2,212	4,257	4,591	4,442	3,715	4,869
February ..	1,715	2,997	3,175	2,783	2,442	3,287
March	1,826	3,165	2,833	2,612	2,165	2,616
April	1,656	2,446	2,316	1,635	1,682	1,739
May	1,898	1,854	1,790	1,323	1,565	1,474
June	1,900	1,578	1,349	1,442	1,602	1,479
Factory Total(a) ..	28,974	43,160	44,776	44,300	40,582	46,592
Made on Farms(b) ..	330	42	20	9	16	14
Grand Total	29,304	43,202	44,796	44,309	40,598	46,606

(a) Year ended June.

(b) Year ended March.

10. **Condensed, Concentrated and Powdered, etc., Milk Production.**—The manufacture of these products has expanded greatly since 1938-39—to meet the needs of the Service during the 1939-45 War and for export purposes since the war. The output of condensed milk (sweetened and unsweetened) in 1952-53 was 219 per cent. higher than in the three years ended 1938-39 while that of powdered milk (full cream and skim) was 306 per cent. higher. Over the same period the quantity of whole milk used in the manufacture of the products shown below increased from 33.2 million gallons to 83.6 million gallons or by 152 per cent. These products are manufactured mainly in Victoria, which produced 62 per cent. of the total (in terms of whole milk equivalent) in 1952-53. New South Wales accounted for 29 per cent. and the remaining States for 9 per cent.

The following table shows details of the output of condensed, concentrated, powdered, etc., milk during the years 1948-49 to 1952-53, compared with the available details for the years 1936-37 to 1938-39.

PRODUCTION OF CONDENSED, CONCENTRATED AND POWDERED, ETC., MILK AUSTRALIA.

Year.	Full Cream Milk Products.					Milk By-Products.	
	Condensed Milk (Sweetened and unsweetened).	Concentrated Whole Milk.(a)	Powdered Full Cream Milk.	Infants' and Invalids' Foods (Including Malted Milk and Milk Sugar).	Total Whole Milk Equivalent of Full Cream Milk Products.	Skim Milk.	Powdered Butter-milk and Whey.
	Tons.	Tons.	Tons.	Tons.	'000 gals.	Tons.	Tons.
Average, 1936-37 to 1938-39	17,347	(b) 1,355	9,464	(c) 1,131	33,226	(d)	(e) 701
1948-49	47,773	13,177	19,768	10,104	87,653	6,116	3,019
1949-50	49,767	17,270	22,539	10,531	89,565	9,393	2,989
1950-51	50,507	18,351	17,594	12,100	84,828	6,583	3,192
1951-52	52,467	16,743	15,121	12,066	76,324	10,887	2,938
1952-53	55,385	14,493	22,393	10,042	83,411	16,103	4,073

(a) Mainly for ice-cream manufacture. (b) Incomplete. (c) Malted milk and milk sugar only. (d) Not available separately; included with Powdered Full Cream Milk. (e) Excludes powdered whey.

11. **Local Consumption of Butter and Cheese.**—The production of butter and cheese less net exports and adjusted to account for movements in stocks, represents the quantity available for consumption in Australia.

A system of butter rationing introduced as a war-time measure and retained until 16th June, 1950, had the effect of considerably reducing civilian consumption. In the last year of rationing, 1949-50, consumption was 25.3 lb. per head per annum compared with an average of 32.9 lb. during the years 1936-37 to 1938-39. Following the cessation of rationing, consumption rose sharply to 30.9 lb. per head in 1950-51 and to 31.2 lb. in 1951-52, but fell in 1952-53 to 29.4 lb.

Cheese consumption rose considerably during the period of butter rationing, from 4.4 lb. per head pre-war to 6.3 lb. per head in 1949-50. There was a further slight rise in 1950-51 to 6.5 lb. per head, but this was followed by a decline in 1951-52 to 6.0 lb. and in 1952-53 to 5.9 lb.

The following table shows details of the production and disposal of butter and cheese for each of the years 1948-49 to 1952-53 compared with the average for the years 1936-37 to 1938-39.

PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE : AUSTRALIA.

Year.	Changes in Stock.	Production.	Exports. (a)	Consumption in Australia.	
				Total.	Per Head per annum.
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
BUTTER.					
Average, 1936-37 to 1938-39	(b)	191.0	(c) 90.0	101.0	32.9
1948-49.. ..	(d) -2.1	165.8	83.4	84.5	24.3
1949-50.. ..	(d) +0.8	173.6	81.9	90.9	25.3
1950-51.. ..	(d) -5.9	163.9	55.2	114.6	30.9
1951-52.. ..	(d) +3.5	135.3	12.9	118.9	31.2
1952-53.. ..	(d) +2.5	167.5	50.5	114.5	29.4
CHEESE.					
Average, 1936-37 to 1938-39	(b)	24.9	11.5	13.4	4.4
1948-49.. ..	- 0.7	43.2	26.2	17.7	5.1
1949-50.. ..	- 1.0	44.8	23.1	22.7	6.3
1950-51.. ..	..	44.3	20.1	24.2	6.5
1951-52.. ..	- 0.1	40.6	17.9	22.8	6.0
1952-53.. ..	- 0.1	46.6	23.7	23.0	5.9

(a) Figures for butter include ghee expressed as butter as well as butter shipped as ships' stores. Figures for cheese include ships' stores after allowance for a small quantity of cheese imported. (b) Not available. (c) Excludes ghee. (d) Includes allowance for movements in stocks other than those held in main cold stores.

12. **Marketing of Dairy Products.**—(i) *The Dairy Produce Export Control Act* 1924-1954. Introduced at the request of the dairying industry this Act was passed by the Commonwealth Parliament with the object of organizing the overseas marketing of Australian dairy produce. A Dairy Produce Control Board was appointed and was in existence from 1924 to 1935. It dealt with matters relating to the organization and supervision of overseas marketing of dairy produce. In the course of its functions the Board regulated shipments to ensure regularity of supply in the London market, controlled forward selling, obtained reductions in overseas freights and insurance rates and participated in an advertising campaign in the United Kingdom.

Prior to the appointment of the Dairy Produce Control Board a voluntary body—the Australian Dairy Council—was established to advise and make recommendations to the Governments on problems connected with the production, manufacture and quality of dairy produce, pasture improvement and diseases of dairy cattle.

Following a recommendation by the Australian Agricultural Council the functions of these bodies were combined by an amending Act of 1935 under the Australian Dairy Produce Board and provision was made for the allocation of money from the Board's

funds for research and investigation into pastures, diseases of dairy cattle and the quality of butter. The functions of the Board were later extended to enable it to advise the Government in connexion with the transport of dairy produce, the securing of new markets, the expansion of existing markets and other matters.

The Australian Dairy Produce Board was re-constituted in 1947 by an amendment to the Dairy Produce Export Control Act, its membership being reduced from seventeen to twelve. The functions of the Board were extended to enable it to purchase and sell, on behalf of the Commonwealth, dairy produce intended for export, and to control all matters concerning the handling, storage, protection, treatment, transfer and shipment of the produce so purchased or sold. In 1953 the direct farmer representation on the Board was increased from two to three members thus raising the total membership from twelve to thirteen.

In April, 1954, the Act was further amended to prepare for the implementation of an export marketing plan to follow the expiration of the United Kingdom-Australia Butter and Cheese Contract. The amendment will enable the Board to purchase dairy produce intended for export to the United Kingdom and to sell such produce on behalf of the dairying industry in lieu of its present function of selling on behalf of the Commonwealth Government. In the interests of the stability of the industry, the Act provides that the Board may be the sole Australian exporter of butter and cheese to the United Kingdom.

(ii) *The Dairy Produce Export Charges Act 1924-1937.* This Act provides for the imposition of a levy on all butter and cheese exported from Australia to cover the administrative expenses of the Board and for advertising and other purposes. The rate of the levy is fixed by regulation.

13. **Butter and Cheese Contracts.**—(i) *General.* Details of the war-time contracts arranged between the United Kingdom and Australian Governments whereby the former undertook to purchase Australia's surplus butter and cheese were shown on pp. 985 and 986 of Official Year Book No. 37. The purchase of butter and cheese in 1944-45 and subsequent years has been covered by the Long-Term Purchase Agreement (*see* sub-par. (ii) following).

For the years 1943-44 to 1947-48 the United Kingdom Government reimbursed the Australian Government to the extent of subsidy paid on butter and cheese exported on Ministry of Food account. From 1st July, 1948 to 30th November, 1950 in respect of butter, and for the year 1948-49 in the case of cheese, however, contract prices paid by the United Kingdom Government were in excess of the basic return to the Australian manufacturer. As a result, subsidy on butter and cheese exported was discontinued from that date and returns from export sales in excess of the basic return to the producer have been credited to the Dairying Industry Stabilization Fund (*see* pp. 810 and 811). The Fund was drawn upon to cover the deficiencies in export prices during 1951-52 and since July, 1952 has been available to make good the deficiency in respect of all exports other than the 20 per cent. provided for under the Five-year Stabilization Plan.

The following table indicates the prices per cwt. Australian currency f.o.b. port of shipment payable under the Long-term Purchase Agreement for the various grades of butter and cheese for the years 1948-49 to 1953-54.

PRICES OF BUTTER AND CHEESE : UNITED KINGDOM CONTRACTS.

Per cwt. Australian currency, f.o.b.

(s. d.)

Period.	Choice.	1st.	2nd.	Pastry.	Whey, 1st.	Whey, 2nd.	Whey, Pastry.
BUTTER.							
1948-49 ..	291 10½	290 3½	285 7½	281 10½	281 10½	276 10½	271 10½
1949-50 ..	313 9	312 4	307 6	303 9	303 9	298 9	293 9
1950-51 ..	339 4½	337 9½	307 6	303 9	303 9	298 9	293 9
1951-52 ..	365 0	363 5½	352 6	347 6	272 0	267 0	262 0
1952-53 ..	392 6	390 11½	380 0	367 6	367 6	361 3	355 0
1953-54 ..	407 0	405 11½	395 0	382 6	382 6	376 3	370 0

PRICES OF BUTTER AND CHEESE: UNITED KINGDOM
CONTRACTS—continued.

Per cwt. Australian currency, f.o.b.

(s. d.)

Period.						Choicest, 1st.	2nd.	3rd.
						CHEESE.		
1948-49	..	..	..	..	..	164 4½	161 10½	159 4½
1949-50	..	..	..	..	..	175 0	172 6	170 0
1950-51	..	..	..	..	..	188 9	172 6	170 0
1951-52	..	..	..	..	..	201 10½	189 4½	176 10½
1952-53	..	..	..	..	..	220 0	207 6	195 0
1953-54	..	..	..	..	..	228 1½	215 7½	203 1½

(ii) *Long-term Purchase Agreement.* Early in 1945 an agreement was completed between the United Kingdom and Australian Governments covering the sale to the former of Australia's surplus butter and cheese for the four years 1944-45 to 1947-48. The Agreement was later extended to cover the period up to 30th June, 1955. In the original agreement, prices were stipulated for the initial two years ended June, 1946, while any variation in price for the succeeding years was not to exceed 7½ per cent. of the price paid for the preceding year. Increases were agreed on during each year of the agreement to 1953-54. For both 1951-52 and 1952-53 the full 7½ per cent. increase was obtained while in 1953-54 the price was agreed at 3½ per cent. above the preceding year. The United Kingdom undertakes responsibility for storage costs if unable to provide ships to lift butter and cheese from store after 90 days, and makes advances against stored stock in this event. The usual provisions relative to quality, packing, etc., continued to obtain, but in regard to payment the United Kingdom now pays the whole of the value on shipment, instead of 97½ per cent. on shipment and 2½ per cent. 60 days after the date of the last bill of lading, as formerly.

14. *Oversea Trade in Butter, Cheese and Milk.*—(i) *General.* The production of butter and cheese in Australia is considerably in excess of local requirements and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon the seasonal conditions. Exports of butter, which averaged 90,000 tons in the three pre-war years, were maintained to a certain extent during the war-time and post-war years by the restriction of supplies for local consumption, but, because of lower production they nevertheless fell as low as 41,800 tons in 1944-45. In the last year of rationing, 1949-50, exports were 79,200 tons, but in 1950-51 they fell to 53,600 tons and in 1951-52 to 11,300 tons, rising again to 49,300 tons in 1952-53. In addition small quantities of ghee have been exported during the post-war period. Exports of cheese, which averaged 11,500 tons pre-war, rose to a maximum of 26,000 tons in 1948-49, but they subsequently fell and in 1952-53 amounted to 23,700 tons.

During 1938-39, 96,900 tons of butter (95 per cent. of all butter exported) were shipped to the United Kingdom. With the decline in total exports there has also been a substantial reduction in the quantity shipped to the United Kingdom. In 1952-53 it amounted to 32,100 tons (65 per cent. of total butter exports.)

In 1938-39, exports of cheese totalled 16,000 tons of which 15,500 tons or 97 per cent were exported to the United Kingdom. Of the total of 23,700 tons exported in 1952-53 17,600 tons or 75 per cent. were shipped to the United Kingdom.

Total quantities and values of exports of Australian origin of butter, cheese and condensed, concentrated, etc., milk and cream are shown on page 826.

(ii) *Butter and Cheese Exports graded according to Quality.* All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to the supervision, inspection and examination of officers appointed for that purpose. These commodities are graded according to quality which has been fixed by

regulation as follows :—Flavour and aroma, 50 points ; texture, 30 points ; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality ; at 90 to 92 points, first quality ; at 86 to 89 points, second quality ; and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details, which include actual quantities by States, are to be found in *Primary Industries Bulletin* No. 47, Part I.—*Rural Industries*, 1952-53.

BULK BUTTER AND CHEESE GRADED FOR EXPORT : AUSTRALIA.
(Per Cent.)

Grade.	Butter.			Cheese.		
	1950-51.	1951-52.	1952-53.	1950-51.	1951-52.	1952-53.
Choicest	50.3	56.4	48.8	2.8	3.4	3.3
First Quality	40.7	34.3	39.7	68.5	70.7	80.0
Second Quality	7.2	7.3	9.5	28.7	25.9	16.7
Third Quality(b)	1.8	2.0	2.0	(a)	(a)	(a)
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) Included with Second Quality.

(b) Includes rejected.

§ 4. Figs and Pig Products.

1. Pigs.—Between 1928-29 and 1938-39 the number of pigs in Australia fluctuated around one million. In the latter year an upward movement commenced and continued until the record number of 1,797,340 was recorded in 1940-41. There was a decline in the following two years but the numbers rose again to 1,746,721 in 1943-44 ; thereafter, there has been an almost continuous decline, the year 1950-51 being the exception, to the figure for 1952-53 of 992,532. Details of the number of pigs in each State and Territory for each of the five years 1949 to 1953, together with the average for the five years 1935 to 1939, are given in the following table.

NUMBER OF PIGS.

As at 31st March.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(a)	A.C.T.	Total.
Average, 1935 to 1939(b) ..	391,874	287,140	294,777	80,548	83,999	42,772	479	544	1,182,133
1949	375,212	223,823	407,322	71,427	80,689	36,996	384	468	1,196,321
1950	333,198	212,901	391,836	69,523	79,126	35,841	419	423	1,123,267
1951	316,833	237,127	374,991	67,517	89,910	45,446	1,122	642	1,133,588
1952	292,829	213,670	316,529	64,903	86,224	46,926	794	249	1,022,124
1953	298,690	182,824	335,809	58,657	76,195	39,378	799	180	992,532

(a) As at 1st January. (b) As at 31st March for New South Wales and Australian Capital Territory ; 1st March for Victoria ; 1st January for Queensland, South Australia, Western Australia and Tasmania.

Further details relating to pig numbers are given in Chapter XIX.—Pastoral Production. A map showing the distribution of pigs in Australia at 31st March, 1948, appears on p. 908 of Official Year Book No. 39.

2. Size of Pig Herds.—A series of special tabulations relating to rural holdings undertaken for all States for the year 1949-50 covered, *inter alia*, a classification of holdings carrying pigs according to size of herd. Full details of these tabulations were published in *Primary Industries Bulletin* No. 44, 1949-50.

3. **Pigs Slaughtered.**—The number of pigs slaughtered during each of the years ended June, 1949 to 1953 and the average for the years 1934-35 to 1938-39 are shown in the following table:—

PIGS SLAUGHTERED.
(’000.)

Year Ended June—	Slaughterings Passed for Human Consumption.							Total Slaughtering (including Boiled Down).
	N.S.W.	Victoria.	Q’land.	S. Aust.	W. Aust.	Tasmania.	Total.(a)	
Average, 1935 to 1939 ..	555	484	525	154	119	61	1,899	1,912
1949 ..	482	376	502	130	131	53	1,676	1,684
1950 ..	479	299	504	110	111	51	1,557	1,568
1951 ..	454	312	460	115	113	58	1,516	1,529
1952 ..	468	339	370	108	132	66	1,488	1,500
1953 ..	458	297	400	115	122	66	1,463	1,474

(a) Including Australian Capital Territory and Northern Territory.

4. **Pork.**—(i) *Production.* In the following table details of the production of pork in each State are shown for the years 1948-49 to 1952-53 compared with average production during the years 1934-35 to 1938-39.

PRODUCTION OF PORK (BONE-IN WEIGHT).
(Tons.)

Year.	N.S.W.	Vic.	Q’land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	9,938	12,236	9,867	3,215	1,741	1,240	7	38	38,282
1948-49 ..	9,831	8,623	12,254	2,358	2,649	1,442	27	56	37,240
1949-50 ..	10,260	6,645	12,911	2,009	1,793	1,208	42	90	34,958
1950-51 ..	9,307	7,596	11,751	2,774	2,116	1,499	64	150	35,257
1951-52 ..	10,382	8,716	8,604	2,551	2,550	1,981	70	170	35,024
1952-53 ..	9,611	6,925	6,548	2,836	2,436	1,920	60	132	30,468

(ii) *Consumption.* As in the case of other meats, pork was subject to rationing during the 1939-45 War and immediate post-war years. This resulted in the consumption of pork per head declining from the pre-war average of 10.4 lb. to 4.9 lb. in 1945. After 1945, the demand for pork for the Armed Services declined and larger quantities were available for civilian consumption. As a result, consumption per head rose steadily again to reach 7.4 lb. in 1948-49. Up to 1951-52 it remained at about 7 lb. per head but in 1952-53 fell again to 5.8 lb. In the following table details of the production and disposal of pork are shown for the years 1948-49 to 1952-53 compared with averages for the three years 1936-37 to 1938-39.

PRODUCTION AND DISPOSAL OF PORK (BONE-IN WEIGHT) : AUSTRALIA.

Year.	Changes in Stock.	Production. (a)	Exports.	Canning.	Consumption in Australia.	
					Total.	Per Head per annum.
	’000 tons.	’000 tons.	’000 tons.	’000 tons.	’000 tons.	lb.
Average, 1936-37 to 1938-39 ..	..	45.5	13.7	..	31.8	10.4
1948-49 ..	+0.6	37.3	9.0	1.9	25.8	7.4
1949-50 ..	+0.1	35.0	6.7	2.2	26.0	7.2
1950-51 ..	+0.5	35.3	5.6	4.0	25.2	6.8
1951-52 ..	+0.4	35.0	1.7	5.3	27.6	7.3
1952-53 ..	+0.8	30.5	1.5	5.5	22.7	5.8

(a) Includes an estimate of trimmings from baconer carcasses.

5. **Bacon and Ham.**—(i) *Production.* As in the case of pork, the increased demand for bacon and ham during the war years stimulated production to a level not previously attained. Production reached its peak in 1944-45 when 56,246 tons of bacon and ham were cured. This was followed by a continuous decline in output in each succeeding year to 36,628 tons in 1951-52. In 1952-53 there was a slight recovery in production to 38,545 tons. Details of production are shown by States in the following table for each year 1948-49 to 1952-53 compared with the average production for the five pre-war years ended 1938-39.

PRODUCTION OF BACON AND HAM (CURED WEIGHT).

(Tons.)

Year.	N S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aus- tralia.
Average, 1934-35 to 1938-39	9,063	7,614	9,269	2,950	2,013	970	1	32,780
1948-49	13,302	10,204	9,412	3,788	3,756	1,122	..	41,584
1949-50	12,955	9,779	10,018	3,718	3,542	991	..	40,603
1950-51	12,629	7,905	8,764	3,042	3,553	946	..	35,844
1951-52(a)	12,514	8,964	7,669	2,969	3,683	829	..	35,628
1952-53(a)	13,228	8,165	9,510	3,063	3,693	886	..	38,545

(a) Pressed and canned bacon and ham have been converted to bone-in weight.

(ii) *Consumption.* Consumption per head declined in the early stages of the 1939-45 War from the pre-war average of 10.2 lb. per annum, but by 1944 it had been restored to this level and subsequently increased to 12.7 lb. in 1946-47. Since that year there has been a steady decline to 7.2 lb. per head during 1951-52 followed by a slight increase to 7.3 lb. per head during 1952-53. Details of production and disposal of bacon and ham for the years 1948-49 to 1952-53 compared with average production and disposal for the period 1936-37 to 1938-39 are shown in the following table:—

PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED WEIGHT) : AUSTRALIA.

Year.	Changes in Stock.	Production.	Exports.	Canning.	Consumption in Australia.	
					Total.	Per head per annum.
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to 1938-39	(a)	32.5	1.0	..	31.5	10.2
1948-49	-0.1	41.6	3.4	2.2	36.1	10.4
1949-50	+0.1	40.6	3.3	2.6	34.6	9.6
1950-51	+0.2	36.8	3.0	2.9	30.7	8.3
1951-52(b)	+0.2	36.6	2.8	6.1	27.5	7.2
1952-53(b)	-0.7	38.5	2.0	8.9	28.3	7.3

(a) Not available.
weight.

(b) Pressed and canned bacon and ham have been converted to bone-in

6. **United Kingdom Contracts.**—Details relating to the several war-time contracts and the more recent Long-term Purchase Agreement between the Governments of the Commonwealth and the United Kingdom for the sale of Australia's surplus production of meats (including pigmeats) are included in Chapter XIX.—Pastoral Production.

7. **Oversea Trade in Pigs and Pig Products.**—Total quantities and values of exports of Australian origin of pigs and pig products (bacon and ham, lard and frozen pork) for the years 1938-39 and 1948-49 to 1952-53 are shown on page 826.

§ 5. Poultry-Farming.

1. *General.*—Poultry-farming has been carried on in Australia for many years and the State Departments of Agriculture have encouraged its development by appointing experts to advise on the care and management of poultry and by conducting egg-laying competitions. Originally the industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry and it is from this source that the bulk of the commercial production is obtained. Practically all farms keep poultry for the purpose of supplying their own domestic requirements and in many cases some supplies from this source are also marketed. In addition, many private homes keep small numbers of fowls in backyard runs and this helps to maintain domestic needs particularly when eggs are in short supply.

2. *Numbers of Poultry.*—In pre-war years the numbers of the principal kinds of poultry were a normal feature of the annual census of live-stock in all States except Victoria and Tasmania. These data were collected on a restricted scale by all States in 1942-43, the details obtained being confined to farms of one acre or more producing eggs or poultry for sale. The collection has since been discontinued in some States because of their incompleteness, details of poultry numbers are not published.

3. *Recorded Production and Disposal of Eggs.*—(i) *Shell Eggs.* Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Egg Boards of the several States. As Boards were not set up in all States until 1943, comparable statistics of recorded production of eggs for Australia as a whole are not available prior to 1943-44. Details of production in the respective States as recorded by these authorities for the years 1948-49 to 1952-53 are shown in the following table :—

SHELL EGGS : PRODUCTION(a) RECORDED BY EGG BOARDS.
(’000 Dozen.)

State.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales	52,052	52,269	50,465	50,271	50,884
Victoria	32,842	29,985	25,573	23,492	24,701
Queensland	12,144	11,176	10,858	8,426	7,860
South Australia	14,115	13,089	11,663	10,741	11,359
Western Australia	7,939	7,653	7,437	8,077	8,783
Tasmania	1,117	1,514	1,297	1,027	1,107
Total	120,209	115,686	107,293	102,034	104,694

(a) Receipts from consignors and sales by producer agents.

(ii) *Egg Pulp.* Prior to the 1939-45 War, production of egg pulp was about 7 million lb. per annum. This was used almost entirely for the manufacture of cakes, pastry and biscuits, only negligible quantities being exported. Production was expanded greatly during the war years to meet the requirements of the Armed Services and has since been maintained at a high level for export purposes and to meet increased local requirements.

Particulars of the production of whole egg pulp as recorded by the Egg Boards in the several States are shown in the following table.

LIQUID WHOLE EGG : PRODUCTION RECORDED BY EGG BOARDS.
(’000 lb.)

State.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales	15,966	14,760	16,003	12,357	16,991
Victoria	14,579	8,565	6,153	6,559	6,467
Queensland	4,560	4,498	4,008	2,278	2,315
South Australia	7,663	6,374	5,692	5,629	6,284
Western Australia	1,782	1,837	1,939	2,878	3,490
Tasmania	129	407	353	249	359
Total	44,679	36,641	34,148	29,950	35,906

In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1952-53 amounted to 387,032 lb. and 253,742 lb. respectively compared with 912,000 lb. and 654,000 lb. respectively in the previous year.

(iii) *Egg Powder.* The production of dried egg powder was established in Australia in 1942, to treat Australia's surplus eggs so as to maintain exports under war-time conditions to the United Kingdom. Production was continued after the end of the war for export purposes, but since 1946-47 has declined to negligible proportions.

4. *Production and Consumption of Eggs.*—Statistics of total egg production must necessarily be accepted with some reserve. The production shown in the following table together with details of exports and consumption is based upon the records of Egg Boards of production from areas under their control plus estimates of production from uncontrolled areas and from "back-yard" poultry-keepers.

ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL : AUSTRALIA.(a)

Year.	Changes In Stock.	Estimated Total Production.	Exports.	For Drying and Pulping.(b)	Consumption in Aus- tralia as Human Food.	
					Total.	Per head per annum.
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average, 1936-37 to						
1938-39	(c)	89.5	7.6	3.2	78.7	25.7
1948-49	+ 0.1	119.4	11.9	22.8	84.6	24.3
1949-50	- 0.3	116.5	14.0	19.0	83.8	23.3
1950-51	+ 0.2	110.4	8.4	17.0	84.8	22.9
1951-52	+ 1.1	106.9	8.5	14.9	82.4	21.6
1952-53	- 1.2	108.6	12.6	16.8	80.4	20.6

(a) The average weight of an egg in Australia is taken as 1.75 oz.

(b) Includes wastage.

(c) Not available.

Details of the consumption of shell eggs, liquid whole egg and total shell egg equivalent (expressed in lb. and in number of eggs) per head of population per annum are shown in the following table :—

SUPPLIES OF EGGS AND EGG PRODUCTS(a) MOVING INTO CONSUMPTION : AUSTRALIA.

(Per head per annum.)

Commodity.		Average, 1936-37 to 1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Shell Eggs	lb.	25.7	24.3	23.3	22.9	21.6	20.6
Liquid Whole Egg and Powder(a)	lb.	0.9	2.8	2.6	2.2	2.3	1.7
Total— {							
	lb.	26.6	27.1	25.9	25.1	23.9	22.3
	Number(b)	243	248	236	229	219	204

(a) In terms of weight of shell eggs.
1.75 oz.

(b) The average weight of an egg in Australia is taken as

5. *Marketing of Eggs.*—(i) *United Kingdom Contracts.* Details of the annual contracts entered into between the United Kingdom and Australian Governments will be found in Official Year Book Nos. 38, pp. 1048-9 and 40, p. 930.

In respect of the 1953-54 season the Ministry of Food agreed to pay to the Australian Government the actual United Kingdom market realizations for eggs in shell, less actual cost, paid by the Ministry up to the point of delivery to wholesalers. For the same season the contract price for egg pulp was fixed at £294 sterling per ton, f.o.b. Australian ports which is equivalent to 3s. 3.375d. per lb. (Australian currency) and represents an increase of 3½d. per lb. (Australian currency) over the contract price for the 1952-53 season. The United Kingdom market realizations for Australian eggs in shell during the 1953-54 season were nearly 25 per cent. below those received during 1952-53, the final year of the contract, when the contract price was 4s. 2.25d. per dozen for packs of 15 lb. In order to cushion the effect of the collapse of the United Kingdom market in the first year following de-control in the United Kingdom, the Commonwealth Government in 1954 made a special grant of £250,000 to egg producers.

(ii) *Egg Export Control Act 1947.* Following the termination of Commonwealth control over the production and marketing of eggs on 31st December, 1947, functions relating to the local marketing of eggs reverted to State Egg Boards which became responsible for stabilizing prices and marketing of eggs produced in the respective States. In order to assist in marketing Australia's surplus production of eggs under the Long-term Purchase Agreement with the United Kingdom, the Commonwealth established the Australian Egg Board under the Egg Export Control Act 1947. The Board, which commenced to operate on 1st January, 1948, was empowered to buy and sell, on behalf of the Commonwealth Government, eggs and egg products intended for export which comply with the provisions of the Export (Dairy Produce) Regulations. In addition, the Board was authorized to deal with all matters relating to the export of eggs and egg products from Australia, to make such experiments as are likely to lead to the improvement of the quality of Australian eggs and to promote their sale overseas. The Board consisted of ten members, including six representatives of egg producers and one representative of the Commonwealth Government.

Due to the discontinuance of inter-Governmental trading in eggs and egg products, the Egg Export Control Act was amended in April, 1954, to provide for the reconstruction of the Australian Egg Board and the implementation of an egg export marketing scheme. The new Board, established on 17th June, 1954, comprises nine members including a representative of the Commonwealth Government and representatives from each State Egg Marketing Board (except Tasmania). The Board is empowered to act as a trading authority selling eggs and egg pulp as agent for State Egg Boards. However any State Board desiring to export on its own account may do so subject to general terms and conditions to be laid down by the Australian Egg Board.

6. Oversea Trade in Poultry Products.—The Australian oversea export of poultry products has in the past been confined chiefly to eggs in shell and egg contents, which are consigned mainly to the United Kingdom. In 1949-50 exports of eggs in shell reached the record level of 23.0 million dozen, but in the two succeeding years amounted to less than 14 million dozen, rising in 1952-53 to 20.9 million dozen.

Prior to the 1939-45 War, exports of egg contents were small and in 1939-40 there was an excess of imports. During the war years, exports expanded greatly, mainly to meet Service requirements, and since the close of the war there was further expansion until 1947-48 when 30.6 million lb. of egg contents were shipped. There has been a decline since 1947-48 and in 1952-53 the quantity exported amounted to 23.7 million lb.

Since the close of the war there has also been a remarkable increase in the exports of frozen poultry, exports amounting to 989,000 pairs in 1952-53 compared with the average for the pre-war years 1934-35 to 1938-39 of only 37,913 pairs.

Total quantities and values of exports of Australian origin of poultry products (live poultry, frozen poultry, eggs in shell, egg pulp and powder and undressed feathers) for the years 1938-39, 1951-52 and 1952-53 are shown on page 826.

§ 6. Bee-Farming.

1. **Production of Honey and Bees-wax.**—Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming, but its place in Australia's rural economy is not very significant. The returns of honey from productive hives during 1952-53 showed an average of 90 lb. per hive and the average quantity of wax was 1.1 lb. per productive hive.

The number of hives and the production of honey and bees-wax during the year 1952-53 are shown in the following table.

BEEHIVES, HONEY AND BEES-WAX, 1952-53.

State.	Beehives.			Honey Produced.		Bees-wax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Gross Value.	Quantity.	Gross Value.
	'000.	'000.	'000.	'000 lb.	£	lb.	£
New South Wales..	99	43	142	8,046	368,796	94,297	31,087
Victoria..	79	30	109	6,235	285,766	71,536	19,672
Queensland ..	25	9	34	2,166	93,210	29,703	8,857
South Australia ..	76	15	91	7,656	237,348	102,733	17,344
Western Australia	26	5	31	3,393	108,717	39,912	7,533
Tasmania ..	4	1	5	309	18,010	3,548	1,420
Australian Capital Territory ..	(b)	(b)	(b)	5	220	50	20
Australia(a) ..	309	103	412	27,810	1,112,067	341,779	85,933

(a) Excludes Northern Territory.

(b) Less than 500.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora of the eucalypts, which varies greatly from year to year. In recent years there has been a pronounced upward trend in the output of honey, the 1948-49 figure (53,200,000 lb.) being an all-time record. Production in 1952-53 (27,810,000 lb.), although much lower than in 1948-49, was still higher than pre-war.

The table hereunder shows the production of honey and bees-wax for the five years ended 1952-53 in comparison with the averages for the years 1934-35 to 1938-39.

HONEY AND BEES-WAX PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
HONEY ('000 lb.).							
Average, 1934-35 to 1938-39 ..	3,827	3,600	689	3,388	1,125	181	(a) 12,810
1948-49 ..	26,008	8,730	3,045	10,906	4,290	221	(a) 53,200
1949-50 ..	9,227	7,744	1,187	5,179	2,041	285	(a) 25,663
1950-51 ..	9,994	8,088	1,925	5,803	1,314	315	(a) 27,439
1951-52 ..	6,814	5,208	706	4,191	3,480	254	(a) 20,653
1952-53 ..	8,046	6,235	2,166	7,656	3,393	309	(b) 27,810
BEES-WAX (lb.).							
Average, 1934-35 to 1938-39 ..	55,927	41,856	10,318	41,083	18,855	2,382	(a) 170,421
1948-49 ..	295,892	90,778	47,184	140,384	55,239	2,944	(a) 632,421
1949-50 ..	117,939	78,124	22,162	70,442	32,045	3,724	(a) 324,436
1950-51 ..	126,047	90,605	29,907	78,838	16,968	4,218	(a) 346,583
1951-52 ..	85,801	55,963	15,080	58,178	44,860	3,266	(a) 263,148
1952-53 ..	94,297	71,536	29,703	102,733	39,912	3,548	(b) 341,779

(a) Excludes Australian Capital Territory and Northern Territory.

(b) Excludes Northern Territory.

2. Oversea Trade in Bee Products.—Prior to the 1939-45 War the production of honey exceeded Australian requirements and a small quantity was available for export. In 1948-49 the record quantity of 32.09 million lb., was exported. In 1951-52 exports amounted to 15.91 million lb. and in 1952-53 to 16.61 million lb.

The wider use of frame hives has reduced the production of wax, and as a result the quantity imported has generally exceeded that exported. During each of the five years prior to 1951-52 production was high on account of exceptionally good seasons, and exports exceeded imports by substantial margins. In 1951-52 imports were greater than exports but with the increased production in 1952-53 exports again exceeded imports by an amount of 141,605 lb.

Total quantities and values of exports of Australian origin of honey and bees-wax for the years 1938-39, 1951-52 and 1952-53 are shown in §7 below.

§ 7. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during 1951-52 and 1952-53 are shown below in comparison with those of 1938-39.

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS : EXPORTS OF AUSTRALIAN ORIGIN.

Particulars.	Unit of Quantity.	Quantity.			Value (£A'000 f.o.b. Port of Shipment).		
		1938-39.	1951-52.	1952-53.	1938-39.	1951-52.	1952-53.
Bees-wax	lb.	5,565	23,587	156,932	(a)	7	28
Butter	'000 lb.	229,543	25,417	110,428	12,802	4,593	20,075
Cheese	"	35,924	40,316	53,006	1,074	4,064	5,851
Eggs in Shell	'000 doz.	10,144	13,832	20,911	638	2,364	4,346
Eggs not in Shell—							
Egg Pulp	'000 lb.	650	10,818	23,743	23	1,291	3,557
Egg Powder	"		169	304		24	22
Feathers, undressed	"	(b)	(b)	(b)	(a)	5	4
Honey	'000 lb.	687	15,912	16,613	14	706	773
Lard	"	(c) 5,491	169	183	(c) 68	16	20
Meats—							
Bacon and Ham	"	(d) 1,739	5,200	3,649	(d) 120	968	774
Frozen Poultry	'000 pr.	22	2,210	989	20	3,036	1,629
Frozen Pork	'000 lb.	50,716	3,898	3,453	882	485	477
Milk—							
Condensed. Preserved, &c.—							
Sweetened Full Cream	"	12,572	66,508	84,913	406	4,940	6,263
Skim	"	"	5	69	"	(a)	3
Unsweetened	"	754	2,396	4,604	19	151	290
Dried or Powdered—							
Full Cream	"	3,001	12,590	27,338	93	1,458	3,308
Skim	"	575	15,852	30,209	6	754	1,577
Malting	"	565	2,361	3,167	57	304	519
Infants' and Invalids' Foods—							
Essentially of Milk	"	1,637	6,343	4,252	210	956	699
Other	"	"	5,600	4,622	"	956	828
Pigs, live	Number	61	1,236	736	(a)	33	17
Poultry, live	"	2,189	81,629	47,551	1	9	8
Total					16,523	27,120	51,058

(a) Less than £500. (b) Quantity not available. (c) Includes lard oil and refined animal fats. (d) Excludes tinned bacon.

§ 8. Imports of Dairy and Farmyard Products into United Kingdom.

NOTE.—Values of imports in this section are expressed in £ sterling at the landed c.i.f. point.

1. **Summary, Principal Products.**—The following table shows the quantities and values of the principal dairy products imported into the United Kingdom during the years 1939, 1952 and 1953.

DAIRY PRODUCTS : IMPORTS INTO UNITED KINGDOM.

Product.	Unit of Quantity.	1939.		1952.		1953.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Butter	'000 cwt.	8,737	£'000. 48,424	5,185	£'000. 82,413	5,639	£'000. 94,903
Cheese	"	2,845	8,869	2,737	28,277	2,921	30,455
Milk, powdered and pre-served	"		2,818		10,398		10,950
Bacon and ham	'000 cwt.	7,953	37,105	5,479	81,355	6,617	87,053
Pork	"	989	3,036	302	3,835	892	11,205
Eggs, dried	"	10	85	10	417	5	200
Eggs in shell	'000 doz.	283,315	12,835	123,477	21,617	134,528	23,924
Eggs, liquid or frozen	'000 cwt.	800	2,292	249	3,083	536	7,131

2. **Butter.**—Until 1950 Australia had regularly supplied between 20 and 30 per cent. of the butter imported into the United Kingdom. Since 1950, when butter rationing was abolished in Australia, the quantity shipped has been considerably lower and in 1953 amounted to 550,633 cwt., or 9.76 per cent. of the total United Kingdom imports. New Zealand supplied 46.45 per cent. of the total quantity imported during 1952 and Denmark, 36.78 per cent.

In the following table particulars of the quantity and value of butter imported into the United Kingdom are shown for the years 1938, 1952 and 1953, according to country of origin.

BUTTER : IMPORTS INTO UNITED KINGDOM.

Country from which Imported.	1938.		1952.		1953.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 cwt.	£'000.	'000 cwt.	£'000.	'000 cwt.	£'000.
New Zealand	2,592	14,524	2,970	46,516	2,620	43,502
Australia	1,798	9,630	278	4,507	551	9,135
Other British Countries	423	2,455	11	166		
Denmark	2,365	12,960	1,739	28,239	2,074	35,861
Netherlands	712	3,466	115	1,837	240	3,919
Other Foreign Countries	1,628	7,838	72	1,148	154	2,486
Total	9,518	50,873	5,185	82,413	5,639	94,903

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1953 was £30,455,000. Of this, £17,708,000 was imported from New Zealand, £3,653,000 from Australia, £3,048,000 from Denmark and £2,255,000 from the Netherlands.

4. **Bacon.**—Of a total import in 1953 of bacon valued at £78,157,000, the value of that supplied by Denmark was £53,199,000, Poland, £14,182,000, and the Netherlands, £7,997,000.

5. **Pork.**—The value of the United Kingdom imports of pork was £11,205,000 in 1953. Imports from New Zealand, valued at £2,637,000, and Argentina, £2,247,000, comprised 44 per cent. of the imports into the United Kingdom.

6. **Eggs.**—In 1953 the value of eggs imported into the United Kingdom was £31,256,000, comprising eggs-in-shell, £23,924,000, liquid or frozen eggs, £7,131,000, and dried eggs, £200,000. The Australian share in this trade amounted to £5,216,000. Eggs-in-shell were supplied principally by Denmark, £14,629,000 and the Irish Republic, £3,833,000.

7. **Milk Products.**—In 1953 the value of powdered and preserved milk imported into the United Kingdom was £10,950,000, comprising condensed milk, sweetened, £2,873,000, condensed milk, unsweetened, £695,000 and powdered milk, £7,382,000. Australia supplied unsweetened milk powder valued at £2,243,000.

8. **Other Products.**—The imports into the United Kingdom from Australia of poultry amounted to £547,000, while those of bees-wax, lard and honey in 1953 were unimportant.

CHAPTER XXII.

FORESTRY.*

§ 1. General.

NOTE.—Values of Australian oversea trade shown throughout this Chapter are expressed in £A f.o.b., Port of Shipment, except where otherwise indicated.

1. **Objects of Forestry.**—The main object of forestry is to manage the forests of a country in the way that will provide the maximum direct and indirect benefits. Direct benefits include the provision of essential commercial commodities such as structural timber, pulpwood, plywood, veneers, firewood, bark products, tars, oils and resins. Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, and aesthetic effects.

Forestry aims to improve existing forests and woodlands by properly controlled exploitation, by protection from destructive agencies such as fire, and by inducing natural regeneration where it is desirable. Forestry also aims to provide a partial tree cover on denuded lands when such cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other crop.

2. **General Account of Forests and Timbers.**—The area of land in Australia suitable for the production of commercial timber as the primary crop is very small in comparison with the size of the continent. It is concentrated mainly around the wetter coastal belts and the eastern highlands and it includes the bulk of the land suitable for intensive development by agricultural or pastoral undertakings.

The allocation of land for agricultural and pastoral purposes led to the clearing of much of the original forest of Australia, particularly of the more readily accessible parts. In the early period of agricultural and pastoral expansion, only the best timbers found their way into commerce, and species now prized as providing high quality woods were often put to inferior uses. During this period the forest resources of the country were considered by the majority of the people to be inexhaustible, and relatively little care was taken to prevent the degradation of the remaining forests by fire and uncontrolled grazing. This state of affairs is rapidly changing; it is now recognized that the remaining forest land must be protected and properly managed in the interests of the community.

The trees which make up the forests of Australia are mainly evergreen hardwoods. The characteristic genus is *Eucalyptus*. There are over six hundred different kinds of eucalypts and with few exceptions the natural occurrence of all of them is restricted to Australia. The genus includes such species as the mountain ash (*Eucalyptus regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, which are the tallest-growing hardwoods in the world. At the other end of the scale there are many eucalypts which do not grow to tall trees, including the species collectively known as the "mallees". The mallees develop a number of small stems from an underground

* A specially contributed article dealing with Forestry in Australia appeared as part of Chapter XIX in Official Year Book No. 19 (see pp. 701-12 therein). See also "The Commercial Timbers of Australia, Their Properties and Uses" by I. H. Boas, published by the Council for Scientific and Industrial Research in 1947, "Timbers and Forest Products of Queensland" by E. H. S. Swain, published in 1928 and "Australian Standard Nomenclature of Australian Timbers" published by the Standards Association of Australia.

structure called the "mallee root". Less than 100 eucalypts are used for sawmilling and not more than 30 to 40 are exploited extensively. The main commercial eucalypts are listed in Official Year Book No. 39 and earlier issues.

The eucalypts satisfy the Australian requirement for timbers having great strength and durability. They also provide a large proportion of the building timber and some of the wood required for packaging. In recent years some eucalypts have been used extensively for papermaking and for the manufacture of hardboard and fibreboard. The species most commonly used for pulping are mountain ash (*E. regnans*), alpine ash (*E. gigantea*), and messmate, stringybark or Tasmanian oak (*E. obliqua*).

A large number of other genera represented in the Australian forest flora also produce commercial hardwoods. Among the outstanding furniture cabinet and veneer timbers are red cedar (*Cedrela toona* var. *australis*), Queensland maple (*Flindersia brayleyana*), Southern and Northern silky oak (*Grevillea robusta* and *Cardwellia sublimis*, respectively), Queensland walnut (*Endiandra palmerstoni*), blackwood (*Acacia melanoxylon*), rose mahogany (*Dysoxylum fraserianum*), etc. Turpentine (*Syncarpia laurifolia*) ranks with the world's best as a harbour piling timber. Coachwood (*Ceratopetalum apetalum*) came into prominence for rifle furniture and for aircraft plywood, during the 1939-45 War.

The foregoing are but a few examples indicating the range of use of the timbers of the Australian hardwood forests.

The most important indigenous softwood resources of Australia were in the forests of hoop pine (*Araucaria cunninghamii*) of Queensland and New South Wales. These forests occurred on rich land suitable for intensive agriculture. The greater part of the original hoop pine forest has gone but the wood removed made an important contribution to the Australian timber industry. Some areas of the hoop pine forest have been replanted with this species in Queensland and, to a lesser extent, in New South Wales.

There are still considerable areas of the useful white-ant resisting cypress pine (*Callitris* spp.) in the inland areas of Queensland and New South Wales. They have been seriously overcut but are gradually being brought under management.

Other native softwoods which have played a useful but minor part in the Australian timber industry include bunya pine (*Araucaria bidwillii*) and kauri (*Agathis* spp.) of Queensland, and huon pine (*Dacrydium franklinii*), celerytop pine (*Phyllocladus rhomboidalis*) and King William pine (*Athrotaxis selaginoides*) of Tasmania.

The savannah woodlands of the interior of Australia yield commercial commodities such as sandalwood, tanbarks and essential oils. They also have an important function in providing fuel and rough timbers for the development of agricultural and pastoral holdings.

3. Extent of Forests.—According to data assembled for the Sixth British Commonwealth Forestry Conference held in Canada in 1952, the total area of forest in Australia is 159,751 square miles, or about 5.4 per cent. of the total land area of the continent. The forest area is distributed amongst the States as follows—New South Wales and the Australian Capital Territory, 47,356 square miles; Victoria, 26,236; Queensland, 22,300; South Australia, 10,311 (including 4,600 square miles of mallee suitable for firewood only); Western Australia, 41,256; and Tasmania, 12,292. The areas given are rough estimates only and are considerably in excess of those which are both suitable for reservation and likely to be maintained for timber production. Considerable areas of low grade forest are included which, in many cases, are suitable for little more than the production of firewood. It is doubtful if the remaining prime native forest area of Australia exceeds 20,000 square miles. The proportion of Australia carrying commercial forests is therefore very low. On the other hand it should be noted that approximately 68 per cent. of the area of the continent is practically uninhabited and carries less than one person in every eight square miles.

The table below shows a classification of the estimated total forest area referred to above:—

CLASSIFICATION OF FOREST AREA : AUSTRALIA, 1952.

Class of Forest.	Area (Square Miles).				Proportion of Total Forest Area
	State Forest.	Communal Forest.	Private Forest.	Total.	
Exploitable—					%
Softwood	4,157	5	1,072	5,234	3.3
Mixed wood	729	..	..	729	0.5
Hardwood	41,020	74	11,050	52,144	32.6
Total	45,906	79	12,122	58,107	36.4
Potentially Exploitable—					
Softwood	156	..	78	234	0.1
Mixed wood .. ..	..	..	..	..	..
Hardwood	15,063	..	12,877	27,940	17.5
Total	15,219	..	12,955	28,174	17.6
Other Land Classed as Forest	67,294	450	5,726	73,470	46.0
Grand Total ..	128,419	529	30,803	159,751	100.0

State forest accounted for 80.4 per cent. of the total forest area, private forest for 19.3 per cent. and communal forest for 0.3 per cent.

The bulk of the softwood areas of approximately 5,468 square miles is in Queensland and New South Wales and consists principally of natural forest, a large proportion of which is slow-growing cypress pine (*Callitris spp.*) in low rainfall areas. The volume of this species per acre is comparatively low.

4. Forest Reservations.—The first attempt to arrive at a forest area which should be reserved solely for purposes of timber production was made at an Interstate Forestry Conference held at Hobart in 1920. This Conference decided that an area of 24½ million acres of indigenous forest should be permanently reserved. According to statements furnished by State authorities, reservations of forest areas in Australia at 30th June, 1953, excluding those in the Northern Territory and the Australian Capital Territory, totalled 29,150,627 acres, of which 21,561,426 acres were Dedicated State Forests, or under some other title, for forestry purposes, and 7,589,201 acres were Timber and Fuel Reserves. The distribution of these areas is shown by States in § 4.2 of this chapter.

In general, the Timber Reserves are temporary only and are liable to be alienated after the timber on them has been exploited. Some of these areas contain land of high value for forestry purposes, but the greater part does not justify permanent reservation.

If the permanently reserved areas were all of good quality, accessible, and fully productive forests supplying the class of timber required, they could be regarded as adequate for a much larger population than exists in Australia at the present time. Actually, however, a considerable proportion is in inaccessible mountainous country and many of the forests contain a mixture of species, some only of which are at present of commercial value: much of it consists of inferior forest and a large proportion of the whole has been seriously degraded by recurrent fires. Also the indigenous forest does not contain adequate supplies of softwoods producing commercial timbers and Australia's requirements of these have to be met largely by imports from other countries.

It is freely acknowledged by Australian forestry authorities that information on forest resources is very imperfect. It is not possible at present to give a reliable estimate of the forest areas needed to meet all future demands because of the number of unknown variables involved; in particular the yield capacity per acre, future consumption of different classes of timber per head, and the future population. It appears however, that all available potentially good forest country, including adequate areas for plantations of conifers, will need to be reserved, protected and systematically managed, if Australia is to approach the goal of self sufficiency in timber supplies in the future. One of the most urgent requirements in this connexion is a comprehensive estimate of forest resources.

5. **Plantations.**—Reference has been made to the inadequacy of indigenous softwood supplies, but, as a result of the planned policy of the forest services of the States and the Commonwealth and, to a less extent, of several private commercial organizations, the area of softwood plantations, mainly of exotic species is steadily increasing. It was natural that this aspect of forestry received earliest attention in South Australia as it is the State most poorly endowed with natural forest. This State now has a larger area of planted softwoods than any other State in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. The total production is now in the vicinity of 100,000,000 superficial feet and this quantity is expected to be increased very substantially during the next decade. Production is also increasing in the other States and first thinnings from their plantations are already supplying a significant portion of the requirements of the case-making industry.

According to statements provided by State authorities, the total effective area of plantations at 30th June, 1953, excluding those in the Northern Territory and the Australian Capital Territory, was 332,264 acres. Details by States are given in § 4.3 of this chapter.

§ 2. Forestry Activities of the Commonwealth.

1. **Prior to 1925.**—When the Commonwealth of Australia was established on the 1st January, 1901, forestry was not included among the matters transferred from the States to the control of the Commonwealth, and Federal jurisdiction was therefore restricted to the then relatively unimportant forests of the Australian Territories. After the 1914–18 War these Territories (including Papua-New Guinea and Norfolk Island) covered a large area, and in the aggregate contained substantial forest resources. In the early twenties of this century a professional forester was appointed as forestry adviser to the Commonwealth Government, and he submitted preliminary reports on the forest resources of Papua-New Guinea, Norfolk Island and the Australian Capital Territory, with suggestions for future policy.

2. **Forestry and Timber Bureau.**—In 1925 the Commonwealth Forestry Bureau was instituted, and the previous Commonwealth Forestry Adviser became the Inspector-General of Forests. By an Act of 1930, the Bureau received statutory powers, and its functions included the advising of the various Territorial Administrations on forestry matters, the management of forests placed under its control, the establishment of experimental forest stations, the training of students in forestry, etc.

At the end of the 1939–45 War, the Commonwealth Government decided to continue certain advisory functions which during the War had been carried out by War-time Timber Control, and such functions were incorporated in the Forestry and Timber Bureau Act 1946, under which the title of the Bureau was altered to Forestry and Timber Bureau. The powers and functions of the Bureau were extended to embrace the collection of statistics and information, and advising the Governments of the Commonwealth and the States or other interested bodies on matters relating to the supply, production, oversea trade and distribution of timber in Australia. The Bureau was placed under the administration of a Director-General.

The activities of the Bureau under its statutory functions are summarized below :—

(a) *Forestry Education.* The Australian Forestry School was opened at Adelaide University in 1926 in continuation of the School of Forestry of that University established in 1911. In 1927 the School was transferred to Canberra. The purpose of the School is to train students as professional officers to manage the forests of Australia. It also accepts students from overseas.

Training at the School covers the third and fourth years of a four-year course. The first two years are spent at an Australian University in a study of prescribed science subjects. Courses at the School lead to Commonwealth Diplomas in Forestry and in Forest Technology, and in the case of the former, can lead further to a Degree in Forestry of an Australian University. Applicants possessing a University Degree granted for approved natural science subjects, or applicants with academic qualifications accepted by the Director-General as equivalent, may also be admitted to this School and proceed to the Diplomas. Graduates or Diploma holders approved by the Director-General may be admitted to the School to take selected subjects or to carry out research work.

The Board of Higher Forestry Education advises regarding pre-requisite University courses leading to the Diploma courses and in regard to the maintenance of the standard of the School Diploma course.

In addition to students nominated by State Governments and other Australian and overseas authorities and organizations, private students are accepted at the School, and the Commonwealth Government offers up to ten forestry scholarships each year. These scholarships provide a salary allowance for the four years of the full Diploma course.

During 1950 the number of students enrolled reached 80, owing to the intake of ex-servicemen taking University courses under the Commonwealth Reconstruction Training Scheme. The normal capacity of the School is 40.

(b) *Silvicultural Research.* Research head-quarters and a Central Experimental Station have been established at Canberra. Other Forest Experimental Stations have been established at Mount Burr in the south-east of South Australia, in Tasmania, and at Dwellingup in Western Australia, on a co-operative basis with the Forest Services of those States. It is proposed to establish similar co-operative Experimental Stations in other States and Territories.

With its present limited staff, the research work of the Bureau has been concentrated largely upon studies of forest and climatic conditions, the genetical relationships and silvicultural requirements of various species, forest nutrition and the improvement of forest yields. A considerable expansion in the research activities is planned for the next few years as suitable trained staff becomes available.

(c) *Forest Management Research.*—In the national interest it is essential that over-cutting of forests should be avoided and in consequence it is a matter of primary importance that reliable information be available as to the country's forest resources and potentialities. To this end a national forest stocktaking is being carried out by the Bureau in co-operation with the Forest Services of the States and, to assist in the work of forest assessment, special consideration is being given to the development of the use of aerial surveys.

Consideration is also being given, in co-operation with the State Forest Services, to the establishment of increased areas of plantations of exotic pines with a view to providing additional supplies of softwood timber to meet requirements.

The general economics of forest management are also being studied.

(d) *Timber Supply.* The value of reliable statistical data covering availability of timber and timber requirements was so forcibly demonstrated during the 1939-45 War that it was considered essential to maintain at least a skeleton organization against times of future national emergency. Apart from this, it became clear that for many years to come shortages of timber on the one hand and heavy post-war reconstruction demands

on the other, accentuated by a rapidly increasing population, would necessitate assessment of requirements and availability of supplies being kept constantly under review as a basis for short and long term policies of timber supply and distribution.

Advice is currently provided to Government Departments and the trade in matters pertaining to timber supply, including—(a) the availability of total quantities and quantities of particular grades and specifications required to meet Australia's needs; (b) the quantity of timber that should be imported; (c) the extent to which exports of timber and related products might be allowed without detriment to local needs; and (d) distribution of timber within Australia.

(e) *Management of Forests.* The Bureau manages the forests of the Australian Capital Territory and maintains a forestry officer in the Northern Territory. In addition, it is responsible for advising the administrations of the Northern Territory and the External Territories on the management of the forests under their charge.

3. **Commercial Forests.**—The forest areas under Commonwealth control include the following :—

- (a) *Australian Capital Territory.* The forests of the Australian Capital Territory are administered by a Division of the Forestry and Timber Bureau. Further information is contained in Chapter V.—The Territories of Australia.
- (b) *Northern Territory.* The forests of the Northern Territory are administered under ordinance by the Administrator of that Territory. The native forests of the Territory are very limited, consisting largely of open eucalypt forest in the North, with very restricted patches of rain forest along streams, river-fringing forests of paper bark tea-tree, patches of cypress pine, and elsewhere savannah woodland deteriorating to mallee and mulga in the interior. The Bureau maintains a forestry officer in the Territory for investigation and advisory purposes.
- (c) *Norfolk Island.* The forests of Norfolk Island are administered by the Administrator of that Territory. The area reserved for forest covers 1,037 acres, of which the main species is Norfolk Island pine.
- (d) *Papua and New Guinea.* The forests of the Territory of Papua and New Guinea are managed by a Forestry Department under the control of a Director, and are administered under an ordinance of the Territorial Administration. Forestry in the Territory commenced with the appointment of two officers in 1938. Further information is contained in Chapter V.—The Territories of Australia.

4. **Forest Products Research.**—Fundamental investigations connected with the properties and uses of timber and forest products generally are carried out by the Forest Products Division of the Commonwealth Scientific and Industrial Research Organization. These investigations cover a very wide field, e.g., pulp, paper, seasoning, structure and chemistry of wood, tans, etc.

Details can be obtained from the annual reports and publications of the Division.

§ 3. Forest Congresses.

The first British Empire Forestry Conference was held in London in 1920. Subsequent conferences were held in Ottawa in 1923, Australia and New Zealand, 1928, South Africa, 1935 and again in the United Kingdom in 1947. In 1952 (the name of these conferences having been changed in conformity with the development of the British Commonwealth of Nations) the Sixth British Commonwealth Forestry Conference was held in Canada. It is proposed to hold the next conference in Australia and New Zealand in 1957.

§ 4. State Forestry Departments.

1. **Functions.**—Except for Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and Regulations. In each State there is a department or commission to control and manage the forests of the State. The functions of these administrations are as follows:—(a) The securing of an adequate reservation of forest lands; (b) the introduction of proper measures for scientific control and management of forest lands; (c) the protection of forests; (d) the conversion, marketing and economic utilization of forest produce; and (e) the establishment and maintenance of coniferous forests to remedy existing deficiency in softwoods. Annual reports are issued by each State forest authority. In Queensland, forestry is a sub-department of the Department of Public Lands. Victoria maintains a forestry school at which recruits are trained for the forestry service of that State.

2. **Forest Reservations.**—As mentioned in § 1, para. 4 above, State forest authorities agreed that, in order to secure Australia's future requirements, an area of 24½ million acres should be permanently reserved. In June, 1953, the area of State forests reserved in perpetuity totalled 21,561,426 acres or 88 per cent. of the area recommended as the goal to be attained.

In addition to the work of permanently reserving areas in each State, foresters are endeavouring to survey all timbered lands with a view to the elimination of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate. The Forestry Departments also usually control all timber on open Crown lands as well as over 10 million acres of Timber Reserves, National Parks, etc., but, while these areas contain some land of high value for forestry purposes, the greater part does not justify permanent reservation.

In the following table details of forest areas as recorded by State Forest Authorities, distinguishing between Dedicated State Forests and Timber and Fuel Reserves, are shown for each State as at 30th June, 1953.

AREA OF FOREST RESERVATIONS, 30th JUNE, 1953.

(Acres.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aust.(a)
Dedicated State Forests	6,176,168	5,171,176	4,597,199	259,726	3,460,092	1,897,065	21,561,426
Timber and Fuel Reserves	1,378,117	(b)	c 3,253,656	..	2,820,400	(c) 137,023	d 7,589,201
Total	7,554,285	d 5,171,176	e 7,850,855	259,726	6,280,492	e 2,034,093	d29,150,627

(a) Excludes Australian Capital Territory and Northern Territory details for which are not available.

(b) Not available. (c) Excludes Fuel Reserves. (d) Incomplete: see notes (b) and (c).

3. **Reforestation, Afforestation, etc.**—In the table below details are shown of the area of indigenous forest improved or regenerated, the area of forest plantations and the number of persons employed by Forestry Departments for the year 1952-53.

FORESTRY AREAS, AND NUMBERS EMPLOYED BY FORESTRY DEPARTMENTS, 1952-53.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Total area of indigenous forest improved or regenerated .. acres	1,587,265	1,173,894	515,125	9,928	1,022,700	426,000	5,634,912
Total area of effective plantations—							
Hardwoods .. acres	1,156	3,067	2,761	1,089	13,189	153	29,415
Softwoods ..	48,387	55,601	54,726	118,461	17,689	(b) 7,985	302,846
Number of persons employed in Forestry Departments—							
Office staff ..	(c) 400	249	191	63	63	60	1,035
Field staff ..	246	302	1,731	736	564	(d) 306	3,885

(a) Excludes Australian Capital Territory and Northern Territory details for which are not available.

(b) Includes 30 acres of nurseries. (c) Includes Wood Technology staff totalling 51.

217 bush employees.

(d) Includes

4. Revenue and Expenditure.—The revenue of State Forestry Departments for 1952-53 was £9,346,854, as compared with £7,639,388 in 1951-52 and £1,466,781 in 1938-39; State details for 1952-53 were as follows:—New South Wales, £2,405,789; Victoria, £2,354,331; Queensland, £2,541,904; South Australia, £1,120,120; Western Australia, £678,150; and Tasmania, £246,560.

The expenditure of the Departments for 1952-53 was £9,856,678, as compared with £10,475,950 in 1951-52 and £1,840,088 in 1938-39; State details for 1952-53 were as follows:—New South Wales, £2,131,156; Victoria, £2,648,468; Queensland, £2,824,152; South Australia, £1,119,142; Western Australia, £766,775; and Tasmania, £366,985.

§ 5. Forestry Production.

1. Timber.—Particulars of logs treated and the production of rough sawn timber by sawmills and other woodworking establishments are shown in the following table by States for the year 1952-53.

OUTPUT OF NATIVE TIMBER : ALL MILLS, 1952-53.
(‘000 super. feet.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
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LOGS TREATED, INCLUDING THOSE SAWN ON COMMISSION.(b)

Hardwood ..	474,362	504,632	320,622	10,011	449,977	210,522	1,970,126
Softwood ..	85,604	34,588	129,117	106,537	9,925	4,110	369,881
Total ..	559,966	539,220	449,739	116,548	459,902	214,632	2,340,007

SAWN TIMBER PRODUCED FROM LOGS ABOVE.(c)

Hardwood ..	299,235	309,487	202,379	6,196	199,344	107,782	1,115,423
Softwood ..	51,557	21,722	82,095	62,304	3,970	2,126	224,374
Total ..	350,792	322,209	285,074	68,500	203,314	109,908	1,339,797

(a) Excludes Australian Capital Territory and Northern Territory details for which are not available.
(b) Includes logs used for plywood and veneer production. (c) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers.

The following table shows logs used and the sawn timber produced in Australia for the years 1938-39 and 1948-49 to 1952-53.

OUTPUT OF NATIVE TIMBER : ALL MILLS, AUSTRALIA.(a)

Particulars.	Unit.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Logs used—							
Hardwood ..	'000 super. feet (hoppus measure)	1,015,136	1,544,601	1,637,236	1,797,226	2,000,032	1,970,126
Softwood ..	" "	293,680	432,567	415,712	300,052	363,829	369,881
Total ..	" "	1,308,816	1,977,168	2,052,948	2,097,278	2,363,861	2,340,007
Sawn Timber Produced—							
Sawn equivalent of Timber Peeled or Sliced for Plywood and Veneers—							
Hardwood ..	'000 super. feet	(b)	2,190	3,602	27,322	29,159	21,606
Softwood ..	"	21,639	22,644	22,444			
Total ..	"	21,639	24,834	26,046	27,322	29,159	21,606
Used for other purposes—							
Hardwood ..	"	695,376	905,514	961,540	123,4018	1,363,607	1,318,191
Softwood ..	"		253,740	235,474			
Total ..	"	695,376	1,159,254	1,197,014	1,234,018	1,363,607	1,318,191
Total Sawn Timber—							
Hardwood ..	"	526,229	907,704	965,142	1,068,096	1,166,114	1,115,423
Softwood ..	"	190,781	276,384	257,918	193,244	226,652	224,374
Total ..	"	717,015	1,184,088	1,223,060	1,261,340	1,392,766	1,339,797

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.
(b) Not available for publication; included with softwoods.

The next table shows the sawn output of native timber in sawmills and other wood-working establishments in each State for the years 1938-39 and 1948-49 to 1952-53.

SAWN OUTPUT (a) OF NATIVE TIMBER : ALL MILLS.

('000 super. feet.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	179,350	353,685	341,144	338,347	380,633	350,792
Victoria ..	120,197	281,852	308,790	329,640	348,478	322,209
Queensland ..	193,250	250,355	251,127	252,378	291,681	285,074
South Australia ..	14,537	51,633	56,775	59,393	67,121	68,500
Western Australia ..	125,453	126,859	138,077	156,810	178,290	203,314
Tasmania ..	84,228	110,704	127,147	124,772	126,563	109,908
Australia (b) ..	717,015	1,184,088	1,223,060	1,261,340	1,392,766	1,339,797

(a) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers. (b) Excludes Australian Capital Territory and Northern Territory, details for which are not available.

In addition to the sawn timber shown in the preceding table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. In Western Australia particulars are obtained of the quantities of timber hewn by contractors for the Railway Department, mines, etc., as well as of the quantities produced by other agencies, but the figures have not been included in the preceding tables. The quantities so produced in Western Australia in the six years shown in the preceding table were as follows: 1938-39, 35,862,540 super. feet; 1948-49, 16,331,835 super. feet; 1949-50, 16,823,566 super. feet; 1950-51, 19,396,134 super. feet; 1951-52, 21,156,790 super. feet; and 1952-53, 20,011,008 super. feet. The annual reports of the Forest Departments of the States contain particulars of the output of timber from areas under department control, but owing to lack of uniformity in classification and measurement, accurate determination of total production cannot be made. Moreover, there is a moderate quantity of hewn timber produced from privately owned land, but information regarding output is not available.

2. Paper and Wood Pulp.—The manufacture of paper from Australian-grown timber has been established in three states.

(i) *Tasmania.* In Tasmania two large mills are making paper from indigenous hardwoods and a third from imported pulp. The paper produced at Burnie covers a wide range of high-class printing, writing, drawing, duplicating, blotting and specialty wrapping papers. At Boyer on the River Derwent, 20 miles from Hobart, newsprint is manufactured from locally ground wood pulp to which is added a small proportion of kraft pulp imported from New Zealand. An associate of the Burnie company produces sulphite banks and bonds, vegetable parchment, grease-proof, glassine and specialty papers on three machines, the last of which went into production in February, 1954. Two additional machines are being installed for the production of high-class writing and printing papers and the first of these will be operating early in 1955. The additional eucalypt pulp requirement for these machines will be made by extensions to the main pulp mill including a continuous digester new to the Australian industry. Hardwood not suitable for pulping is used to manufacture hardboard, and for fuel. During 1952-53 169,234 tons of pulpwood and 71,710 tons of firewood were used by these mills.

(ii) *Victoria.* In Victoria wood pulp is produced for paper-making at Maryvale. Associated with the pulp mill is a paper-making plant capable of producing about 20,000 tons of kraft paper per annum. The timber used at this mill consists mainly of hardwoods at present unsuitable for other purposes and, in addition, a small quantity of pine, (mainly thinnings), mill waste, and special softwood for production of cellulose. During 1952-53 the wood taken from Crown Lands for the production of pulpwood and cellulose amounted to 3,191,585 cubic feet of which 2,961,607 cubic feet were hardwood and 229,978 cubic feet were radiata pine.

(iii) *South Australia.* In South Australia a pulp and paper board mill operates near Millicent, using considerable quantities of softwoods from the Mount Burr and Penola pine plantations. During 1952-53, 9,829,370 super. feet of pulp wood were produced from South Australian forests, 5,610,014 super. feet for local use and 4,219,356 super. feet for use in an interstate mill.

3. *Other Forest Products.*—(i) *Veneers, Plywood, etc.* Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. Recently, however, this has been considerably extended, and much greater use has been made of locally-grown timbers, both hardwoods and softwoods. In recent years special attention has been paid to the selection of logs suitable for peeling.

The following table shows the production of plywood for each of the years 1938-39 and 1948-49 to 1952-53 :—

PLYWOOD PRODUCED.
(’000 square feet $\frac{3}{8}$ in. basis.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	24,194	25,572	28,008	32,287	31,784	22,557
Queensland. . .	66,100	104,262	111,048	104,799	110,028	81,400
Other States ..	14,511	16,451	17,977	16,412	17,341	11,771
Australia ..	104,805	146,285	157,033	153,498	159,153	115,728

Of the total plywood produced in 1952-53 95,636,373 square feet $\frac{3}{8}$ in. basis was classed as “Commercial”, 13,891,529 as “Waterproof” and 6,200,159 as “Case.”

During 1952-53, 333.3 million square feet ($\frac{1}{8}$ in. basis) of veneers were produced by the rotary process for the manufacture of plywood, and 45.9 million square feet ($\frac{1}{8}$ in. basis) were sold or added to stock, the bulk of which would eventually be used in the production of plywood. In addition, 17.2 million square feet of sliced veneers were produced.

(ii) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of Eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but considerable quantities are manufactured, particularly in Victoria. The value of oversea exports of eucalyptus oil distilled in Australia amounted in 1938-39 to £86,714; in 1950-51 to £468,680; in 1951-52 to £445,206; and in 1952-53 to £215,283. The quantities exported in the years 1950-51 to 1952-53 were 1,219,762 lb., 1,254,618 lb., and 721,330 lb., respectively.

(iii) *Grass Tree or Yacca Gum.* South Australia is the chief State producing this gum, which is used in the preparation of varnishes and lacquers. Small quantities are also obtained in New South Wales and Western Australia. Production in 1952-53 amounted to 73 tons in South Australia and 56 tons in Western Australia, whilst the exports from Australia amounted to 158 tons valued at £3,976 in the same year.

(iv) *Tanning Barks.* The forests of Australia are capable of yielding a wealth of tanning materials; many species of eucalyptus and other genera contain varying proportions of tannin, chiefly in the bark, but also in the wood and twigs. Scattered distribution however, has resulted in only the richest tan-bearing species being used in Australia. These are :—Golden wattle (*Acacia pycnantha*), black or green wattle (*Acacia decurrens* or *mollissima*), and mallet (*Eucalyptus astrigens*). Mallet (*E. astrigens*), of Western Australia, is not extensively used in Australian tanneries, but is exported to Europe and other countries. Reference to oversea trade in tanning barks is made in § 6, para. 3.

A brief account of work done by the Council for Scientific and Industrial Research in connexion with tanning materials is given in Official Year Book No. 22, p. 743. The

production of extract from the bark of karri (*E. diversicolor*), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has started production on a commercial scale. The experimental work in kimo impregnated karri (*E. calophylla*) bark is not yet complete. The production of tanning bark in Australia approximated 25,000 tons per annum in the years prior to 1939, but since then production has declined and in 1952-53 was approximately 12,000 tons. However, this decrease is offset by the increased use of vegetable tanning extract.

4. Value of Production.—(i) *Gross and Local Values, 1952-53.* The values of forestry production on a gross and local basis are shown in the following table for the year 1952-53.

GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION, 1952-53.
(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.
New South Wales	16,090	598	15,492
Victoria	9,620	716	8,904
Queensland	8,302	1,200	7,102
South Australia	3,939	149	3,790
Western Australia	3,578	250	3,328
Tasmania	3,777	529	3,248
Australia(a)	45,306	3,442	41,864

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available

No information is available on the value of materials used in the process of production or of depreciation and maintenance charges for 1952-53 and hence it is not possible to calculate net value of forestry production.

(ii) *Local Values, 1934-35 to 1952-53.* In the following table the local value of forestry production and the local value per head of population are shown by States for the years 1948-49 to 1952-53 in comparison with the average for the five years ended 1938-39. Local value is gross value less marketing costs and is the value at place of production.

LOCAL VALUE OF FORESTRY PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
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LOCAL VALUE. (£'000.)

Average, 1934-35 to 1938-39 (b) ..	2,094	837	2,226	547	1,176	394	7,274
1948-49	6,561	3,940	3,804	2,104	1,791	2,105	20,305
1949-50	7,185	5,570	4,020	2,300	2,021	2,099	23,193
1950-51	8,966	6,437	5,029	2,656	2,908	2,432	28,428
1951-52	12,461	8,479	7,040	3,179	3,689	3,057	37,905
1952-53	15,492	8,904	7,102	3,790	3,328	3,248	41,864

LOCAL VALUE PER HEAD OF POPULATION. (£ s. d.)

Average, 1934-35 to 1938-39 (b) ..	0 15 7	0 9 1	2 5 2	0 18 7	2 11 8	1 13 9	1 1 4
1948-49	2 2 10	1 17 3	3 7 0	3 3 3	3 8 7	7 16 11	2 12 3
1949-50	2 5 4	2 11 4	3 9 2	3 7 0	3 14 1	7 11 4	2 17 11
1950-51	2 14 9	2 17 7	4 4 4	3 14 9	5 1 10	8 9 2	3 8 9
1951-52	3 14 3	3 13 8	5 15 4	4 7 2	6 4 10	10 4 9	4 9 3
1952-53	4 10 7	3 15 5	5 13 9	5 1 2	5 8 8	10 10 3	4 16 3

(a) Excludes Australian Capital Territory and Northern Territory, details for which are not available.

(b) Net value of production (i.e. local value less value of materials used in the course of production) has been included for certain years for Victoria and Western Australia.

5. *Employment.*—(i) *Forestry Operations.* The estimated number of persons employed in forestry operations during June, 1953 is shown in the following table. These estimates, which have been based upon pay-roll tax and other data, include working proprietors, but exclude those employed in the sawmilling industry, for which particulars are shown in the next table.

ESTIMATED NUMBERS EMPLOYED IN FORESTRY, JUNE, 1953.

(Excluding Sawmilling Industry.)

Sex.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Aust.
Males ..	7,758	6,537	5,819	1,547	1,824	2,031	7	159	25,632
Females ..	26	37	2	9	16	10	..	7	107
Total ..	7,784	6,574	5,821	1,556	1,840	2,041	7	166	25,739

(ii) *Milling Operations.* Details of the average number of persons employed, including working proprietors, in the milling operations of sawmills during the year 1952-53 are shown in the next table. Further details regarding the operations of these mills are shown in Chapter XXIV.—Manufacturing Industry.

SAWMILLS : AVERAGE NUMBER OF PERSONS EMPLOYED, 1952-53.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia. (a)
Males ..	9,745	7,051	6,832	1,877	4,108	1,998	31,611
Females ..	345	154	267	130	33	22	951
Total ..	10,090	7,205	7,099	2,007	4,141	2,020	32,562

(a) Excludes Northern Territory and Australian Capital Territory, details for which are not available.

§ 6. Imports and Exports of Timber and Tanning Substances.

1. *Imports of Dressed and Undressed Timber.* The quantities of timber imported into Australia during the years 1949-50 to 1952-53 inclusive are shown in the following table according to countries of origin:—

IMPORTS OF DRESSED AND UNDRESSED TIMBER INTO AUSTRALIA : COUNTRIES OF ORIGIN.

('000 Super. feet.)

Country of Origin.	Dressed Timber.				Undressed Timber.(a)			
	1949-50.	1950-51.	1951-52.	1952-53.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	6	43	7	2	181	143	101	57
Canada ..	398	696	9,193	250	80,201	85,083	77,168	41,928
New Zealand ..	773	404	3,235	1,981	15,085	10,709	26,351	8,565
Other British Countries ..	..	140	12	67	36,621	35,827	34,983	21,772
Sweden ..	33,189	64,700	59,337	7,025	23,115	53,018	26,768	1,127
United States of America ..	..	..	7,554	..	46,368	58,845	115,576	32,560
Other Foreign Countries ..	9,788	19,135	28,311	985	12,287	60,952	50,346	8,125
Total ..	44,154	85,118	107,649	10,310	213,858	304,577	331,293	114,134

(a) Includes logs not sawn and excludes timber not measured in super. feet.

The figures in the table above exclude dressed and undressed timber such as architraves, veneers, plywood, staves, etc., quantities for which either are not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £126,812 in 1952-53.

The bulk of the imports of dressed timber now comes from Sweden and New Zealand and consists of softwoods cut for making boxes, and tongued and grooved timber, weatherboards, etc. The total value of dressed timber shown in the table above amounted to £723,000 during 1952-53, the major items being timber for box making and tongued and grooved weatherboarding. Undressed timber imported totalled £4,739,000 of which more than 90 per cent. was softwood. The principal undressed timber imported was oregon pine from Canada and the United States of America. The balance was mainly hemlock from North America, pines from New Zealand and the United States of America, and hickory from the United States of America.

2. Exports of Undressed Timber and Railway Sleepers.—The quantities of undressed timber and railway sleepers exported during the years 1949-50 to 1952-53 are shown below, together with the countries of destination.

EXPORTS OF UNDRESSED TIMBER (a) AND RAILWAY SLEEPERS FROM AUSTRALIA : COUNTRIES OF DESTINATION.

('000 super. feet.)

Country of Destination.	Undressed Timber (excluding Railway Sleepers).				Railway Sleepers.			
	1949-50.	1950-51.	1951-52.	1952-53.	1949-50.	1950-51.	1951-52.	1952-53.
United Kingdom ..	15,319	7,266	4,840	8,289	..	325	217	..
Ceylon ..	326	..	..	5	423	346	..	..
Mauritius ..	397	539	187	409	350	..	..	..
New Zealand ..	11,634	7,526	14,507	26,059	11,355	5,059	4,148	8,136
Union of South Africa ..	2,655	2,854	1,258	2,880	1,923	1,401	97	..
Other British Countries	2,647	2,657	2,966	1,927	438	120	286	214
Foreign Countries ..	789	695	105	7,633	1,048	268	..	17
Australian Produce ..	33,767	21,537	23,872	47,207	15,540	7,519	4,748	8,367
Re-exports ..	470	299	124	231	..	..	..	..
Total ..	34,237	21,836	23,996	47,438	15,540	7,519	4,748	8,367

(a) Excludes timber not measured in super. feet.

The bulk of the exports of undressed timber was consigned to New Zealand and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as harbour works and wood paving, etc. The total value of exports of undressed timber, excluding railway sleepers, during 1952-53 was £3,251,955 (hardwood £3,223,496, softwood £28,459). Railway sleepers exported were valued at £355,047.

3. Classification of Imports and Exports.—(i) *General.* The quantities and values of timber, according to items, imported and exported during the year 1952-53 are shown in the following table :—

TIMBER : IMPORTS AND EXPORTS, AUSTRALIA, 1952-53.

Description.	Quantity.				Value (£).		
	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.	Imports.	Exports.	Excess of Imports over Exports.
Logs, not sawn ..	'000 sup. ft.	16,941	12,331	4,610	355,057	762,166	- 407,109
Timber, undressed—							
Boxmaking timber ..	"	468	..	468	25,308	..	25,308
Railway sleepers ..	"	981	8,367	-7,386	34,804	355,047	- 320,153
Other undressed ..	"	(a) 95,743	35,392	(a) 60,351	64,328,245	2,489,789	61,838,456
Timber, dressed—							
Bent or cut into shape ..	"	(c)	(c)	(c)	25,615	2,719	22,896
Boxmaking timber ..	'000 sup. ft.	4,809	..	4,809	324,846	..	324,846
Tongued, and grooved, weatherboards ..	"	4,514	762	3,752	316,501	43,626	272,875
Other, dressed or moulded ..	"	987	(c)	(c)	81,447	272	81,175
Plywood ..	'000 sq. ft.	914	1,161	- 247	37,616	41,123	- 3,477
Veneers ..	"	3,073	4,748	- 1,675	54,347	71,991	- 17,644
Total ..	..	(c)	(c)	(c)	5,583,906	3,766,733	1,817,173

(a) Excludes undressed timber valued at £4,182 for which quantity data are not available.
 (b) Includes the value of timber referred to in note (a).
 (c) Not available.

NOTE.—Minus sign (—) denotes an excess of exports.

(ii) *Tanning Bark.* Since 1938-39, imports of tanning bark have been considerably in excess of exports each year except for 1950-51 and 1952-53. Imports reached a maximum of 105,315 cwt. valued at £53,553 during 1943-44, but declined in subsequent years and in 1952-53 amounted to only 2,486 cwt. (£5,022). In recent years exports have declined considerably. In 1947-48, 1949-50 and 1951-52 there were no exports, while in 1950-51, exports amounted to 10,019 cwt. (£11,020) and in 1952-53 to 8,566 cwt. (£15,928).

The imports of tanning bark consist almost exclusively of wattle bark from the plantations in South Africa. One species of Australian wattle, *Acacia mollissima*, is chiefly relied upon for the production of wattle bark in the South African plantations, most of the seed being obtained from the best wattle bark areas in eastern Tasmania and western Victoria. Two reasons are given to account for the success of the industry in the Union of South Africa :—(a) The suitability of the treeless, grassy highlands of Natal; and (b) the availability of native labour.

(iii) *Other Tanning Substances.* Considerable quantities of tanning substances other than bark are imported annually into Australia. The total value in Australian currency of the importations in 1952-53 was £468,041, and was composed as follows :—tanners' bates, £9,719; wattle bark extract, £391,489; other extracts, £23,240; and valonia, myrobalans, cutch, etc., £46,400.

Exports of tanning extracts and other tanning substances from Australia amounted to £208,856 in 1952-53.

CHAPTER XXIII.

FISHERIES.

§ 1. General.

1. **Fish Stocks.**—Australia possesses a varied native fauna of freshwater and marine fish, including tropical and temperate species. In addition, certain exotic species have become acclimatized in the freshwater streams. The commercial fisheries exploit on-shore, demersal (bottom) and pelagic (surface) stocks. The on-shore stocks are at present of greatest importance.

The Australian marine fauna includes also a number of mollusca (oysters, scallops) and crustacea (crabs, prawns, crayfish) groups which are commercially exploited.

In winter whales of various species, of which the humpback is the most common, appear off the western and eastern coasts.

2. **Fishing Areas.**—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. There are interruptions of variable size; for the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod, snapper, etc. are taken; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from Crowdy Head to south of Cape Everard and further off the east Tasmanian coast from Babel Island southwards to Storm Bay. Other demersal grounds exist in the Great Australian Bight but would require large modern trawlers for commercial exploitation. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Jack mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Tuna is now being taken in commercial quantities on the New South Wales and South Australian coasts.

Pearlshell is fished from Cooktown in Northern Queensland (and from Thursday Island) round the north coast of Australia to Exmouth Gulf in Western Australia. Trochus shell is obtained from Mackay in Queensland round the north coast to King Sound in Western Australia.

Edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland, but the principal cultivation grounds are found in New South Wales. The scallop is taken commercially only in Tasmanian waters.

Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales. Crayfish are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia. Considerable development has taken place in the crayfish fisheries, particularly in South Australian and Western Australian waters, owing to the opening up of markets in the United States of America for frozen crayfish tails.

Whales emigrating from Antarctic waters to their breeding grounds in the warmer waters of low latitudes pass up both the western and eastern coasts of Australia, returning to the Antarctic in the spring. Three whaling stations operate in Western Australia (Pt. Cloates, Babbage Island near Carnarvon and Cheynes Beach near Albany), one in New South Wales (Byron Bay) and one in Queensland (Moreton Bay).

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery

is worked with traps, hand lines and long lines. The demersal flathead-fishery is worked by both otter trawl (with V.-D. gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel-fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. Tuna is taken by trolling and more recently, by pole fishing with live bait.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, and the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. **Administration.**—The fisheries are administered by State Departments implementing State laws. This administration includes licensing of men and boats, and restrictions of fishing by prohibitions against fishing at certain times and places and by certain methods. The States also prescribe the gear that may be used and for some fishes the legal minimum size at which they may be landed.

In October, 1946 the Commonwealth Government established the Commonwealth Fisheries Office to co-ordinate fisheries administration and develop the fisheries of Australia. It is a division of the Department of Commerce and Agriculture.

Following the revocation of Commonwealth war-time powers, an interstate conference in 1947 considered the Commonwealth and State spheres of responsibility. Following the passing of the Commonwealth Fisheries Act 1952 and Pearling Act 1952 a further conference was held in 1952. At this conference all States, except Western Australia, agreed on procedure for implementing through the States some of the provisions of the Fisheries and Pearling Acts. These Acts were passed to enable the Commonwealth to conserve and develop fisheries in Australian waters outside the States' 3-mile territorial limit. As a first result of the July conference, the conservation of the school shark and tiger flathead fisheries was taken in hand by the Commonwealth in co-operation with the States concerned.

The Commonwealth Scientific and Industrial Research Organization, through its Fisheries Division, is responsible for fishery research (*see* § 4, para. 2 hereafter).

§ 2. Development and Present Condition of the Fishery.

1. **Fisheries Proper.**—(i) *General.* The earliest Australian fishery was on-shore. To this was soon added the demersal reef fishery using lines. At each centre of population this sequence has almost invariably been followed, and expansion of the industry up to about the year 1900 consisted chiefly of the extension of these operations into hitherto unworked areas. The taking of barracouta in Tasmanian waters was begun at least by 1880, if not earlier, but the main development of this fishery occurred between 1915 and 1925.

The first major development of the fishery came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government. The State enterprise failed, but the fishery was found very profitable by private enterprise. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, and in 1946 (after the return of vessels requisitioned in war-time) a peak was reached and thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. Of the species taken by the trawl fishery, tiger flathead, morwong and nannygai are the most important, and of these flathead may be regarded as the prime fish and commands a higher price. Since 1947 the composition of the catch has changed, because of depletion of the flathead stocks, and the lower priced fish have become a larger proportion of the catch. In 1953-54 ten steam trawlers (all based at Sydney but fishing right down the coast to Bass Strait) and a considerably larger number of Danish seine vessels in New South Wales and Victoria were engaged in the trawl fishery.

In Queensland waters the Spanish mackerel is taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns, with Townsville as the centre. This fishery started in 1930 and by 1942 production had risen to about 1,000,000 lb. The catch decreased considerably during the war and early post-war years, but subsequently increased and by 1952-53 it had reached more than 1,500,000 lb.

In 1930 fishing for snapper shark commenced in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery extended rapidly its area of operations, particularly in the Bass Strait area and the south-east coast of South Australia, and by 1952-53 the catch of edible sharks had reached 4,850,000 lb. Great impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. This demand has eased with the return of cod-liver oil, and the production overseas of synthetic vitamin "A". However shark is still fished for the flesh, which is sold as "flake", mainly in the Melbourne Fish Markets.

Pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia. Commercial catches have been made with lampara nets and to a less extent with purse seines at Jervis Bay on the New South Wales coast, in Port Phillip Bay in Victoria, at Coffin Bay in South Australia and at Albany in Western Australia. Anchovies in Port Phillip Bay and sprats in Tasmanian waters are caught in payable quantities, though there is usually some difficulty in finding a market for them. Jack mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales.

The tuna fishery was established on the New South Wales coast during the second half of 1949, when fishermen, using improvised trolling gear, caught 1,000 tons of southern blue-fin tuna. The catch was canned at Narooma and Eden, and samples of both canned and frozen tuna were sent to California where they met with approval. The American-owned tuna clipper *Senibua*, whose operations were subsidized by the Commonwealth, proved that Australian tunas could be caught by pole fishing with live bait, but less than a dozen boats were so operating in 1953.

(ii) *Production.* The total recorded catch of fresh fish during 1952-53 amounted to more than 73,000,000 lb., compared with 64,000,000 lb. in the previous year. This is still below the peak production of 79,000,000 lb. reached in 1947-48.

Production for the years 1938-39 and 1948-49 to 1952-53 is shown by States in the following table :—

RECORDED PRODUCTION OF FRESH FISH.
('000 lb.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	(a) 29,382	29,506	27,985	24,206	25,473	30,486
Victoria (b) ..	12,840	(c) 12,634	(c) 11,581	(c) 10,741	11,328	11,339
Queensland ..	9,182	10,129	10,125	8,897	9,020	10,501
South Australia ..	(a) 8,960	(a) 5,264	(a) 5,799	(a) 6,502	6,950	7,255
Western Australia ..	(a) 5,841	(a) 9,254	(a) 8,911	(a) 7,659	6,765	8,425
Tasmania (b) ..	(a) 2,393	11,295	7,363	5,934	4,029	5,195
Northern Territory ..	28	52	52	56	62	88
Total ..	68,626	78,134	71,816	63,995	63,627	73,289

(a) Year ended previous December.
is included in Victoria.

(b) Catch by Victorian fishermen in Tasmanian waters
(c) No details available of amount caught by Victorian Fishermen in Tasmanian waters.

2. *Oysters and Shell Fisheries.*—Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. This is carried on mainly in New South Wales where there has been constant improvement

in methods, and the present technique in certain areas is highly efficient. The production for Australia in 1952-53 was 8,399,000 lb. (in shell). Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania.

Cray fisheries have developed greatly since the War to take advantage of the market in the United States of America for frozen crayfish tails. Details of production by States for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table :—

RECORDED PRODUCTION OF CRAYFISH.
(¹000 lb.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	420	687	595	487	688	549
Victoria (a) ..	965	(c) 532	(c) 947	(c) 491	930	940
Queensland ..	..	..	..	..	..	2
South Australia ..	(b) 686	(b) 870	(b) 1,671	(b) 2,089	2,750	3,500
Western Australia ..	(b) 1,349	(b) 2,805	(b) 5,121	(b) 6,550	8,343	8,100
Tasmania (a) ..	1,576	3,241	3,016	1,689	1,879	2,694
Australia ..	4,996	8,135	11,350	11,306	14,590	15,785

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Year ended previous December. (c) No details available of amount caught by Victorian fishermen in Tasmanian waters.

3. Pearl-shell and Trochus.—The industry, which ceased operations on Japan's entry into the war in December, 1941, did not resume on a commercial basis at Queensland centres until late in 1945, and at Western Australian centres until 1946, while operations off the Northern Territory coast were not resumed until 1948.

Before the war a large proportion of the key men were Japanese ; the others included Malays, Chinese, Koepangers, Filipinos, Papuans and Torres Straits Islanders. On the resumption of operations without the Japanese, the labour available was, with few exceptions, inefficient. Queensland with a more ready source of labour from the Torres Strait Islands and mainland was able to expand its fishing more rapidly, and in the 1949 season, achieved its second highest pearl shell production on record. The expansion of the industry at Darwin has been retarded by the fact that the key men lack the local knowledge acquired by the Japanese. Western Australian centres also suffered from lack of skilled labour. In 1953 the Commonwealth permitted the employment at Broome, under certain conditions, of 35 Japanese divers, tenders and engine-drivers.

In 1953 a Japanese fleet, which had been pearling in the Arafura Sea while a Japanese Mission in Canberra was discussing a fisheries agreement with the Australian Government, moved into an area in which they had been asked not to fish. Their action was regarded as having broken off the negotiations, and proclamations were issued in September 1953 declaring Australia's sovereign rights over the natural resources of the sea bed and sub-soil of the Continental Shelf adjoining Australia, its territories and the Trust Territory of New Guinea. In September the Pearl Fisheries Act 1952-53, providing for licensing and control of pearling, was brought into operation.

Japan disputed Australia's right to apply this legislation to foreign ships, and Australia agreed to refer the dispute to the International Court of Justice on condition that meantime Japanese pearling in Australian waters would be conducted in conformity with the Australian Government's policy of regulation and conservation, and that Japan would abide by the Court's decision. On these conditions, a Japanese pearling fleet operated in prescribed waters in 1954.

Tables showing the principal statistics relating to pearl-shell and trochus are shown in § 5, para. 1 (iii) hereafter.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912, and by the Tariff Board in 1935, appears on page 1031 of Official Year Book No. 37.

§ 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers and consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at fourteen centres along the coast. The organization ensures that all fish is marketed through these channels, and the board has encouraged to a very marked extent the steadily increasing annual fish production of the State. The fish marketing methods in this State have proved successful. In New South Wales the central market in Sydney is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute some of their fish to local centres and to inland country districts, and send the balance to the central market in Sydney. In Victoria, South Australia, and Western Australia fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate export of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. **Consumption of Fish.**—Prior to the 1939-45 War, Australians consumed annually the fresh and canned equivalent of about 131 million lb. of round fish, or 19.0 lb. per person. About 70 million lb. was produced locally and the remainder was imported. Total consumption (including canned and cured) during 1952-53 is estimated at 67.9 million lb. edible weight (7.8 lb. per head) as compared with 88.3 million lb. edible weight (10.3 lb. per head) in the previous year. This is equivalent to approximately 138.9 million lb. fresh round weight (15.9 lb. per head) and 166.2 million lb. fresh round weight (19.5 lb. per head) respectively. Fish is not, as in many countries, a staple item in the diet of Australians and, away from the seaboard, is still regarded as rather a luxury.

3. **Processing, including Canning.**—The equipment for handling fish has in the past been rather inadequate, but in most States in recent years cold storage facilities have been improved and increased. In Queensland and New South Wales particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails for export. A number of vessels have been equipped with freezing plants to process crayfish at sea.

In all States there has been a development of facilities for light processing of fish.

Reference to the production of processed fish and number of factories operating will be found in § 5, para. 3, page 851. Considerable expansion has taken place in the industry, particularly since 1945-46. In 1938-39, three factories processed 2,180,371 lb. of fish valued at £33,637, whereas in 1952-53 thirteen factories processed 12,409,735 lb., valued at £371,346.

4. **By-products.**—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils has been undertaken in several States and oil-production has been favourably developed.

§ 4. Inquiries and Research.

1. **General.**—The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. Details of the inquiries undertaken, the recommendations arising from them and subsequent developments will be found in Official Year Book No. 38, page 1082.

2. **Commonwealth Scientific and Industrial Research Organization, Division of Fisheries.**—Details of the establishment, organization and functions of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization will be found in Official Year Book No. 38, page 1083.

Since the establishment of the Division in 1937, its work has extended, and there are field stations at Melbourne, Perth, Hobart and Thursday Island. The Division has two research vessels, F.R.V. *Derwent Hunter*, working in South Australian waters, and a ketch, F.R.V. *Gahleru*, working as a pearling lugger in the Thursday Island area.

As a result of the exploratory investigations and the research of the Division, together with the collaboration of commercial fishermen, it has been shown that important species of pelagic fish can be taken in commercial quantities in Australia. On the other hand, it has been shown that certain stocks of trawl fish, edible shark and whitebait need the protection of regulations to preserve them; and whale, crayfish and pearl oyster stocks are being closely studied in case they need similar protection in future. Proposals are made to trade and administrative bodies whenever action appears to be necessary to exploit or conserve stocks.

Research on oysters has been aimed at cultivation methods, including the fertilization of mud to increase the output. It has been determined that the Pacific oyster from Japan can be established and grown satisfactorily in Tasmanian waters. Experiments are being carried out with Australian species of pearl-shell in the Thursday Island area to appraise the possibilities of cultivating the oysters and culturing pearls.

Oceanographic studies are being pursued to demonstrate the properties of different water masses in south-eastern waters (west Tasman Sea and Bass Strait) and seasonal and annual changes in the distribution of the water masses; this work is expected to reveal the areas of greatest productivity of pelagic fishes such as tunas.

3. **Commonwealth Fisheries Office.**—The Commonwealth Fisheries Office, a division of the Department of Commerce and Agriculture, arose out of a Tariff Board recommendation in 1941, following a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. Details of the establishment, organization and functions of the office will be found in Official Year Book No. 38, page 1084.

In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization which had established a Division of Fisheries for this purpose in 1937.

The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

4. **North Australia Development Committee.**—In 1946 the North Australia Development Committee gave considerable attention to the fisheries resources of North Australia and recommended that a hydrological and oceanographical survey should be made of the area. It also suggested that a biological survey should be made of pearl-shell with particular reference to the possibility of instituting pearl-shell culture. It recommended that all information regarding the area should be compiled and made available for scientific workers. It also recommended that an economic survey of the fisheries resources should be made, comparing them particularly with those of the Netherlands East Indies.

5. **Whaling.**—The Commonwealth Fisheries Office carried out extensive investigational and preparatory work for the establishment of an Australian whaling industry. In 1949 a privately-owned station began operating at Pt. Cloates, Western Australia. The same year a Commonwealth Whaling Commission was established, which built a station at Babbage Island, near Carnarvon, Western Australia, but it did not begin operating until almost the end of the 1950 season. There is also a smaller station in

Western Australia at Cheynes Beach near Albany. In 1952 a large station began operating at Moreton Island (Queensland). In 1953 these four stations produced 17,058 tons of whale oil, making Australia the largest producer of baleen whale oil outside the Antarctic. In 1954 another small station began operating at Byron Bay (New South Wales).

The Director of Fisheries represents Australia on the International Whaling Commission, which controls whaling throughout the world.

§ 5. The Fishing Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The statistics have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts are shown in the following table.

GENERAL FISHERIES.

Year and State or Territory.	Boats Engaged. No.	Value of Boats and Equip- ment. £'000.	Men Engaged. (a) No.	Fish Taken.		Crustaceans Taken.			
				Quan- tity. '000 lb.	Gross Value. £'000.	Cray- fish. '000 lb.	Prawns. '000 lb.	Crabs. '000 lb.	Gross Value. £'000.
1952-53—									
New South Wales ..	2,236	1,631	2,079	30,486	1,751	549	2,825	83	572
Victoria ..	695	622	988	11,339	841	940	..	..	96
Queensland ..	7,717	994	7,575	10,501	596	2	488	459	95
South Australia ..	1,490	520	4,297	7,255	644	3,500	..	..	316
Western Australia ..	544	795	996	8,425	462	8,100	23	38	817
Tasmania ..	708	(c) 460	1,239	(b) 5,195	303	(b) 2,694	..	..	(b) 214
N. Territory	18	6	32	88	9	..	..	..	..
Australia	9,408	5,028	17,206	73,289	4,606	15,785	3,336	580	2,110
1951-52 ..	9,095	4,613	16,602	63,627	3,827	14,590	2,204	466	1,833
1950-51 ..	8,628	4,149	14,870	63,995	3,555	11,306	4,620	576	1,227
1949-50 ..	9,329	4,104	15,637	71,816	2,877	11,350	3,119	599	914
1948-49 ..	10,160	3,668	17,440	78,134	3,160	8,135	2,622	771	664
1938-39 ..	5,462	649	9,081	68,626	1,385	4,996	1,069	383	152

(a) For New South Wales, number of fishermen's licences issued; licences are issued only to persons deriving a substantial proportion of their income from personal exertion from the capture and sale of fish. (b) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (c) Includes oyster fisheries.

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. The available returns show the following takes during 1952-53 in these States:—New South Wales, 7.8 million lb., value £380,480; Queensland, 504,000 lb., value £16,256. In Tasmania the scallop is far more important than the oyster, and in 1952-53 the take was valued at £88,800.

Figures for Australia for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table:—

EDIBLE OYSTER FISHERIES: AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
No. of boats engaged	754	833	1,132	1,020	1,114	1,079
No. of men engaged ..	850	768	878	664	901	871
Oysters obtained—						
Quantity (a) '000 lb.	9,677	6,223	8,672	6,805	8,121	8,399
Gross value (b) £	132,201	291,470	425,745	398,995	435,513	487,327

(a) Excludes scallops in Tasmania; 29,845 cwt. (in shell) in 1948-49; 21,055 cwt. in 1949-50; 16,095 cwt. in 1950-51; 14,540 cwt. in 1951-52; and 28,830 cwt. in 1952-53; 1938-39 weight not available. (b) Includes scallops in Tasmania, valued at £14,500 in 1938-39; £26,460 in 1948-49; £23,580 in 1949-50; £31,540 in 1950-51; £38,650 in 1951-52; and £88,800 in 1952-53.

(iii) *Pearl and Pearl-shell Fisheries.* The following table shows particulars of equipment used in the pearling industry, men engaged and production for the years 1938-39 and 1948-49 to 1952-53, while particulars by States are shown for 1952-53.

PEARL AND PEARL-SHELL FISHERIES.

Year and State or Territory.	Boats Engaged. No.	Value of Boats and Equipment. £	Men Engaged. No.	Pearl-shell.		Gross Value of Pearls obtained. (a) £	Trochus-shell.	
				Quantity Obtained. Tons.	Gross Value. £		Quantity Obtained. Tons.	Gross Value. £
1952-53—								
Queensland ..	86	322,550	(b) 918	495	250,643	..	995	145,993
W. Australia(c)	21	83,600	189	303	176,882	500	4	485
Nor. Territory	7	35,000	45	116	59,000	2,300	..	..
Australia ..	114	441,150	1,152	914	486,525	2,800	999	146,478
1951-52 ..	132	522,850	1,516	853	458,852	1,490	1,176	234,332
1950-51 ..	154	557,990	1,621	1,091	488,230	3,635	1,287	223,325
1949-50 ..	126	404,139	1,383	1,542	551,715	1,040	577	51,682
1948-49 ..	141	387,550	1,417	1,346	573,285	1,930	414	28,170
1938-39 ..	181	168,133	1,750	2,543	222,281	3,397	322	23,885

(a) Incomplete; as reported.

(b) Includes Torres Strait Islanders and Australian aboriginals

(c) Year ended December, 1952.

2. *Value of Production.*—(i) *Gross and Local Values, 1952-53.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in the collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

GROSS AND LOCAL VALUE OF FISHERIES PRODUCTION, 1952-53. (£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.
New South Wales	2,704	471	2,233
Victoria	894	141	753
Queensland	1,104	260	844
South Australia	960	109	851
Western Australia	1,643	33	1,610
Tasmania	606	..	606
Total	7,911	1,014	6,897

(ii) *Local Values, 1934-35 to 1938-39 (Average) and 1948-49 to 1952-53.* In the following table the local value of fisheries production and the local value per head of population are shown by States for the average of years 1934-35 to 1938-39 and for each of the years 1948-49 to 1952-53. Local value is gross value less marketing costs and is the value at the place of production. Because the value of materials used in the course of production is not available for all States it is not possible to show a comparison of net values.

LOCAL VALUE OF FISHERIES PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE. (£'000.)							
Average, 1934-35 to							
1938-39 ..	588	159	292	182	229	80	1,530
1948-49 ..	1,479	522	704	232	679	558	4,174
1949-50 ..	1,449	615	760	287	697	426	4,234
1950-51 ..	1,730	700	812	404	812	411	4,869
1951-52 ..	1,821	706	835	701	1,225	441	5,729
1952-53 ..	2,233	753	844	851	1,610	606	6,897

LOCAL VALUE PER HEAD OF POPULATION.
(s. d.)

Average, 1934-35 to							
1938-39 ..	4 5	1 9	5 11	6 3	10 0	6 11	4 6
1948-49 ..	9 8	4 11	12 5	7 0	26 0	41 7	10 9
1949-50 ..	9 2	5 8	13 1	8 4	25 6	30 9	10 7
1950-51 ..	10 7	6 3	13 7	11 4	28 5	28 7	11 9
1951-52 ..	10 10	6 2	13 8	19 3	41 5	29 6	13 6
1952-53 ..	13 1	6 4	13 6	22 9	52 7	39 3	15 10

3. Fish Preserving.—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, continued to operate, but there was no marked development until about 1945-46 when the production of canned fish amounted to 1,700,000 lb. After that year production increased considerably and reached a peak of 10,900,000 lb. in 1948-49, but by 1951-52 it had declined to 6,800,000 lb. It increased again to 7,400,000 lb. in 1952-53.

In addition to the canning of fish other fish products are produced. In 1952-53 these included 409,000 lb. of smoked fish, 844,000 lb. of fish paste and a considerable quantity of frozen crayfish tails for export.

In 1939 New South Wales and Tasmania were the only States canning fish, but by 1941 the industry had been extended to South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1948-49 to 1952-53.

PRODUCTION OF CANNED FISH (a) : AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number of factories operating ..	3	16	15	18	17	13
Quantity .. lb.	603,302	10,886,254	7,442,521	7,279,033	7,294,622	7,705,081
Value .. £	13,700	973,027	676,812	723,689	965,100	1,020,307

(a) Including the canning of fish loaf.

The varieties canned in the several States differ according to the catch available, but separate details for each variety are not collected. In New South Wales salmon is the principal variety. In South Australia the canned pack includes mullet, salmon, garfish, etc., in Western Australia herrings, crayfish and mullet, and in Tasmania, salmon and crayfish.

4. State Revenue from Fisheries.—The revenue from fisheries during the year 1952-53 was £63,552 compared with £59,769 in 1951-52 and £34,273 in 1938-39. Of the total of £63,552 in 1952-53, New South Wales collected £31,025, Victoria £4,386, Queensland £11,905, South Australia £4,363, Western Australia (year ended December, 1952) £7,362, Tasmania £4,430 and Northern Territory £81.

§ 6. Oversea Trade in Fishery Products.

NOTE.—Values of Australian oversea trade shown in this section are expressed in £A. l.o.b., port of shipment.

1. Imports of Fish.—The equivalent, in the round, of imported fish consumed in Australia in 1952-53 was 24 per cent. of the total consumption. Particulars of the imports of fish are shown below for the years 1948-49 to 1952-53 in comparison with 1938-39.

FISH (INCLUDING SHELL FISH) : IMPORTS INTO AUSTRALIA.
(Cwt.)

Classification.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Fresh or preserved by cold process	84,028	100,902	59,152	103,926	150,972	86,397
Potted or concentrated	9,435	3,012	1,908	1,959	1,766	583
Preserved in Tins—						
Fish—						
Herrings	38,917	95,994	81,569	95,227	88,149	20,030
Pilchards	(a)	3,740	735	930	4,041	462
Salmon	166,695	2,544	14,848	14,923	20,387	24,855
Sardines (including Sild)	29,372	61,962	50,253	80,645	70,334	3,380
Other	14,306	8,682	5,974	4,535	15,455	916
Shell Fish—						
Crustaceans	6,829	1,623	2,386	6,194	3,308	2,150
Oysters	1,939	29	59	121	198	115
Other	(a)	100	201	74	225	113
Smoked or Dried (not salted)	8,122	32,331	70,524	64,099	56,235	55,929
Other (including salted) ..	7,987	3,319	8,577	8,655	11,911	6,878

(a) Not recorded separately.

The value of fish and fish products imported during 1952-53 amounted to £2,113,000, compared with £1,470,854 in 1938-39.

Canned fish (total imports of which in 1952-53 were valued at £954,905) constituted the largest proportion of the imports; salmon from the Soviet Union and Canada, herrings from the United Kingdom and Norway, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. A considerable proportion of the fresh fish imported in 1952-53 came from the United Kingdom and New Zealand, and the potted fish came chiefly from the United Kingdom; the bulk of the remainder came from South Africa, the United Kingdom and New Zealand.

2. Exports of Fish.—During 1952-53 the exports of fish of Australian origin were as follows :—oysters in shell, 111 cwt., £560; other fresh or preserved by cold process, 40,027 cwt., £1,548,704; potted or concentrated, 264 cwt., £8,949; fish preserved in tins, 4,425 cwt., £105,767; shell fish in tins, 184 cwt., £7,306; smoked or dried, 104 cwt., £2,065; and other fish, 24 cwt., £624.

3. Exports of Pearl and other Shell.—The exports of pearl, trochus and other shell of Australian origin are shown hereunder for the years 1938-39 and 1948-49 to 1952-53.

PEARL, TROCHUS AND OTHER SHELL : EXPORTS FROM AUSTRALIA.

Article.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Pearl-shell .. cwt.	52,532	27,885	33,840	22,877	14,473	24,714
£	244,266	606,767	624,517	485,685	370,096	694,029
Trochus-shell .. cwt.	9,108	15,547	10,765	27,460	42,815	34,751
£	34,166	73,012	49,170	231,580	515,067	247,482
Other shell .. cwt.	4	157	1,239	621	2,531	5,732
£	151	1,599	16,225	6,517	35,933	58,713

CHAPTER XXIV.

MANUFACTURING INDUSTRY.

§ 1. General.

1. **Introduction.**—A complete statistical account of the growth of the manufacturing industry in Australia cannot be given owing to the fact that prior to 1906 the necessary statistics were not collected by the several States on a definite and uniform basis. A standard classification of manufacturing industries was formulated at a conference of Australian Statisticians in 1902 and adopted by all States in 1906. Figures on this basis were prepared for 1907 and subsequent years.

Prior to the federation of the Australian States in 1901, the manufacturing industry in Australia was primarily engaged in the production of goods for local use, mainly of food commodities, furniture, bricks, clothing made from imported materials, printing, the repair rather than the manufacture of machinery, and the preliminary treatment of primary products, such as wool-scouring and sawmilling.

After federation, steady expansion of the manufacturing industry resulted from the removal of interstate trade barriers and the operation of a uniform protective tariff. This expansion was quickened as a result of the demands created by the 1914-18 War, the curtailment of imports, and the rapid growth of spending power within the community. New and more advanced development took place, iron and steel works and many related and subsidiary industries were established, extensive manufacture of machinery was begun, and a wide range of high-grade products—textiles, metal manufactures, electrical goods, etc.—was added to the list of commodities made in Australia.

A check was made in this expansion by the world-wide economic depression of 1929-33, but returning general prosperity and the opportunities opened to local manufacturers by import restrictions initiated revival in 1933 and, with depreciation of Australian currency, gave renewed stimulus to manufacturing enterprise. As economic conditions improved, the tariff, revenue duties and primage were reduced, but without materially prejudicing the progress of local manufactures.

When war broke out in September, 1939, Australia became a major source of supply for British countries east of Suez and in meeting these demands, as well as those arising locally because of interruption of overseas importations, existing manufacturing industries expanded, and new enterprises were developed rapidly for the production of all classes of munitions, aircraft, ships, many new kinds of machinery and metal manufactures, scientific equipment, textiles, chemicals, etc. The outbreak of war with Japan, the basing of Allied armed forces in Australia, and Australian responsibilities for supplies in the South-west Pacific Area, gave added impetus to these developments, and manufacturing in Australia outstripped all previous levels.

The cessation of war production and the transition of industry to a peace-time basis temporarily retarded progress, but from 1945-46 onward, there was renewed expansion of the manufacturing industries to which an inflow of capital from overseas contributed.

2. **Decentralization of Manufacturing Industries.**—Following upon a report by the Secondary Industries Commission, the Commonwealth Government called a conference of Commonwealth and State Ministers in August, 1945 to formulate a national policy for the decentralization of secondary industries. It was agreed that the State Governments should seek to promote decentralization along the lines appropriate to each, providing necessary services, assistance and concessions to the full extent of State resources. The Commonwealth undertook to collaborate in all matters of Commonwealth industrial policy affecting the development and location of industry, to investigate in association with the States the prospects of developing secondary industries in selected areas, to advise the States of developments desirable for defence purposes, and to provide financial assistance for projects of national importance where the cost would be great relative to the State's resources.

The Commonwealth has assisted decentralization by allocating to private industry munitions and other defence buildings in decentralized areas and accommodating migrants in provincial centres with prospects of development. Oversea firms contemplating establishment in Australia are encouraged to select locations in rural areas or the less industrialized States.

3. Commonwealth Division of Industrial Development.—The Secondary Industries Commission was established in 1943 to investigate post-war uses for munitions factories, to plan for the transition of secondary industries from war-time to peace-time activities, and generally to seek to increase industrial efficiency and to explore opportunities for new industries. The Commission was disbanded in April, 1950.

The functions of the Division of Industrial Development (formed in February, 1945 as the Secondary Industries Division of the Department of Post-war Reconstruction) were extended in August, 1948 to include the encouragement of industrial development, the exercising of Commonwealth responsibilities for the decentralization of industry, the promotion of industrial efficiency (especially the study of technical, production, and managerial problems and the dissemination and application of new knowledge and methods), the encouragement of the development of technological institutes and the publication of studies of the structure and operation of Australian manufacturing industries. The Division was attached to the Ministry of National Development when formed in March, 1950 to plan the development of national resources and to promote decentralization and regional development in conjunction with the States.

4. Customs and Excise Tariffs and Bounties on Manufactures.—Particulars of Australian customs and excise tariffs, and the constitution and functions of the Australian Tariff Board in relation to matters affecting the industrial development of Australia, are given in Chapter VII.—Trade.

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The Statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards.

5. Scientific Research and Standardization.—(i) *The Commonwealth Scientific and Industrial Research Organization.* The function of this Organization, reference to which also appears in Chapter XXIX., is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research studentships and fellowships, to make grants in aid of pure scientific research, to establish industrial research associations in various industries, to provide for testing and standardization of scientific equipment, to conduct an information service relating to scientific and industrial matters, and to act for Australia in liaison with other countries in matters of scientific research.

(ii) *The Standards Association of Australia.* This Association, which is referred to also in Chapter XXIX., acts as the national standardizing organization of Australia and issues standard specifications for materials and codes of practice. Specifications and codes are prepared and revised periodically in accordance with the needs of industry, and standards are evolved and accepted by general consent.

(iii) *The National Association of Testing Authorities.* The National Association of Testing Authorities organizes national testing facilities throughout Australia to serve private and governmental needs. Laboratories may register voluntarily in respect of tests within their competence and the Association ensures the maintenance of their standards of testing. It is expected that there will be general acceptance of certificates of tests issued in the name of the Association by the registered laboratories.

6. **Definitions in Factory Statistics.**—The statistics relating to factories have been compiled from returns supplied annually by manufacturers to, and tabulated by, the several State Statisticians, in the terms of the Statistical Acts of the States. A return must be supplied in respect of every factory, which is defined for this purpose as an establishment where four or more persons are employed or where power (other than manual) is used in any manufacturing process. This definition includes factories in educational and charitable institutions, reformatories, and other public institutions (except penitentiaries) but does not cover smallgoods makers, laundries, farriers, photography studios, florists and seedsmen, and most abattoirs.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment, a separate return is obtained for each industry, if practicable.

Manufacturers are requested to state in their returns particulars as to the number, age, wages, etc., of their employees, the value of premises and equipment, the horse-power of machinery, the value, and in most cases the quantities, of raw materials and fuel used, and quantities and values of principal materials and articles produced. The returns obtained from manufacturers are not intended to show a complete record of the income or expenditure of factories nor to show the profits or losses of factories collectively or individually.

The *average number of persons* employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of these the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average is used only in respect of details relating to classification according to number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

Working proprietors are included in all employment figures other than those relating to monthly employment and age dissections, but salaries and wages paid in all cases exclude drawings by working proprietors.

The *value of factory output* is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The *value of production* is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel, and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture, many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. Examples are raw sugar passing from the mills to the refinery, metals from the smelters which become raw materials in establishments concerned in the production of metal goods, and timber from the sawmills used in furniture factories and in joinery. On the other hand, the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason the value of production, and not the value of the output, is used as a measure of activity in the manufacturing industries as a whole.

In the special case of Government factories and workshops, the value of output is, in most cases, estimated by adding 10 per cent. to the value of materials and fuel used and other factory costs, including salaries and wages paid.

7. **Classification of Factories.**—In the compilation of statistical data relating to factories in Australia, a standard classification of manufacturing industries, formulated at a conference of Australian Statisticians in 1902 and revised from time to time, was used until the year 1929–30. A new classification was introduced in 1930–31, and this in turn was revised and extended (principally in regard to the placement and composition of sub-classes) in accordance with decisions of the Statisticians' Conference, 1945.

Owing to limitations of space, details published in general tables in this chapter are confined either to the sixteen classes of industry or total factory activity. Particulars of certain of the sub-classes shown below are published in the latter portion of this chapter and full details for all sub-classes may be found in the *Secondary Industries Bulletin*, published annually.

The principal classes and sub-classes in the current classification of factories are as follows :—

CLASSIFICATION OF FACTORIES.

CLASS I.—TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS.

Coke Works.
Briquetting and Pulverized Coal.
Carbide.
Lime, Plaster of Paris, Asphalt.
Fibrous Plaster and Products.
Marble, Slate, etc.
Cement.
Asbestos Cement Sheets, etc.
Other Cement Goods.
Other.

CLASS II.—BRICKS, POTTERY, GLASS, ETC.

Bricks and Tiles, Fire Bricks and Fire-clay Goods.
Earthenware, China, Porcelain, Terra-cotta.
Glass (other than Bottles).
Glass Bottles.
Other.

CLASS III.—CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE.

Industrial and Heavy Chemicals and Acids.
Pharmaceutical and Toilet Preparations.
Explosives.
White Lead, Paints, Varnish.
Oils, Vegetable.
Oils, Mineral.
Oils, Animal.
Boiling Down, Tallow Refining.
Soap and Candles.
Chemical Fertilizers.
Inks, Polishes, etc.
Matches.
Other.

CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES.

Smelting, Converting, Refining and Rolling of Iron and Steel.
Foundries—Ferrous.
Plant, Equipment and Machinery.
Other Engineering.
Extracting and Refining of other Metals, Alloys.
Electrical Machinery, Cables and Apparatus.
Construction and Repair of Vehicles (no groups).
Ship and Boat Building and Repairing, Marine Engineering.
Cutlery and Small Hand Tools.
Agricultural Machines and Implements.
Non-Ferrous Metals—
Rolling and Extrusion.
Foundries, Casting, etc.
Iron and Steel Sheets.
Sheet Metal Working, Pressing, and Stamping.
Pipes, Tubes and Fittings—Ferrous.
Wire and Wire Netting (including Nails).
Stoves, Ovens and Ranges.
Gas Fittings and Meters.
Lead Mills.

CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES—continued.

Sewing Machines.
Arms, Ammunition (excluding Explosives).
Wireless and Amplifying Apparatus.
Other Metal Works.

CLASS V.—PRECIOUS METALS, JEWELLERY, PLATE, JEWELLERY.

Watches and Clocks (including Repairs).
Electroplating (Gold, Silver, Chromium).

CLASS VI.—TEXTILES AND TEXTILE GOODS (NOT DRESS).

Cotton Ginning.
Cotton Spinning and Weaving.
Wool—Carding, Spinning, Weaving.
Hosiery and other Knitted Goods.
Silk, Natural.
Rayon, Nylon and other Synthetic Fibres.
Flax Mills.
Rope and Cordage.
Canvas Goods, Tents, Tarpaulins, etc.
Bags and Sacks.
Other.

CLASS VII.—SKINS AND LEATHER (NOT CLOTHING OR FOOTWEAR).

Furriers and Fur Dressing.
Woolscouring and Felmongery.
Tanning, Currying, and Leather Dressing.
Saddlery, Harness, Whips.
Machine Belting.
Bags, Trunks, etc.

CLASS VIII.—CLOTHING (EXCEPT KNITTED).

Tailoring and Ready-made Clothing.
Waterproof and Oilskin Clothing.
Dressmaking.
Millinery.
Shirts, Collars, Underclothing.
Foundation Garments.
Handkerchiefs, Ties, Scarves.
Hats and Caps.
Gloves.
Boots and Shoes (not rubber).
Boot and Shoe Repairing.
Boot and Shoe Accessories.
Umbrellas and Walking Sticks.
Dyeworks and Cleaning.
Other.

CLASS IX.—FOOD, DRINK AND TOBACCO.

Flour Milling.
Cereal Foods and Starch.
Animal and Bird Foods.
Chaffcutting and Corn Crushing.
Bakeries (including Cakes and Pastry).
Biscuits.
Sugar Mills.

CLASS IX.—FOOD, DRINK AND TOBACCO—
continued.

Sugar Refining.
Sugar Confectionery (including Chocolate).
Jam, Fruit and Vegetable Canning.
Pickles, Sauces, Vinegar.
Bacon Curing.
Butter Factories.
Cheese Factories.
Condensed and Dried Milk Factories.
Margarine.
Meat and Fish Preserving.
Condiments, Coffee, Spices, etc.
Ice and Refrigerating.
Salt Refining.
Aerated Waters, Cordials, etc.
Breweries.
Distilleries.
Wine Making.
Cider and Perry Making.
Malting.
Bottling.
Tobacco, Cigars, Cigarettes, Snuff.
Dehydrated Fruit and Vegetables.
Ice-cream.
Sausage Skins.
Arrowroot.
Other.

CLASS X.—SAWMILLS, JOINERY, BOXES, ETC.,
WOOD TURNING AND CARVING.

Sawmills.
Plywood and Veneer Mills.
Bark Mills.
Joinery.
Cooperage.
Boxes and Cases.
Basketware and Wickerware (including Sea-grass
and Bamboo Furniture).
Perambulators.
Wall and Ceiling Boards (not Plaster or Cement).
Other.

CLASS XI.—FURNITURE OF WOOD, BEDDING, ETC.

Billiard Tables, Cabinet and Furniture Making and
Upholstery.
Bedding and Mattresses.
Furnishing Drapery, etc.

CLASS XII.—FURNITURE OF WOOD, BEDDING,
ETC.—*continued.*

Picture Frames.
Blinds.
Other.

CLASS XIII.—PAPER, STATIONERY, PRINTING,
BOOKBINDING, ETC.

Newspapers and Periodicals.
Printing—
Government.
General, including Bookbinding.
Manufactured Stationery.
Sterotyping and Electrotyping.
Process and Photo Engraving.
Cardboard Boxes, Cartons and Containers.
Paper Bags.
Paper Making.
Pencils, Penholders, Chalks, Crayons.
Other.

CLASS XIV.—RUBBER.

Rubber Goods and Tyres Made.
Tyre Retreading and Repairing.

CLASS XV.—MUSICAL INSTRUMENTS.

Gramophones and Gramophone Records.
Pianos, Piano-Players, Organs.
Other.

CLASS XVI.—MISCELLANEOUS PRODUCTS.

Linoleum, Leather Cloth, Oil Cloth, etc.
Bone, Horn, Ivory and Shell.
Plastic Moulding and Products.
Brooms and Brushes.
Optical Instruments and Appliances.
Surgical and other Scientific Instruments and
Appliances.
Photographic Materials, including Developing and
Printing.
Toys, Games and Sports Requisites.
Artificial Flowers.
Other.

CLASS XVII.—HEAT, LIGHT, AND POWER.

Electric Light and Power.
Gas Works.

8. Factory Development since 1901—Australia.—The development of the manufacturing industries in Australia at intervals since 1901 is summarized in the following table :—

FACTORIES : AUSTRALIA.

Year.	Fac- tories.	Employ- ment.(a)	Salaries and Wages Paid.(b)	Value of—				
				Materials and Fuel Used.	Output.	Pro- duction. (c)	Land and Build- ings.	Plant and Ma- chinery.
	No.	'000.	£'000.	£'000. (d)	£'000. (d)	£'000. (d)	£'000. (d)	£'000. (d)
1901	11,143	198	27,528	81,703	133,022	51,259	32,701	31,516
1911	14,455	312	27,528	213,579	323,993	110,434	60,831	68,655
1920-21	17,113	367	62,932	172,480	290,799	118,310	172,211	124,498
1930-31	21,751	339	62,455	297,003	500,420	203,417	130,930	143,662
1938-39	26,941	505	106,743	515,324	867,648	352,324	186,939	185,545
1945-46	31,184	745	205,819	600,164	1,011,026	410,862	193,152	189,693
1946-47	34,768	805	237,174	720,822	1,210,110	489,297	211,143	213,719
1947-48	37,356	849	285,765	856,609	1,425,378	568,769	212,740	246,494
1948-49	40,070	890	339,219	983,924	1,645,456	661,532	259,549	285,602
1949-50	41,596	917	385,797	1,306,963	2,150,835	843,872	302,755	336,615
1950-51	43,147	969	491,715	1,609,839	2,634,766	1,024,867	359,490	410,144
1951-52	45,844	978	611,789					

(a) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (b) Excludes drawings by working proprietors. (c) Value of output less value of materials and fuel, etc., used. (d) Not available.

§ 2. Number of Factories.

1. Number of Factories in each State.—The following table shows the number of factories operating in each State in the years 1938-39, 1945-46 and 1948-49 to 1951-52:—

FACTORIES : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39	9,464	9,250	3,087	2,067	2,129	944	26,941
1945-46	12,287	10,195	2,945	2,395	2,280	1,082	31,184
1948-49	16,087	12,702	4,083	2,927	2,925	1,346	40,070
1949-50	16,346	13,231	4,494	3,046	3,023	1,456	41,596
1950-51	17,129	13,504	4,776	3,141	3,111	1,486	43,147
1951-52	18,144	14,758	4,918	3,245	3,267	1,512	45,844

2. Number of Factories in Industrial Classes.—(i) *Australia.* The next table shows the number of factories in Australia during 1938-39, 1945-46 and 1948-49 to 1951-52 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. This classification, which was introduced during 1930-31, superseded the grouping which had been in use since 1902. Details of some of the principal industries included in the table will be found in § 11, page 888.

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
I. Treatment of Non-metalliferous Mine and Quarry Products	564	591	1,025	1,126	1,235	1,316
II. Bricks, Pottery, Glass, etc. ..	471	410	544	561	583	601
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	666	886	1,010	1,006	1,020	1,049
IV. Industrial Metals, Machines, Conveyances	7,255	8,816	11,801	12,362	13,106	14,513
V. Precious Metals, Jewellery and Plate ..	290	337	623	619	629	662
VI. Textiles and Textile Goods (not Dress) ..	611	883	1,065	1,155	1,190	1,246
VII. Skins and Leather (not Clothing or Footwear)	533	651	746	751	761	785
VIII. Clothing (except Knitted)	4,314	5,215	6,533	6,620	6,684	6,989
IX. Food, Drink and Tobacco	5,202	5,865	6,659	6,796	6,865	7,033
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	2,822	3,148	4,530	4,893	5,165	5,546
XI. Furniture of Wood, Bedding, etc. ..	1,149	1,140	1,726	1,820	1,936	2,052
XII. Paper, Stationery, Printing, Book-binding, etc.	1,816	1,703	1,942	1,981	2,010	2,084
XIII. Rubber	299	308	391	404	411	430
XIV. Musical Instruments	34	41	64	59	66	68
XV. Miscellaneous Products	413	714	947	985	1,032	1,039
Total, Classes I. to XV.	26,439	30,708	39,606	41,138	42,693	45,413
XVI. Heat, Light and Power	502	476	464	458	454	431
Grand Total	26,941	31,184	40,070	41,596	43,147	45,844

Although not the best index of manufacturing activity, the number of factories affords some indication of the development of secondary industries. Except for the two war years 1941-42 and 1942-43, when there were decreases, the number of factories increased each year from 1931-32 to 1951-52; in the latter year the number of factories in Australia reached the record total of 45,844 or 70.2 per cent. greater than in 1938-39.

(ii) *States, 1951-52.* The following table shows the number of factories in each State classified according to the nature of the industry :—

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, 1951-52.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	439	436	93	158	138	52	1,316
II. Bricks, Pottery, Glass, etc. ..	287	142	51	59	45	17	601
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	521	315	67	73	49	24	1,049
IV. Industrial Metals, Machines, Conveyances ..	5,856	4,557	1,541	1,098	1,067	394	14,513
V. Precious Metals, Jewellery and Plate ..	276	241	36	51	52	6	662
VI. Textiles and Textile Goods (not Dress) ..	450	672	31	45	36	12	1,246
VII. Skins and Leather (not Clothing or Footwear) ..	346	294	53	47	35	10	785
VIII. Clothing (except Knitted) ..	3,090	2,542	490	387	414	66	6,989
IX. Food, Drink and Tobacco ..	2,456	2,038	1,035	644	560	300	7,033
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	2,084	1,394	895	283	407	483	5,546
XI. Furniture of Wood, Bedding, etc. ..	678	702	276	149	160	87	2,052
XII. Paper, Stationery, Printing, Book-binding, etc. ..	863	766	180	125	120	30	2,084
XIII. Rubber ..	158	128	58	43	25	18	430
XIV. Musical Instruments ..	32	21	4	6	5	..	68
XV. Miscellaneous Products ..	484	406	48	42	50	9	1,039
Total Classes I. to XV. ..	18,020	14,654	4,858	3,210	3,163	1,508	45,413
XVI. Heat, Light and Power ..	124	104	60	35	104	4	431
Grand Total ..	18,144	14,758	4,918	3,245	3,267	1,512	45,844

§ 3. Classification of Factories according to Number of Persons Employed.

1. *General.*—The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors). Prior to 1945-46 there was no dissection of the "over 100 employees" group, but for that and subsequent years this group was subdivided into the seven size groups as shown in the table below.

2. *States, 1951-52.*—The following table shows, for each State, the number of factories classified according to the average number of persons employed :—

FACTORIES : CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1951-52.

Size of Factory (Persons employed).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Aust.
NUMBER OF FACTORIES.							
Under 4 ..	5,926	4,789	1,524	917	1,389	626	15,171
4 ..	1,552	1,267	457	308	140	157	3,881
5 to 10 ..	4,876	3,714	1,420	857	864	371	12,102
11 to 20 ..	2,549	2,141	686	523	409	172	6,480
21 to 50 ..	1,960	1,720	501	368	301	102	4,952
51 to 100 ..	653	585	152	140	101	52	1,683
101 to 200 ..	343	291	105	75	42	18	874
201 to 300 ..	104	109	44	18	12	4	291
301 to 400 ..	54	43	8	14	5	2	126
401 to 500 ..	24	31	5	8	1	..	69
501 to 750 ..	48	39	8	5	2	4	106
751 to 1,000 ..	20	14	5	4	..	2	45
Over 1,000 ..	35	15	3	8	1	2	64
Total ..	18,144	14,758	4,918	3,245	3,267	1,512	45,844

The relative importance of large and small factories is illustrated by a classification of the average number of persons employed according to the size of factory in which they work :—

FACTORIES : CLASSIFICATION OF PERSONS EMPLOYED ACCORDING TO SIZE OF FACTORY, 1951-52.

Size of Factory (Persons employed).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING PERIOD WORKED.							
Under 4	11,889	9,640	3,232	1,986	2,848	1,322	30,917
4	6,208	5,068	1,828	1,232	560	628	15,524
5 to 10	33,978	25,739	9,849	5,985	5,698	2,510	83,759
11 to 20	37,089	31,472	10,134	7,574	5,780	2,514	94,563
21 to 50	61,266	53,922	15,434	11,531	9,518	3,186	154,857
51 to 100	45,229	41,016	10,631	9,544	6,932	3,402	116,754
101 to 200	47,809	40,520	14,727	10,173	5,516	2,476	121,221
201 to 300	25,325	26,501	10,576	4,417	2,841	921	70,581
301 to 400	19,075	14,654	2,629	4,671	1,674	643	43,346
401 to 500	10,689	13,623	2,366	3,492	401	..	30,571
501 to 750	30,420	23,551	4,529	3,051	1,269	2,308	65,128
751 to 1,000	17,864	11,863	4,256	3,633	..	1,792	39,408
Over 1,000	63,028	27,989	5,328	17,434	2,617	2,928	119,324
Total	409,869	325,558	95,519	84,723	45,654	24,630	985,953
Average per Factory	22.59	22.06	19.42	26.11	13.97	16.29	21.51

3. Australia, 1938-39, 1945-46 and 1948-49 to 1951-52.—In the following table factories in Australia are classified according to the number of persons employed in conformity with the practice prior to 1945-46.

FACTORIES : CLASSIFICATION ACCORDING TO NUMBER OF PERSONS EMPLOYED. AUSTRALIA.

Year.	Establishments Employing on the Average—							
	20 and under.		21 to 100.		101 and upwards.		Total.	
	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.
1938-39—								
Number	21,982	129,505	4,013	170,971	946	272,022	26,941	572,498
Average per establish- ment .. ..	..	5.89	..	42.60	..	287.55	..	21.25
1945-46—								
Number	24,819	154,242	5,080	211,781	1,285	390,538	31,184	756,561
Average per establish- ment .. ..	..	6.21	..	41.69	..	303.92	..	24.26
1948-49—								
Number	32,394	200,889	6,226	257,204	1,450	439,595	40,070	897,688
Average per establish- ment .. ..	..	6.20	..	41.31	..	303.17	..	22.40
1949-50—								
Number	33,673	207,600	6,442	266,027	1,481	455,187	41,596	928,814
Average per establish- ment .. ..	..	6.17	..	41.37	..	307.16	..	22.33
1950-51—								
Number	34,885	214,044	6,665	274,621	1,597	488,245	43,147	976,910
Average per establish- ment .. ..	..	6.14	..	41.20	..	305.84	..	22.65
1951-52—								
Number	37,634	224,763	6,635	271,611	1,575	489,579	45,844	985,953
Average per establish- ment .. ..	..	5.97	..	40.94	..	310.84	..	21.51

§ 4. Power Equipment in Factories.

1. **General.**—In 1936–37 statistics of power equipment in factories were collected on a basis different from that previously in use. Information now obtained relates to the “rated horse-power” of engines ordinarily in use and of engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of Central Electric Stations are collected in greater detail. To avoid duplication it is essential that some distinction should be made between Central Electric Stations and other classes of industries. In the following tables Central Electric Stations have been treated separately from other factories.

In para. 2 below, 836 factories are shown in 1951–52 as using no power other than hand-power, the distribution of these factories among the various industries being as follows:—Fibrous Plaster and Products, 50; Industrial and Heavy Chemicals and Acids and Pharmaceutical and Toilet Preparations, 15; Galvanized Ironworking, Tinsmithing, 33; Tailoring and Ready-made Clothing, 230; Dressmaking, 53; Millinery, 18; Bakeries, 86; Cabinet and Furniture Making, 12; all other industries, 339.

2. **Rated Horse-power of Engines in Factories other than Central Electric Stations.**—The following table shows the number of factories using power-driven machinery, those using manual labour only, and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1951–52:—

FACTORIES(a) : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1951–52.

State.	Number of Establishments.(a)			Rated Horse-power of Engines and Motors.	
	Using Power.	Others.	Total.	Ordinarily in use.(b)	In Reserve or Idle (omitting obsolete).
New South Wales	18,012	47	18,059	1,502,010	196,253
Victoria	14,397	293	14,690	998,927	142,256
Queensland	4,682	192	4,874	366,939	42,942
South Australia	3,086	127	3,213	269,057	35,730
Western Australia	3,016	151	3,167	156,240	23,473
Tasmania	1,484	26	1,510	164,210	28,838
Australia.. ..	44,677	836	45,513	3,457,383	469,492

(a) Excludes Central Electric Stations.
factories.

(b) Excludes motors driven by electricity generated by

3. **Rated Horse-power of Engines and Electric Motors Ordinarily in Use.**—(i) *According to Type, States.* Particulars of the types and the total rated horse-power of engines, etc., ordinarily in use in each State are given below:—

FACTORIES(a) : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1951–52.

State.	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total. (b)
	Recipro- cating.	Tur- bine.	Gas.	Light Oils.	Heavy Oils.		Pur- chased.	Own Gener- ation. (c)	
N.S.W. ..	106,643	77,752	2,606	75,835	88,569	363	1,150,242	81,707	1,502,010
Victoria ..	24,929	41,149	1,642	17,544	20,922	1,261	391,480	39,184	998,927
Queensland ..	86,544	16,960	6,219	10,340	20,118	..	226,758	57,465	366,939
S. Australia ..	5,891	7,371	1,628	3,402	13,452	10	237,303	19,775	269,057
W. Australia ..	10,406	..	1,588	6,798	15,245	..	122,113	7,598	156,240
Tasmania ..	2,299	2,003	1	8,785	1,836	192	149,094	..	164,210
Australia ..	236,712	145,235	13,684	122,704	160,142	1,826	2,777,088	205,729	3,457,383

(a) Excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(ii) *According to Type, Australia.* In the following table details of the total rated horse-power of the various types of engines in use are given for Australia for the years 1938-39, 1945-46 and 1948-49 to 1951-52.

FACTORIES(a) : TYPES AND TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, AUSTRALIA.

Year.	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total. (b)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (c)	
1938-39 ..	268,409	84,149	32,916	17,971	55,799	1,616	1,017,912	179,890	1,478,772
1945-46 ..	236,378	117,736	20,481	23,876	56,189	1,737	1,755,936	226,602	2,211,433
1948-49 ..	229,953	120,289	16,024	55,158	72,165	1,515	2,249,360	177,296	2,744,404
1949-50 ..	232,047	135,217	15,035	67,986	92,151	1,703	2,421,174	186,566	2,905,313
1950-51 ..	230,664	140,145	15,879	91,415	114,260	1,882	2,635,713	181,788	3,250,938
1951-52 ..	232,512	149,435	13,684	122,704	160,142	1,826	2,770,080	205,729	3,457,383

(a) Excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(iii) *In Classes of Industry, 1951-52.* The next table shows the total rated horse-power of engines and electric motors ordinarily in use in the various classes of industry in each State.

FACTORIES(a) : TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1951-52.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-ferrous Mine and Quarry Products ..	76,093	42,372	11,453	12,961	8,470	13,297	164,646
II. Bricks, Pottery, Glass, etc. . .	42,806	27,529	6,755	6,862	6,648	2,138	92,738
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	86,286	77,355	5,832	15,800	23,588	2,382	211,243
IV. Industrial Metals, Machines, Conveyances ..	700,768	288,331	80,516	122,972	37,811	46,253	1,276,651
V. Precious Metals, Jewellery and Plate ..	4,783	5,296	402	1,017	521	71	12,090
VI. Textiles and Textile Goods (not Dress) ..	59,871	85,666	4,940	6,918	2,146	4,931	164,472
VII. Skins and Leather (not Clothing or Footwear) ..	18,982	18,648	4,561	4,699	2,359	1,454	50,703
VIII. Clothing (except Knitted) ..	30,647	25,861	3,261	2,712	1,954	526	64,961
IX. Food, Drink and Tobacco ..	171,808	159,982	146,227	48,439	30,744	15,127	572,327
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	152,537	106,141	80,056	23,545	32,836	30,719	425,834
XI. Furniture of Wood, Bedding, etc. . .	18,001	16,928	7,371	5,844	3,911	1,799	53,854
XII. Paper, Stationery, Printing, Bookbinding, etc. . .	59,632	75,516	7,395	11,628	4,422	44,741	203,334
XIII. Rubber ..	44,781	40,387	5,771	2,474	387	325	94,125
XIV. Musical Instruments ..	2,922	444	48	12	7	..	3,433
XV. Miscellaneous Products ..	17,471	18,201	487	1,614	436	336	38,545
Total, Classes I. to XV. ..	1,487,388	988,657	365,075	267,497	156,240	164,099	3,428,956
XVI. Gas Works ..	14,622	10,270	1,864	1,560	..	111	28,427
Grand Total ..	1,502,010	998,927	366,939	269,057	156,240	164,210	3,457,383

(a) Excludes Central Electric Stations.

4. Capacity of Engines and Generators installed in Central Electric Stations.—
(i) *According to Type, Australia.* Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1951–52 are given in the following table:—

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, AUSTRALIA, 1951–52.

Particulars.	Capacity of Engines and Generators.						
	Steam.		Internal Combustion.				Total.
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.	Water.	
Engines installed.. Rated H.P.	16,452	2,833,181	19,765	7,986	277,183	422,825	3,577,392
Generators installed—							
Kilowatt capacity—							
Total installed .. K.W.	10,741	2,106,508	13,541	5,289	174,069	310,634	2,620,782
Effective capacity .. „	10,364	1,808,220	10,310	3,995	159,994	304,569	2,297,452
Horse-power equivalent—							
Total installed .. H.P.	14,398	2,823,732	18,151	7,090	233,336	416,399	3,513,106
Effective capacity .. „	13,893	2,423,883	13,820	5,355	214,469	408,268	3,079,688

(ii) *States.* Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1951–52 are given in the next table.

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, 1951–52.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Engines installed.. Rated H.P.	1,372,050	932,384	371,596	327,157	265,955	308,250	3,577,392
Generators installed—							
Kilowatt capacity—							
Total installed .. K.W.	1,062,735	651,688	264,248	238,675	181,836	221,600	2,620,782
Effective capacity .. „	911,646	607,186	168,443	222,747	171,230	216,200	2,297,452
Horse-power equivalent—							
Total installed .. H.P.	1,424,575	873,575	354,219	319,939	243,748	297,050	3,513,106
Effective capacity .. „	1,222,043	813,921	225,794	298,588	229,530	289,812	3,079,688

§ 5. Employment in Factories.

1. *Number Employed.*—(i) *General.* All persons employed in the manufacturing activities of a factory, including proprietors who work in their own business and “outworkers” (see para. 4 (ii), page 867), are counted as factory employees, while those employed in selling and distributing, such as salesmen, travellers, collectors, carters employed solely on outward delivery of manufactured goods and retailing storemen are excluded. Prior to 1945–46 the occupational grouping collected was (i) working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) enginedrivers and firemen; (v) workers in factory, skilled and unskilled; (vi) carters and messengers; and (vii) persons working regularly at home for the establishment. This grouping did not record separate details for technical staff (e.g., chemists, draftsmen, etc.) and supervisory staff and in 1945–46 the set-up on the collection form was amended to obtain the following groupings:—(i) Working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers and persons working regularly at home.

Prior to the year 1928-29 average employment in factories was computed by dividing the sum of the number employed each week by the number of weeks worked. The figures therefore represented the average number employed over the period worked, which, for many factories, was less than a full year. Commencing with the year 1928-29 the figures represent the equivalent average number employed over a full year of fifty-two weeks. The classification of factories according to the number of persons employed (*see* § 3, p. 859), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.

(ii) *Australia.* Particulars of the numbers employed, the increase in employment and the rate per cent. of such increase are given for years 1938-39, 1945-46 and 1948-49 to 1951-52 in the following table:—

FACTORIES : EMPLOYMENT, AUSTRALIA.

Year.	Males.			Females.			Persons.		
	Number Employed.	Increase on Preceding Year.		Number Employed.	Increase on Preceding Year.		Number Employed.	Increase on Preceding Year.	
		Number.	Per Cent.		Number.	Per Cent.		Number.	Per Cent.
1938-39 ..	412,591	3,989	0.98	152,515	1,957	1.30	565,106	5,946	1.06
1945-46 ..	548,888	12,995	2.42	196,370	-18,316	-8.53	745,258	-5,321	-0.71
1948-49 ..	669,961	29,036	4.53	220,156	12,205	5.87	890,117	41,241	4.86
1949-50 ..	689,347	19,386	2.90	228,152	7,996	3.63	917,499	27,382	3.08
1950-51 ..	726,051	36,704	5.33	242,867	14,715	6.45	968,918	51,419	5.60
1951-52 ..	741,971	15,920	2.19	235,546	-7,321	-3.02	977,517	8,599	0.89

NOTE.—Minus sign (—) indicates decrease.

(iii) *States* The following table shows, for the same years, (a) the average number of persons employed in manufacturing industries in each State; (b) for each State, the percentage of the total number employed in factories in Australia; and (c) the number so employed per ten thousand of the mean population in each State and Australia.

FACTORIES : EMPLOYMENT.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
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AVERAGE NUMBER EMPLOYED DURING FULL YEAR (52 WEEKS).

1938-39 ..	228,781	201,831	54,110	43,371	23,211	13,802	565,106
1945-46 ..	310,870	256,249	65,460	63,188	30,256	19,235	745,258
1948-49 ..	378,380	292,006	82,945	75,830	38,354	22,602	890,117
1949-50 ..	382,385	303,476	88,963	78,436	40,733	23,506	917,499
1950-51 ..	406,905	316,792	94,579	82,994	43,761	23,827	968,918
1951-52 ..	405,994	324,143	94,349	83,907	45,097	24,027	977,517

PERCENTAGE OF AUSTRALIAN TOTAL.

1938-39 ..	40.48	35.72	9.58	7.67	4.11	2.44	100.00
1945-46 ..	41.72	34.38	8.78	8.48	4.06	2.58	100.00
1948-49 ..	42.51	32.80	9.32	8.52	4.31	2.54	100.00
1949-50 ..	41.68	33.08	9.70	8.55	4.44	2.56	100.00
1950-51 ..	42.00	32.60	9.76	8.57	4.52	2.46	100.00
1951-52 ..	41.53	33.16	9.65	8.58	4.62	2.46	100.00

FACTORIES: EMPLOYMENT—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
PER 10,000 OF POPULATION.							
1938-39 ..	836	1,078	537	729	497	581	815
1945-46 ..	1,060	1,272	604	1,002	617	769	1,003
1948-49 ..	1,235	1,382	731	1,140	734	843	1,141
1949-50 ..	1,206	1,398	765	1,129	746	847	1,140
1950-51 ..	1,243	1,416	793	1,167	766	829	1,166
1951-52 ..	1,208	1,409	773	1,150	763	801	1,145

2. Rates of Increase, 1938-39, 1945-46 and 1948-49 to 1951-52.—The percentage increase on the average number of persons employed in the preceding year is shown below for each State :—

FACTORIES: ANNUAL PERCENTAGE INCREASE OF PERSONS EMPLOYED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 ..	1.74	0.02	3.82	-1.62	0.34	4.80	1.06
1945-46 ..	-1.21	-0.54	2.07	-3.49	3.81	-1.41	-0.71
1948-49 ..	4.13	4.94	8.07	3.38	6.64	6.75	4.86
1949-50 ..	1.06	3.93	7.26	3.44	6.20	4.00	3.08
1950-51 ..	6.43	4.39	6.31	5.81	7.43	1.37	5.60
1951-52 ..	-0.24	2.32	-0.24	1.10	2.99	0.84	0.89

NOTE.—Minus sign (—) indicates decrease.

3. Persons Employed in Classes of Industry.—(i) *Australia.* The following table shows the average number of persons employed in factories in each industrial class in Australia for the years 1938-39, 1945-46 and 1948-49 to 1951-52 :—

FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51	1951-52.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	10,343	9,929	15,572	16,598	18,436	19,365
II. Bricks, Pottery, Glass, etc. ..	15,709	13,466	18,702	19,241	20,449	20,912
III. Chemicals. Dyes. Explosives, Paints, Oils and Grease ..	19,816	31,471	33,355	34,525	36,323	38,246
IV. Industrial Metals, Machines, Conveyances ..	177,677	292,477	333,313	344,313	373,798	389,252
V. Precious Metals, Jewellery and Plate ..	3,726	3,240	6,414	6,638	6,344	5,953
VI. Textiles and Textile Goods (not Dress)	46,082	55,008	64,855	65,528	68,280	63,548
VII. Skins and Leather (not Clothing or Footwear) ..	10,767	14,492	15,902	16,277	15,801	14,324
VIII. Clothing (except Knitted) ..	86,092	93,370	118,133	118,757	122,464	116,705
IX. Food, Drink and Tobacco ..	83,846	105,878	118,259	122,783	124,350	122,734
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	30,739	38,346	51,206	53,169	56,300	59,664
XI. Furniture of Wood, Bedding, etc. ..	15,287	13,107	20,024	21,021	22,818	22,156
XII. Paper, Stationery, Printing, Book-binding, etc. ..	39,913	39,905	50,571	53,002	55,328	56,455
XIII. Rubber ..	7,502	8,699	11,808	12,382	13,526	14,021
XIV. Musical Instruments ..	451	450	1,250	1,456	1,614	1,581
XV. Miscellaneous Products ..	7,727	14,838	18,123	18,561	19,401	18,176
Total, Classes I. to XV. ..	555,677	734,685	877,487	904,251	955,232	963,094
XVI. Heat, Light and Power ..	9,429	10,573	12,630	13,248	11,686	14,423
Grand Total ..	565,106	745,258	890,117	917,499	966,918	977,517

(ii) *States.* Particulars of the numbers employed in each industrial class are shown in the following table for each State :—

FACTORIES : PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1951-52.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	7,864	5,718	1,656	1,632	1,787	708	19,365
II. Bricks, Pottery, Glass, etc. ..	11,114	5,165	1,131	1,901	1,237	364	20,912
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	17,408	14,144	1,424	3,096	1,840	336	38,248
IV. Industrial Metals, Machines, Conveyances ..	176,689	112,572	32,881	43,058	16,376	7,676	389,252
V. Precious Metals, Jewellery and Plate ..	1,953	3,090	316	349	228	17	5,953
VI. Textiles and Textile Goods (not Dress) ..	23,224	33,402	1,861	2,371	771	1,919	63,548
VII. Skins and Leather (not Clothing or Footwear) ..	5,502	5,329	1,221	1,302	708	262	14,324
VIII. Clothing (except Knitted) ..	46,975	47,536	9,596	6,678	4,986	934	116,705
IX. Food, Drink and Tobacco ..	39,941	39,506	21,594	10,783	6,096	4,814	122,734
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	20,973	14,862	11,091	4,102	5,420	3,216	59,664
XI. Furniture of Wood, Bedding, etc. ..	8,103	6,618	3,215	2,044	1,527	649	22,156
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	24,504	18,979	4,732	3,389	2,229	2,622	56,455
XIII. Rubber ..	6,600	4,822	1,534	773	158	134	14,021
XIV. Musical Instruments ..	1,271	212	38	40	20	..	1,581
XV. Miscellaneous Products ..	7,925	8,269	565	818	405	194	18,176
Total, Classes I. to XV.	400,046	320,224	92,855	82,336	43,788	23,845	963,094
XVI. Heat, Light and Power ..	5,948	3,919	1,494	1,571	1,309	182	14,423
Grand Total ..	405,994	324,143	94,349	83,907	45,097	24,027	977,517

4. *Persons Employed According to Occupational Status.*—(i) *General.* In the following table the average number of persons employed in each State during 1951-52 are classified according to their occupational status. As mentioned previously, persons employed in factories are now classified on a basis different from that adopted prior to 1945-46. The nature of this change is indicated in § 5, para. 1.

FACTORIES : PERSONS EMPLOYED—OCCUPATIONAL STATUS, 1951-52.

State.	Average Number of Persons Employed.						Total.
	Working Proprietors.	Managerial and Clerical Staff, etc.(a)	Chemists, Draftsmen, etc.	Foremen and Overseers.	Workers in Factory (Skilled and Unskilled).	Carters (excluding Delivery only) and Messengers, etc. (b)	
New South Wales ..	14,313	43,066	5,154	16,318	324,410	2,733	405,994
Victoria ..	12,851	32,846	4,019	13,866	258,251	2,310	324,143
Queensland ..	4,323	8,638	772	3,216	76,632	768	94,349
South Australia ..	2,331	9,088	1,142	3,434	67,496	416	83,907
Western Australia ..	2,410	3,423	327	1,660	37,147	130	45,097
Tasmania ..	955	2,249	318	1,022	19,348	135	24,027
Australia ..	37,183	99,310	11,732	39,516	783,284	6,492	977,517

(a) Includes salaried managers and working directors at home.

(b) Includes persons working regularly

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and embraces only persons to whom work is given out by factories to be done at home. Owing to the amended employment groupings adopted in 1945-46 (see § 5. 1.) persons working regularly at home for factories are now included with carters, messengers and others and separate details are no longer available. The number of "outworkers" employed by factories in 1944-45 was 1,049.

5. *Monthly Employment, 1938-39, 1945-46 and 1949-50 to 1951-52.*—The following table shows the number of persons (excluding working proprietors) employed in factories on the pay-day nearest to the 15th of each month for years up to 1949-50 and on the last pay-day of the month thereafter.

FACTORIES : MONTHLY EMPLOYMENT, AUSTRALIA.
(EXCLUDING WORKING PROPRIETORS.)

Month.	1938-39.	1945-46.	1949-50.	1950-51.	1951-52.
MALES.					
July	387,693	518,734	584,186	682,797	710,373
August	389,979	519,122	622,085	685,454	711,656
September	391,576	511,909	646,928	685,873	712,284
October	393,977	505,753	652,463	687,498	714,424
November	395,192	503,296	655,097	692,615	716,300
December	394,438	489,040	655,306	690,565	708,848
January	385,742	513,396	658,082	692,678	710,357
February	392,056	533,761	664,547	694,602	709,453
March	395,146	543,347	669,336	696,262	707,701
April	391,005	547,253	669,389	700,154	702,571
May	393,609	553,980	674,263	702,628	696,475
June	390,973	558,428	677,513	704,515	694,871
FEMALES.					
July	147,282	204,705	195,016	229,987	243,646
August	149,294	204,150	211,519	232,090	244,629
September	151,159	199,331	219,867	233,914	244,712
October	152,473	193,587	222,680	236,282	245,285
November	152,806	191,689	225,063	238,740	242,831
December	151,165	183,899	223,894	237,141	237,174
January	141,853	184,810	223,213	236,018	231,186
February	151,883	188,632	228,232	242,902	229,047
March	154,854	192,699	231,238	243,181	225,487
April	152,614	192,084	230,354	243,011	216,845
May	150,693	192,215	231,345	243,768	212,036
June	148,601	192,137	231,206	244,268	207,163
PERSONS.					
July	534,975	723,439	779,202	912,784	954,019
August	539,273	723,272	833,604	917,544	956,285
September	542,735	711,240	866,795	919,787	956,996
October	546,450	699,340	875,143	923,780	959,709
November	547,998	694,985	880,160	931,353	959,131
December	545,603	672,939	879,200	927,706	946,022
January	527,595	698,206	881,295	928,696	941,543
February	543,939	722,393	892,779	937,504	938,500
March	550,000	736,046	900,574	939,443	933,188
April	543,619	739,337	899,743	943,165	919,416
May	544,302	746,195	905,608	946,396	908,511
June	539,574	750,565	908,719	948,783	902,034

6. Distribution of Employees According to Age.—The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, permits of a distribution of employees (excluding working proprietors) into seven age-groups from 1945 to 1946 onwards, instead of three as in previous years. The particulars are collected as at June. The numbers employed in each age-group on the last-pay day in June, 1951 and 1952 are given below :—

FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1951 AND 1952.

(EXCLUDING WORKING PROPRIETORS.)

Age Group.	June, 1951.			June, 1952.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Under 16 years	8,219	6,236	14,455	9,079	5,669	14,748
16 years	10,835	8,163	18,998	11,505	7,185	18,690
17 „	12,125	9,000	21,125	12,608	8,364	20,972
18 „	12,819	10,182	23,001	12,255	8,854	21,109
19 „	12,200	9,804	22,004	11,711	8,296	20,007
20 „	12,934	9,699	22,633	11,537	7,732	19,269
21 „ and over	635,383	191,184	826,567	626,176	161,063	787,239
Total	704,515	244,268	948,783	694,871	207,163	902,034

As comparative details based on the new age grouping are not available for the years prior to 1945-46, the following table shows the age distribution in sexes for Australia in June, 1939, 1946 and 1949 to 1952 on the old basis.

FACTORIES : DISTRIBUTION OF EMPLOYEES IN JUNE, ACCORDING TO AGE, AUSTRALIA.

(EXCLUDING WORKING PROPRIETORS.)

In June—	Under 16 Years.		16 and under 21 Years.		21 Years and Over.		Total.	
	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
MALES.								
1939 ..	16,109	4.12	76,418	19.55	298,436	76.33	390,963	100.00
1946 ..	9,016	1.61	69,413	12.43	479,999	85.96	558,428	100.00
1949 ..	7,791	1.21	66,030	10.23	572,440	88.56	646,261	100.00
1950 ..	7,812	1.15	63,310	9.35	606,391	89.50	677,513	100.00
1951 ..	8,219	1.17	60,913	8.64	635,383	90.19	704,515	100.00
1952 ..	9,079	1.31	59,616	8.58	626,176	90.11	694,871	100.00
FEMALES.								
1939 ..	15,497	10.43	56,273	37.87	76,831	51.70	148,601	100.00
1946 ..	7,881	4.10	53,018	27.59	131,238	68.31	192,137	100.00
1949 ..	6,326	2.88	51,563	23.47	161,763	73.65	219,652	100.00
1950 ..	6,055	2.62	48,021	20.77	177,130	76.61	231,206	100.00
1951 ..	6,236	2.55	46,848	19.18	191,184	78.27	244,268	100.00
1952 ..	5,669	2.74	40,431	19.52	161,063	77.74	207,163	100.00
PERSONS.								
1939 ..	31,606	5.86	132,691	24.59	375,267	69.55	539,564	100.00
1946 ..	16,897	2.25	122,431	16.31	611,237	81.44	750,565	100.00
1949 ..	14,117	1.63	117,593	13.58	734,203	84.79	865,913	100.00
1950 ..	13,867	1.53	111,331	12.25	783,521	86.22	908,719	100.00
1951 ..	14,455	1.52	107,761	11.36	826,567	87.12	948,783	100.00
1952 ..	14,748	1.64	100,047	11.09	787,239	87.27	902,034	100.00

§ 6. Sex Distribution in Factories.

1. Distribution According to Sex of Persons Employed.—(i) *General.* In New South Wales the ratio of the number of females engaged in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and in 1951-52 was one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one to three, and in 1951-52 was about two to five. For Australia as a whole the ratio of females employed in factories was highest in 1943-44 at about two females to five males but by 1946-47 the ratio had declined to the level of one female to three males, where it has since remained.

(ii) *Average Number of Males and Females Employed.* The following table shows the average number of males and females employed in factories in each State for 1938-39, 1945-46 and 1948-49 to 1951-52 :—

FACTORIES : MALES AND FEMALES EMPLOYED.

State.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
MALES.						
New South Wales ..	167,172	227,454	282,312	284,055	301,307	304,808
Victoria ..	136,218	178,951	208,184	216,198	224,919	233,699
Queensland ..	43,941	53,587	68,385	72,948	77,182	77,673
South Australia ..	35,406	49,523	60,890	63,133	66,840	68,045
Western Australia ..	18,704	24,268	31,682	33,711	36,349	37,812
Tasmania ..	11,150	15,105	18,508	19,302	19,454	19,934
Australia ..	412,591	548,888	669,961	689,347	726,051	741,971
FEMALES.						
New South Wales ..	61,609	83,416	96,068	98,330	105,658	101,186
Victoria ..	65,013	77,298	83,822	87,778	91,873	90,444
Queensland ..	10,109	11,873	14,560	16,015	17,397	16,676
South Australia ..	7,965	13,065	14,940	15,303	16,154	15,862
Western Australia ..	4,507	5,988	6,672	7,022	7,412	7,285
Tasmania ..	2,652	4,130	4,094	4,204	4,373	4,093
Australia ..	152,515	196,370	220,156	228,152	242,867	235,546

2. Rate of Variation for each Sex.—The percentages of increase or decrease on the average numbers of males and females employed in the preceding year are shown below for the years 1938-39, 1945-46 and 1948-49 to 1951-52 :—

FACTORIES : ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES EMPLOYED.

State.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
MALES.						
New South Wales ..	1.69	1.65	3.56	0.62	6.07	1.16
Victoria ..	0.04	2.60	4.61	3.85	4.03	3.90
Queensland ..	3.79	4.09	7.65	6.67	5.80	0.64
South Australia ..	-2.39	0.95	3.08	3.68	5.87	1.80
Western Australia ..	-0.30	8.32	7.33	6.40	7.83	4.02
Tasmania ..	4.40	2.37	7.55	4.29	0.79	2.47
Total ..	0.98	2.42	4.53	2.89	5.32	2.19
FEMALES.						
New South Wales ..	1.88	-8.24	5.84	2.35	7.45	-4.23
Victoria ..	-0.03	-7.11	5.75	4.12	5.26	-1.56
Queensland ..	3.96	-6.16	10.07	9.99	8.63	-4.14
South Australia ..	1.08	-16.76	4.66	2.43	5.56	-1.81
Western Australia ..	3.06	-11.18	3.44	5.25	5.55	-1.71
Tasmania ..	6.51	-13.14	3.25	2.69	4.02	-6.40
Total ..	1.30	-8.53	5.87	3.63	6.45	-3.01

NOTE.—Minus sign (—) indicates decrease.

3. **Masculinity of Persons Employed in Factories.**—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons employed in each State. The following table shows particulars for the years 1938-39, 1945-46 and 1948-49 to 1951-52 :—

FACTORIES : MASCULINITY(a) OF PERSONS EMPLOYED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39	271	208	432	445	415	420	271
1945-46	273	232	451	362	405	366	280
1948-49	294	248	470	408	475	452	304
1949-50	289	248	455	413	480	459	302
1950-51	285	245	444	414	490	445	299
1951-52	301	258	466	429	519	487	315

(a) Number of males per 100 females.

For a number of years prior to 1926-27 there were on the average 300 males employed in factories for every 100 females, but by 1932-33, as a result of the particularly severe effect of the depression on the heavier industries where males predominate in number, there were only 239 males employed to every 100 females. With the subsequent recovery of employment in the heavier industries the proportion of males per 100 females increased to 271 in 1937-38 and 1938-39. The enlistment of men in the armed services and the expansion of industry and the consequential absorption of women brought about by the 1939-45 War caused a decrease in masculinity from 1938-39 to 1943-44. However, following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased, and in 1951-52 there were 315 males to every 100 females employed in factories.

4. **Employment of Females in Particular Industries.**—(i) *General.* The majority of females in manufacturing industries are employed in four classes, namely :—IV., Industrial Metals, Machines, etc.; VI., Textiles; VIII., Clothing; and IX., Food, Drink and Tobacco. In 1951-52 these industries accounted for 80.15 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were 126 females to every 100 males and in Class VIII., Clothing, with 242 females per 100 males. The following tables show the average number of males and females employed in each of these classes in 1951-52 :—

MALES AND FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, 1951-52.

Class.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
IV. Industrial Metals, etc. ..	157,235	100,148	31,018	38,708	15,680	7,346	350,135
VI. Textiles and Textile Goods (not Dress) ..	9,882	15,049	709	1,273	408	800	28,121
VIII. Clothing (except Knitted) ..	13,046	14,722	2,572	1,948	1,482	373	34,143
IX. Food, Drink and Tobacco ..	27,693	28,919	18,346	8,015	4,703	3,375	91,051
All Other Classes ..	96,952	74,861	25,028	18,101	15,539	8,040	238,521
Total ..	304,868	233,699	77,673	68,045	37,812	19,934	741,971
FEMALES.							
IV. Industrial Metals, etc. ..	19,454	12,424	1,863	4,350	696	330	39,117
VI. Textiles and Textile Goods (not Dress) ..	13,342	18,353	1,152	1,098	363	1,119	35,427
VIII. Clothing (except Knitted) ..	33,929	32,814	7,024	4,730	3,504	561	82,562
IX. Food, Drink and Tobacco ..	12,248	10,587	3,248	2,768	1,393	1,439	31,683
All Other Classes ..	22,213	16,266	3,389	2,916	1,329	644	46,757
Total ..	101,186	90,444	16,676	15,862	7,285	4,093	235,546

(ii) *Females Employed in Clothing Manufacture.* The employment of females in the several industries of Class VIII., Clothing—in which class the largest number of females is employed—and the relation of their number to that of the males so employed are shown in the following table.

FEMALES EMPLOYED IN CLOTHING INDUSTRIES, 1951-52.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females.	Femininity. (a)	Males.	Females.	Femininity. (a)	Males.	Females.	Femininity. (a)
Tailoring and Ready-made Clothing	3,321	14,903	449	3,384	7,555	223	1,608	5,455	339
Waterproof and Oilskin Clothing	117	661	565	152	399	263	17	119	700
Dressmaking, Hemstitching	192	2,394	1,247	1,543	9,819	636	172	3,426	1,992
Millinery	229	1,412	617	221	903	409	46	555	1,207
Shirts, Collars and Under-clothing	523	4,404	842	621	4,602	741	194	2,296	1,184
Foundation Garments	135	1,432	1,061	174	1,109	637	22	210	955
Handkerchiefs, Ties and Scarves	174	936	538	90	383	426	2	8	400
Hats and Caps	627	702	112	365	288	80	25	131	524
Gloves	112	391	349	105	325	310	36	157	436
Boots and Shoes	3,799	3,797	100	5,448	5,410	99	2,337	1,920	82
Boot and Shoe Repairing	1,348	77	6	594	28	5	674	38	6
Boot and Shoe Accessories	205	222	108	404	236	58	39	3	8
Umbrellas and Walking Sticks	50	87	174	23	55	239	16	40	250
Dyeworks and Cleaning (including Renovating and Repairing)	2,168	2,226	103	1,527	1,478	97	1,187	1,461	123
Other	46	285	620	71	224	315	..	..	..
Total	13,046	33,929	260	14,722	32,814	223	6,375	15,819	248

(a) Number of females per 100 males.

§ 7. Child Labour in Factories.

1. Conditions of Child Labour.—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.

2. Number of Children Employed, 1939, 1951 and 1952.—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940 to 14,748 in June, 1952 which is most marked in all States excepting Western Australia, was probably caused by several factors, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate which occurred about 1929, and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years mentioned.

FACTORIES : CHILDREN(a) EMPLOYED, JUNE.

State.	1939.			1951.			1952.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New Sth. Wales	5,759	7,084	12,843	2,184	1,767	3,951	2,654	1,625	4,279
Victoria	6,167	5,005	11,172	2,790	2,139	4,929	2,981	1,911	4,892
Queensland	1,790	1,334	3,124	1,667	1,178	2,845	1,724	1,076	2,800
South Australia	1,296	1,053	2,349	721	733	1,454	804	696	1,500
Western Aust.	705	521	1,226	755	378	1,133	804	324	1,128
Tasmania	392	500	892	102	41	143	112	37	149
Australia	16,109	15,497	31,606	8,219	6,236	14,455	9,079	5,669	14,748

(a) Under sixteen years of age.

3. **Industries Employing Child Labour.**—The distribution of children employed in factories in June, 1952 and the proportion of children employed to total employees are given in the following table according to the class of industry :—

FACTORIES : CHILDREN EMPLOYED, BY CLASSES, AUSTRALIA, JUNE, 1952.

Class of Industry.	Children Employed.		Total Employees. (a)		Proportion (per cent.) of Children Employed to Total Employees. (a)	
	Males.	Females.	Males.	Females.	Males.	Females.
Industrial Metals, Machines, Convey- ances	4,551	631	337,234	34,619	1.35	1.82
Textiles and Textile Goods (not Dress)	317	734	23,948	30,088	1.32	2.44
Clothing (except Knitted)	473	2,526	27,108	71,671	1.74	3.52
Food, Drink and Tobacco	1,065	778	85,633	28,642	1.24	2.72
Sawmills, Joinery, Boxes, etc. .. .	649	67	50,911	2,309	1.27	2.90
Furniture of Wood, Bedding, etc. ..	546	66	15,659	2,917	3.49	2.26
Paper, Stationery, Printing, Bookbind- ing	664	464	39,269	14,290	1.69	3.25
All other Industries	814	403	115,367	22,625	0.71	1.78
Total	9,079	5,669	695,129	207,161	1.31	2.74

(a) Excludes working proprietors.

4. **Apprenticeship.**—In all the States, Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 8. Salaries and Wages Paid and Value of Production.

Note.—In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

1. **General.**—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1951–52 was £2,635 million, of which amount £1,513 million represented the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and £97 million the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of the output, namely, £1,025 million, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e., “the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production.” The total amount of salaries and wages paid in factories in 1951–52 was £612 million. This figure, which excludes amounts drawn by working proprietors, was the highest ever recorded and shows an increase of £120 million or 24.4 per cent. on that for the previous year.

2. **Salaries and Wages Paid.**—(i) *In Classes of Industry, 1951–52.* The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table.

FACTORIES : SALARIES AND WAGES PAID, 1951-52.
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	5,691	3,716	990	1,043	1,077	443	12,960
II. Bricks, Pottery, Glass, etc.	7,902	3,469	657	1,268	806	258	14,360
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	12,226	9,817	850	1,998	1,384	263	26,538
IV. Industrial Metals, Machines, Conveyances	125,979	77,272	18,960	29,816	9,496	5,040	266,563
V. Precious Metals, Jewellery and Plate	1,095	1,900	137	186	121	10	3,449
VI. Textiles and Textile Goods (not Dress)	12,764	18,848	824	1,422	400	1,009	35,267
VII. Skins and Leather (not Clothing or Footwear)	3,526	3,392	723	859	419	165	9,084
VIII. Clothing (except Knitted)	21,471	23,007	3,759	2,846	1,930	401	53,414
IX. Food, Drink and Tobacco	24,103	24,775	12,896	6,347	3,612	2,789	74,522
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	12,361	8,603	5,853	2,426	2,893	1,812	33,946
XI. Furniture of Wood, Bedding, etc.	4,742	3,523	1,510	1,079	748	312	11,914
XII. Paper, Stationery, Printing, Bookbinding, etc.	16,081	12,524	2,604	2,049	1,232	1,887	36,380
XIII. Rubber	5,237	3,662	779	494	92	78	10,342
XIV. Musical Instruments	793	122	19	21	7	..	962
XV. Miscellaneous Products	4,893	4,806	272	459	178	93	10,701
Total. Classes I. to XV.	258,867	199,436	50,833	52,313	24,395	14,560	600,404
XVI. Heat, Light and Power	4,785	3,150	1,073	1,245	989	143	11,385
Grand Total	263,652	202,586	51,906	53,558	25,384	14,703	611,789

(ii) *Totals and Averages, 1938-39, 1945-46 and 1948-49 to 1951-52.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The figures exclude working proprietors and the amounts drawn by them :—

FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES PAID.

Year.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
TOTAL AMOUNT PAID (£'000.)							
1938-39..	44,606	36,027	10,887	8,169	4,574	2,480	106,743
1945-46..	87,647	70,499	18,012	16,770	7,884	5,007	205,819
1948-49..	146,536	112,410	29,447	29,442	12,928	8,456	339,219
1949-50..	162,147	130,255	34,748	33,708	15,293	9,646	385,797
1950-51..	211,339	163,207	42,837	42,940	19,658	11,737	491,718
1951-52..	263,652	202,586	51,906	53,558	25,384	14,703	611,789
AVERAGE PER EMPLOYEE (£).							
1938-39..	201.77	185.64	210.78	195.57	207.90	188.31	196.31
1945-46..	290.75	284.09	285.00	272.71	273.01	269.85	285.17
1948-49..	401.06	399.86	371.11	398.93	357.18	389.57	395.57
1949-50..	439.04	429.21	408.67	441.70	397.13	428.29	436.56
1950-51..	537.13	534.64	473.80	531.59	474.15	513.74	526.34
1951-52..	673.13	650.79	576.57	656.54	594.67	637.29	650.61

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1951-52 were paid in New South Wales, South Australia and Victoria, in that order.

The average earnings per employee rose annually from 1938-39 to 1943-44 when a record high level of £291 was attained as a result of war-time conditions. In 1944-45 the average dropped to £285 and remained at this level in 1945-46. From 1945-46 average earnings rose each year and in 1951-52 reached a new record level of over £650.

(iii) *Total and Average Earnings of Males and Females, 1938-39, 1945-46 and 1948-49 to 1951-52.* Particulars for these years are given in the table on the following page.

FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
TOTAL AMOUNT PAID (£'000).							
1938-39..	38,272	29,006	9,920	7,488	4,129	2,234	91,049
1945-46..	73,380	56,773	16,178	14,654	7,038	4,353	172,376
1948-49..	123,263	90,765	26,331	26,722	11,555	7,503	285,489
1949-50..	135,875	105,135	30,948	29,809	13,692	8,538	323,997
1950-51..	176,031	130,923	37,870	37,786	17,620	10,336	410,566
1951-52..	220,885	163,688	46,087	47,194	22,870	13,056	513,780
AVERAGE PER EMPLOYEE (£).							
1938-39..	239.24	224.47	238.59	220.95	235.49	212.09	231.84
1945-46..	335.34	330.86	314.56	305.70	306.74	301.35	326.99
1948-49..	455.88	457.85	405.20	441.83	390.29	425.40	446.17
1949-50..	499.33	510.86	446.87	487.39	433.41	465.46	492.20
1950-51..	609.05	610.44	516.83	583.37	515.67	558.67	591.41
1951-52..	756.84	736.68	625.91	716.25	643.68	687.09	725.57
FEMALES.							
TOTAL AMOUNT PAID (£'000).							
1938-39..	6,334	7,021	967	681	445	246	15,694
1945-46..	14,267	13,726	1,834	2,116	846	654	33,443
1948-49..	23,273	21,645	3,116	3,370	1,373	953	53,730
1949-50..	26,272	25,120	3,600	3,899	1,601	1,108	61,800
1950-51..	35,308	32,284	4,967	5,154	2,038	1,401	81,152
1951-52..	42,767	38,898	5,819	6,364	2,514	1,647	98,009
AVERAGE PER EMPLOYEE (£).							
1938-39..	103.66	108.25	96.00	86.44	99.58	93.19	103.92
1945-46..	172.65	179.26	155.85	156.05	142.62	159.02	171.88
1948-49..	245.02	261.17	216.90	227.81	208.35	234.25	246.83
1949-50..	270.27	291.34	240.93	257.31	231.57	265.37	274.12
1950-51..	338.08	355.57	289.82	322.03	279.55	322.46	338.12
1951-52..	428.40	436.60	354.96	405.70	351.30	404.71	422.04

(iv) *Managers, Clerical Staff and Other Employees.* A further analysis of salaries and wages paid is given in the following table for 1951-52 and shows the amounts paid to managerial and clerical staff including salaried managers and working directors, chemists, draftsmen and other laboratory and research staff, and those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases:—

FACTORIES : SALARIES AND WAGES PAID TO MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, AUSTRALIA, 1951-52.

Class of Industry.	Managers, Clerical Staff, Chemists, Draftsmen, etc.		All Other Employees.	
	Males.	Females.	Males.	Females.
	£'000.	£'000.	£'000.	£'000.
I. Treatment of Non-metalliferous Mine and Quarry Products	1,452	206	11,216	86
II. Bricks, Pottery, Glass, etc.	1,077	276	12,605	402
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	4,801	1,163	17,771	2,803
IV. Industrial Metals, Machines, Conveyances	33,026	7,030	216,203	10,298
V. Precious Metals, Jewellery and Plate	374	124	2,613	337
VI. Textiles and Textile Goods (not Dress)	2,759	1,153	17,479	13,874
VII. Skins and Leather (not Clothing or Footwear)	987	186	6,751	1,161
VIII. Clothing (except Knitted)	2,983	1,492	17,133	31,805
IX. Food, Drink and Tobacco	8,858	2,420	52,590	10,654
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	2,970	596	30,050	332
XI. Furniture of Wood, Bedding, etc.	954	297	9,656	1,008
XII. Paper, Stationery, Printing, Bookbinding, etc.	4,070	1,477	25,958	4,876
XIII. Rubber	1,360	287	7,715	980
XIV. Musical Instruments	149	57	667	90
XV. Miscellaneous Products	1,283	435	6,938	2,045
Total, Classes I. to XV.	67,103	17,207	435,345	80,751
XVI. Heat, Light and Power	1,089	44	10,244	7
Grand Total	68,192	17,251	445,589	80,758
Average paid per employee	£. 944	£. 444	£. 701	£. 413

3. Power, Fuel and Light Used.—(i) *In Classes of Industry, 1951-52.* The expenditure by factories on power, fuel and light, including the value of lubricants and water, is of considerable importance; in 1951-52 it amounted to a new high level of £96,628,000, an increase of £24,946,000 as compared with the previous year and a little over six times the corresponding value in 1938-39. The following table shows the value of power, fuel and light, etc., used in the different classes of industry:—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED(a), 1951-52.

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	1,316	1,010	313	388	344	175	3,546
II. Bricks, Pottery, Glass, etc. ..	3,255	1,560	195	395	346	144	5,895
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	2,679	1,654	126	562	260	61	5,342
IV. Industrial Metals, Machines, Conveyances ..	16,689	3,365	1,099	3,883	596	577	26,209
V. Precious Metals, Jewellery and Plate ..	69	71	6	20	6	..	172
VI. Textiles and Textile Goods (not Dress) ..	1,058	1,375	36	162	27	75	2,733
VII. Skins and Leather (not Clothing or Footwear) ..	327	376	45	110	45	15	918
VIII. Clothing (except Knitted) ..	641	581	104	88	61	20	1,495
IX. Food, Drink and Tobacco ..	4,493	4,072	1,828	1,159	774	320	12,646
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	940	447	329	92	195	148	2,151
XI. Furniture of Wood, Bedding, etc. ..	114	63	29	29	16	5	256
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	941	786	83	174	54	550	2,588
XIII. Rubber ..	693	666	88	54	12	11	1,524
XIV. Musical Instruments ..	35	6	..	..	..	..	41
XV. Miscellaneous Products ..	308	252	14	31	6	2	613
Total, Classes I. to XV. ..	33,558	16,284	4,295	7,147	2,742	2,103	66,129
XVI. Heat, Light and Power ..	15,106	5,706	3,991	3,262	2,431	4	30,500
Grand Total ..	48,664	21,990	8,286	10,409	5,173	2,107	96,629

(a) Includes value of lubricants and water.

(ii) *Values of Items, 1951-52.* The following table shows the values of the various items of power, fuel and light used in factories in each State, during the year:—

FACTORIES : VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(a), 1951-52.

(£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal, Black	18,626	2,945	4,599	(b) 3,333	1,665	561	(b) 31,729
" Brown .. ..	..	3,875	..	..	..	..	3,875
Brown Coal Briquettes .. ..	..	1,586	..	..	..	..	1,586
Coke	8,888	912	258	2,175	133	141	12,507
Wood	407	783	376	359	658	194	2,777
Fuel Oil	5,658	4,448	899	1,731	1,216	394	14,346
Tar (Fuel)	419	250	5	76	17	18	785
Electricity	10,389	4,895	1,510	2,039	1,031	627	20,491
Gas	1,998	542	93	140	60	32	2,865
Other (Charcoal, etc.)	162	543	95	(c) 209	117	43	(c) 1,169
Water	1,297	700	199	179	127	43	2,545
Lubricating Oils	820	511	252	168	149	54	1,954
Total	48,664	21,990	8,286	10,409	5,173	2,107	96,629

(a) Includes value of lubricants and water. (b) Includes £892,000, the value of 359,000 tons of Leigh Creek coal. (c) Includes £18,000, the value of 13,000 tons of coke breeze.

(iii) *Quantities of Fuel Used, 1951-52.* The following table shows the quantities of fuel used in factories in each State during the year:—

FACTORIES : QUANTITIES OF FUEL USED, 1951-52.

Particulars.	Unit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Coal, Black	'ooo tons	4,914	535	1,265	(a) 808	453	157	(a)8,132
" Brown	"	"	6,436	"	"	"	"	6,436
Brown Coal Briquettes	"	"	494	"	"	"	"	494
Coke	"	1,706	136	35	275	26	15	2,193
Wood	"	196	506	231	162	474	119	1,688
Fuel Oil	'ooo gals.	74,410	58,510	9,404	23,069	13,627	4,420	183,440
Tar (Fuel)	"	20,620	4,342	168	1,504	890	509	28,033

(a) Includes 359,000 tons of Leigh Creek coal.

(iv) *Total Value, 1938-39, 1945-46 and 1948-49 to 1951-52.* The next table shows the amounts expended on power, fuel and light during these years:—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED.(a)
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938-39	7,652	4,000	1,423	1,018	1,169	438	15,700
1945-46	12,207	6,941	2,298	2,851	1,836	904	27,037
1948-49	21,611	11,337	4,086	5,123	2,745	1,160	46,062
1949-50	25,536	13,695	5,119	5,942	3,184	1,354	54,830
1950-51	35,381	17,371	6,295	7,267	3,759	1,609	71,682
1951-52	48,664	21,990	8,286	10,409	5,173	2,107	96,629

(a) Includes value of lubricants and water.

4. *Value of Materials Used.*—(i) *In Classes of Industry, 1951-52.* The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia in 1951-52 reached £1,513,069,000, representing 57.5 per cent. of the value of the final output (see para. 5). The following table shows the value of the materials used in various classes of industry in each State:—

FACTORIES : VALUE OF MATERIALS USED, 1951-52.
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliciferous Mine and Quarry Products	17,283	7,258	2,212	2,165	1,760	859	31,537
II. Bricks, Pottery, Glass, etc.	6,011	2,957	429	1,137	459	150	11,143
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	60,241	35,582	4,278	7,871	7,077	940	115,989
IV. Industrial Metals, Machines, Conveyances	245,294	113,620	26,585	65,602	12,780	13,636	477,517
V. Precious Metals, Jewellery and Plate	1,111	2,104	74	130	68	2	3,489
VI. Textiles and Textile Goods (not Dress)	39,792	59,786	3,832	4,909	2,420	4,663	115,402
VII. Skins and Leather (not Clothing or Footwear)	12,714	11,863	2,168	6,888	1,113	978	35,724
VIII. Clothing (except Knitted)	35,653	38,434	5,681	3,125	2,428	314	85,635
IX. Food, Drink and Tobacco	116,420	117,932	81,422	30,211	21,493	11,444	378,922
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	32,370	18,685	10,801	7,745	4,198	3,296	77,095
XI. Furniture of Wood, Bedding, etc.	8,834	7,332	2,936	2,316	1,539	417	23,374
XII. Paper, Stationery, Printing, Bookbinding, etc.	38,189	31,120	4,864	3,937	2,032	2,901	83,043
XIII. Rubber	17,343	16,160	3,257	997	231	171	38,159
XIV. Musical Instruments	958	148	6	5	2	"	1,119
XV. Miscellaneous Products	7,368	9,271	463	866	151	60	18,179
Total, Classes I. to XV.	639,581	472,252	149,008	137,904	57,751	39,831	1,496,327
XVI. Heat, Light and Power	7,710	5,365	1,419	1,294	901	194	16,883
Grand Total	647,291	477,617	150,427	139,198	58,652	40,025	1,513,210

(ii) *Total Amount, 1938-39, 1945-46 and 1948-49 to 1951-52.* The following table shows the values of materials used in factories for these years :—

FACTORIES : VALUE OF MATERIALS USED.
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	120,502	82,971	42,596	20,309	9,604	5,321	281,303
1945-46 ..	201,706	159,798	58,633	37,770	18,361	12,019	488,287
1948-49 ..	336,914	252,741	97,045	75,227	29,199	19,422	810,548
1949-50 ..	384,467	293,528	108,682	83,277	34,750	24,390	929,094
1950-51 ..	522,422	382,002	134,457	117,547	46,452	32,401	1,235,281
1951-52 ..	647,291	477,617	150,427	139,198	58,652	40,025	1,513,210

5. *Value of Output.*—(i) *In Classes of Industry, 1951-52.* The value of the output of factories in the various classes in each State in 1951-52 is shown in the following table. It represents the selling value at the factory of goods made or processed during the year, including by-products. In addition, it includes the amount received for other work done such as repair work, assembling and making up for customers. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the real value of factory production (*see para. 6*).

FACTORIES : VALUE OF OUTPUT, 1951-52.
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products	28,071	14,667	4,202	4,420	3,810	1,805	56,975
II. Bricks, Pottery, Glass, etc.	20,655	9,514	1,537	3,526	2,099	652	37,983
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	96,391	57,857	6,167	12,498	10,498	1,635	185,046
IV. Industrial Metals, Machines, Conveyances	452,180	232,711	64,503	113,461	27,455	26,466	916,776
V. Precious Metals, Jewellery and Plate	2,936	5,109	304	463	289	17	9,100
VI. Textiles and Textile Goods (not Dress)	62,268	90,461	5,755	7,164	3,223	6,448	174,719
VII. Skins and Leather (not Clothing or Footwear)	18,202	17,580	3,117	8,192	1,885	1,219	50,265
VIII. Clothing (except Knitted)	69,300	74,049	11,514	7,076	5,351	897	168,187
IX. Food, Drink and Tobacco	170,694	168,776	104,964	42,030	29,726	16,432	532,622
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	84,850	34,177	20,465	11,875	9,382	6,579	137,328
XI. Furniture of Wood, Bedding, etc.	16,195	13,587	5,411	4,043	2,812	902	42,950
XII. Paper, Stationery, Printing, Bookbinding, etc.	69,320	55,201	9,158	8,199	4,503	7,484	153,865
XIII. Rubber	25,163	24,855	5,091	1,828	457	334	57,728
XIV. Musical Instruments	2,154	336	41	31	14	..	2,576
XV. Miscellaneous Products	15,434	17,381	909	1,647	421	181	35,973
Total, Classes I. to XV.	1,103,813	816,243	242,608	226,453	101,925	71,051	2,562,093
XVI. Heat, Light and Power	35,533	17,724	7,435	6,400	4,646	875	72,613
Grand Total ..	1,139,346	833,967	250,043	232,853	106,571	71,926	2,634,706

(ii) *Total, 1938-39, 1945-46 and 1948-49 to 1951-52.* The following table shows the value of output in each State during these years :—

FACTORIES : VALUE OF OUTPUT.
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	218,420	152,967	63,321	35,005	19,549	11,158	500,420
1945-46 ..	367,092	286,990	91,201	60,223	34,023	22,119	867,648
1948-49 ..	609,724	446,838	154,670	124,072	53,417	36,657	1,425,378
1949-50 ..	693,203	526,466	175,156	141,573	63,978	45,080	1,645,450
1950-51 ..	923,912	675,033	216,212	192,623	84,431	58,624	2,150,835
1951-52 ..	1,139,346	833,967	250,043	232,853	106,571	71,926	2,634,706

6. *Value of Production.*—(i) *In Classes of Industry, 1951-52.* The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production".

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". All these deductions with the exception of depreciation are included in the items "value of materials used" and "value of fuel used" as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was agreed that no deduction should be made on this account for the present. The value of production as given in the following tables is obtained, therefore, by deducting "value of materials used" and "value of fuel used" from the "value of the output".

The figure thus calculated is, however, not the net value of production. The deduction for depreciation, particulars of which are shown in § 9, para. 4, was estimated at £34,113,000 for 1951-52. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges, have not been taken into account. Therefore, it must not be inferred that when wages and salaries are deducted from the value of production the whole of the "surplus" is available for interest and profit.

The value of factory production therefore approximates "net value added" in the manufacturing process. It amounted in 1951-52 to £1,025 million to which Class IV., Industrial Metals, etc., with £413 million or more than six times the value of production of this class in 1938-39, made the greatest contribution. This total value of production in 1951-52 represented an increase of £181.0 million over the figure for 1950-51 and £821.5 million (404 per cent.) over the value of production recorded in 1938-39.

The following table shows the value of production in 1951-52 in each State for the various classes of industry:—

FACTORIES: VALUE OF PRODUCTION, 1951-52.
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	9,473	6,398	1,678	1,866	1,707	771	21,893
II. Bricks, Pottery, Glass, etc. ..	11,390	4,996	914	1,995	1,294	357	20,946
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	33,470	20,621	1,763	4,064	3,162	635	63,715
IV. Industrial Metals, Machines, Conveyances ..	190,198	115,726	36,821	43,975	14,078	12,253	413,051
V. Precious Metals, Jewellery and Plate ..	1,756	2,916	225	313	214	14	5,438
VI. Textiles and Textile Goods (not Dress) ..	21,418	29,301	1,287	2,093	774	1,711	56,584
VII. Skins and Leather (not Clothing or Footwear) ..	5,161	5,341	974	1,194	727	226	13,623
VIII. Clothing (except Knitted) ..	33,006	35,033	5,729	3,863	2,863	564	81,058
IX. Food, Drink and Tobacco ..	49,781	46,772	21,713	10,660	7,459	4,668	141,053
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	21,539	15,045	9,335	4,038	4,989	3,136	58,082
XI. Furniture of Wood, Bedding, etc. ..	7,247	6,192	2,445	1,698	1,258	480	19,320
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	30,190	23,297	4,210	4,087	2,417	4,033	68,234
XIII. Rubber ..	7,126	8,029	1,746	778	215	151	18,045
XIV. Musical Instruments ..	1,161	182	34	27	12	..	1,416
XV. Miscellaneous Products ..	7,758	7,857	431	751	264	118	17,179
Total, Classes I. to XV.	430,674	327,706	89,305	81,402	41,433	29,117	999,637
XVI. Heat, Light and Power ..	12,717	6,654	2,025	1,844	1,313	677	25,230
Grand Total ..	443,391	334,360	91,330	83,246	42,746	29,794	1,024,867

(ii) *Total and Averages, 1938-39, 1945-46 and 1948-49 to 1951-52.* The value of production and the amount per person employed and per head of population are shown in the following table. For Australia as a whole the value of production per head of population increased from £29.34 per head in 1938-39 to £120.02 per head in 1951-52. For value per person employed, the increase was not quite so pronounced (from £360 per head in 1938-39 to £1,048 in 1951-52) owing to the considerable increase in the numbers of persons employed in 1951-52 as compared with 1938-39.

FACTORIES : VALUE OF PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE. (£'000.)							
1938-39 ..	90,266	65,996	19,302	13,678	8,776	5,399	203,417
1945-46 ..	153,179	120,250	30,270	25,602	13,826	9,196	352,323
1948-49 ..	251,199	182,760	53,540	43,722	21,474	16,074	568,769
1949-50 ..	283,201	219,244	61,354	52,353	26,044	19,336	661,532
1950-51 ..	366,109	275,660	75,460	67,809	34,220	24,614	843,872
1951-52 ..	443,391	334,360	91,330	83,246	42,746	29,794	1,024,867

PER PERSON EMPLOYED. (£.)

1938-39 ..	395	327	357	315	378	391	360
1945-46 ..	493	469	462	405	457	478	473
1948-49 ..	664	626	645	577	560	711	639
1949-50 ..	741	722	690	667	639	823	721
1950-51 ..	900	870	798	817	782	1,033	871
1951-52 ..	1,092	1,032	968	992	947	1,240	1,048

PER HEAD OF POPULATION. (£.)

1938-39 ..	33.00	35.25	19.14	22.98	18.80	22.72	29.34
1945-46 ..	52.24	59.67	27.92	40.58	28.22	36.74	47.43
1948-49 ..	81.98	86.49	47.18	65.73	41.12	59.92	72.93
1949-50 ..	89.28	101.02	52.75	76.22	47.72	69.71	82.18
1950-51 ..	111.82	123.24	63.26	95.37	59.89	85.59	101.53
1951-52 ..	132.12	145.28	74.79	114.14	72.31	99.79	120.02

7. *Value of Output and Cost of Production.*—As the total value of the output for Australia for 1951-52 was estimated at £2,634,706,000, there remained, after payment of £1,513,210,000 for the value of the materials used, £611,789,000 for salaries and wages and £96,629,000 for power, fuel and light, a balance of £413,078,000 to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit. The following table gives corresponding particulars for each State expressed absolutely and as percentages of the total value of the output for the year 1951-52 :—

FACTORIES : VALUE OF OUTPUT AND COST OF PRODUCTION, 1951-52.

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance. (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.
VALUE AND COST, ETC. (£'000.)					
New South Wales ..	647,291	48,664	263,652	179,739	1,139,346
Victoria ..	477,617	21,990	202,586	131,774	833,967
Queensland ..	150,427	8,286	51,906	39,424	250,043
South Australia ..	139,198	10,409	53,558	29,688	232,853
Western Australia ..	58,652	5,173	25,384	17,362	106,571
Tasmania ..	40,025	2,107	14,703	15,091	71,926
Australia ..	1,513,210	96,629	611,789	413,078	2,634,706

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.
(b) Includes lubricants and water. (c) See paragraph preceding this table.

FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1951-52—
continued.

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance, (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.
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PROPORTION OF COSTS, ETC., TO TOTAL VALUE OF OUTPUT.
(Per Cent.)

New South Wales	..	56.81	4.27	23.14	15.78	100.00
Victoria..	..	57.27	2.64	24.29	15.80	100.00
Queensland	..	60.16	3.31	20.76	15.77	100.00
South Australia	..	59.78	4.47	23.00	12.75	100.00
Western Australia	..	55.04	4.85	23.82	16.29	100.00
Tasmania	..	55.65	2.93	20.44	20.98	100.00
Australia ..	..	57.43	3.67	23.22	15.68	100.00

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.
(b) Includes lubricants and water. (c) See paragraph preceding this table.

§ 9. Value of Land, Buildings, Plant and Machinery.

1. **General.**—The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1951-52 :—

FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1951-52.
(£'000.)

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Land and buildings	153,662	119,465	28,610	28,507	16,747	12,499	359,490
Plant and machinery	166,437	128,934	41,290	32,177	20,716	20,590	410,144
Total ..	320,099	248,399	69,900	60,684	37,463	33,089	769,634

(a) Includes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates of the capital value of premises and plant rented. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified.

2. **Value of Land and Buildings.**—(i) *Total for Australia.* The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries for 1938-39, 1945-46 and 1948-49 to 1951-52.

FACTORIES : VALUE OF LAND AND BUILDINGS(a), AUSTRALIA.
(£'000.)

Class of Industry.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	2,779	3,020	4,331	4,851	6,281	6,905
II. Bricks, Pottery, Glass, etc. ..	2,953	3,331	4,246	4,719	5,883	6,761
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	7,377	18,461	20,254	22,076	20,920	25,262
IV. Industrial Metals, Machines, Conveyances ..	34,841	59,530	73,247	81,682	97,021	117,513
V. Precious Metals, Jewellery and Plate ..	633	752	1,515	1,614	1,688	2,037
VI. Textiles and Textile Goods (not Dress) ..	6,000	9,112	11,905	14,838	18,004	20,845
VII. Skins and Leather (not Clothing or Footwear) ..	2,096	2,966	3,777	4,158	4,764	5,382
VIII. Clothing (except Knitted) ..	10,624	13,994	18,440	19,763	22,128	24,768
IX. Food, Drink and Tobacco ..	33,273	40,129	48,075	52,197	60,217	68,916
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	4,107	5,441	8,072	9,442	11,680	14,505
XI. Furniture of Wood, Bedding, etc. ..	2,533	2,829	4,235	4,828	5,776	6,812
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	10,639	11,605	14,517	16,234	20,207	24,691
XIII. Rubber ..	1,676	1,865	2,476	3,038	3,792	4,620
XIV. Musical Instruments ..	105	133	268	325	387	380
XV. Miscellaneous Products ..	1,433	2,965	3,929	4,360	5,035	6,266
Total, Classes I. to XV. ..	121,069	176,133	219,287	244,125	283,783	355,663
XVI. Heat, Light and Power ..	9,851	10,806	13,453	15,424	19,002	23,827
Grand Total ..	130,920	186,939	232,740	259,549	302,785	359,490

(a) Includes estimated value of rented premises.

(ii) *In Classes of Industry in States, 1951-52.* The following table gives particulars of the various classes of industry in each State.

FACTORIES : VALUE OF LAND AND BUILDINGS(a), 1951-52.
(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	3,051	2,003	448	457	404	542	6,905
II. Bricks, Pottery, Glass, etc. ..	3,778	1,651	316	507	374	135	6,761
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	11,422	9,435	595	1,961	1,428	421	25,262
IV. Industrial Metals, Machines, Conveyances ..	55,859	36,148	7,889	10,072	4,546	2,999	117,513
V. Precious Metals, Jewellery and Plate ..	642	1,080	80	123	98	14	2,037
VI. Textiles and Textile Goods (not Dress) ..	8,022	11,284	452	503	291	293	20,845
VII. Skins and Leather (not Clothing or Footwear) ..	1,873	2,223	307	552	192	235	5,382
VIII. Clothing (except Knitted) ..	11,100	9,393	1,635	1,373	1,078	189	24,768
IX. Food, Drink and Tobacco ..	23,718	22,204	10,256	5,868	3,968	2,902	68,916
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	5,861	4,056	1,498	1,194	1,159	737	14,505
XI. Furniture of Wood, Bedding, etc. ..	2,525	2,353	850	472	451	161	6,812
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	9,919	9,040	1,468	1,184	701	2,379	24,691
XIII. Rubber ..	1,730	2,037	445	244	86	78	4,620
XIV. Musical Instruments ..	272	86	3	12	7	..	380
XV. Miscellaneous Products ..	2,704	2,967	151	250	139	55	6,266
Total, Classes I. to XV. ..	142,476	115,960	26,393	24,772	14,922	11,140	335,663
XVI. Heat, Light and Power ..	11,186	3,505	2,217	3,735	1,825	1,359	23,827
Grand Total ..	153,662	119,465	28,610	28,507	16,747	12,499	359,490

(a) Includes estimated value of rented premises.

(iii) *Totals in each State.* The following table shows the value of land and buildings in each State for the years 1938-39, 1945-46 and 1948-49 to 1951-52 :—

FACTORIES : VALUE OF LAND AND BUILDINGS.(a)
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39..	57,353	42,026	12,299	8,711	6,814	3,717	130,920
1945-46..	80,308	60,265	14,332	18,447	8,283	5,304	186,939
1948-49..	101,241	73,384	18,508	22,218	10,054	7,335	232,740
1949-50..	110,597	84,124	20,806	24,317	11,055	8,650	259,549
1950-51..	130,468	101,326	23,958	23,303	13,380	10,350	302,785
1951-52..	153,662	119,465	28,610	28,507	16,747	12,499	359,490

(a) Includes estimated value of rented premises.

Prior to 1929-30 the increase in the value of land and buildings was uninterrupted, rising from £23 million in 1903 to £118 million in 1929-30, a growth of £95 million in 27 years. During the three years ended 1932-33, there was a decline of £12 million to £105.8 million, but since that year the value has risen annually and stood at £359.5 million in 1951-52.

3. *Value of Plant and Machinery.*—(i) *Total for Australia, 1938-39, 1945-46 and 1948-49 to 1951-52.* The following table shows for Australia the approximate value of plant and machinery used in factories.

FACTORIES : VALUE OF PLANT AND MACHINERY(a), AUSTRALIA.
(£'000.)

Class of Industry.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
I. Treatment of Non-metalliferous Mine and Quarry Products..	7,028	4,916	7,342	8,055	9,239	11,911
II. Bricks, Pottery, Glass, etc..	3,145	2,968	4,333	4,991	6,057	7,461
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	6,754	17,792	19,255	23,518	26,247	30,559
IV. Industrial Metals, Machines, Conveyances ..	33,038	53,902	70,155	77,597	90,801	112,940
V. Precious Metals, Jewellery and Plate ..	197	253	721	770	808	955
VI. Textiles and Textile Goods (not Dress) ..	6,657	7,737	12,797	17,485	21,218	23,973
VII. Skins and Leather (not Clothing or Footwear) ..	973	1,584	2,063	2,535	2,994	3,642
VIII. Clothing (except Knitted) ..	2,557	4,135	6,923	7,792	9,294	10,403
IX. Food, Drink and Tobacco ..	32,101	33,234	42,796	48,318	56,489	66,712
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	3,908	5,023	8,481	10,377	12,614	15,869
XI. Furniture of Wood, Bedding, etc. ..	728	741	1,427	1,679	2,035	2,483
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	9,188	8,556	15,027	19,193	25,301	33,613
XIII. Rubber ..	1,368	1,219	2,244	2,754	3,456	4,171
XIV. Musical Instruments ..	12	23	134	154	227	302
XV. Miscellaneous Products ..	758	1,856	2,806	3,275	4,008	4,674
Total, Classes I. to XV. ..	108,412	143,939	196,504	228,493	270,788	329,668
XVI. Heat, Light and Power ..	35,250	41,606	49,990	57,109	65,827	80,476
Grand Total ..	143,662	185,545	246,494	285,602	336,615	410,144

(a) Includes estimated value of rented plant and machinery.

Except for the years 1930-31 to 1933-34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in Australia. The increase in 1951-52 of £73.6 million over 1950-51 extended over all industrial classes. The greatest increase occurred in Class IV., Industrial Metals, Machines, Implements and Conveyances.

(ii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1938-39, 1945-46 and 1948-49 to 1951-52. During 1951-52 increases occurred in all States, New South Wales showing the largest increase, £29.9 million.

FACTORIES : VALUE OF PLANT AND MACHINERY.(a)

(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39..	62,693	38,627	18,095	9,750	8,095	6,402	143,662
1945-46..	72,561	58,537	18,690	19,018	8,508	8,231	185,545
1948-49..	99,812	76,080	25,757	22,792	9,800	12,253	246,494
1949-50..	113,864	92,748	28,904	24,901	11,457	13,728	285,602
1950-51..	136,491	107,261	34,235	26,759	14,713	17,156	336,615
1951-52..	166,437	128,934	41,290	32,177	20,716	20,590	410,144

(a) Includes estimated value of rented plant and machinery.

(iii) *Value according to Class of Industry, 1951-52.* The following table shows the value of plant and machinery used in factories in each State during 1951-52 according to class of industry.

FACTORIES : VALUE OF PLANT AND MACHINERY(a), 1951-52.

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	5,892	2,721	836	1,506	620	336	11,911
II. Bricks, Pottery, Glass, etc. ..	3,981	1,928	426	491	419	216	7,461
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	13,474	11,074	615	2,907	1,958	531	30,559
IV. Industrial Metals, Machines, Conveyances ..	60,414	30,802	6,444	10,386	3,078	1,816	112,940
V. Precious Metals, Jewellery and Plate ..	304	546	27	41	32	5	955
VI. Textiles and Textile Goods (not Dress) ..	9,038	13,108	811	327	210	479	23,973
VII. Skins and Leather (not Clothing or Footwear) ..	1,326	1,260	387	328	200	141	3,642
VIII. Clothing (except Knitted) ..	4,285	4,304	742	544	429	99	10,403
IX. Food, Drink and Tobacco ..	20,061	18,370	17,380	5,148	3,575	2,178	66,712
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving ..	5,634	3,859	2,664	763	1,533	1,416	15,869
XI. Furniture of Wood, Bedding, etc. ..	902	748	328	231	212	62	2,483
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	9,502	14,183	1,786	1,325	873	5,944	33,613
XIII. Rubber ..	1,569	1,830	508	177	44	43	4,171
XIV. Musical Instruments ..	248	49	3	1	1	..	302
XV. Miscellaneous Products ..	1,911	2,388	77	218	52	28	4,674
Total, Classes I. to XV.	138,541	107,170	33,034	24,393	13,236	13,294	329,668
XVI. Heat, Light and Power ..	27,896	21,764	8,256	7,784	7,480	7,296	80,476
Grand Total ..	166,437	128,934	41,290	32,177	20,716	20,590	410,144

(a) Includes estimated value of rented plant and machinery.

4. *Depreciation of Land and Buildings and Plant and Machinery, 1951-52.*—The following table shows the allowance made for the depreciation of land and buildings and plant and machinery used in connexion with the manufacturing industries in each State as recorded by factory proprietors at the annual census of factory production.

**FACTORIES : ALLOWANCE FOR DEPRECIATION OF LAND AND BUILDINGS
AND PLANT AND MACHINERY, 1951-52.**

(£'000.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	745	250	98	79	50	33	1,255
II. Bricks, Pottery, Glass, etc. ..	420	188	38	54	38	24	762
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	1,227	949	65	298	236	114	2,889
IV. Industrial Metals, Machines, Conveyances ..	5,178	2,827	720	1,209	335	640	10,909
V. Precious Metals, Jewellery and Plate ..	22	49	2	3	2	..	78
VI. Textiles and Textile Goods (not Dress) ..	816	1,422	60	69	21	54	2,442
VII. Skins and Leather (not Clothing or Footwear) ..	85	154	19	36	17	8	319
VIII. Clothing (except Knitted) ..	393	394	59	36	36	8	926
IX. Food, Drink and Tobacco ..	1,903	2,063	1,357	511	303	224	6,361
X. Sawmills, Joinery, Boxes, etc.; Wood Turning and Carving ..	540	431	251	93	145	150	1,610
XI. Furniture of Wood, Bedding, etc. ..	89	60	31	20	14	4	218
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	1,029	976	153	107	82	575	2,922
XIII. Rubber ..	323	373	138	25	5	6	870
XIV. Musical Instruments ..	36	5	..	..	..	..	41
XV. Miscellaneous Products ..	213	324	10	29	7	3	586
Total, Classes I. to XV.	13,019	10,465	3,001	2,569	1,291	1,843	32,188
XVI. Heat, Light and Power ..	702	197	390	219	325	92	1,925
Grand Total ..	13,721	10,662	3,391	2,788	1,616	1,935	34,113

5. Land and Buildings, Plant and Machinery—Values, Additions and Replacements, Depreciation, 1938-39, 1945-46 and 1948-49 to 1951-52.—The following table summarizes the recorded totals for Australia, in this section, and also includes particulars of additions and replacements.

**FACTORIES : VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY,
AUSTRALIA.**

(£'000.)

Year.	Book Values as at 30th June.(a)		Additions and Replacements during year.		Depreciation allowed during year.	
	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.
1938-39 ..	130,920	143,662	5,578	17,781	1,911	8,736
1945-46 ..	186,939	185,545	6,245	21,766	2,537	14,597
1948-49 ..	232,740	246,494	15,029	47,226	2,864	21,666
1949-50 ..	259,549	285,602	18,551	59,562	2,983	25,906
1950-51 ..	302,785	336,615	26,710	81,003	3,859	33,006
1951-52 ..	359,490	410,144	37,702	96,370	3,634	30,479

(a) Includes estimated value of rented premises, plant and machinery.

§ 10. Principal Factory Products.

The monthly factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau and in the *Secondary Industries Bulletin*.

The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1950 to 1952. A more complete list, together with values, where available, is published in the *Secondary Industries Bulletin*.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA.

Article.	Unit of Quantity.	1949-50.	1950-51.	1951-52.
Acid—				
Nitric	Ton	6,361	7,367	9,344
Sulphuric	"	612,245	639,856	650,239
Aerated and Carbonated Waters	'ooo gal.	50,190	55,000	57,092
Asbestos Cement Building Sheets	'ooo sq. yd.	18,345	21,247	23,321
Bacon and Ham	'ooo lb.	89,946	81,863	74,284
Bags—				
Leather, Fibre, etc.—				
Handbags—				
Leather	No.	1,060,057	903,333	820,879
Plastic	"	502,666	565,945	579,406
Other	"	88,462	128,498	156,841
Kitbags	"	109,246	(a)	(a)
School Bags	"	107,222	118,712	109,223
Suitcases	"	683,682	(b) 1,185,115	(b) 1,061,316
Trunks	"	4,690	4,032	4,976
All other	"	568,020	317,043	269,029
Textile, Hessian, etc.	Doz.	1,594,822	1,895,236	2,072,912
Baking Powder	lb.	929,326	951,839	638,253
Bath Heaters—				
Electric	No.	13,313	28,361	25,618
Gas	"	28,285	33,007	29,264
Solid Fuel and Oil	"	70,007	73,291	63,679
Bathing Suits	Doz.	97,731	125,334	115,726
Baths, C.I.P.E.	No.	59,364	87,600	76,848
Batteries, Wet Cell type	"	1,114,375	1,092,530	1,164,623
Beer (excluding Waste Beer)	'ooo gal.	154,189	170,635	182,506
Biscuits	'ooo lb.	117,904	130,116	149,947
Blankets	Pair	895,586	972,576	645,256
Boots, Shoes and Slippers—				
Boots	'ooo pairs	1,813	16,902	16,795
Shoes	"	13,597		
Sandals	"	1,789		
Slippers	"	8,582		
Bran (Wheat)	Ton (2,000 lb.)	273,336	302,222	318,108
Brassieres	Doz.	318,897	369,583	377,989
Bricks, Clay	'ooo	604,066	689,431	715,469
Brooms	Gross	19,079	21,757	20,379
Brushes	"	126,565	155,861	(c) 116,513
Butter	Ton	168,074	159,631	131,166
Candles	Cwt.	21,245	12,871	16,931
Cardigans, Sweaters, etc.	Doz.	604,632	719,141	684,673
Cement, Portland	Ton	1,167,189	1,234,626	1,237,461
Cheese	"	44,777	44,300	40,582
Cigarettes	'ooo lb.	10,341	10,679	11,749
Cleansing and Scouring Powders	Cwt.	62,380	75,132	83,426
Cloth—				
Cotton	'ooo sq. yd.	29,699	32,357	32,365
Woolen and Worsted(d)	"	38,028	38,454	29,790
Coke—				
Metallurgical	Ton	1,182,773	1,515,782	1,636,982
Other	"	1,094,982	1,111,854	1,203,602
Colours—				
Dry	Cwt.	57,776	81,413	64,301
Ground in Oil(e)	"	20,857	11,819	14,337
Confectionery—				
Chocolate	'ooo lb.	78,742	69,122	61,276
Other	"	70,744	73,429	78,735
Coppers—				
Electric	No.	29,995	47,759	41,045
Gas	"	36,861	43,394	37,889
Inserts (all types)	"	106,887	125,409	107,069
Cordials and Syrups	'ooo gal.	4,523	5,349	7,204
Corsets and Corsetslets	Doz.	109,814	122,248	131,305

(a) Included with Suitcases. (b) Includes Kitbags. (c) Excludes Industrial Metal and Bristle. (d) Includes Mixtures. (e) Excludes Zinc Oxide Paste.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—continued.

Article.	Unit of Quantity.	1949-50.	1950-51.	1951-52.
Cosmetic Creams and Lotions—				
Face Cream	Cwt.	4,136	5,166	3,934
Hand Lotion	"	2,251	1,884	2,089
Other Skin Creams	"	6,767	6,945	9,264
Custard Powder	'ooo lb.	7,135	6,673	5,598
Cycles, Assembled	No.	96,282	112,076	84,931
Dynos—				
Alternators	"	273	334	508
Generators	"	9,461	14,134	16,256
Electricity	Mill. kwh	9,509	10,503	11,297
Enamels, Natural and Synthetic	'ooo gal.	2,236	1,889	2,093
Engines—				
Diesel, other than Marine	No.	4,598	4,200	4,225
Petrol, Marine	"	2,470	2,296	2,112
Other (a)	"	23,406	27,190	26,264
Essences, Flavouring—				
Domestic	Gal.	102,443	97,512	93,125
Industrial	"	179,802	278,807	258,651
Face Powder	Cwt.	2,723	3,268	2,848
Fans, Electric	No.	48,338	63,629	75,264
Fats, Edible—				
Dripping	Cwt.	295,744	369,069	280,799
Other	"	249,881	192,270	261,427
Fibrous Plaster Sheets	'ooo sq. yd.	13,258	15,184	16,470
Fish, Tinned	'ooo lb.	7,443	7,279	7,295
Floorboards—				
Australian Timber	'ooo super. ft.	71,613	66,997	76,147
Imported Timber	"	11,562	11,854	9,272
Flour, Wheaten (b)	Ton (2,000 lb.)	1,509,023	1,695,559	1,721,150
Flour, Self-raising	Cwt.	1,113,203	1,059,968	1,255,099
Fruit Juices	Gal.	1,573,689	1,846,047	1,134,466
Gas	Mill. cubic ft.	34,898	37,875	40,391
Gloves—				
Dress—				
Leather	Doz. pairs	35,684	28,855	15,393
Other	"	35,754	50,178	53,668
Work, All types	"	171,611	207,606	241,984
Golf Clubs	Doz.	15,378	14,041	11,371
Handkerchiefs—				
Men's	"	818,475	881,532	1,107,452
Women's	"	827,118	1,104,526	949,141
Hats and Caps	"	480,788	515,818	491,512
Hose, Rubber	'ooo lin. ft.	17,499	18,167	20,336
Ice	Ton	1,061,862	1,083,472	1,032,823
Ice Cream	'ooo gal.	15,786	17,385	17,306
Iron and Steel—				
Pig Iron	Ton	1,097,635	1,313,332	1,430,027
Ingot Steel	"	1,217,971	1,443,831	1,521,386
Blooms and Billets	"	1,103,784	1,297,260	1,361,342
Irons, Electric	No.	178,283	232,206	226,207
Jams and Preserves—				
Jams	'ooo lb.	134,577	125,288	108,173
Fruit, Preserved (c)	"	211,428	233,538	256,133
Vegetables, Preserved	"	73,534	79,510	100,446
Jelly Crystals	"	14,002	13,999	11,927
Kalsomine	"	9,334	8,860	7,363
Lacquer, Clear and Colours	Gal.	944,725	1,158,465	1,190,663
Lard	'ooo lb.	5,466	5,108	3,961
Lawn Mowers—				
Electric	No.	23,461	29,877	28,717
Petrol	"	1,070	696	818
Hand	"	88,425	118,437	97,142
Leather—				
Sole and Belting	'ooo lb.	38,650	38,107	38,636
Harness, Skirt, etc.	"	1,966	1,724	1,881
Upholstery	'ooo sq. ft.	10,318	10,980	10,095
Dressed from Hides	"	43,110	43,860	44,753
Dressed from Skins	"	29,319	26,675	25,279

(a) Excludes Motor Car, Motor Cycle, Tractor and Aero Engines.
Baking.

(c) Includes Canned Apple, all types.

(b) Includes Wheatmeal for

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—continued.

Article.	Unit of Quantity.	1949-50.	1950-51.	1951-52.
Lime—Quick	ton	103,889	115,857	123,876
Hydrated	"	26,871	36,908	37,422
Agricultural	"	70,415	75,315	87,942
Linseed Oil	'ooo gal.	3,658	4,456	4,516
Lubricating Oil	"	9,765	19,849	15,880
Malt, Barley	'ooo bus.	5,438	5,550	6,073
Margarine—				
Table	'ooo lb.	14,044	8,542	15,952
Other	"	54,261	49,653	56,168
Mattresses—Wire	No.	219,923	250,070	221,880
Inner Spring	"	206,850	289,856	280,084
Soft Filled, etc.	"	501,409	506,265	399,348
Meat, Tinned	'ooo lb.	127,684	130,015	161,868
Milk—				
Condensed	'ooo lb.	111,477	113,135	117,527
Concentrated (Whole)	"	38,685	41,106	37,503
Powdered (Whole) (a)	"	74,497	66,514	66,899
Mops, Floor	Gross	9,760	9,836	9,396
Motor Bodies	No.	67,196	92,718	98,470
Motor Spirit (Including Benzol)	'ooo gal.	81,329	92,544	96,108
Motors, Electric	No.	397,338	523,585	610,363
Nails	Ton	18,434	24,752	24,751
Neckties	Doz.	430,758	521,065	412,755
Newsprint	Ton	30,472	30,967	32,648
Oatmeal	Cwt.	432,667	419,677	363,398
Paint—Water	'ooo lb.	16,209	19,506	22,543
Oil	'ooo gal.	3,960	5,590	5,513
Peanut Butter	'ooo lb.	3,737	3,574	3,209
Perambulators	No.	107,420	118,824	111,357
Pickles	'ooo pints	9,427	10,864	9,748
Plywood, $\frac{1}{2}$ inch basis	'ooo sq. ft.	157,033	153,498	159,153
Pollard	Ton (2,000 lb.)	316,795	339,074	358,883
Pyjamas—				
Men's (Suits only)	Doz.	218,103	200,501	226,963
Women's (including Nightdresses)	"	275,617	320,784	300,401
Refrigerators—Commercial	No.	5,295	3,901	1,925
Domestic	"	162,341	203,928	192,812
Rice (Dressed)	Cwt.	707,652	773,068	457,682
Ropes and Cables (excluding Wire)	"	114,854	133,438	141,420
Sauce	'ooo pints	32,279	30,402	30,643
Sausage Casings	Cwt.	88,901	89,443	78,294
Semolina	"	275,013	131,865	217,709
Shirts	Doz.	904,787	1,074,294	1,161,548
Sink Heaters	No.	22,434	32,854	33,001
Soap—				
Household	Cwt.	599,422	686,958	641,274
Flakes and Chips (b)	"	60,250	86,616	67,666
Industrial	"	79,927	118,078	88,676
Sand	"	44,981	40,713	41,006
Toilet and Hand	"	267,793	292,546	316,050
Shaving, including Sticks and Creams	"	8,995	8,845	7,039
Soft	"	19,561	23,061	18,858
Liquid	"	84,503	100,860	116,608
Shampoo	"	9,173	7,992	7,810
Soap Extracts and Powders	"	697,848	754,758	929,310
Socks and Stockings—				
Men's	Doz. pr.	1,192,065	1,536,318	1,461,517
Women's	"	1,708,647	1,850,594	1,867,261
Children's	"	656,936	563,093	461,505
Soup (Tinned)	'ooo pints	32,611	33,841	38,877
Spades and Shovels	Doz.	33,394	35,701	31,257
Starch—Edible	Cwt.	279,350	306,211	329,947
Indible	"	87,752	91,416	137,565
Steel, Structural, Fabricated	Ton	74,909	98,211	119,205
Stoves, Ovens and Ranges—				
Domestic Cooking—				
Solid Fuel	No.	61,857	75,010	71,695
Gas	"	46,709	55,357	51,007
Electric(c)	"	103,048	116,654	101,769
Sugar—Raw	Ton	937,119	921,102	745,401
Refined	"	422,675	451,170	493,486
Sulphate of Ammonia	"	48,736	57,893	63,815
Superphosphate	"	1,483,458	1,547,823	1,597,080

(a) Includes Malted Milk and Infants' and Invalids' Foods.
chips.

(c) Includes Stovettes, Cookers, etc.

(b) Includes Industrial flakes and

**QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—continued.**

Article.	Unit of Quantity.	1949-50.	1950-51.	1951-52.
Talcum Powder	Cwt.	25,112	23,425	20,944
Tallow—	"			
Inedible	"	(b) 742,425	(b) 673,181	833,236
Edible	"	(c) 575,236	(c) 483,258	232,024
Tennis Racquet Frames	Doz.	19,576	22,727	14,948
Tiles, Roofing—				
Cement	'ooo	40,638	50,764	66,483
Terracotta	"	45,415	47,012	48,859
Timber—				
From Native Logs—				
Hardwood	'ooo super. ft.	965,142	1,068,096	1,166,114
Softwood	"	257,918	193,244	226,052
From Imported Logs—				
Hardwood	"	} 20,449	18,920	13,466
Softwood	"			
Toasters, Electric (Domestic)	No.	175,054	154,574	198,599
Tobacco	'ooo lb.	20,168	20,967	21,615
Tomato Juice	Gal.	741,995	368,181	1,003,304
Towels	Doz.	418,283	516,493	506,965
Transformers and Converters—				
Above 20 k.v.a.	No.	2,560	1,940	3,039
Below 20 k.v.a.	"	226,984	289,353	235,612
Twine (all types)	Cwt.	85,570	98,578	110,557
Tyres, Pneumatic—				
Motor Car and Motor Cycle	No.	1,339,072	1,587,201	1,874,857
Truck and Omnibus	"	535,262	557,408	587,806
All Other (excl. Bicycle)	"	110,579	123,264	127,461
Umbrellas	"	262,655	362,820	367,306
Underwear	'ooo doz.	3,531	3,847	3,681
Vacuum Cleaners (Domestic)	No.	70,604	70,096	64,065
Varnishes	'ooo gal.	3,266	3,634	3,575
Washing Machines, Household, Electric	No.	31,638	72,627	99,429
Weatherboards—				
Australian Timber	'ooo super. ft.	21,135	20,283	20,921
Imported Timber	"	2,847	6,600	4,680
Wheatmeal (a)	Ton (2,000 lb.)	55,825	62,018	90,255
Wheelbarrows (Metal)	No.	71,603	71,996	67,573
Wireless—				
Cabinets—				
Wood	No.	75,895	86,352	78,186
Other	"	260,719	349,914	288,296
Receiving Sets	"	343,323	459,436	358,379
Wool Scoured—				
For Sale	'ooo lb.	50,559	46,673	38,843
For use in own works	"	40,443	36,259	30,116
On Commission	"	81,977	69,451	51,839
Wool Tops	"	31,475	29,786	24,815
Yarn (d)				
Cotton	"	30,233	35,261	34,461
Woollen	"	22,858	21,726	17,002
Worsted	"	26,129	24,839	19,500
Zinc Oxide	Cwt.	239,462	238,690	223,448
Zinc Oxide Paste	"	19,101	22,081	7,225

(a) Excludes Wheatmeal for Baking Included with Flour. (b) Described as "Raw" Tallow.
(c) Described as "Refined" Tallow. (d) Including mixtures predominantly of the fibre mentioned.

§ 11. Individual Industries.

1. **General.**—Particulars in pages 858-84, §§ 2-9 afford a general view of the magnitude of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work, to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour and capital or for other features of special interest. Where there are only one or two establishments in a particular industry in the State or the Commonwealth, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

The statistics in the following tables should be read in the light of the following definitions.

Factory. A factory is taken to be a manufacturing establishment in which four or more persons are employed or in which power, other than manual, is used.

Average Number of Persons Employed. All persons employed in the manufacturing activities of a factory are counted as factory employees, including working proprietors and "out-workers". The average number of persons employed means, in general, the average number over the whole year and not the average over the period worked.

Value of Materials Used. This item includes the value, in the usual sense, of the materials used, stores used, containers, tools replaced, and materials used in repairs to plant.

Value of Fuel, etc., Used. This item includes also the cost of power and light used, of lubricants and of water.

Value of Output. The amounts given under this heading represent the selling value at the factory of goods made or processed during the year, including by-products, also the value of other work done.

Value of Production. The value of production is obtained by deducting "Value of materials used" and "Value of fuel used", as defined above, from the "Value of output". This method of valuing factory production has been adopted by the Statistical offices throughout Australia.

Rated Horse-power of Engines Used. Statistics of power used in factories other than Central Electric Stations relate to the "rated horse-power" of engines ordinarily in use.

For more detailed definitions see § 1, par. 6 of this chapter, page 855.

Details of some of the principal articles produced in factories in Australia during the years 1949-50 to 1951-52 are shown in the table in the preceding pages (§ 10).

2. **Portland Cement and Cement Goods.**—The manufacture of Portland Cement and Cement Goods is an important industry included in Class I. Particulars for the three industries under this general heading are shown for 1951-52 and for a selected number of years in the following table.

PORTLAND CEMENT, ASBESTOS CEMENT SHEETS, ETC., AND OTHER CEMENT GOODS.

AUSTRALIA, 1951-52.

Items.	Portland Cement.	Asbestos Cement Sheets and Mouldings.	Other Cement Goods.	Total.
Number of factories	11	14	534	559
Number of persons employed	2,432	2,289	5,130	9,851
Salaries and wages paid	£. 1,662,476	1,677,254	3,129,637	6,469,367
Value of power, fuel, etc., used	£. 2,186,434	105,897	125,977	2,418,308
Value of materials used	£. 3,273,027	3,463,500	5,961,533	12,698,060
Value of production	£. 3,059,958	2,611,308	5,497,330	11,168,596
Total value of output	£. 8,519,419	6,180,705	11,584,840	26,284,964
Value of land and buildings	£. 1,293,486	784,996	1,387,605	3,466,087
Value of plant and machinery	£. 3,859,406	903,324	1,691,904	6,454,634
Horse-power of engines ordinarily in use h.p.	59,983	8,335	13,373	81,691

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	132	152	381	450	526	559
Number of persons employed	3,932	4,582	7,301	8,033	9,192	9,851
Salaries and wages paid	£'000 897	1,334	3,036	3,673	4,860	6,469
Value of power, fuel, etc., used	£'000 562	593	1,192	1,444	1,794	2,418
Value of materials used	£'000 1,542	2,498	5,372	6,671	9,025	12,698
Value of production	£'000 2,385	2,577	5,394	6,540	8,635	11,169
Total value of output	£'000 4,489	5,668	11,958	14,655	19,454	26,285
Value of land and buildings	£'000 1,350	1,464	2,087	2,283	3,250	3,466
Value of plant and machinery	£'000 2,516	2,005	3,689	3,970	4,691	6,455
Horse-power of engines ordinarily in use	h.p. 39,617	42,578	69,975	71,000	75,584	81,691

3. **Chemicals, Drugs and Medicines.**—In 1945-46 the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations, which previously had been combined. Details for each of these industries are given in the next two tables for 1951-52 with comparisons with previous years. However, it should be noted that in order to avoid the publication of confidential information, particulars relating to Industrial and Heavy Chemicals include details for the Explosives industry.

INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS (INCLUDING EXPLOSIVES).

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	112	74	17	8	7	1	219
Number of persons employed ..	4,384	5,802	246	804	(a)	(a)	11,504
Salaries and wages paid .. £	3,529,840	4,119,656	165,357	536,142	(a)	(a)	8,539,038
Value of power, fuel, etc., used .. £	1,022,522	627,138	35,339	379,979	(a)	(a)	2,109,841
Value of materials used .. £	11,611,813	8,309,309	204,911	654,812	(a)	(a)	21,097,165
Value of production .. £	7,711,717	7,664,095	300,089	1,221,221	(a)	(a)	17,179,877
Total value of output .. £	20,346,052	16,600,542	540,339	2,256,012	(a)	(a)	40,886,883
Value of land and buildings .. £	3,299,833	4,611,287	84,008	703,318	(a)	(a)	8,828,354
Value of plant and machinery .. £	4,675,326	5,740,642	146,498	1,651,644	(a)	(a)	12,507,297
Horse-power of engines ordinarily in use .. h.p.	29,073	39,886	1,056	4,421	(a)	(a)	76,890

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	165	192	199	207	219
Number of persons employed ..	10,228	9,137	9,749	10,615	11,504
Salaries and wages paid .. £'000	3,450	4,143	4,890	6,243	8,539
Value of power, fuel, etc., used .. £'000	618	908	1,064	1,546	2,110
Value of materials used .. £'000	6,007	9,027	10,522	16,852	21,097
Value of production .. £'000	6,627	7,887	9,075	13,373	17,180
Total value of output .. £'000	13,252	17,822	20,661	31,776	40,887
Value of land and buildings .. £'000	11,697	10,199	10,696	7,770	8,828
Value of plant and machinery .. £'000	10,964	7,511	9,708	11,043	12,507
Horse-power of engines ordinarily in use h.p.	69,399	63,946	72,183	74,613	76,890

(a) Not available for publication ; included with total for Australia.

PHARMACEUTICAL AND TOILET PREPARATIONS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	127	56	4	12	5	3	208
Number of persons employed ..	3,107	2,282	(a)	541	109	(a)	6,149
Salaries and wages paid .. £	1,670,876	1,391,089	(a)	272,752	52,137	(a)	3,432,827
Value of power, fuel, etc., used .. £	50,868	73,644	(a)	21,962	2,885	(a)	150,568
Value of materials used .. £	5,330,342	3,419,518	(a)	902,755	107,196	(a)	9,876,947
Value of production .. £	6,782,466	2,871,485	(a)	368,624	137,748	(a)	10,313,647
Total value of output .. £	12,163,676	6,364,647	(a)	1,293,347	247,829	(a)	20,341,162
Value of land and buildings .. £	1,378,739	1,722,409	(a)	158,212	33,440	(a)	3,331,992
Value of plant and machinery .. £	523,628	677,312	(a)	63,355	13,312	(a)	1,285,637
Horse-power of engines ordinarily in use .. h.p.	3,845	5,195	(a)	1,326	162	(a)	10,618

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	215	216	205	201	208
Number of persons employed ..	5,514	5,474	5,157	5,538	6,149
Salaries and wages paid .. £'000	1,699	1,801	1,840	2,423	3,433
Value of power, fuel, etc., used .. £'000	57	69	73	91	150
Value of materials used .. £'000	5,402	6,414	6,371	8,291	9,877
Value of production .. £'000	4,790	5,851	6,566	8,985	10,314
Total value of output .. £'000	10,249	12,334	13,010	17,367	20,341
Value of land and buildings .. £'000	1,534	1,718	1,706	1,963	3,332
Value of plant and machinery .. £'000	598	755	767	823	1,286
Horse-power of engines ordinarily in use h.p.	6,324	7,660	7,816	8,357	10,618

(a) Not available for publication ; included with total for Australia.

4. White Lead, Paint and Varnish.—The following table shows particulars of this industry for each State during 1951-52 and for Australia for a series of years.

WHITE LEAD, PAINTS AND VARNISH.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	69	51	14	14	7	3	158
Number of persons employed	3,044	1,266	283	459	(a)	(a)	5,141
Salaries and wages paid	£ 2,030,103	835,844	168,460	290,632	(a)	(a)	3,377,600
Value of power, fuel, etc., used	£ 223,334	53,271	8,264	15,900	(a)	(a)	303,438
Value of materials used	£ 9,117,263	4,339,351	981,569	1,848,573	(a)	(a)	16,622,783
Value of production	£ 4,489,551	2,300,186	368,128	767,978	(a)	(a)	8,112,103
Total value of output	£ 13,830,148	6,692,808	1,357,961	2,632,453	(a)	(a)	25,038,324
Value of land and buildings	£ 1,710,802	856,835	84,589	484,579	(a)	(a)	3,212,761
Value of plant and machinery	£ 891,265	643,905	58,678	210,677	(a)	(a)	1,841,507
Horse-power of engines ordinarily in use	h.p. 13,500	5,419	553	1,458	(a)	(a)	21,412

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	102	122	152	149	154	158
Number of persons employed	2,271	3,197	4,240	4,526	4,985	5,141
Salaries and wages paid	£'000 535	1,005	1,797	2,097	2,784	3,378
Value of power, fuel, etc., used	£'000 45	81	127	171	229	303
Value of materials used	£'000 2,275	4,775	9,048	10,903	14,157	16,623
Value of production	£'000 1,585	2,448	4,376	5,296	7,010	8,112
Total value of output	£'000 3,905	7,304	13,551	16,370	21,396	24,038
Value of land and buildings	£'000 761	973	1,595	2,038	2,831	3,213
Value of plant and machinery	£'000 324	524	989	1,345	1,548	1,842
Horse-power of engines ordinarily in use	h.p. 7,696	12,252	15,829	17,681	19,875	21,412

(a) Not available for publication; figures are included in the total for Australia.

5. Soap and Candle Factories.—The following table shows particulars of factories in the Soap and Candle industry in each State for 1951-52 and for Australia for a series of years :—

SOAP AND CANDLES.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	49	18	10	5	3	3	88
Number of persons employed	2,042	785	334	189	(a)	(a)	3,440
Salaries and wages paid	£ 1,625,365	589,473	179,953	111,897	(a)	(a)	2,554,514
Value of power, fuel, etc., used	£ 190,920	226,591	16,320	13,082	(a)	(a)	452,831
Value of materials used	£ 4,673,181	2,781,813	510,052	224,727	(a)	(a)	8,383,547
Value of production	£ 2,978,084	1,141,474	297,552	121,639	(a)	(a)	4,638,544
Total value of output	£ 7,842,185	4,149,878	823,924	359,448	(a)	(a)	13,474,922
Value of land and buildings	£ 637,820	442,433	85,678	83,113	(a)	(a)	1,300,609
Value of plant and machinery	£ 737,473	773,832	80,106	77,181	(a)	(a)	1,593,400
Horse-power of engines ordinarily in use	h.p. 4,596	2,943	539	514	(a)	(a)	8,769

(a) Not available for publication; figures are included in total for Australia.

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	65	73	91	90	93	88
Number of persons employed	2,620	3,020	3,578	3,646	3,502	3,440
Salaries and wages paid	£'000 501	860	1,461	1,605	1,974	2,555
Value of power, fuel, etc., used	£'000 76	123	259	285	353	453
Value of materials used	£'000 1,568	3,051	5,277	5,499	6,330	8,384
Value of production	£'000 1,886	2,628	3,816	4,442	4,609	4,638
Total value of output	£'000 3,330	5,802	9,352	10,226	11,292	13,475
Value of land and buildings	£'000 666	676	715	1,115	1,200	1,301
Value of plant and machinery	£'000 577	373	518	1,201	1,341	1,603
Horse-power of engines ordinarily in use	h.p. 5,267	6,630	7,569	7,515	7,447	8,769
Materials used—						
Tallow	cwt. 535,511	834,057	972,474	1,008,257	1,123,895	1,134,235
Alkali for Soap (a)	cwt. 194,869	281,313	329,974	326,648	343,378	403,241
Coconut oil—refined and unrefined	cwt. 138,954	86,576	100,610	78,893	91,404	113,203
Articles produced—						
Soap (b)	cwt. 978,113	1,065,439	1,149,868	1,174,605	1,265,660	1,304,987
Soap Extracts and Powders	cwt. 191,232	469,865	609,631	697,848	754,758	929,310
Candles made	cwt. 28,649	23,844	15,692	21,245	12,871	16,931

(a) Includes Soda Ash and Candle factories.

(b) Soap made in all factories including those not classified as "Soap

6. Chemical Fertilizers.—The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1951-52 and for Australia for a series of years. Details of the consumption, imports and exports of fertilizers will be found in Chapter XX.—Agricultural Production.

CHEMICAL FERTILIZERS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	13	9	8	7	5	7	49
Number of persons employed ..	900	1,411	248	831	848	87	4,325
Salaries and wages paid .. £	727,990	1,122,106	155,902	601,183	669,451	84,791	3,361,423
Value of power, fuel, etc., used .. £	267,751	151,095	17,713	78,621	73,795	1,913	588,888
Value of materials used .. £	2,830,675	7,096,202	1,566,243	3,055,074	5,170,537	578,028	20,296,759
Value of production .. £	1,194,839	2,072,587	335,444	1,019,579	1,222,419	153,565	5,998,433
Total value of output .. £	4,293,265	9,319,884	1,917,400	4,153,274	6,466,751	733,506	26,884,080
Value of land and buildings .. £	2,056,790	746,330	151,341	388,102	615,446	285,579	4,243,588
Value of plant and machinery .. £	2,375,069	1,579,197	176,918	767,096	736,916	169,133	5,804,329
Horse-power of engines ordinarily in use .. h.p.	12,119	12,887	1,826	6,513	17,085	549	50,979

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	36	38	50	51	49	49
Number of persons employed ..	2,340	3,127	3,894	3,889	4,012	4,325
Salaries and wages paid .. £'000	601	1,091	1,847	2,051	2,540	3,361
Value of power, fuel, etc., used .. £'000	114	181	372	407	440	589
Value of materials used .. £'000	3,231	7,899	11,910	12,737	14,014	20,297
Value of production .. £'000	1,600	1,967	3,400	3,998	4,312	5,998
Total value of output .. £'000	4,945	10,047	15,682	17,142	18,766	26,884
Value of land and buildings .. £'000	1,449	1,572	3,511	3,633	3,900	4,244
Value of plant and machinery .. £'000	2,353	2,409	4,782	4,849	5,418	5,804
Horse-power of engines ordinarily in use .. h.p.	18,165	22,574	29,164	30,855	36,274	50,979

7. Iron and Steel Works and Engineering.—(i) *General.* In 1945-46 the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel and Engineering. The first group (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The second group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production of boilers, engines, machines and machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers, not elsewhere included.

(ii) *Smelting, Converting, Refining and Rolling of Iron and Steel.* In the following table particulars are shown for 1951-52 for each State and for Australia in selected years for the group Smelting, Converting, Refining and Rolling of Iron and Steel.

SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	17	9	..	3	1	..	30
Number of persons employed ..	12,861	983	..	(a)	(a)	..	14,192
Salaries and wages paid .. £	10,783,823	836,140	..	(a)	(a)	..	11,993,537
Value of power, fuel, etc., used .. £	9,461,308	199,512	..	(a)	(a)	..	11,183,868
Value of materials used .. £	52,206,139	609,440	..	(a)	(a)	..	53,347,321
Value of production .. £	18,438,726	1,209,576	..	(a)	(a)	..	20,317,181
Total value of output .. £	80,106,173	2,108,528	..	(a)	(a)	..	84,839,310
Value of land and buildings .. £	3,836,079	172,178	..	(a)	(a)	..	4,064,186
Value of plant and machinery .. £	14,518,866	262,263	..	(a)	(a)	..	14,991,981
Horse-power of engines ordinarily in use .. h.p.	209,392	6,932	..	(a)	(a)	..	218,857

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	27	32	30	30	30
Number of persons employed ..	10,413	12,335	11,509	13,419	14,192
Salaries and wages paid .. £'000	4,164	6,583	6,972	9,245	11,904
Value of power, fuel, etc., used .. £'000	2,777	4,568	5,516	7,860	11,186
Value of materials used .. £'000	19,134	26,750	29,747	40,580	53,347
Value of production .. £'000	7,393	11,950	12,784	16,594	20,317
Total value of output .. £'000	29,304	43,268	48,047	65,070	84,839
Value of land and buildings .. £'000	2,197	2,697	2,812	3,259	4,064
Value of plant and machinery .. £'000	5,669	6,375	7,185	9,101	14,992
Horse-power of engines ordinarily in use h.p.	198,317	202,332	213,529	216,617	218,857

(a) Not available for publication; figures are included in the total for Australia.

Particulars of the production of pig-iron and steel will be found in Chapter XVIII.—Mineral Industry.

(iii) *Foundries (Ferrous).* Particulars covering those industries classified as founding of iron and steel are shown for each State for 1951-52 and for Australia in selected years in the following table :—

FOUNDRIES—FERROUS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	91	210	22	23	19	..	365
Number of persons employed ..	2,964	2,574	616	594	501	..	7,243
Salaries and wages paid .. £	2,299,068	1,813,212	386,936	422,595	330,319	..	5,252,130
Value of power, fuel, etc., used .. £	251,440	229,396	30,167	57,909	64,187	..	633,099
Value of materials used .. £	1,817,849	1,544,384	325,710	394,558	248,001	..	4,330,502
Value of production .. £	3,207,320	2,712,754	637,655	593,247	471,081	..	7,622,027
Total value of output .. £	5,276,609	4,486,504	993,532	1,045,714	783,269	..	12,585,628
Value of land and buildings .. £	5,679,089	745,941	130,268	102,621	78,290	..	1,736,209
Value of plant and machinery .. £	601,803	574,468	163,488	153,118	81,078	..	1,373,955
Horse-power of engines ordinarily in use .. h.p.	10,529	7,637	2,193	2,271	2,477	..	25,107

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	312	374	353	365
Number of persons employed	5,344	6,900	6,346	7,198
Salaries and wages paid .. £'000	..	1,612	2,986	2,985	4,134
Value of power, fuel, etc., used .. £'000	..	161	295	341	473
Value of materials used .. £'000	..	1,210	2,142	2,116	3,262
Value of production .. £'000	..	2,341	4,041	4,648	6,024
Total value of output .. £'000	..	3,712	6,478	7,105	9,761
Value of land and buildings .. £'000	..	988	1,237	1,207	1,570
Value of plant and machinery .. £'000	..	619	1,047	1,063	1,337
Horse-power of engines ordinarily in use .. h.p.	..	13,381	19,600	19,306	23,976

(iv) *Plant, Equipment and Machinery (including Machine Tools).* The next table shows particulars for this group for each State during 1951-52 and for Australia for the years 1945-46 and 1948-49 to 1951-52 :—

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS).

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	810	579	100	129	66	..	1,684
Number of persons employed ..	28,516	20,138	5,410	7,878	2,124	..	64,066
Salaries and wages paid .. £	21,226,545	14,200,350	3,243,590	5,471,627	1,291,740	..	45,433,852
Value of power, fuel, etc., used .. £	888,303	563,572	123,274	297,537	64,013	..	1,936,699
Value of materials used .. £	33,220,166	20,692,356	3,990,048	9,311,387	1,728,962	..	68,942,919
Value of production .. £	34,797,918	22,497,435	6,648,383	7,876,337	1,989,601	..	71,809,874
Total value of output .. £	68,006,387	43,753,368	8,761,705	17,485,461	3,782,576	..	142,689,492
Value of land and buildings .. £	8,898,141	6,934,872	912,896	1,820,550	816,549	..	19,383,008
Value of plant and machinery .. £	8,306,739	6,340,525	942,876	1,588,225	691,704	..	17,870,069
Horse-power of engines ordinarily in use .. h.p.	91,628	62,693	13,322	21,448	7,573	..	196,664

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	1,038	1,423	1,498	1,684
Number of persons employed	46,123	54,268	56,344	60,990
Salaries and wages paid .. £'000	..	14,259	23,096	20,495	35,215
Value of power, fuel, etc., used .. £'000	..	605	906	1,073	1,434
Value of materials used .. £'000	..	16,155	30,109	38,457	53,040
Value of production .. £'000	..	21,044	34,624	40,958	55,934
Total value of output .. £'000	..	38,104	65,639	80,490	110,403
Value of land and buildings .. £'000	..	7,227	10,428	12,680	15,904
Value of plant and machinery .. £'000	..	7,046	10,354	12,571	14,968
Horse-power of engines ordinarily in use .. h.p.	..	101,810	141,033	156,402	205,736

(v) *Other Engineering.* Details covering jobbing and general engineering works not elsewhere included are shown for each State for 1951-52 and for selected years for Australia in the following table.

OTHER ENGINEERING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	713	697	105	133	122	83	1,853
Number of persons employed ..	6,001	8,166	1,345	2,766	785	1,335	20,398
Salaries and wages paid .. £	3,868,912	5,457,147	729,128	1,768,319	417,574	883,126	13,124,206
Value of power, fuel, etc., used .. £	135,382	149,778	19,554	60,354	22,787	25,537	413,392
Value of materials used .. £	3,922,838	6,445,952	877,234	1,581,695	535,838	904,314	14,267,871
Value of production .. £	6,384,053	8,828,743	1,048,119	2,430,700	688,644	1,300,846	20,681,105
Total value of output .. £	10,442,273	15,424,473	1,944,907	4,072,749	1,247,269	2,230,697	35,362,368
Value of land and buildings .. £	2,329,717	2,936,721	403,168	565,767	255,229	530,505	7,021,107
Value of plant and machinery .. £	1,531,054	2,524,592	282,675	591,286	164,907	339,738	5,434,252
Horse-power of engines ordinarily in use .. h.p.	17,173	23,500	3,146	6,735	2,083	3,760	56,397

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	963	1,358	1,495	1,627	1,853
Number of persons employed ..	13,112	14,844	16,798	18,487	20,398
Salaries and wages paid .. £'000	3,634	5,741	6,977	9,495	13,124
Value of power, fuel, etc., used .. £'000	162	193	241	291	413
Value of materials used .. £'000	3,599	5,217	6,637	9,855	14,268
Value of production .. £'000	5,432	8,950	11,086	15,323	20,681
Total value of output .. £'000	9,193	14,360	17,964	23,469	35,362
Value of land and buildings .. £'000	2,369	5,128	5,191	5,089	7,021
Value of plant and machinery .. £'000	2,091	3,128	3,515	4,098	5,434
Horse-power of engines ordinarily in use .. h.p.	26,095	41,577	41,668	47,396	56,397

8. Extracting and Refining of Non-ferrous Metals ; Alloys.—The following table shows particulars of establishments engaged in metal extraction and ore reduction including secondary recovery of metals, but excluding blast furnaces engaged in production of pig iron from iron ore, for each State during 1951-52 and for Australia for a series of years.

EXTRACTING AND REFINING OF NON-FERROUS METALS ; ALLOYS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Australia.
Number of factories ..	29	20	12	3	..	3	67
Number of persons employed ..	2,113	213	1,082	(b)	..	(b)	7,812
Salaries and wages paid .. £	2,011,569	164,876	774,470	(b)	..	(b)	6,515,468
Value of power, fuel, etc., used .. £	1,069,374	25,875	474,088	(b)	..	(b)	3,129,968
Value of materials used .. £	29,805,850	1,958,140	5,716,965	(b)	..	(b)	71,096,644
Value of production .. £	6,368,418	376,064	9,307,678	(b)	..	(b)	27,495,996
Total value of output .. £	37,243,642	2,360,079	15,498,731	(b)	..	(b)	101,722,608
Value of land and buildings .. £	613,909	103,931	432,389	(b)	..	(b)	2,075,048
Value of plant and machinery .. £	1,810,856	50,928	1,328,749	(b)	..	(b)	4,935,915
Horse-power of engines ordinarily in use .. h.p.	23,238	855	14,742	(b)	..	(b)	81,567

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	42	49	56	62	65	67
Number of persons employed ..	5,532	6,060	7,040	7,394	7,664	7,812
Salaries and wages paid .. £'000	1,613	2,280	3,919	4,324	5,268	6,515
Value of power, fuel, etc., used .. £'000	598	1,058	1,712	1,908	2,323	3,130
Value of materials used .. £'000	16,844	18,042	41,488	38,993	59,735	71,097
Value of production .. £'000	3,892	5,527	16,032	15,718	20,435	27,496
Total value of output .. £'000	21,334	24,627	59,232	56,619	82,493	101,723
Value of land and buildings .. £'000	1,177	1,385	1,649	1,861	2,017	2,075
Value of plant and machinery .. £'000	3,526	3,795	4,267	4,605	4,723	4,936
Horse-power of engines ordinarily in use .. h.p.	54,450	57,345	77,437	79,320	88,410	81,567

(a) In Western Australia the majority of the plants are worked at the mines and are therefore not included. (b) Not available for publication ; figures are included in the total for Australia.

9. Electrical Machinery, Cables and Apparatus.—The following table shows particulars of this industry for each State during 1951-52 and for Australia for a series of years.

ELECTRICAL MACHINERY, CABLES AND APPARATUS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	447	291	52	64	59	15	928
Number of persons employed ..	24,332	8,467	1,579	1,110	826	158	36,772
Salaries and wages paid .. £	16,513,544	5,449,264	951,190	807,957	461,281	93,485	24,276,721
Value of power, fuel, etc., used £	725,412	185,347	21,172	25,911	14,746	3,190	975,778
Value of materials used .. £	27,408,741	9,809,944	1,629,503	1,009,000	699,025	148,512	40,704,725
Value of production .. £	26,417,057	8,357,610	1,402,554	1,152,014	767,627	146,894	38,243,756
Total value of output .. £	54,551,210	18,352,901	3,053,229	2,186,925	1,481,398	298,596	79,924,259
Value of land and buildings .. £	6,190,052	2,487,929	317,422	313,601	230,130	92,153	9,631,287
Value of plant and machinery .. £	4,141,349	2,109,114	364,821	162,915	85,660	93,441	6,957,300
Horse-power of engines ordinarily in use .. h.p.	42,105	13,013	4,980	1,439	1,053	224	62,814

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	360	551	791	811	867	928
Number of persons employed ..	10,666	22,825	29,961	30,956	35,494	36,772
Salaries and wages paid .. £'000	2,031	6,301	11,703	13,563	18,816	24,277
Value of power, fuel, etc., used .. £'000	105	209	366	453	637	976
Value of materials used .. £'000	3,195	8,085	16,510	21,149	31,680	40,704
Value of production .. £'000	3,655	9,496	17,834	21,154	30,867	38,244
Total value of output .. £'000	6,955	17,790	34,710	42,756	63,184	79,924
Value of land and buildings .. £'000	1,627	3,507	5,382	6,293	8,224	9,631
Value of plant and machinery .. £'000	897	2,084	3,664	4,127	5,719	6,957
Horse-power of engines ordinarily in use .. h.p.	12,043	26,244	39,382	43,995	55,854	62,814

10. Railway and Tramway Workshops.—The railway and tramway workshops, which form an important item in Class IV., are chiefly owned by State Governments and Local Authorities. Workshops (thirteen in 1951-52) controlled by non-public bodies are not included in the figures below :—

TRAMCARS AND RAILWAY ROLLING STOCK.(a)

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	47	24	11	14	23	7	126
Number of persons employed ..	17,153	6,683	6,083	4,358	3,359	863	38,499
Salaries and wages paid .. £	12,556,567	4,404,563	3,735,575	3,142,677	1,916,004	525,518	26,280,904
Value of power, fuel, etc., used .. £	281,747	165,778	91,361	160,187	96,283	16,819	812,175
Value of materials used .. £	6,209,746	2,993,675	1,866,891	2,101,038	1,758,041	221,717	15,151,108
Value of production .. £	14,794,822	5,570,782	4,278,750	3,799,652	2,329,573	601,267	31,374,846
Total value of output .. £	21,286,315	8,730,235	6,237,002	6,060,877	4,183,897	839,803	47,338,129
Value of land and buildings .. £	4,798,542	1,487,262	565,639	1,196,291	231,261	507,123	8,786,118
Value of plant and machinery .. £	6,326,141	570,298	589,854	1,240,173	384,572	106,482	9,217,520
Horse-power of engines ordinarily in use .. h.p.	39,754	15,574	14,416	16,938	7,764	3,139	97,585

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	117	115	128	127	126	126
Number of persons employed ..	27,310	36,962	37,993	38,432	38,253	38,499
Salaries and wages paid .. £'000	6,721	11,657	16,357	18,057	20,914	26,281
Value of power, fuel, etc., used .. £'000	226	372	450	500	617	812
Value of materials used .. £'000	4,976	8,143	9,533	11,133	12,165	15,151
Value of production .. £'000	8,021	13,794	19,265	21,643	25,738	31,375
Total value of output .. £'000	13,223	22,309	29,248	33,276	38,520	47,338
Value of land and buildings .. £'000	6,737	6,960	7,773	8,051	7,983	8,786
Value of plant and machinery .. £'000	5,390	6,034	7,206	7,925	8,277	9,218
Horse-power of engines ordinarily in use .. h.p.	53,671	75,532	87,391	89,864	93,567	97,585

(a) Government and Local Authority only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not included in any of the tables in this chapter.

11. Motor Vehicles.—The industries catering for the motor trade are included in Class IV., Industrial Metals, Machines and Conveyances. In the table below a summary is given of the principal statistics for 1951-52 for each branch of industry associated with the motor trade of Australia.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., AUSTRALIA.

1951-52.

Items.	Construction and Assembly.	Motor Bodies.	Repairs.	Motor Accessories.	Total.
Number of factories	81	736	5,618	152	6,587
Number of persons employed ..	14,819	19,074	42,098	6,132	82,123
Salaries and wages paid .. £	11,598,570	13,411,904	22,543,248	4,245,101	51,798,823
Value of power, fuel, etc., used .. £	406,951	352,792	619,974	230,305	1,610,022
Value of materials used .. £	18,042,290	23,375,526	24,568,838	4,980,530	70,967,184
Value of production .. £	18,677,152	18,960,957	34,449,661	6,719,883	78,807,653
Total value of output .. £	37,126,393	42,689,275	59,638,473	11,930,718	151,384,859
Value of land and buildings .. £	4,986,082	4,847,984	19,181,948	1,783,159	30,799,173
Value of plant and machinery .. £	2,939,923	3,114,013	6,592,869	2,335,669	14,982,474
Horse-power of engines ordinarily in use, h.p.	24,150	28,823	42,212	21,043	116,228

In the next table similar details are shown on a State basis for 1951-52 and for Australia for selected years for these branches combined.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories ..	2,571	1,810	930	462	576	238	6,587
Number of persons employed ..	25,547	28,266	8,724	12,571	5,235	1,780	82,123
Salaries and wages paid .. £	15,611,708	19,103,860	4,372,660	8,792,584	2,962,555	955,456	51,798,823
Value of power, fuel, etc., used .. £	500,280	572,760	136,446	276,522	108,139	15,875	1,610,022
Value of materials used .. £	20,650,551	25,367,642	4,338,681	15,149,363	4,536,863	924,084	70,967,184
Value of production .. £	23,637,007	28,305,668	8,439,161	12,421,705	4,496,591	1,507,521	78,807,653
Total value of output .. £	44,787,838	54,246,070	12,914,288	27,847,590	9,441,593	2,447,480	151,384,859
Value of land and buildings .. £	12,602,035	9,828,300	2,579,992	2,845,456	1,975,860	967,530	30,799,173
Value of plant and machinery .. £	4,884,510	5,526,899	1,122,043	2,286,627	909,644	252,751	14,982,474
Horse-power of engines ordinarily in use .. h.p.	39,342	42,104	9,077	25,224	8,455	2,026	126,228

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	3,592	5,009	5,330	5,730	6,587
Number of persons employed ..	39,706	62,020	67,874	75,580	82,123
Salaries and wages paid .. £'000	10,582	23,883	28,855	38,789	51,799
Value of power, fuel, etc., used .. £'000	395	744	895	1,215	1,610
Value of materials used .. £'000	12,143	23,672	32,427	48,542	70,967
Value of production .. £'000	15,818	34,494	45,091	60,592	78,808
Total value of output .. £'000	28,356	58,910	78,453	110,349	151,385
Value of land and buildings .. £'000	9,878	16,271	18,801	23,361	30,799
Value of plant and machinery .. £'000	3,758	8,301	9,464	11,495	14,982
Horse-power of engines ordinarily in use .. h.p.	56,117	89,194	95,755	109,707	126,228

(a) Includes horse-drawn vehicles.

The table below shows the output of motor bodies and the imports of motor bodies and motor chassis for 1938-39, 1945-46 and 1948-49 to 1951-52 :—

PRODUCTION AND IMPORTS OF MOTOR BODIES(a) AND IMPORTS OF MOTOR CHASSIS : AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Motor Bodies—						
Number made .. No.	79,436	19,473	68,230	67,097	92,621	98,361
Value .. £'000	6,421	2,357	12,145	14,057	18,421	22,612
Number imported .. No.	532	223	34,728	115,484	92,701	101,628
Value .. £'000	64	34	5,568	17,994	14,275	16,657
Motor Chassis—						
Number imported .. No.	76,094	10,113	101,664	187,363	185,751	173,419
Value .. £'000	7,315	1,879	23,636	44,965	46,920	49,864

(a) Excludes sidecars.

12. **Agricultural Machines and Implements.**—Owing to the extensive agricultural activities conducted in Australia and the demand for modern mechanized farm equipment, the manufacture of agricultural implements constitutes an important branch of Australian industry. The articles manufactured include a wide range of implements for tillage, seeding, and planting and the harvesting of crops. Other farm machinery made includes windmills, chaff-cutters and machinery used in the dairying industry.

The following table shows details of agricultural implement works in each State for 1951-52 and for Australia for a series of years.

AGRICULTURAL MACHINES AND IMPLEMENTS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	95	75	32	33	22	..	257
Number of persons employed ..	2,349	6,879	1,517	1,448	288	..	12,481
Salaries and wages paid ..	£ 1,714,735	£ 5,256,412	£ 921,180	£ 961,433	£ 190,373	..	£ 9,044,133
Value of power, fuel, etc., used ..	£ 79,381	£ 350,774	£ 46,147	£ 72,898	£ 5,289	..	£ 554,489
Value of materials used ..	£ 2,445,030	£ 8,911,463	£ 1,034,316	£ 1,002,962	£ 127,388	..	£ 13,521,159
Value of production ..	£ 2,624,353	£ 7,313,245	£ 1,300,429	£ 1,524,950	£ 287,901	..	£ 13,050,878
Total value of output ..	£ 5,148,764	£ 16,575,482	£ 2,380,892	£ 2,600,810	£ 420,578	..	£ 27,126,546
Value of land and buildings ..	£ 907,002	£ 1,489,521	£ 376,563	£ 366,722	£ 179,727	..	£ 3,319,535
Value of plant and machinery ..	£ 647,989	£ 2,012,525	£ 333,340	£ 312,125	£ 58,769	..	£ 3,364,748
Horse-power of engines ordinarily in use ..	h.p. 6,687	18,444	4,106	4,814	547	..	34,598

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	161	172	196	208	225	257
Number of persons employed ..	6,563	9,510	9,629	10,454	11,651	12,481
Salaries and wages paid ..	£'000 1,373	2,894	4,199	5,012	6,894	9,044
Value of power, fuel, etc., used ..	£'000 82	186	233	292	433	555
Value of materials used ..	£'000 1,485	2,717	4,480	6,910	9,952	13,521
Value of production ..	£'000 1,836	3,798	5,671	6,983	9,854	13,051
Total value of output ..	£'000 3,403	6,701	10,384	14,185	20,239	27,127
Value of land and buildings ..	£'000 997	1,200	1,913	2,201	2,814	3,320
Value of plant and machinery ..	£'000 911	1,230	1,938	2,215	2,877	3,365
Horse-power of engines ordinarily in use ..	h.p. 13,346	21,225	26,445	28,139	33,464	34,598

13. **Wireless and Amplifying Apparatus.**—The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930-31 a new classification of factories was adopted and "Wireless Apparatus" was shown as a separate industry. The industry is confined mainly to New South Wales and Victoria, but is becoming increasingly important in South Australia. The number of broadcast listeners' licences increased from a third of a million in 1930-31 to about two million at 31st March, 1954, and this increase reflects the advancement of the industry during that period. During the war years considerable expansion took place in the industry to meet the requirements of the fighting services and apart from a slight drop in output in 1945-46, this expansion has continued.

WIRELESS AND AMPLIFYING APPARATUS : AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	72	97	136	129	139	141
Number of persons employed ..	4,828	8,709	9,213	9,283	10,628	8,733
Salaries and wages paid ..	£'000 754	2,296	3,362	3,745	5,140	5,361
Value of power, fuel, etc., used ..	£'000 23	58	103	101	147	184
Value of materials used ..	£'000 1,356	3,446	5,197	6,409	9,229	8,487
Value of production ..	£'000 1,123	3,011	4,612	5,252	7,219	7,023
Total value of output ..	£'000 2,502	6,515	9,912	11,762	16,595	15,604
Value of land and buildings ..	£'000 558	969	1,106	1,205	1,339	1,586
Value of plant and machinery ..	£'000 305	712	688	770	946	980
Horse-power of engines ordinarily in use ..	h.p. 2,710	4,949	7,230	10,357	13,565	12,055
Domestic receiving sets made ..	No. 163,821	93,048	294,119	343,323	459,436	358,379

14. **Cotton.**—(i) *General.* Cotton has been grown in Australia since 1860, but never on a very large scale. The average annual quantity of unginned cotton produced during the five years ended 1938-39 was 18 million lb. and slightly under $1\frac{1}{2}$ million lb. in the five years ended 1952-53. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop, but the downward trend which commenced with the war in the Pacific has persisted. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XX.—Agricultural Production.

(ii) *Ginning.* The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board operates ginneries and processes by-products. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly (1951-52) from India, Pakistan, Brazil, Egypt and the United States of America.

(iii) *Spinning and Weaving.* The recent expansion in the spinning and weaving section of the cotton industry marks an important event in its development. New factories have been established and Australia is now producing an extensive range of cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre cord and tyre cord fabric. The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are shown in the following table for the years 1938-39, 1945-46 and 1948-49 to 1951-52.

COTTON SPINNING AND WEAVING : AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	33	78	91	93	91	94
Number of persons employed ..	3,589	7,253	8,246	8,377	9,233	8,840
Salaries and wages paid .. £'000	493	1,715	2,939	3,306	4,473	5,297
Value of power, fuel, etc., used .. £'000	50	150	251	308	441	554
Value of materials used .. £'000	1,357	4,560	7,857	9,889	16,873	20,803
Value of production .. £'000	979	3,227	4,783	5,991	7,534	9,272
Total value of output .. £'000	2,386	7,937	12,896	16,188	24,848	30,629
Value of land and buildings .. £'000	704	1,529	2,078	2,844	3,215	3,695
Value of plant and machinery .. £'000	736	1,914	2,748	4,118	4,020	4,214
Horse-power of engines ordinarily in use .. h.p.	9,128	21,195	26,078	29,118	31,468	32,285

15. *Wool Carding, Spinning and Weaving.*—The importance of this industry is emphasised by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed worsted cloth, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability.

WOOL CARDING, SPINNING AND WEAVING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	64	102		3	3	5	181
Number of persons employed ..	7,198	10,797	742	539	310	1,652	21,244
Salaries and wages paid .. £	3,769,233	6,126,108	330,315	279,979	172,234	865,026	11,542,895
Value of power, fuel, etc., used .. £	353,487	572,926	23,132	33,385	17,061	56,691	1,057,584
Value of materials used .. £	12,594,432	23,792,703	1,250,924	986,104	1,305,234	4,074,482	44,063,879
Value of production .. £	5,175,298	8,376,516	452,054	501,672	315,732	1,450,265	10,271,757
Total value of output .. £	18,123,217	32,742,147	1,726,110	1,521,361	1,698,947	5,581,438	61,393,220
Value of land and buildings .. £	2,262,235	3,460,647	142,869	34,735	64,850	196,000	6,161,396
Value of plant and machinery .. £	2,517,067	4,596,608	294,193	64,438	107,362	300,763	7,880,931
Horse-power of engines ordinarily in use .. h.p.	21,547	38,022	2,407	1,889	898	4,469	69,232

AUSTRALIA.

Items.	1938-39. (a)	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	90	114	153	168	176	181
Number of persons employed ..	19,608	21,536	24,893	24,354	24,333	21,244
Salaries and wages paid .. £'000	2,888	5,324	8,684	9,404	11,349	11,543
Value of power, fuel, etc., used .. £'000	393	511	787	831	952	1,057
Value of materials used .. £'000	7,331	12,315	23,643	32,741	53,672	44,064
Value of production .. £'000	4,791	8,951	13,598	16,426	18,610	16,272
Total value of output .. £'000	12,515	21,777	38,028	49,998	73,434	61,393
Value of land and buildings .. £'000	2,380	3,028	3,654	4,347	5,369	6,161
Value of plant and machinery .. £'000	3,370	2,926	4,246	5,235	6,898	7,881
Horse-power of engines ordinarily in use .. h.p.	42,944	52,739	58,083	63,669	69,070	69,232
Articles produced—						
Woolen cloth and tweed (b)						
'000 sq. yds.	8,336	16,707	16,319	13,245	11,126	10,962
Worsted cloth ..	17,986	12,644	18,074	19,074	19,832	16,032
Serge (b) ..	792	1,022	1,373	817	1,043	(c)
Flannel—						
For outer clothing ..	2,144	2,193	2,937	1,856	2,614	(c)
For underwear (pure) ..	1,557	1,367	1,527	1,659	1,916	(c)
For underwear (mixtures) ..	814	656				
Blankets (b) ..	574	981	689	896	973	645

(a) Includes Woolscouring Works in Victoria and Tasmania and Woolscouring Works and Fellmongeries in South Australia. (b) Includes production in other industries. (c) Included in Worsted cloth.

16. **Hosiery and Other Knitted Goods.**—Details for each State for 1951-52 and for Australia for a series of years are shown in the following table :—

HOSIERY AND OTHER KNITTED GOODS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	162	358	6	9	9	4	548
Number of persons employed ..	6,883	13,580	546	97	156	80 (a)	21,342
Salaries and wages paid .. £	3,616,752	7,196,210	230,720	40,192	64,334	30,649	11,178,857
Value of power, fuel, etc., used .. £	152,530	316,293	5,316	1,304	2,501	1,727	479,871
Value of materials used .. £	8,163,056	14,806,145	1,256,625	59,632	166,827	64,402	24,516,387
Value of production .. £	6,198,329	11,160,588	451,408	57,057	117,504	43,376	18,028,262
Total value of output .. £	14,513,915	26,283,026	1,713,549	117,993	286,832	109,205	43,024,520
Value of land and buildings .. £	1,841,922	3,536,869	121,806	27,996	41,472	32,415	5,602,486
Value of plant and machinery .. £	1,526,437	4,131,019	171,498	19,803	29,497	15,451	5,893,705
Horse-power of engines ordinarily in use .. h.p.	7,570	11,464	372	45	152	74	19,677

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	313	376	465	496	510	548
Number of persons employed ..	18,159	17,091	21,116	21,577	22,268	21,342
Salaries and wages paid .. £'000	2,332	3,687	6,526	7,382	9,605	11,179
Value of power, fuel, etc., used .. £'000	133	185	272	315	386	480
Value of materials used .. £'000	4,284	7,203	14,137	16,637	22,834	24,517
Value of production .. £'000	3,809	5,865	10,542	12,399	16,257	18,028
Total value of output .. £'000	8,226	13,253	24,951	29,351	39,477	43,025
Value of land and buildings .. £'000	1,962	2,444	3,210	3,877	4,755	5,602
Value of plant and machinery .. £'000	1,931	1,358	2,763	3,815	4,905	5,894
Horse-power of engines ordinarily in use .. h.p.	8,684	11,465	13,011	14,625	16,925	19,677

(a) Includes 15,023 females.

The following quantities of yarn were used in these establishments during 1951-52, viz. :—Worsted, 7,314,252 lb. ; woollen, 109,385 lb. ; cotton, 6,785,772 lb. ; mercerised cotton, 615,564 lb. ; rayon, 7,504,073 lb. ; silk, 69,536 lb. ; nylon, 799,959 lb. ; other, including mixtures, 668,154 lb. Production of garments and stockings is shown in § 10.

17. **Tanning, Currying and Leather Dressing.**—(i) *Details of Industry.* In Class VII. the most import industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

TANNING, CURRYING AND LEATHER DRESSING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories ..	69	45	13	10	5	2	143
Number of persons employed ..	1,829	2,405	573	221	(a)	(a)	5,274
Salaries and wages paid .. £	1,470,113	1,752,944	364,251	144,996	(a)	(a)	3,889,210
Value of power, fuel, etc., used .. £	155,808	148,878	25,847	10,884	(a)	(a)	351,784
Value of materials used .. £	3,776,282	3,357,894	949,488	345,352	(a)	(a)	8,795,673
Value of production .. £	2,105,731	2,651,773	616,545	275,639	(a)	(a)	5,911,672
Total value of output .. £	6,037,821	6,158,545	1,591,880	631,875	(a)	(a)	15,060,029
Value of land and buildings .. £	690,468	952,635	88,758	77,877	(a)	(a)	2,856,615
Value of plant and machinery .. £	675,282	671,232	189,957	120,587	(a)	(a)	2,703,319
Horse-power of engines ordinarily in use .. h.p.	12,588	11,165	2,848	1,471	(a)	(a)	28,988

(a) Not available for publication ; figures are included in the total for Australia.

TANNING, CURRYING AND LEATHER DRESSING—*continued.*

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	132	152	144	145	143	143
Number of persons employed ..	4,375	5,022	5,421	5,473	5,362	5,274
Salaries and wages paid .. £'000	920	1,662	2,502	2,755	3,200	3,889
Value of power, fuel, etc., used .. £'000	88	128	189	243	275	352
Value of materials used .. £'000	2,983	5,238	6,466	6,846	8,221	8,796
Value of production .. £'000	1,522	2,690	3,871	4,330	4,950	5,912
Total value of output .. £'000	4,593	8,056	10,526	11,419	13,446	15,060
Value of land and buildings .. £'000	814	1,048	1,271	1,355	1,638	1,857
Value of plant and machinery .. £'000	524	705	980	1,171	1,425	1,703
Horse-power of engines ordinarily in use .. h.p.	12,345	17,850	24,032	25,792	27,684	28,980

(ii) *Materials Used and Articles Produced.* The quantities of materials used and leather produced in tanneries in each State in 1951-52 are shown in the following table:—

TANNERIES : MATERIALS USED AND PRODUCTION, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Materials used—							
Hides .. no.	907,816	1,087,544	341,250	(a)	141,090	(a)	2,617,586
Skins—							
Calf .. "	612,678	557,546	195,208	(a)	(a)	(a)	1,380,261
Goat .. "	649,686	(a)	(a)	(a)	(a)	(a)	689,664
Sheep, including Pelts .. "	62,491,869	287,587	(a)	(a)(b)	(a)	(a)	63,469,333
Marsupial .. "	28,090	18,224	(a)	(a)	(a)	(a)	86,338
Bark used—							
Wattle .. tons	3,474	5,077	822	(b) 698	(a)	(a)	(b) 10,137
Mallet and Other .. "	(a)	911	(a)	(a)	(a)	(a)	1,279
Tanning extract used .. "	4,542	3,300	1,870	(a)(b)	1,051	(a)	(b) 11,093
Articles produced—							
Leather made—							
Sole and Belting lb.	12,264,101	14,862,616	6,304,328	(a)	3,486,802	(a)	38,636,238
Harness .. "	795,177	546,644	466,571	(a)	(a)	(a)	1,880,785
Upholstery .. sq. ft.	(a)	5,838,581	(a)	(a)	(a)	(a)	10,094,763
Dressed and Upper from Hides—							
Sold by Measure-ment—							
Patent .. sq. ft.	(a)	(a)	(a)	(a)	(a)	(a)	1,309,350
All Other .. "	15,398,208	17,880,224	5,036,320	3,220,462	(a)	(a)	43,444,095
Sold by Weight (all kinds) lb.	(a)	96,398	(a)	(a)	7,496	(a)	432,210
Dressed from skins—							
Calf .. sq. ft.	4,244,093	4,027,529	1,351,241	(a)	55,037	(a)	9,724,948
Goat .. "	2,691,251	(a)	(a)	(a)	(a)	(a)	2,814,586
Sheep .. "	8,367,362	761,877	(a)	(a)(b)	(a)	(a)	11,675,310
Marsupial .. "	113,476	86,019	(a)	(a)	(a)	(a)	381,613

(a) Not available for publication ; figures are included in the total for Australia. (b) Includes an amount produced or used in other works.

18. *Tailoring and Ready-made Clothing.*—Statistics showing the distribution of this industry between States in 1951-52 and for Australia for a series of years are shown in the following table:—

TAILORING AND READY-MADE CLOTHING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	915	642	154	128	140	19	1,998
Number of persons employed ..	18,224	10,939	3,055	2,363	1,313	332	36,226
Salaries and wages paid .. £	8,224,845	5,237,343	1,120,426	933,761	474,671	141,151	16,132,197
Value of power, fuel, etc., used .. £	170,567	104,585	20,970	21,703	8,909	2,220	328,954
Value of materials used .. £	15,405,942	10,599,925	2,098,458	1,107,120	733,954	132,892	30,078,291
Value of production .. £	11,905,639	8,059,712	1,697,534	1,183,131	705,759	167,205	23,718,980
Total value of output .. £	27,482,148	18,764,222	3,816,962	2,311,954	1,448,622	302,317	54,126,225
Value of land and buildings .. £	3,758,627	2,248,433	504,218	524,216	302,765	59,688	7,397,947
Value of plant and machinery .. £	1,313,886	831,367	116,849	116,108	42,260	10,550	2,431,020
Horse-power of engines ordinarily in use .. h.p.	7,026	2,829	505	494	181	58	11,093

TAILORING AND READY-MADE CLOTHING—continued.

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	1,177	1,420	1,874	1,902	1,890	1,998
Number of persons employed ..	26,499	30,047	37,958	37,250	38,535	36,226
Salaries and wages paid .. £'000	3,168	5,507	10,323	11,246	14,206	16,132
Value of power, fuel, etc., used .. £'000	72	116	187	204	249	329
Value of materials used .. £'000	4,947	9,617	19,344	20,187	27,539	30,078
Value of production .. £'000	4,812	8,881	15,668	17,085	21,349	23,719
Total value of output .. £'000	9,831	18,614	35,199	37,476	49,137	54,126
Value of land and buildings .. £'000	3,176	4,142	5,550	5,872	6,538	7,398
Value of plant and machinery .. £'000	356	829	1,461	1,666	2,030	2,431
Horse-power of engines ordinarily in use .. h.p.	2,607	5,148	7,375	8,895	10,137	11,093

19. Dressmaking and Millinery Establishments.—Particulars of dressmaking and millinery establishments in Australia for the years 1938-39, 1945-46 and 1948-49 to 1951-52 are shown in the following table :—

DRESSMAKING AND MILLINERY : AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	869	998	1,270	1,313	1,328	1,423
Number of persons employed ..	16,398	18,051	21,934	22,384	22,557	20,912
Salaries and wages paid .. £'000	1,653	3,038	5,497	6,244	7,568	8,412
Value of power, fuel, etc., used .. £'000	33	57	95	112	130	149
Value of materials used .. £'000	2,610	5,281	10,104	8,996	11,567	12,123
Value of production .. £'000	2,592	5,170	8,787	9,812	11,868	12,700
Total value of output .. £'000	5,235	10,508	18,986	18,920	23,565	24,972
Value of land and buildings .. £'000	2,052	2,724	3,421	3,626	4,068	4,588
Value of plant and machinery .. £'000	189	362	601	713	903	1,032
Horse-power of engines ordinarily in use .. h.p.	1,732	3,142	3,898	4,361	4,671	4,899

20. Shirts, Collars and Underclothing.—Particulars of this industry are shown below for each State for 1951-52 and for Australia for a series of years :—

SHIRTS, COLLARS AND UNDERCLOTHING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	196	150	22	29	20	2	419
Number of persons employed ..	4,927	5,223	1,205	530	(a)	(a)	12,640
Salaries and wages paid .. £	2,081,433	2,326,340	481,008	196,641	(a)	(a)	5,360,799
Value of power, fuel, etc., used .. £	38,345	30,466	6,741	3,143	(a)	(a)	81,936
Value of materials used .. £	5,581,827	5,251,450	846,837	305,662	(a)	(a)	12,332,784
Value of production .. £	3,414,382	3,938,086	745,003	265,409	(a)	(a)	8,715,021
Total value of output .. £	9,034,554	9,220,002	1,598,581	574,214	(a)	(a)	21,129,741
Value of land and buildings .. £	889,439	893,408	156,410	65,971	(a)	(a)	2,090,503
Value of plant and machinery .. £	373,731	388,987	52,213	27,357	(a)	(a)	885,147
Horse-power of engines ordinarily in use .. h.p.	2,626	2,061	173	170	(a)	(a)	5,189

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	283	347	410	397	410	419
Number of persons employed ..	11,081	9,902	12,760	12,545	12,870	12,640
Salaries and wages paid .. £'000	1,143	1,729	3,299	3,515	4,452	5,361
Value of power, fuel, etc., used .. £'000	23	32	55	60	72	82
Value of materials used .. £'000	2,651	4,446	9,199	8,915	10,730	12,333
Value of production .. £'000	1,761	2,601	5,482	5,978	7,503	8,715
Total value of output .. £'000	4,435	7,079	14,736	14,953	18,305	21,130
Value of land and buildings .. £'000	946	1,311	1,790	1,833	2,155	2,091
Value of plant and machinery .. £'000	231	397	608	693	845	885
Horse-power of engines ordinarily in use .. h.p.	1,874	2,676	3,521	3,795	6,017	5,189

(a) Not available for separate publication ; figures are included in total for Australia.

21. Boots and Shoes.—(i) *Details of Industry.* The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following tables refer to boot and shoe factories as distinct from those devoted to repairing. It has been necessary to include details of Boot and Shoe Repairing in Tasmania, in order to conceal confidential information for that State. Factories engaged in the manufacture of rubber boots and shoes are excluded, being classified under Rubber Goods, *see* para. 38.

BOOTS AND SHOES.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number of factories ..	200	257	33	20	12	18	540
Number of persons employed ..	7,596	10,858	1,784	1,451	898	188	22,775
Salaries and wages paid .. £	4,124,451	6,097,754	853,434	799,126	474,697	55,511	12,404,973
Value of power, fuel, etc., used£	68,854	76,154	8,881	10,433	7,096	578	171,996
Value of materials used .. £	5,410,839	9,745,947	1,232,681	972,338	614,691	81,835	18,058,331
Value of production .. £	5,897,177	8,437,401	1,141,627	980,068	629,668	75,401	17,161,342
Total value of output .. £	11,376,870	18,259,502	2,383,189	1,962,839	1,251,455	157,814	35,391,669
Value of land and buildings .. £	1,196,564	1,518,587	197,455	259,626	109,817	28,138	3,310,187
Value of plant and machinery .. £	658,189	1,205,865	204,209	184,542	127,046	21,871	2,401,722
Horse-power of engines ordinarily in use .. h.p.	7,520	8,696	882	792	575	108	18,573

AUSTRALIA.

Items.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	383	529	510	521	540
Number of persons employed ..	18,264	22,906	23,180	23,783	22,775
Salaries and wages paid .. £'000	4,408	7,611	8,410	10,215	12,405
Value of power, fuel, etc., used .. £'000	75	115	123	141	172
Value of materials used .. £'000	7,520	10,918	12,353	15,390	18,058
Value of production .. £'000	6,472	10,758	11,892	14,611	17,162
Total value of output .. £'000	14,067	21,791	24,368	30,142	35,392
Value of land and buildings .. £'000	1,518	2,087	2,328	2,822	3,310
Value of plant and machinery .. £'000	1,222	1,684	1,877	2,265	2,402
Horse-power of engines ordinarily in use .. h.p.	9,678	12,213	15,644	17,200	18,573

(a) Includes details of Boot and Shoe Repairing.

(ii) *Quantity and Value of Production.* The number and value of boots, shoes and slippers made in factories producing and repairing boots and shoes in each State are shown for 1951-52 in the following table. Particulars relating to the output of rubber boots and shoes are not included :—

BOOT AND SHOE FACTORIES : OUTPUT, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Quantity—							
Boots, shoes and sandals pairs ..	6,155,496	8,729,521	1,350,419	1,421,245	738,809	113,665	18,509,155
Slippers	2,465,485	3,713,352	743,902	73,176	581,958	..	7,577,873
Uppers(b)	37,696	8,233	(a)	(a)	(a)	..	64,636
Value—							
Boots, shoes and sandals .. £	9,925,613	14,903,902	1,837,391	1,914,815	945,957	157,060	29,684,738
Slippers £	1,337,493	2,068,877	344,800	31,420	311,516	..	4,094,106
Uppers(b) £	26,500	5,788	(a)	(a)	(a)	..	40,742

(a) Not available for publication; figures are included in total for Australia.

(b) Made for sale as such.

22. Flour-milling.—(i) *Details of Industry.* The following table shows the position of the grain-milling industry in each State for the year 1951-52 and for Australia for a series of years :—

FLOUR-MILLING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	55	38	10	28	20	11	162
Number of persons employed ..	1,651	1,351	(a)	525	559	(a)	4,681
Salaries and wages paid .. £	1,258,488	987,943	(a)	406,131	427,180	(a)	3,465,522
Value of power, fuel, etc., used£	272,218	181,646	(a)	99,513	118,603	(a)	729,674
Value of materials used .. £	15,890,997	13,859,480	(a)	5,586,814	6,036,877	(a)	45,576,423
Value of production .. £	2,869,763	2,123,311	(a)	709,450	848,931	(a)	7,312,800
Total value of output .. £	19,032,978	16,164,437	(a)	6,395,777	7,004,411	(a)	53,618,897
Value of land and buildings .. £	1,426,665	972,954	(a)	231,109	661,604	(a)	3,606,235
Value of plant and machinery .. £	1,866,178	955,855	(a)	427,923	610,071	(a)	4,105,618
Horse-power of engines ordinarily in use .. h.p.	16,061	13,189	(a)	4,250	4,866	(a)	41,824

(a) Not available for publication; figures are included in total for Australia.

FLOUR-MILLING—continued.

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	172	170	164	161	165	162
Number of persons employed ..	3,783	4,099	4,768	4,541	4,842	4,681
Salaries and wages paid .. £'000	896	1,376	2,272	2,349	2,933	3,466
Value of power, fuel, etc., used .. £'000	231	300	427	444	545	732
Value of materials used .. £'000	10,573	14,180	29,800	27,837	34,350	45,576
Value of production .. £'000	2,091	2,367	4,539	4,277	5,636	7,313
Total value of output .. £'000	12,895	16,847	34,766	32,558	40,531	53,619
Value of land and buildings .. £'000	2,091	2,244	2,456	2,557	3,177	3,606
Value of plant and machinery .. £'000	1,814	1,835	2,330	2,593	3,408	4,106
Horse-power of engines ordinarily in use .. h.p.	27,795	32,132	35,573	36,081	38,413	41,824

(ii) *Production of Flour and By-products.* The production of flour by the mills in each State (including other than flour mills) for the years 1938-39, 1945-46 and 1948-49 to 1951-52 was as follows:—

FLOUR-MILLING : PRODUCTION OF FLOUR.

(Tons of 2,000 lb.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	547,162	436,829	84,314	146,262	138,583	19,582	1,372,732
1945-46 ..	451,895	315,525	96,984	164,986	166,791	22,657	1,218,838
1948-49 (a)	667,645	479,288	110,843	211,787	183,143	26,484	1,679,190
1949-50 (a)	597,491	447,784	112,995	162,259	161,251	27,243	1,509,023
1950-51 (a)	694,036	448,881	116,503	189,962	218,841	27,336	1,695,559
1951-52 (a)	578,686	559,224	124,703	206,856	223,936	27,745	1,721,150

(a) Includes Wheatmeal for Baking.

In addition, 676,991 tons of bran and pollard were made. The quantity of wheat ground was 82,506,325 bushels.

23. *Bakeries.*—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory as explained at the beginning of this section. For that reason the tables do not give complete details of the industry, as a large number of bakehouses not coming within the definition are excluded. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

BAKERIES (INCLUDING CAKES AND PASTRY).

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number of factories ..	1,258	1,024	454	194	276	141	3,347
Number of persons employed ..	7,004	5,141	2,601	1,211	946	1,429	18,332
Salaries and wages paid .. £	3,412,785	2,318,607	1,046,916	634,892	377,158	780,302	8,570,666
Value of power, fuel, etc., used .. £	603,977	418,562	176,508	108,135	78,085	100,905	1,486,172
Value of materials used .. £	9,719,834	6,879,592	3,390,536	1,833,595	1,255,945	3,372,231	26,451,533
Value of production .. £	7,473,873	5,380,594	2,269,088	1,253,824	920,265	1,325,939	18,623,583
Total value of output .. £	17,797,484	12,678,748	5,836,132	3,195,554	2,254,295	4,799,075	46,562,288
Value of land and buildings .. £	4,398,554	3,098,524	990,559	716,170	508,514	1,076,780	10,789,101
Value of plant and machinery .. £	1,851,509	1,510,686	564,022	433,669	265,787	455,894	5,081,567
Horse-power of engines ordinarily in use .. h.p.	7,764	5,299	2,576	1,983	1,235	3,391	22,248

(a) Includes confectionery.

BAKERIES (INCLUDING CAKES AND PASTRY)—continued.
AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	1,958	2,494	2,950	3,064	3,167	3,347
Number of persons employed	11,715	14,535	17,420	17,925	17,929	18,332
Salaries and wages paid £'000	1,993	3,314	5,182	5,891	6,942	8,571
Value of power, fuel, etc., used £'000	306	574	784	917	1,116	1,486
Value of materials used £'000	6,651	11,087	16,477	18,406	20,786	26,451
Value of production £'000	4,509	7,265	10,852	12,987	14,893	18,624
Total value of output £'000	11,466	18,926	28,113	32,310	36,795	46,561
Value of land and buildings £'000	4,960	6,222	7,973	8,817	9,199	10,789
Value of plant and machinery £'000	1,478	1,804	3,092	3,635	4,078	5,082
Horse-power of engines ordinarily in use h.p.	10,855	13,695	17,622	19,160	20,483	22,248

24. **Sugar-mills.**—(i) *General.* Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XX.—Agricultural Production.

The products of the sugar-mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Particulars of cane crushed and sugar produced embodied in the following table refer to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XX.—Agricultural Production, which relate to harvest years.

(ii) *Details for States.* The following table shows details of the operations of sugar mills in New South Wales and Queensland for the years 1938-39, 1945-46 and 1948-49 to 1951-52 :—

SUGAR-MILLS.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
NEW SOUTH WALES.						
Number of factories	3	3	3	3	3	3
Number of persons employed	212	283	223	227	282	176
Cane crushed tons	337,038	166,069	273,974	330,740	(a)	(a)
Raw sugar produced (94 net titre) tons	45,106	21,220	33,003	40,706	41,258	41,060
Molasses produced gals.	1,489,090	1,110,000	1,348,480	1,631,200	(a)	(a)
QUEENSLAND.						
Number of factories	33	32	32	32	32	31
Number of persons employed	4,419	4,665	5,531	5,898	6,394	5,612
Cane crushed tons	5,432,193	4,551,971	6,707,530	6,518,006	6,691,704	5,005,172
Raw sugar produced (94 net titre) tons	775,064	644,661	910,049	896,413	879,844	704,341
Molasses—						
Sold to distillers and others '000 gals.	8,276	9,381	18,233	17,596	15,234	12,557
Used as fodder " "	4,237	4,676	5,846	5,563	5,582	5,900
Used as manure " "	3,293	3,075	5,282	7,517	5,555	5,484
Run to waste " "	499	51	168	283	50	37
Burnt as fuel " "	3,749	1,748	1,677	1,490	2,371	1,005
Sold or used for other purposes '000 gals.	232	423	402	727	581	324
Total molasses disposed of '000 gals.	20,286	19,354	31,608	33,176	29,373	25,307

(a) Not available for publication.

25. **Sugar-refining.**—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1951-52 there were two sugar refineries in Queensland and one each in New South Wales, Victoria, South Australia and Western Australia. The quantity of raw sugar treated amounted to 515,301 tons for a yield of 493,486 tons of refined sugar.

26. Confectionery.—The figures for 1951-52 for each State and for Australia for a series of years are shown hereunder :—

CONFECTIONERY.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(b)
Number of factories ..	92	104	21	25	8	(a)	250
Number of persons employed ..	3,035	3,216	374	385	351	(a)	7,361
Salaries and wages paid .. £	1,797,485	1,746,325	131,588	192,481	138,225	(a)	4,006,104
Value of power, fuel, etc., used .. £	179,773	144,088	12,604	19,137	15,332	(a)	370,934
Value of materials used .. £	6,174,491	5,433,980	446,715	409,790	431,656	(a)	11,996,632
Value of production .. £	3,690,140	3,378,225	224,228	257,341	251,688	(a)	7,801,622
Total value of output .. £	10,044,404	8,056,293	683,547	686,268	698,676	(a)	20,169,188
Value of land and buildings .. £	1,055,244	955,216	128,606	207,788	80,822	(a)	2,427,676
Value of plant and machinery .. £	1,219,873	1,224,046	81,612	97,529	80,575	(a)	2,703,635
Horse-power of engines ordinarily in use .. h.p.	12,661	11,598	879	1,283	466	(a)	26,887

AUSTRALIA.(b)

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	148	198	263	267	250	250
Number of persons employed ..	7,256	5,965	7,505	8,064	7,801	7,361
Salaries and wages paid .. £'000	1,041	1,389	2,396	2,974	3,431	4,006
Value of power, fuel, etc., used .. £'000	107	139	215	263	299	371
Value of materials used .. £'000	3,102	4,669	8,556	9,571	10,370	11,997
Value of production .. £'000	2,418	3,314	5,686	6,641	6,810	7,801
Total value of output .. £'000	5,627	8,122	14,457	16,475	17,479	20,169
Value of land and buildings .. £'000	1,423	1,556	1,906	2,071	2,319	2,428
Value of plant and machinery .. £'000	1,364	1,142	1,629	2,087	2,421	2,704
Horse-power of engines ordinarily in use .. h.p.	16,154	17,939	22,492	23,463	26,473	26,887

(a) Not available for publication.

(b) Excludes Tasmania.

27. Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar.—(i) *Details of Industry.* The following table shows particulars of factories included in this class for each State for 1951-52 and for Australia for a series of years :—

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	64	62	20	21	11	23	201
Number of persons employed ..	3,411	5,360	1,042	1,436	179	1,724	13,152
Salaries and wages paid .. £	2,036,419	3,301,505	577,809	794,489	78,263	1,004,503	7,792,988
Value of power, fuel, etc., used .. £	194,653	311,220	41,077	57,857	7,089	59,830	671,726
Value of materials used .. £	7,433,414	13,295,889	2,227,500	2,309,697	265,698	2,754,413	28,286,611
Value of production .. £	3,476,112	6,312,553	1,018,737	1,182,828	148,547	1,484,365	13,623,142
Total value of output .. £	11,104,179	19,919,662	3,287,314	3,550,382	421,334	4,298,668	42,581,479
Value of land and buildings .. £	1,187,537	2,153,991	567,088	432,835	84,048	605,096	5,030,595
Value of plant and machinery .. £	1,090,992	1,920,384	344,585	352,106	50,180	667,415	4,424,762
Horse-power of engines ordinarily in use .. h.p.	8,516	14,021	1,883	1,696	389	3,287	29,792

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	123	157	182	197	200	201
Number of persons employed ..	6,476	11,403	11,447	12,200	13,124	13,152
Salaries and wages paid .. £'000	1,149	2,947	4,147	4,901	6,298	7,793
Value of power, fuel, etc., used .. £'000	97	260	325	415	521	672
Value of materials used .. £'000	4,800	12,326	14,762	17,481	21,234	28,286
Value of production .. £'000	2,334	5,079	7,048	8,374	10,685	13,623
Total value of output .. £'000	7,231	17,665	22,135	26,270	32,440	42,581
Value of land and buildings .. £'000	1,382	2,184	3,051	3,490	4,082	5,031
Value of plant and machinery .. £'000	721	1,630	2,628	3,118	3,720	4,425
Horse-power of engines ordinarily in use .. h.p.	7,873	18,234	23,172	25,314	26,718	29,792

(ii) *Production.* During the 1939-45 War, production of jams increased greatly and a high level of output of 171 million lb. was attained in 1943-44. Production afterwards decreased, but attained a new record of 198.5 million lb. in 1947-48. It dropped to 108.2 million lb. in 1951-52. The peak output of preserved fruit occurred in 1951-52 with 256.1 million lb., compared with the previous highest level of 233.5 million lb. attained in the previous year.

There has also been a marked development in the production of canned vegetables. In 1938-39 output totalled 10,255,000 lb. but, as a result of the war-time demand by the armed services, production reached the record level of 119,149,000 lb. in 1944-45. However, it has since declined and in 1951-52 amounted to 100,446,000 lb.

The following table shows the total quantity and value of jams, pickles, sauces and other items manufactured in each State in 1951-52 :—

JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES : OUTPUT, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Quantity—							
Jams .. '000 lb.	29,260	(a)57,854	10,469	9,304	1,286	(b)	108,173
Fruit Pulp—							
Consumed in own works							
For sale or addition to	16,674	12,978	(c)	16,937	(c)	26,948	76,314
stock .. cwt.	45,832	35,480	5,073	16,880	18,202	96,908	218,375
Tomato Pulp—							
Consumed in own works							
For sale or addition to	43,507	118,034	(c)	10,727	9,999	(c)	184,749
stock .. cwt.	50,376	280,268		(c)	10,707	(c)	363,389
Fruit, preserved '000 lb.	48,106	134,258	21,586	27,294	473	24,416	256,133
Vegetables, preserved in							
liquid .. '000 lb.	37,823	40,817	1,862	5,435	1,356	13,153	100,446
Pickles .. '000 pints	4,285	2,661	(c)	2,263	(c)		9,748
Sauces .. "	11,071	14,245	1,351	2,174	(c)	(c)	30,643
Value—							
Jams .. £'000	1,599	(a) 3,226	684	534	75	(b)	6,118
Fruit, preserved .. £'000	3,269	6,872	1,606	1,575	34	1,379	14,735
Vegetables, preserved in							
liquid .. £'000	2,718	2,603	97	319	95	985	6,817
Pickles .. £'000	401	230	(c)	274	(c)		962
Sauces .. £'000	1,335	1,207	93	197	(c)	(c)	2,961

(a) Includes Tasmania.

(b) Included with Victoria.

(c) Not available for publication;

figures are included in total for Australia.

28. *Bacon-curing.*—(i) *Details of Industry.* The table hereunder shows particulars of factories engaged in bacon-curing in each State for 1951-52 and for Australia for a series of years :—

BACON-CURING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	33	15	9	12	4	10	83
Number of persons employed ..	692	703	809	309	253	72	2,838
Salaries and wages paid .. £	462,374	468,597	528,516	212,951	176,372	46,206	1,895,016
Value of power, fuel, etc., used .. £	61,787	53,726	53,366	50,719	27,482	4,044	251,134
Value of materials used .. £	4,124,422	3,807,470	4,252,723	1,719,924	1,916,175	447,924	16,268,644
Value of production .. £	810,206	1,035,640	1,314,037	355,357	280,793	110,871	3,906,904
Total value of output .. £	4,996,415	4,896,842	5,620,126	2,126,000	2,224,450	562,839	20,426,672
Value of land and buildings .. £	372,996	275,686	406,033	202,077	66,706	32,222	1,355,720
Value of plant and machinery .. £	168,962	143,109	225,353	134,636	37,940	13,936	723,936
Horse-power of engines ordinarily in use .. h.p.	2,012	2,361	3,502	1,581	908	336	10,700

BACON-CURING—continued.

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	76	87	87	86	84	83
Number of persons employed ..	2,047	2,879	2,872	4,907	2,961	2,838
Salaries and wages paid .. £'000	480	879	1,160	1,318	1,577	1,895
Value of power, fuel, etc., used .. £'000	77	126	170	204	251	251
Value of materials used .. £'000	3,768	9,410	11,146	12,518	14,076	16,269
Value of production .. £'000	865	1,628	1,932	2,283	2,930	3,907
Total value of output .. £'000	4,710	11,164	13,235	14,971	17,210	20,427
Value of land and buildings .. £'000	750	890	1,069	1,079	1,270	1,356
Value of plant and machinery .. £'000	357	395	531	537	610	724
Horse-power of engines ordinarily in use .. h.p.	9,389	10,116	10,522	10,093	10,472	10,700

(ii) *Quantity and Value of Production.* The number of pigs cured and the quantity of bacon and ham and lard produced in factories in each State for 1951-52 are shown in the following table:—

BACON-CURING FACTORIES: PIGS CURED AND PRODUCTION, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Pigs cured on own account— To finished Bacon ..	195,509	153,642	151,111	61,864	(a)	(a)	686,362
To green Bacon ..							
Pigs cured on commission ..	47,585	1,854	3,479	540	(a)	(a)	53,931
Total ..	243,094	157,496	172,211	62,404	83,255	21,833	740,293
Bacon and Ham produced (b) tons ..	10,940	7,792	7,369	2,786	3,680	727	33,294
Lard produced (b) ..	486	325	466	141	280	70	1,768

(a) Not available for publication; figures are included in total for Australia.

(b) Includes particulars of articles produced in other works.

Bacon and ham and other pig products are dealt with more fully in Chapter XXI.—Farmyard, Dairy and Bee Products.

29. *Butter, Cheese and Condensed and Dried Milk.*—(i) *Details of Industry.* The following table shows particulars of butter, cheese and condensed and dried milk factories in each State for 1951-52 and for Australia for a series of years.

BUTTER, CHEESE AND CONDENSED AND DRIED MILK.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	90	139	91	42	14	23	399
Number of persons employed ..	2,168	5,224	1,502	838	354	387	10,473
Salaries and wages paid .. £	1,443,716	3,809,599	921,443	542,789	231,361	236,828	7,185,736
Value of power, fuel, etc., used .. £	441,674	984,995	170,931	116,235	66,514	56,099	1,836,448
Value of materials used .. £	10,491,610	34,011,269	13,346,570	4,979,748	2,563,859	2,645,002	68,038,058
Value of production .. £	2,029,358	7,435,168	1,335,557	904,225	411,441	419,629	12,535,378
Total value of output .. £	12,962,642	42,431,432	14,853,058	6,000,208	3,041,814	3,120,730	82,409,884
Value of land and buildings .. £	1,627,284	3,147,769	1,057,460	397,849	134,338	219,826	6,584,526
Value of plant and machinery .. £	2,480,910	3,903,240	1,307,936	381,649	234,127	261,129	8,568,991
Horse-power of engines ordinarily in use .. h.p.	21,071	28,487	18,820	5,332	1,672	2,057	77,439

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	523	462	434	428	409	399
Number of persons employed ..	6,851	8,896	10,016	10,469	10,707	10,473
Salaries and wages paid .. £'000	1,570	2,737	4,237	4,941	6,020	7,186
Value of power, fuel, etc., used .. £'000	390	756	1,070	1,340	1,504	1,837
Value of materials used .. £'000	29,162	34,991	52,837	60,762	61,581	68,038
Value of production .. £'000	3,543	5,024	7,335	8,099	10,790	12,535
Total value of output .. £'000	33,095	40,771	61,242	70,201	73,875	82,410
Value of land and buildings .. £'000	2,880	3,506	4,236	4,562	5,400	6,585
Value of plant and machinery .. £'000	3,067	3,597	4,679	5,547	7,014	8,369
Horse-power of engines ordinarily in use .. h.p.	45,059	60,611	66,210	69,809	74,199	77,439

(ii) *Quantity and Value of Production.* The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1951-52. These details are restricted to factory production and therefore exclude farm output.

BUTTER, CHEESE AND CONDENSED MILK, ETC. FACTORIES: PRODUCTION, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MILK USED ('000 GALLONS).							
For the manufacture of—							
Butter	108,939	272,755	127,103	33,343	29,498	32,669	604,307
Cheese	4,561	47,439	10,441	22,618	1,348	878	87,285
Condensed, Dried and other Milk Products (including Ice Cream)(b)	13,817	62,246	785	(a)	(a)	(a)	86,929

PRODUCTS.

Quantity—							
Butter tons	23,438	59,236	27,850	7,767	6,705	6,170	131,166
Cheese „	1,995	22,240	(c) 4,700	10,615	624	408	40,582
Condensed and concentrated milk tons	9,303	45,711	(a)	(a)	(a)	(a)	69,210
Powdered milk—							
Full cream „	2,457	11,957	(a)	(a)	..	(a)	15,121
Skim „	669	9,628	(a)	(a)	..	(a)	10,887
Value—							
Butter £'000	7,852	19,614	(c) 9,237	2,749	2,240	2,068	43,760
Cheese „	500	4,615	906	2,111	132	93	8,357
Condensed and concentrated milk £'000	1,138	5,815	(a)	(a)	(a)	(a)	8,863
Powdered milk—							
Full cream „	745	3,209	(a)	(a)	..	(a)	4,096
Skim „	49	951	(a)	(a)	..	(a)	1,055

(a) Not available for publication; figures are included in total for Australia. (b) Includes Whole Milk equivalent of cream and butter fat purchased as such. (c) Includes 164 tons of cheese valued at £31,482, made in establishments not classified as factories.

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXI.—Farmyard, Dairy and Bee Products.

30. *Meat and Fish Preserving.*—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. The substitution of chilled for frozen meat exported has already been referred to in Chapter XIX.—Pastoral Production. In recent years there has been considerable expansion in the canning of meat and fish.

MEAT AND FISH PRESERVING.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	12	17	20	20	14	4	87
Number of persons employed ..	777	1,109	4,590	287	508	115	7,386
Salaries and wages paid .. £	467,944	816,775	3,291,572	152,100	429,117	64,422	5,221,930
Value of power, fuel, etc., used .. £	57,222	108,675	489,524	15,915	65,235	5,164	741,735
Value of materials used .. £	2,504,295	4,634,462	23,174,890	814,175	2,510,543	189,126	33,827,491
Value of production £	857,538	1,818,774	4,685,363	256,683	1,041,769	91,181	8,751,308
Total value of output £	3,419,055	6,561,911	28,349,777	1,086,773	3,617,547	285,471	43,320,534
Value of land and buildings .. £	227,911	560,659	2,147,968	149,629	854,778	48,647	3,989,592
Value of plant and machinery & Horse-power of engines ordinarily in use h.p.	353,063	478,395	1,053,668	102,889	606,877	27,907	2,622,799
	2,841	5,162	19,816	844	5,476	371	34,510

MEAT AND FISH PRESERVING—continued.
AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories	32	57	81	86	86	87
Number of persons employed ..	4,093	6,741	7,765	8,552	7,940	7,386
Salaries and wages paid .. £'000	1,180	2,297	3,343	4,165	4,752	5,222
Value of power, fuel, etc., used .. £'000	134	257	421	550	633	742
Value of materials used .. £'000	6,351	11,800	18,420	23,640	30,578	33,828
Value of production .. £'000	1,601	3,439	5,431	7,200	6,528	8,751
Total value of output .. £'000	8,086	15,496	24,272	31,390	37,739	43,321
Value of land and buildings .. £'000	1,966	2,412	2,977	3,015	3,223	3,990
Value of plant and machinery .. £'000	1,325	1,541	1,746	1,970	2,297	2,623
Horse-power of engines ordinarily in use .. h.p.	13,385	21,696	27,149	28,668	30,081	34,510

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XIX.—Pastoral Production.

31. *Breweries.*—(i) *Details of Industry.* The following table gives particulars of breweries in each State for the year 1951-52 and for Australia for a series of years. It should be noted, however, that the data shown are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

BREWERIES.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	8	7	6	4	4	2	31
Number of persons employed ..	1,658	2,102	695	686	(a)	(a)	5,914
Salaries and wages paid .. £	1,328,419	1,620,410	467,946	506,878	(a)	(a)	4,564,318
Value of power, fuel, etc., used .. £	447,687	318,365	113,241	97,178	(a)	(a)	1,144,861
Value of materials used .. £	3,976,611	3,583,844	982,034	1,298,510	(a)	(a)	11,739,499
Value of production .. £	3,614,123	2,899,997	1,182,360	904,936	(a)	(a)	10,297,613
Total value of output(b) .. £	8,038,421	6,802,206	2,277,635	2,300,624	(a)	(a)	23,181,973
Value of land and buildings .. £	1,502,984	2,266,339	983,745	341,707	(a)	(a)	5,714,816
Value of plant and machinery .. £	1,305,106	1,224,861	797,790	805,522	(a)	(a)	4,831,995
Horse-power of engines ordinarily in use .. h.p.	10,918	7,204	4,829	3,272	(a)	(a)	30,181

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	34	33	32	30	29	31
Number of persons employed ..	3,698	4,121	5,007	5,258	5,517	5,914
Salaries and wages paid .. £'000	1,215	1,586	2,489	2,866	3,666	4,564
Value of power, fuel, etc., used .. £'000	251	351	571	704	849	1,145
Value of materials used .. £'000	3,407	4,256	6,213	7,584	9,081	11,739
Value of production .. £'000	5,372	5,869	6,743	7,593	8,458	10,298
Total value of output(b) .. £'000	9,030	10,476	13,527	15,851	18,388	23,182
Value of land and buildings .. £'000	2,801	3,186	3,329	3,507	5,162	5,715
Value of plant and machinery .. £'000	2,737	2,484	3,204	3,623	4,489	4,832
Horse-power of engines ordinarily in use .. h.p.	23,231	25,927	25,514	26,512	28,765	30,181

(a) Not available for publication; figures are included in total for Australia.
Excise Duty.

(b) Excludes

(ii) *Production, Consumption, Materials Used.* The quantity of ale, stout and beer brewed fell from 73.7 million gallons in 1928-29 to 49.8 million gallons in 1931-32, but thereafter increased each year to 109.2 million gallons in 1941-42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently output remained static at about 100 million gallons from 1942-43 to 1944-45. Thereafter production increased, and in 1952-53 amounted to 109 million gallons.

The average annual consumption of ale, stout and beer prior to the economic depression of the early thirties exceeded 11 gallons per head of the population: it dropped to 7.32 gallons in 1931-32, increased to 13.76 gallons in 1941-42 and declined again to about 13 gallons during the period of control. The consumption per head had increased to 21.05 gallons by 1952-53.

The table below shows the quantities of raw materials used and the quantity and value of ale, stout and beer (excluding waste beer) brewed in each State during 1951-52 :—

BREWERIES : MATERIALS USED AND PRODUCTION, 1951-52.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
RAW MATERIALS USED.							
Total—							
Malt .. bus.	1,832,180	1,590,514	592,510	(a)	638,583	(a)	5,381,191
Hops .. lb.	1,734,282	1,121,538	402,042	(a)	396,729	(a)	4,257,358
Sugar .. cwt.	310,240	213,840	73,420	(a)	39,540	(a)	723,420
Per 1,000 gallons of Ale, Stout and Beer brewed—							
Malt .. bus.	27.43	28.31	31.12	(a)	36.63	(a)	29.45
Hops .. lb.	25.96	19.97	21.11	(a)	22.76	(a)	23.30
Sugar .. cwt.	4.64	3.81	3.86	(a)	2.27	(a)	3.96
ALE, STOUT AND BEER BREWED (EXCLUDING WASTE BEER).							
Quantity '000 gals.	66,799	56,174	18,815	(a)	17,433	(a)	182,506
Value(b) £'000	7,925	6,719	2,271	(a)	2,852	(a)	22,825

(a) Not available for publication; figures are included in total for Australia.

(b) Excludes Excise Duty.

32. Wineries and Distilleries.—The following table shows particulars of the operations of Wineries and Distilleries for each State during 1951-52 and for Australia for a series of years.

WINERIES AND DISTILLERIES.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	28	33	5	74	17	(a)	158
Number of persons employed ..	319	437	160	1,308	(a)	(a)	2,277
Salaries and wages paid .. £	221,856	264,265	103,239	803,556	(a)	(a)	1,416,340
Value of power, fuel, etc., used .. £	86,649	115,158	48,960	130,104	(a)	(a)	382,693
Value of materials used .. £	1,362,324	947,812	189,365	4,467,123	(a)	(a)	7,076,175
Value of production .. £	398,400	488,924	244,659	1,927,101	(a)	(a)	3,118,147
Total value of output .. £	1,847,373	1,551,894	482,984	6,524,328	(a)	(a)	10,577,015
Value of land and buildings .. £	527,811	245,556	76,762	1,025,700	(a)	(a)	1,919,575
Value of plant and machinery .. £	476,654	340,813	172,553	748,898	(a)	(a)	1,773,652
Horse-power of engines ordinarily in use .. h.p.	2,170	2,386	591	5,631	(a)	(a)	11,038

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	135	138	146	146	153	158
Number of persons employed ..	1,133	1,771	2,146	2,130	2,158	2,277
Salaries and wages paid .. £'000	246	519	870	976	1,122	1,416
Value of power, fuel, etc., used .. £'000	58	130	240	260	294	383
Value of materials used .. £'000	1,421	2,982	4,127	4,484	4,810	7,076
Value of production .. £'000	811	1,333	2,130	2,169	2,637	3,118
Total value of output .. £'000	2,290	4,445	6,497	6,913	7,741	10,577
Value of land and buildings .. £'000	1,002	1,065	1,358	1,500	1,795	1,920
Value of plant and machinery .. £'000	916	998	1,250	1,210	1,556	1,774
Horse-power of engines ordinarily in use .. h.p.	4,396	6,185	7,499	8,175	9,189	11,038

(a) Not available for publication; figures are included in total for Australia.

33. Tobacco, Cigars and Cigarettes.—Particulars of establishments in which the manufacture of tobacco, cigars or cigarettes was carried on during 1951-52 are shown below for each State and for Australia for a series of years. There are no such factories in Tasmania.

TOBACCO, CIGARS AND CIGARETTES.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia
Number of factories ..	15	13	7	..	1	36
Number of persons employed ..	2,555	2,114	(a)	..	(a)	4,971
Salaries and wages paid .. £	1,540,243	1,221,895	(a)	..	(a)	2,931,655
Value of power, fuel, etc., used .. £	85,433	34,708	(a)	..	(a)	125,620
Value of materials used .. £	11,813,271	7,084,784	(a)	..	(a)	19,418,804
Value of production .. £	2,447,945	2,492,935	(a)	..	(a)	5,206,199
Total value of output .. £	14,346,649	9,611,527	(a)	..	(a)	24,750,623
Value of land and buildings .. £	721,640	754,413	(a)	..	(a)	1,597,643
Value of plant and machinery .. £	498,314	701,127	(a)	..	(a)	1,283,792
Horse-power of engines ordinarily in use .. h.p.	3,591	2,018	(a)	..	(a)	5,862

TOBACCO, CIGARS AND CIGARETTES—continued.

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	30	26	37	37	37	36
Number of persons employed ..	5,544	5,255	5,219	5,167	5,044	4,971
Salaries and wages paid .. £'000	1,096	1,300	1,828	1,992	2,380	2,932
Value of power, fuel, etc., used .. £'000	34	52	74	89	90	126
Value of materials used .. £'000	7,081	10,602	13,751	15,016	16,599	19,419
Value of production .. £'000	2,685	2,389	3,788	3,869	4,897	5,206
Total value of output .. £'000	9,800	13,043	17,613	18,974	21,586	24,751
Value of land and buildings .. £'000	1,042	959	1,175	1,276	1,485	1,598
Value of plant and machinery .. £'000	943	724	1,009	1,060	1,171	1,284
Horse-power of engines ordinarily in use .. h.p.	4,610	5,267	6,190	4,610	6,056	5,862
Leaf used—						
Australian (stemmed) .. '000 lb.	4,489	4,685	3,084	3,313	3,775	3,664
Imported (stemmed) .. '000 lb.	16,011	18,822	22,775	24,043	24,558	26,131
Tobacco made .. '000 lb.	16,305	17,901	19,256	20,168	20,967	21,615
Cigars made .. '000 lb.	238	125	169	169	179	175
Cigarettes made .. '000 lb.	6,731	8,482	9,701	10,341	10,679	11,749

(a) Not available for publication ; figures are included in total for Australia.

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw material. Increased import duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929-30 to over 3 million lb. in 1930-31. During the 1939-45 War about 4.7 million lb. of Australian-grown leaf was used annually, but in subsequent years the figure fell, and the 1951-52 usage was 3.7 million lb. In this connexion, see Chapter XX.—Agricultural Production.

Imports of tobacco during 1951-52 comprised—manufactured tobacco, 602,667 lb. ; cigars, 27,579 lb. ; cigarettes, 12,153,933 lb. ; unmanufactured tobacco, 27,025,742 lb.

34. Sawmills, etc.—The most important industry in Class X. is that of sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town, they have been combined in the following table, together with plywood and bark mills.

SAWMILLS, PLYWOOD AND BARK MILLS.

1951-52.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	1,074	675	671	86	259	368	3,133
Number of persons employed ..	11,509	7,369	8,703	1,972	3,856	2,276	35,685
Salaries and wages paid .. £	6,587,571	4,305,774	4,663,508	1,210,249	2,066,030	1,266,650	20,099,782
Value of power, fuel, etc., used .. £	473,959	332,340	282,744	52,113	172,755	86,358	1,400,275
Value of materials used .. £	19,747,290	10,592,134	8,494,379	5,259,358	2,920,460	2,203,874	49,217,495
Value of production .. £	12,156,005	7,970,148	7,459,983	3,376,726	3,747,840	2,253,945	35,964,047
Total value of output .. £	32,377,254	18,894,628	16,237,106	7,688,197	6,841,055	4,544,177	86,582,417
Value of land and buildings .. £	2,447,332	1,764,108	1,116,937	780,913	759,134	279,327	7,147,751
Value of plant and machinery .. £	3,453,898	2,664,926	2,271,592	457,987	1,304,430	723,096	10,875,929
Horse-power of engines ordinarily in use .. h.p.	104,204	72,397	67,945	14,751	26,610	24,954	310,861

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	1,660	1,765	2,541	2,781	2,937	3,133
Number of persons employed ..	19,104	22,591	30,067	31,493	32,978	35,685
Salaries and wages paid .. £'000	3,635	5,842	10,402	12,031	14,999	20,100
Value of power, fuel, etc., used .. £'000	226	375	657	804	1,032	1,400
Value of materials used .. £'000	8,523	12,174	23,428	27,020	34,965	49,217
Value of production .. £'000	5,789	9,159	17,505	20,727	26,747	35,965
Total value of output .. £'000	14,538	21,708	41,590	48,551	62,744	86,582
Value of land and buildings .. £'000	2,055	2,523	3,825	4,477	5,819	7,148
Value of plant and machinery .. £'000	2,786	3,461	5,712	7,077	8,881	10,876
Horse-power of engines ordinarily in use .. h.p.	90,315	132,767	208,230	243,927	276,232	310,861

The sawmill output of native timber, which declined from 740 million super. feet in 1925-26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in 1938-39 and by 1951-52 had risen to 1,392 million super. feet. Further reference is made to the sawmilling industry in Chapter XXII.—Forestry.

35. **Cabinet and Furniture Making and Upholstery.**—These industries constitute the principal manufactures in Class XI. The following table shows particulars for each State in 1951-52 :—

CABINET AND FURNITURE MAKING AND UPHOLSTERY, 1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	463	545	217	117	143	71	1,556
Number of persons employed ..	5,467	5,033	2,632	1,605	1,263	574	16,574
Salaries and wages paid £	3,356,565	2,695,417	1,245,731	853,399	603,138	276,528	9,030,778
Value of power, fuel, etc., used £	83,798	48,856	24,427	23,266	13,587	3,649	197,613
Value of materials used £	5,461,040	4,231,414	2,054,809	1,483,985	1,001,479	279,096	14,511,823
Value of production ..	£ 4,931,291	£ 4,485,954	£ 1,934,516	£ 1,275,251	£ 994,809	£ 411,833	£ 14,033,654
Total value of output ..	£ 10,476,129	£ 8,766,224	£ 4,013,752	£ 2,782,532	£ 2,009,875	£ 694,578	£ 28,743,090
Value of land and buildings ..	£ 1,729,548	£ 1,677,787	£ 629,213	£ 370,669	£ 367,313	£ 136,088	£ 4,910,618
Value of plant and machinery ..	£ 563,817	£ 522,917	£ 254,502	£ 185,266	£ 164,023	£ 48,541	£ 1,739,066
Horse-power of engines ordinarily in use .. h.p.	14,974	14,776	6,320	4,987	3,369	1,476	45,902

36. **Printing Works.**—Printing and bookbinding rank high in importance among the industries of Australia, and in 1951-52 afforded employment for 35,502 employees, and paid £22,319,000 in salaries and wages, while the value of output amounted to £80,665,000. The first table below gives particulars of establishments engaged in general printing in each State for 1951-52. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow :—

GOVERNMENT AND GENERAL PRINTING WORKS, 1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	445	467	100	66	70	19	1,167
Number of persons employed ..	9,060	7,951	2,275	1,535	1,324	584	22,729
Salaries and wages paid £	5,724,503	4,816,801	1,168,059	860,648	676,195	333,869	13,580,075
Value of power, fuel, etc., used £	195,748	105,679	27,175	20,587	18,608	5,841	373,638
Value of materials used ..	£ 10,234,227	£ 7,847,829	£ 1,726,670	£ 1,059,624	£ 972,365	£ 388,563	£ 22,229,284
Value of production ..	£ 10,089,796	£ 8,176,543	£ 1,738,487	£ 1,418,020	£ 1,297,671	£ 522,664	£ 23,243,181
Total value of output ..	£ 20,519,771	£ 16,130,051	£ 3,492,338	£ 2,498,231	£ 2,288,644	£ 917,068	£ 45,846,103
Value of land and buildings ..	£ 3,021,293	£ 2,706,114	£ 535,481	£ 353,959	£ 348,894	£ 139,168	£ 7,104,909
Value of plant and machinery ..	£ 3,451,916	£ 3,097,585	£ 522,773	£ 606,907	£ 503,441	£ 186,744	£ 8,369,366
Horse-power of engines ordinarily in use .. h.p.	16,092	10,812	1,961	1,928	1,683	729	33,205

NEWSPAPERS AND PERIODICALS, 1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	183	111	57	33	30	7	421
Number of persons employed ..	5,851	3,228	1,787	928	617	362	12,773
Salaries and wages paid £	4,071,366	2,306,475	1,082,557	623,657	407,552	247,320	8,738,927
Value of power, fuel, etc., used £	168,311	73,156	44,583	22,039	26,254	5,671	340,014
Value of materials used ..	£ 8,667,875	£ 5,589,468	£ 1,911,953	£ 1,460,266	£ 796,081	£ 214,902	£ 18,640,545
Value of production ..	£ 7,689,236	£ 3,958,724	£ 1,726,721	£ 1,301,682	£ 845,633	£ 315,916	£ 15,837,912
Total value of output ..	£ 16,525,422	£ 9,621,348	£ 3,683,257	£ 2,783,987	£ 1,667,968	£ 536,489	£ 34,818,471
Value of land and buildings ..	£ 2,961,515	£ 942,685	£ 717,857	£ 524,590	£ 266,131	£ 114,397	£ 5,527,175
Value of plant and machinery ..	£ 2,962,485	£ 2,944,201	£ 1,004,279	£ 224,920	£ 307,232	£ 94,844	£ 7,537,961
Horse-power of engines ordinarily in use .. h.p.	16,331	9,762	4,379	2,602	1,970	558	35,602

37. **Paper Making.**—Although the paper manufacturing industry has been established in Australia for many years it was not until the manufacture of paper pulp from indigenous timber commenced in 1938-39 that any marked development occurred.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania, whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp rose from 6,000 tons in 1938-39 to 88,000 tons in 1946-47, and remained about this level until 1951-52, when production totalled 101,000 tons.

The number of factories operating in 1951-52 comprised two in New South Wales, eight in Victoria, one in Queensland, South Australia and Western Australia and three in Tasmania. In the latter State, newsprint, writing and printing papers are produced, and in the other States wrappings, other papers and boards. Particulars for this industry are shown in the following table.

PAPER MAKING, INCLUDING PULP MILLS : AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	7	12	14	14	14	16
Number of persons employed ..	1,961	4,705	5,991	6,160	6,336	7,237
Salaries and wages paid .. £'000	467	1,577	2,881	3,183	4,231	5,852
Value of power, fuel, etc., used .. £'000	201	599	941	998	1,181	1,610
Value of materials used .. £'000	1,096	3,802	5,768	6,154	7,487	14,558
Value of production .. £'000	1,005	3,017	5,649	6,581	9,165	12,623
Total value of output .. £'000	2,302	7,418	12,358	13,733	17,833	28,791
Value of land and buildings .. £'000	850	1,525	2,526	3,331	4,871	6,820
Value of plant and machinery .. £'000	1,713	2,509	4,641	5,754	9,814	12,961
Horse-power of engines ordinarily in use .. h.p.	31,548	68,215	79,223	95,999	103,098	112,469

38. Rubber Goods.—The following table shows particulars of this industry for each State during 1951-52 and excludes establishments engaged primarily in the retreading and repairing of tyres.

RUBBER GOODS, 1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	24	42	8	9	2	..	85
Number of persons employed ..	5,787	4,326	(a)	508	(a)	..	11,765
Salaries and wages paid .. £	4,766,985	3,360,078	(a)	333,052	(a)	..	9,033,464
Value of power, fuel, etc., used .. £	637,449	624,548	(a)	29,351	(a)	..	1,346,562
Value of materials used .. £	16,172,278	15,381,085	(a)	569,517	(a)	..	34,787,920
Value of production .. £	6,092,090	7,283,218	(a)	493,867	(a)	..	15,189,201
Total value of output .. £	22,901,817	23,288,851	(a)	1,092,735	(a)	..	51,323,683
Value of land and buildings .. £	1,223,590	1,643,900	(a)	80,671	(a)	..	3,207,341
Value of plant and machinery .. £	1,320,315	1,654,427	(a)	92,228	(a)	..	3,444,237
Horse-power of engines ordinarily in use .. h.p.	42,685	38,986	(a)	2,000	(a)	..	88,792

(a) Not available for separate publication ; figures included in total for Australia.

39. Electric Light and Power Works.—(i) *Details of Industry.* The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. For further information on this subject see Chapter XXV.—Electric Power Generation and Distribution. Particulars of the industry for each State during the year 1951-52 and for Australia for a series of years are shown below :—

ELECTRIC LIGHT AND POWER WORKS.

1951-52.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	85	68	44	32	100	2	331
Number of persons employed ..	4,459	2,500	1,066	1,117	(a)	(a)	10,381
Salaries and wages paid .. £	3,561,194	1,979,255	784,296	913,001	(a)	(a)	8,178,246
Value of power, fuel, etc., used .. £	13,534,980	5,608,627	3,968,644	3,257,866	(a)	(a)	28,723,716
Value of materials used .. £	1,963,405	390,558	568,442	233,534	(a)	(a)	3,481,694
Value of production .. £	8,744,683	4,603,839	1,521,621	1,450,371	(a)	(a)	18,064,804
Total value of output .. £	24,243,068	10,603,024	6,058,707	4,941,771	(a)	(a)	50,270,214
Value of land and buildings .. £	10,004,918	2,955,591	1,972,638	3,703,393	(a)	(a)	21,640,748
Value of plant and machinery .. £	23,664,654	15,941,360	7,153,268	6,267,798	(a)	(a)	66,630,204

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	395	372	363	358	354	331
Number of persons employed ..	6,508	7,071	8,822	9,433	9,815	10,381
Salaries and wages paid .. £'000	1,977	2,588	4,751	5,368	6,541	8,178
Value of power, fuel, etc., used .. £'000	3,239	6,398	12,860	15,491	21,259	28,724
Value of materials used .. £'000	530	1,029	1,845	2,180	2,712	3,481
Value of production .. £'000	8,714	10,563	12,233	12,885	14,790	18,065
Total value of output .. £'000	12,483	17,990	26,938	30,556	38,761	50,270
Value of land and buildings .. £'000	8,388	9,235	11,640	13,486	16,932	21,641
Value of plant and machinery .. £'000	27,751	32,131	39,083	45,454	53,441	66,630

(a) Not available for separate publication ; figures included in total for Australia.

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 863.

(ii) *Production.* The increase in the production of electric light and power in each of the States since 1938-39 is shown in the following table :—

ELECTRIC LIGHT AND POWER WORKS : ELECTRICITY PRODUCED.
(’000 kWh)

Year.	N.S.W.	Victoria.	Q’land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	1,948,490	1,222,505	387,368	256,283	307,002	566,691	4,688,339
1945-46 ..	2,831,801	1,904,403	612,672	402,134	338,799	819,958	6,909,767
1948-49 ..	3,717,030	2,503,981	890,258	566,606	398,594	976,474	9,052,943
1949-50 ..	3,758,004	2,706,081	971,630	593,808	417,499	1,061,639	9,508,661
1950-51 ..	4,251,442	2,875,866	1,115,348	713,034	469,914	1,077,723	10,503,327
1951-52 ..	4,628,095	2,964,155	1,242,086	787,780	529,702	1,145,500	11,297,318

40. *Gas-works.*—(i) *Details of Industry.* Gas-works are in operation in the majority of important towns in Australia. The following table shows particulars of gas-works in each State for the year 1951-52 and for Australia for a series of years :—

GAS-WORKS.

1951-52.

Items.	N.S.W.	Victoria.	Q’land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	39	36	16	3	4	2	100
Number of persons employed ..	1,489	1,419	428	454	(a)	(a)	4,042
Salaries and wages paid .. £	1,222,882	1,170,759	289,032	332,065	(a)	(a)	3,206,825
Value of power, fuel, etc., used .. £	1,571,205	96,943	22,426	4,055	(a)	(a)	1,776,884
Value of materials used ..	5,746,262	4,974,441	850,572	1,059,848	(a)	(a)	13,400,947
Value of production .. £	3,972,643	2,049,999	502,907	393,943	(a)	(a)	7,165,219
Total value of output .. £	11,290,110	7,121,383	1,375,905	1,457,846	(a)	(a)	22,343,050
Value of land and buildings .. £	1,180,920	549,175	244,340	31,050	(a)	(a)	2,185,900
Value of plant and machinery .. £	4,231,365	5,822,593	1,102,905	1,516,456	(a)	(a)	13,846,223
Horse-power of engines ordinarily in use .. h.p.	14,622	10,270	1,864	1,560	(a)	(a)	28,427

AUSTRALIA.

Items.	1938-39.	1945-46.	1948-49.	1949-50.	1950-51.	1951-52.
Number of factories ..	107	104	101	100	100	100
Number of persons employed ..	2,931	3,502	3,808	3,815	3,871	4,042
Salaries and wages paid .. £’000	785	1,194	1,837	2,027	2,401	3,207
Value of power, fuel, light, etc., used .. £’000	251	448	723	845	1,179	1,777
Value of materials used .. £’000	1,872	3,965	6,734	7,220	9,450	13,401
Value of production .. £’000	2,694	3,313	3,653	3,663	4,426	7,165
Total value of output .. £’000	4,817	7,726	11,110	11,728	15,055	22,343
Value of land and buildings .. £’000	1,463	1,571	1,813	1,939	2,071	2,186
Value of plant and machinery .. £’000	7,498	9,475	10,907	11,656	12,386	13,846
Horse-power of engines ordinarily in use .. h.p.	17,905	24,053	26,337	26,225	28,205	28,427

(a) Not available for publication ; figures are included in the total for Australia.

(ii) *Coal Used and Production.* The following table shows details for 1951-52 :—

GAS-WORKS : COAL USED AND PRODUCTION, 1951-52.

Particulars.	N.S.W.	Victoria.	Q’land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal used .. tons	928,814	733,680	215,424	134,001	(a)	(a)	2,096,783
Gas produced ’000 cubic ft.	20,537,003	12,525,273	2,874,626	2,639,635	(a)	(a)	40,390,949
Gas sold .. tons	17,498,768	10,719,118	2,508,987	2,294,795	(a)	(a)	34,530,698
Coke produced (b) .. tons	633,172	399,247	56,792	78,856	(a)	(a)	1,203,602

(a) Not available for publication ; figures are included in total for Australia. (b) In addition, 1,636,982 tons of metallurgical coke were made in Coke Works in 1951-52.

Since 1938-39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached 40 thousand million cubic feet in 1951-52.

CHAPTER XXV.

ELECTRIC POWER GENERATION AND DISTRIBUTION.

This chapter is based on an article contributed by the Division of Industrial Development of the Commonwealth Ministry of National Development which was published in Official Year Book No. 39. The chapter is divided into three major parts. A.—Introduction, which deals briefly with the resources, generation and distribution, and future developments, of electric power in Australia; B.—The Snowy Mountains Hydro-electric Scheme; and C.—The origins, development, present situation and new projects of electrical systems in each Australian State and Territory (internal and external). A Statistical Summary is appended.

It should be noted that the information contained in the chapter relates to situations existing and projects contemplated early in 1954 and that it may be considerably affected by changes in policy or plans, or by developments in the projects themselves.

A. INTRODUCTION.

1. *Distribution of Population and Location of Power Resources.*—The geographical pattern of electric power generation and distribution in Australia has been affected by two main influences—the distribution of population, with a resulting distribution of industry, and the location of fuel and water resources.

The Australian population between 1939 and 1954 increased by approximately 1,910,000 to reach a total of 8,917,000. The two principal centres of population and industry, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power. Their growth has been associated with the development of large deposits of coal located relatively close to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of the Commonwealth, materially influences the distribution of industrial population and the location of major electric power stations.

By far the most important source of energy used in the production of electric power in Australia is coal. At 30th June, 1953 thermal power equipment represented 82 per cent., hydro 11 per cent. and internal combustion equipment 7 per cent. of the total installed generating capacity.

Most of Australia is poorly supplied with water, only 15.2 per cent. receiving an annual rainfall of 30 inches or over. This is confined largely to the narrow coastal strip on the east coast and to Tasmania. The possibility of establishing large hydro or steam stations in inland areas is therefore strictly limited by the lack of sufficient water for feed and condensing purposes.

The only region on the mainland of Australia where land is high enough to receive reliable winter snowfall, and from which reasonably constant water supplies throughout the year can therefore be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales through to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 3,000,000 kW within the next 25 years. The two major construction schemes in this area are the Snowy Mountains and Kiewa projects. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount there available is only a small proportion of the potential of the Alpine region. In Tasmania hydro-electric resources have been estimated at about 50 per cent. of the total Australian hydro-electric potential. Whereas on the mainland the chief source of energy is coal, water occupies this position in Tasmania.

2. *Electric Power Generation and Distribution.*—(i) *Ownership of Undertakings.* At the beginning of this century, Australia's electrical undertakings were carried on mainly by private enterprise, but some measure of governmental control was exercised through various electric light and power Acts. This legislation was designed to provide standards of safety, and to define the scope and obligations of the private organizations engaged in production of electric power for sale. A trend towards public ownership commenced during the 1914-18 War and became more pronounced after the 1939-45 War. By 1954, all major generating stations supplying the public were, in varying degrees, under the control of State statutory organizations, constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies within the various States. There are, however, still a large number of small private and municipal enterprises generating power for supply to country towns, but, where practicable, central authorities are extending supply to these places. In many areas, however, it has been and remains the practice for central authorities to sell power in bulk to local distributing organizations who undertake local reticulation.

In addition to the private, local government and statutory organizations who generate and/or distribute electricity for sale, there are numerous firms generating power for use in their own establishments, particularly those engaged in mining pursuits remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, and the power regularly produced for such internal consumption is, in any case, a relatively small proportion of total power produced.

(ii) *Power Production and Generating Capacity.* In the period between 1938-39 and 1952-53 production of electric power in Australia increased by about 157 per cent. from 4,688 to £12,045 million kilowatt hours.

Since the 1939-45 War, industry and commerce have expanded rapidly, many new houses have been built and the population has increased by approximately 20 per cent. These factors, together with extension of electricity supplies to rural areas and the increased use of domestic electric appliances, have all contributed to bring about a position where the greatly increased demand for power cannot be satisfied by the existing installed capacity of central generating stations.

At 30th June, 1953, installed generating capacity in Australia totalled approximately 3.0 million kW compared with 1.6 million kW in 1939, an increase of about 83 per cent. In 1938-39 each kW of installed capacity produced an average of 3,000 kWh per annum, compared with an average of 4,050 kWh in 1952-53. These figures are based on Commonwealth totals; figures for the States vary, depending on such factors as the distribution of demand, number of consumers, and type of equipment employed. In Tasmania, for example, average output per kW installed was 5,000 kWh in 1938-39 and 5,600 kWh in 1952-53 compared with 2,300 and 3,070 kWh respectively in South Australia.

3. *Future Developments.*—Each central authority has embarked upon constructional programmes to overcome the lag between supply and demand. However, industrial and commercial expansion has continued on a high level, and several projects have been commenced or planned in various parts of the Commonwealth for suburban and main railway line electrification. Other fields directly connected with the demand for power, such as house building, must also be taken into account.

An important factor to be considered in regard to future development is the increasing relative importance of the generation of electric power from water resources.

B. SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME.*

1. *Geography of Area.*—The Snowy country in south-eastern New South Wales is the only part of the continent in which any altitudes exceed 7,000 feet, and in which there is a substantial area over the altitude of 6,000 feet. The precipitation which results from the presence of this barrier on the line of the prevailing winter depressions of Antarctic origin amounts to as much as 120 inches a year in the vicinity of Mt. Kosciuszko, the highest point in Australia. The drainage from the snowfields is practically all to three systems—those of the Murray and Murrumbidgee Rivers, which flow inland, and that of the Snowy, which flows southwards to Bass Strait.

* See also Chapter XXVI.—Water Conservation and Irrigation, §3, para. 4.

2. *Historical.*—The Murray and Murrumbidgee have been subject to control and intensive development for irrigation for many years; the Snowy, however, flows through mountainous and practically uninhabited country until debouching onto the river flats of East Gippsland, not many miles above its mouth. It has never been controlled in any way, either for the production of power or for irrigation, and a great proportion of its waters flows to waste into the sea. As a result, attention has long been directed towards this river, which has the highest source of any in Australia and which conducts away a large proportion of the waters from the south-eastern New South Wales snowfields, and it has been consecutively considered as a means of supplementing the flow of the great inland rivers, a source of water supply to the rapidly growing metropolitan area of Sydney, a means for developing hydro-electric power and, again, as a source of increasing agricultural production in the rich Murray and Murrumbidgee valleys.

The 1939–45 War, and the plans for post-war reconstruction which then originated, led to a proposal by the State of New South Wales for diversion for irrigation and agricultural purposes of the waters of the Snowy to the Murrumbidgee River—a scheme in which little emphasis was placed on the generation of power. The Victorian Government proposed a counter-scheme, involving very much greater generation of power, and involving diversion, not to the Murrumbidgee, but to the Murray.

The Commonwealth Government, however, being seized with the national implications of these proposals, brought about a meeting in 1946 of Commonwealth and State representatives to discuss the general utilization of Snowy waters, and subsequently a Committee was set up to examine the whole question on the broadest possible basis. This Committee, in a report submitted in November, 1948, suggested consideration of a far greater scheme than any previously put forward. It involved not only the simple question of utilization of the waters of the Snowy, but a general consideration of the possible diversion of a number of rivers in the area, tributaries, not only of the Snowy, but of the Murray and Murrumbidgee. The recommendations of the Committee were generally agreed to by a conference of Ministers representing the Commonwealth and States of New South Wales and Victoria, and it was also agreed that the Committee should continue its investigations. A further report was submitted by the Committee in June, 1949, as a result of which the Commonwealth Parliament passed the Snowy Mountains Hydro-electric Power Act. In the next month the Snowy Mountains Hydro-electric Authority was constituted, and thus was inaugurated the greatest engineering scheme in Australian history.

3. *Description of Scheme.*—(i) *General.* The proposals at present being implemented fall into two groups, Tumut Development and Snowy-Murray Development—each having its associated plans for hydro-electric power production. The features described hereunder may be identified by reference to the map on page 927. It should be remembered that, as the final designs for practically every element of the scheme have not yet been completed, and in many cases will not be completed for many years, any figures which are now quoted in respect of those elements will undoubtedly be subject to modification in the future.

(ii) *Tumut Development.* The central feature of this part of the plan is diversion to, and regulation of, the waters of the Tumut River, a stream at present completely unregulated, but which contributes approximately half of the flow of the Murrumbidgee River at Gundagai below the existing main storage on the Murrumbidgee at Burrinjuck. To the Tumut will be diverted the waters of the Eucumbene, a major tributary of the Snowy, and the headwaters of the Tooma, a tributary of the Upper Murray. The headwaters of the Murrumbidgee itself will also be diverted to the Tumut, principally to secure desirable electric power.

A major dam is being constructed on the Eucumbene River at Adaminaby, creating a storage of at least 3.5 million acre feet, and from this, water will be conveyed by a 14-mile tunnel to Tumut Pond on the upper reaches of the Tumut River, where it will be joined by the waters from the Tooma, diverted by aqueducts and tunnels. From Tumut Pond another tunnel will convey the water to power station T.1 with an installed capacity of about 320,000 kW and a further tunnel to power station T.2 with a capacity of 280,000 kW thence discharging into a smaller storage at Lob's Hole.

To the Lob's Hole Reservoir will also be brought the waters of the Upper Murrumbidgee from another major storage at Tantangara, holding 600,000 acre feet. From Tantangara waters will be led by tunnel to power station T.3 with an installed capacity of 140,000 kW, which will discharge into a pond on the Yarrangobilly River, a tributary of the Tumut, and from Yarrangobilly Pond by further tunnel to power station T.4 with an installed capacity of 160,000 kW which, in turn, will discharge into the Lob's Hole Reservoir.

Between the foot of the Lob's Hole storage and the top of the Blowering storage will be power stations T.5 and T.6. The total capacity of these stations will be 410,000 kW.

The Blowering storage with its capacity of about 800,000 acre feet, is an adjunct to the Snowy Mountains Hydro-electric Scheme and will be required for the regulation both of the Tumut waters and of the waters diverted into the Tumut. This regulation is essential if the waters impounded are to be fully utilized for irrigation purposes. At the foot of the Blowering Dam will be the last of the Tumut Power stations, T.7, with a capacity of some 50,000 kW, but this station will operate only when water is released for irrigation. The State of New South Wales will be responsible for the construction of the Blowering works.

The total extra new water which will reach the Murrumbidgee is expected to average 528,000 acre feet per annum and the total installed capacity of the various power stations is estimated at 1,310,000 kW (excluding T.7).

(iii) *Snowy-Murray Scheme.* The central feature of this part of the scheme is the diversion of the waters of the Upper Snowy itself from a major dam to be constructed at Jindabyne on that river, a little below its junction with the Eucumbene and the Crackenback Rivers. This reservoir will have a storage capacity of approximately 1,200,000 acre feet and from it will run right through the Great Dividing Range a tunnel approximately 28 miles in length, finally discharging into Swampy Plains River, not far above its junction with the Murray proper.

Into this tunnel will be collected a considerable quantity of water from the very high altitude country of the Kosciusko area, and from a number of smaller tributaries of the Murray. The collection from the Kosciusko area commences at the Kosciusko Reservoir at an altitude of 5,725 feet, not many miles below the source of the Snowy. A tunnel will convey water from this reservoir to power station M.1.A. with an installed capacity of 60,000 kW and thence to a pond on the Snowy River, at its junction with the Guthega River.

From the Guthega Pond, a further tunnel and penstock will lead to station M.1.B. with a capacity of 90,000 kW, which discharges into a pond at the junction of the Munyang and Snowy Rivers. Construction of this part of the scheme is almost completed. Munyang Pond will discharge into a tunnel leading to station M.2.L., with installed capacity of 60,000 kW. This station also receives the flow of a tributary of the Snowy River via station M.2.H. From station M.2.L. the water discharges into a reservoir at Island Bend on the main stream of the Snowy.

From the Island Bend reservoir, a vertical shaft, 1,000 feet deep, will lead to the main tunnel from Jindabyne reservoir previously referred to, passing on its way through power station M.3 with installed capacity of 250,000 kW. Into this main tunnel will also be collected waters from the Upper Murray tributary streams previously mentioned.

Of these, the most important is the Windy Creek-Geehi River series. A pond on Windy Creek, a small tributary of the Geehi, situated at an altitude of over 5,000 feet, will provide water through a tunnel to station M.4 with an installed capacity of 50,000 kW thence by aqueducts and tunnel to station M.5.H. with an installed capacity of 65,000 kW discharging into the M.5.L. Intake Pond on the Geehi River.

A vertical shaft will lead this water into the main tunnel, passing through station M.5.L. with an installed capacity of 20,000 kW. The combined waters thus collected into the main tunnel will pass through station M.6 with an installed capacity of 540,000 kW and then discharge into a pond on Bogong Creek, another of the Upper Murray tributaries. At this point, the water is still at an altitude of nearly 2,000 feet, and the main tunnel will thence continue to station M.7 with a capacity of 540,000 kW.

From M.7 the total collected waters will flow into the Swampy Plains River at a point some seven miles, in a direct line, above its confluence with the Murray. It will be necessary, however, to provide on the Murray a further storage for the proper regulation of these waters for irrigation purposes.

The total water flowing to the Murray from these works will amount on the average to 722,000 acre feet per annum, but as 280,000 acre feet which now reaches the Murray from the Tooma will be, as indicated previously, diverted to the Tumut, the total extra water actually reaching the Murray will be, on the average 442,000 acre feet per annum; the total installed capacity of the power stations will be 1,700,000 kW.

An integral part of each development is the construction of hundreds of miles of aqueducts to collect and divert water from the many streams in the area into storages and tunnels.

4. **Utilization of Power.**—The total capacity of all stations in the scheme will be of the order of 3,000,000 kW, which is slightly greater than the present total installed capacity of all the generating stations in the Commonwealth.

If, however, the demand for power continues to increase as is expected, the major source of power must still be thermal stations. The operation of the whole scheme is dependent on the appropriate development and integration of these stations, as otherwise there would be a serious loss in ultimate economy; all economic estimates therefore postulate that thermal capacity will be expanded so as to preserve an appropriate ratio.

For the purposes of general comparison, the ratio of 38 per cent. for effective capacity of hydro power to 62 per cent. thermal has been adopted. This, however, is only tentative and may be departed from as the scheme proceeds. It has, however, been estimated with a reasonable degree of probability that the power available from the scheme will save coal to the order of five million tons annually.

The first call on the power generated under the Snowy Scheme will be by the Commonwealth Government for supply to the Australian Capital Territory of power which it needs in that area, particularly for certain projects with defence significance, and no indication can at present be given as to how great that call will be. It is not likely, however, to amount to more than a relatively small fraction of the total power available, and it has been agreed that the balance will be divided between the States of New South Wales and Victoria in a proportion of two-thirds to New South Wales and one-third to Victoria.

The project has not yet proceeded so far that plans can be made for the actual scheme of power distribution, but transmission lines from the Australian Capital Territory via Cooma are under construction and, whereas this is primarily to supply power from the existing New South Wales network to the operational sites for construction purposes, it is anticipated that, when station M.1.B. comes into operation, power will then be fed from that station back to the inter-connected network. The original estimates for transmission costs in the proposal were based on transmission to load centres at 220,000 volts, but it is probable that much higher voltages will be used.

C. STATES AND TERRITORIES.

§ 1. New South Wales.

1. **General.**—In Official Year Book No. 39 an account is given in some detail of the origin and development of electricity generation and distribution in New South Wales, describing in particular the growth of the systems of the Sydney County Council, the Department of Railways, the Electric Light and Power Supply Corporation Ltd., the Southern Electricity Supply and the Clarence River County Council (now the Northern Rivers County Council). A description is also given of the legislation existing prior to, and that which constituted, the Electricity Authority of New South Wales and the Electricity Commission of New South Wales. At present, the three main Acts governing electricity supply in New South Wales are:—

- (i) The Local Government Act 1919 which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.

- (ii) The Electricity Development Act 1945–1948 which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.
- (iii) The Electricity Commission Act 1950 which constituted the Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.

2. *Organization.*—(i) *The Electricity Commission of New South Wales.*—The Commission, which was constituted under the Electricity Commission Act 1950, consists of five members of whom one is a full-time Chairman. In its administration the Commission is directly responsible to the Minister for Local Government.

When the Commission was established, 93 per cent. of the State's power requirements were generated by four bodies—the Sydney County Council, the Department of Railways, Southern Electricity Supply (a division of the Department of Public Works) and the privately-owned Electric Light and Power Supply Corporation Ltd. The Electricity Commission Act 1950 and the Electricity Commission (Balmain Electric Light Company Purchase) Act 1950 provided for the acquisition of the power stations and main transmission lines of those bodies. The transfer of the power stations and transmission lines of the Sydney County Council, Southern Electricity Supply and the Department of Railways has now been effected. The date of transfer of the undertaking owned by the Electric Light and Power Supply Corporation Ltd. is dependent upon the determination of the valuation of the undertaking by the Land and Valuation Court.

The main function of the Commission is the generation and transmission of electricity which it sells in bulk to distribution authorities (mainly local government bodies) throughout a large part of the State, to the government railways and tramways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources. An important exception is the hydro-electric resources of the Snowy Mountains region which are being developed by the Snowy Mountains Hydro-electric Authority, a Commonwealth Government body.

(ii) *Other Electricity Supply Authorities.* The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities—municipal and shire councils, electricity county councils (consisting of a grouping of shire and/or municipal councils) or private franchise holders. At 1st July, 1954 there were 133 of these supply authorities throughout the State of which 44 also generated part or the whole of their power requirements. A few authorities—the most notable being Tamworth City Council—also supply in bulk to other councils. The great majority of country power stations are, however, small oil engine plants which are becoming increasingly costly to operate. Consequently, they are gradually being closed down as the main transmission network is extended further afield.

Over the past few years there has been a distinct trend towards the consolidation of supply areas, many of which have been regarded as being too weak individually to form satisfactory areas for distribution. Generally these consolidations have taken the form of a county district consisting of a number of neighbouring shire and municipal areas grouped for electricity supply purposes only and administered by a county council of representatives elected by the constituent shire and municipal councils.

It is interesting to note that of the 238 shires and municipalities in New South Wales, 121 are included in one or other of the 23 electricity county districts. Seventeen of these county districts have been constituted since 1945. The largest of the county councils is the Sydney County Council which at the close of the year 1953 was supplying 312,749 consumers in the Sydney Metropolitan Area. Unlike the other county councils, which are constituted under the provisions of the Local Government Act 1919, the Sydney County Council was specially constituted under the Gas and Electricity Act 1935. a-

(iii) *The Electricity Authority of New South Wales.*—The Electricity Authority was constituted under the Electricity Development Act 1945 for the stated purpose of promoting and regulating the co-ordination, development, expansion, extension and improvement of electricity supply throughout the State. The Authority, which is a regulatory body only, consists of seven members of whom one is a full time Chairman. Like the Commission, it is responsible to the Minister for Local Government.

The main functions of the Authority are as follows :—

- (a) *Distribution.* Under the Act the approval of the Authority is required. *inter alia*, for the establishment or acquisition of an electricity trading undertaking by a local government council; for the granting or renewing by such a council of electricity franchise agreements or corresponding agreements with other councils; and for the giving or taking of bulk supplies of electricity. It also has power to formulate proposals for the establishment of county councils.

In exercising these powers the Authority is mainly concerned to see that distributing authorities are sufficiently strong to provide an economical, efficient and satisfactory service. Its most important activities in this regard are in investigating supply areas and in making recommendations to the Minister for the consolidation of such areas into county districts. Many of the new county districts referred to earlier have been formed largely as a result of the Authority's advice.

- (b) *Rural Electrification.* The Authority administers the rural electricity subsidy scheme under which rural electrification throughout the State is progressing very rapidly (*see below*).

- (c) *Safety.* The Electricity Development Act 1945-1948 contains provisions for the making of regulations relating to most aspects of safety and these powers are being used more and more extensively. Safety regulations now in force cover such matters as inspection of consumer's installations, licensing of electricians and electrical contractors, approval of electrical appliances, safety of linesmen and overhead line construction.

- (d) *Generation and Transmission.* The approval of the Authority is required for the establishment or extension of power stations and main transmission lines (with the exception of those of the Electricity Commission). The Authority may, for example, refuse approval for the establishment of a new power station if it is more economical and in the general interest for the supply authority concerned to purchase in bulk from another body.

3. *Generation and Transmission.*—(i) *General.* Except in the Snowy Mountains district, and in one or two other areas, New South Wales is lacking in major water power potential and for the generation of electricity, the State is, therefore, mainly dependent on steam power stations. Coal-fired stations generate 93 per cent. of the State's requirements, hydro-electric stations 2 per cent. and internal combustion plants 5 per cent.

The proportion of power generated in hydro-electric stations will increase considerably in the future with the development of the Snowy Mountains Scheme by the Commonwealth Government. The possibility of developing the hydro-electric potential of the Clarence River and other rivers is also being investigated. Nevertheless, coal-fired steam power stations will continue to supply the greater part of requirements for the foreseeable future.

(ii) *Major Generating Stations.* In New South Wales the generation of electricity has followed the general world trend towards large centralized power stations supplying large areas through inter-connected transmission networks. The greater part of the coal-fired generating plant is now concentrated within the bounds of the major coal-fields, where the big industrial centres and most of the population are also located.

As at 1st July, 1953, the major power stations within the main inter-connected system and their installed capacities were as follows :—*Steam*—Bunnerong "A" and "B" (Sydney), 312,000 kW; White Bay (Sydney), 122,000 kW; Pyrmont "A" and "B" (Sydney), 132,000 kW; Ultimo (Sydney), 79,500 kW; Zarra-street (Newcastle), 67,000 kW; Balmain (Sydney), 70,625 kW; Port Kembla, 48,500 kW; Lithgow, 16,000 kW; Penrith, 20,000 kW. *Hydro*—Burrinjuck (near Yass), 20,000 kW. There were also various other steam hydro and internal combustion stations aggregating 59,241 kW. The total installed capacity of the main inter-connected system was 946,866 kW.

It will be seen therefore that the greater part of the State's generating plant is concentrated within a hundred mile radius of Sydney—that is, at Sydney itself (five stations), Port Kembla, Newcastle, Penrith and Lithgow. The largest single station

outside this area is located at Tamworth. At present there is only one hydro-electric station in New South Wales with an installed capacity of more than 10,000 kW. This is the Burrinjuck station in south-eastern New South Wales with an installed capacity of 20,000 kW. Other hydro-electric stations are located at Wyangala (near Cowra), Nymboida (near Grafton), Dorrigo, Brown Mountain (near Bega), Mullumbimby, Batlow and Tumbarumba. These stations are, however, very small compared with the major steam power stations.

(iii) *Interconnected Network.* Over 90 per cent. of electricity consumers in New South Wales are now supplied through the main inter-connected systems. In this network, transmission lines operating mainly at 66,000 or 33,000 volts interconnect the various power stations and distribute power to load centres throughout most of the south-eastern portion of the State and the north coast region. Three 132,000 volt transmission lines have also been completed—one, completed in 1942, linking Burrinjuck and Port Kembla; one, completed in 1952, between Sydney and Newcastle; and one, completed in 1953, between Sydney and Port Kembla. The total installed capacity of the interconnected systems, which includes an aggregated capacity of 48,152 kW for various stations, including the Northern Rivers County District, linked with the main system, was 995,108 kW (as at 1st July, 1953).

(iv) *Separate Systems and Total State Installed Capacity.* There are a number of separate systems and isolated plants which have not yet been interconnected with the main network and which at 1st July, 1953, had an aggregate installed capacity of 57,994 kW. The most notable are the Tamworth and Muswellbrook Coal Company systems and that of the Bega Valley County Council on the far south coast. The Tamworth system (18,000 kW) supplies power to an extensive district in the north-east of the State through 66,000 volt and 33,000 volt transmission lines. Some councils along the Victorian border receive bulk supplies from Victorian authorities.

The aggregate installed capacity for the whole of the New South Wales systems and isolated plants was 1,053,012 kW (as at 1st July, 1953).

(v) *Future Development.* The following major power stations in Sydney are at present being extended by the installation of additional generating plant:—Pyrmont "B", 100,000 kW; Balmain, 50,000 kW; Bunnerong, 50,000 kW; White Bay, 50,000 kW. Construction is also proceeding on new major power stations on the coal-fields at Lake Macquarie, near Newcastle (330,000 kW), Tallawarra, near Port Kembla (120,000 kW), and Wallerawang, near Lithgow (120,000 kW). These stations will be linked with Sydney by 132,000 volt transmission lines, and extensive additions to the 132,000 volt system to supply increasing loads at various centres are also planned. A 132,000 volt system will be established around the outer Sydney Metropolitan Area for the supply of load centres at present fed through 33,000 volt circuits direct from the inner Sydney power stations. Future plans provide for the construction of a hydro-electric power station on the Hume Reservoir of 50,000 kW capacity, half of the output to be fed into the New South Wales network through a 132,000 volt transmission line between Hume and Wagga Wagga and half into the Victorian 66,000 volt network.

In addition to the power stations mentioned above which are under construction or planned for the system controlled by the Electricity Commission, a number of local government bodies have plans in hand for the development of independent power stations. Of these the more important are as follows:—The Northern Rivers County Council is constructing a steam power station at Koolkhan (near Grafton). Immediate plans provide for an installed capacity of 27,000 kW. Two units each of 6,000 kW capacity have been installed and work on further extensions is under way. The Tamworth City Council is planning the construction of a new steam power station at Gunnedah for the augmentation of the council's system now supplied from Tamworth power station. The initial installation will be 30,000 kW and the ultimate now envisaged will be 75,000 kW. The North-West County Council is establishing a 12,000 kW steam power station on the Ashford coal-field. The Ulan County Council is constructing a steam power station of 6,250 kW capacity on the Ulan coal-field. The New England County Council and the Bega Valley County Council are constructing small hydro-electric power stations on the Oakey River (near Armidale), and Georges Creek (near Bega) respectively.

Preliminary investigations have also been made of the possibilities of developing substantial hydro-electric schemes on the Clarence, Shoalhaven and a number of other East Coast Rivers but no concrete proposals have as yet been adopted.

4. **Rural Electrification.**—When the Electricity Authority of New South Wales was constituted in 1946, one of its first tasks was the devising of a scheme for subsidizing the cost of rural electrification. At that time only 16,000 New South Wales farms were being served with electricity—less than one-third of those within reasonable reach of public electricity supply systems. In August, 1946 a subsidy scheme was approved by the Government and put into immediate operation. Under this scheme local electricity supplies receive subsidies from the Electricity Authority towards the cost of new rural lines. The amount of subsidy is based on the estimated cost of a proposed extension and the number of consumers able to be served by the new lines. In order that the funds available for subsidy purposes might be used to the best possible advantage, the scheme is designed to encourage local electricity supply authorities to construct the more economic extensions first. This has been achieved by fixing a limit to the cost eligible for subsidy. Originally this limit was £250 per consumer when averaged over the cost of the whole extension but the limit was raised to £400 in December, 1953. Some subsidy is paid on higher cost extensions but the excess over an average of £400 is not subsidized.

Between August, 1946 and December, 1953 nearly 12,000 miles of new distribution lines in rural areas were erected at a cost of over £6,500,000. These lines served 19,600 farms and 16,100 other rural consumers. At 31st December, 1953 the Electricity Authority was committed to the payment of £2,500,000 in subsidies of which over £1,000,000 had actually been paid. At that time the percentage of farms connected had been raised from 22 per cent. (in 1946) to 47 per cent.

Surveys have indicated that with the aid of subsidies, it should be possible to supply, from the public mains, about 70 per cent. of the farms in New South Wales. This appears to be somewhat near the limit of farm connexions now considered practicable on a reasonably economic basis.

§ 2. Victoria.

1. **General.**—In Official Year Book No. 39 a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat up to the time of transfer of control of electricity undertakings in these cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.

2. **The State Electricity Commission of Victoria.**—(i) *Functions of Commission.* Under the terms of the State Electricity Commission Act, three Commissioners were appointed, who took up duty on 4th March, 1919. Subsequently, in 1921, a full time Chairman was appointed, in addition to the three part-time Commissioners. Their powers authorized them to erect and operate electrical undertakings; to supply electricity in bulk to any corporation; to supply electricity to any person outside any area in which there was an existing undertaking; to carry on any business associated with an electrical undertaking; to make regulations as to precautions to be adopted in the use of electricity and arrange for the licensing of wiremen (powers which were subsequently extended to include the registration of electrical contractors, and the testing and approval of electrical appliances); and to establish and operate State coal winning projects.

In addition to these powers, the Commissioners were to enquire into and report to the Government as to the steps which should be taken to co-ordinate and concentrate all electrical undertakings in Victoria; to secure the efficient inter-connexion of such undertakings by adopting the necessary standards of plant, voltages, etc.; to encourage and promote the use of electricity for industrial purposes; to report to the Government on the prospects of establishing new industries in Victoria requiring large quantities of electrical energy; and to carry out investigations of coal deposits or hydro-potential that could be used for the generation of electrical energy.

(ii) *Newport and Yallourn Power Stations.* Action was taken to investigate the practicability of utilizing the State's brown coal and water power resources for the production of electricity. In a Report dated 26th November, 1919, the Commissioners concluded, *inter alia*, that the brown coal field located at what is now known as Yallourn in the neighbourhood of Morwell should be developed and a power house established thereon by 1923, with an initial capacity of 50,000 kW. As to water power, they were

of the opinion that consideration of hydro-electric power schemes should be deferred until further investigations then being undertaken were completed. It was further concluded that in order to obtain maximum economy, the proposed station in the neighbourhood of Morwell and any other power house to be erected in connexion with the proposed State electricity supply scheme should be interconnected with the Railways Department power station at Newport and operated under the control of a single authority.

The actual transfer of the Railways Department station at Newport did not take place until 1951, and in the meantime two new stations (and subsequent extensions) had been constructed by the Commission and were in operation. By the latter months of 1953, the total installed generator capacity of the Newport power station, consisting of Newport "A" (originally under the control of the Railways Department), Newport "B", and Newport "C", was 311,000 kW, which, added to Spencer Street (Melbourne City Council—74,000 kW) and Richmond (53,000 kW), made a total of 438,000 kW installed in the Melbourne metropolitan area, of which 325,000 kW were included in the 50 cycle interconnected State generating system the remainder (113,000 kW) being 25 cycle plant at Newport "A". Frequency changes with a maximum capacity of 54,000 kW provide for interchange of power between the 50 cycle and 25 cycle sections of the State generating system.

To implement one of the main reasons for the establishment of the State Electricity Commission, namely, development of Victoria's brown coal resources, particularly for production of electrical energy, construction commenced in 1920 of the Yallourn power station designed for an initial capacity of 50,000 kW, but increased within a few years by the addition of two further machines. On 24th June, 1924, power was first transmitted on a commercial basis from Yallourn to Melbourne. Main metropolitan terminal stations were constructed at Yarraville and later at Richmond.

The site chosen for the power station on the bank of the Latrobe River, about 6 miles from Morwell, had numerous advantages. Adequate water was available for the station's requirements, land nearby provided a good town site, while, most important of all considerations, an area of one square mile, adjacent to the proposed station, contained proved reserves of brown coal totalling about 150 million tons with averages of 174 feet thickness and 33 feet overburden. By the use of mechanized methods for open-cut coal winning, the coal could be extracted and delivered to the power station at a cost of only a few shillings a ton. Development of these resources was designed to ensure to a large degree the State's independence in fuel requirements for the production of electrical energy.

Estimated to contain about 10,000 million tons of brown coal, all capable of being won by mechanized open-cut methods, the Yallourn-Morwell brown coal field forms part of the very large brown coal deposits in the Latrobe Valley, where boring has revealed more than 20,000 million tons of brown coal capable of being won by open-cut methods of extraction.

As the Yallourn station was intended to carry the base load of the system, steps were taken to augment its capacity to keep pace with the anticipated and continually increasing demand for electric power, and by the middle of 1954 Yallourn "A" "B" and "C" (still under construction) had a total capacity of 225,000 kW. (In addition, an average of 8,000 kW of by-product electricity is fed into the system from the Yallourn briquette factory.)

(iii) *Hydro-electric Development.* Development of the State's hydro-electric potential the necessity of which was foreseen in the Commissioners' initial Report of November, 1919, but deferred pending further investigations, commenced in 1922. The project selected was dependent on the waters of the Goulburn River and adjacent mountain streams in the Cerberean Range, about 65 miles north of Melbourne. These two sources of water power provided a distinct advantage in that one was mainly summer flow and the other winter flow, thus permitting the continuous generation of power. Five small stations, namely, Sugarloaf (Eildon Dam, 13,500 kW), Rubicon (9,100 kW), Lower Rubicon (2,700 kW), Royston (840 kW), and Rubicon Falls (275 kW), were installed totalling approximately 26,400 kW. The complete project was in service by 1929. In conjunction with the building of the new Big Eildon Dam, the Sugarloaf station is being replaced by one having a total installed capacity of 135,000 kW. It will comprise two

new generators, totalling 120,000 kW capacity, while the two 6,750 kW machines in the former Sugarloaf power station have been re-built and re-installed at the revised rating of 7,500 kW each.

In a Report to Parliament during 1920, the Commissioners included details of a large-scale project for harnessing the Kiewa River in the valleys and tablelands of the Bogong High Plains area of the Main Dividing Range, located approximately 150 miles north-east of Melbourne. At that time the Commission was not prepared to recommend adoption of the plan, but, on the other hand, suggested further consideration of the smaller Sugarloaf and Rubicon scheme. However, during the following 17 years, hydrological investigations were carried out in the Kiewa area which greatly facilitated the subsequent planning of a major hydro-electric project. On 12th June, 1937, a further Report was submitted to Parliament recommending adoption of a plan to provide an ultimate capacity of 117,000 kW from the Kiewa project. The plan, which included construction of four power stations with an initial installation comprising 20,000 kW to be in service by 1942, was approved and its provisions embodied in the State Electricity Commission (Extension of Undertaking) Act 1937. Construction commenced during 1938, but the war delayed progress and it was not until September, 1944 that the first station came into partial operation with 13,000 kW—a second unit of 13,000 kW was brought into service in April, 1945.

The 1937 Kiewa project, prior to its submission to the Government, was critically reviewed by a group of overseas consulting engineers, and their report confirmed that an enlarged scheme might be possible after further detailed investigation of the water power resources of the terrain adjacent to the Bogong High Plains. On 21st November, 1947, the Commission submitted proposals for expanding the original Kiewa scheme of 117,000 kW to one of 289,000 kW with an annual output, averaged over a typical period of wet and dry years, of about 1,000 million kWh. Approval for the amended scheme was contained in the State Electricity Commission Act 1948. Work was begun on the project, but it has since been drastically curtailed because of the shortage of capital funds, and the design will be somewhat modified.

(iv) *State Supply System.* (a) *Growth and Extent.* Since its inception, the Commission has gradually extended the State's system of supply so that it now serves two-thirds of the populated area of the State, in which nine-tenths of the population reside, and certain towns in New South Wales, including Albury. The following comparative table indicates the growth of the Commission's State system between 1929 and 1953.

VICTORIA : STATE ELECTRICITY COMMISSION SYSTEM.(a)

Particulars.	Year ended 30th June—			
	1929.	1939.	1949.	1953.
Installed Capacity kW	148,000	(b)281,400	480,300	<div> <div>562,300</div> <div>(50 cycle)</div> <div>113,000</div> <div>(25 cycle)</div> <div>2,816</div> <div>(50 cycle)</div> <div>204</div> <div>(25 cycle)</div> </div>
Units Generated million kWh	422	898	2,148	
No. of consumers (approx.) (including bulk supply areas)	230,000	368,000	500,000	618,000
Country and Provincial Centres Served	141	419	699	842
Farms Served	700	4,985	14,419	22,326

(a) About 98 per cent. of electricity produced in Victoria is now generated by the State Electricity Commission, which also supplies 95 per cent. of consumers. Statistics for 1949 and 1953 include the Commission's regional diesel-electric power station at Hamilton which is not at present connected with the State system.

(b) Includes Geelong power station (acquired 1st September, 1930) and Ballarat power station (acquired 1st July, 1934, but not in 1939 connected with the rest of the State system); excludes Spencer Street power station, which was not connected with the State system until 1st January, 1941.

During 1952-53 electricity was reticulated to the various classes of consumers in the following proportions—domestic, 37 per cent.; commercial, 15 per cent.; industrial, 42 per cent.; public lighting, 2 per cent.; and traction (excluding railways), 4 per cent.

To 30th June, 1953 the Commission had acquired 79 country undertakings in addition to those acquired in the metropolitan area and in provincial cities. It carries out retail distribution throughout its area of supply, except for part of the metropolitan area where eleven municipal undertakings, operating under Orders-in-Council granted before the foundation of the Commission, purchase their electricity in bulk from the Commission. Bulk supply is given to the following New South Wales border municipalities and shires, Albury, Berrigan, Coreen, Corowa, Moama and (since October, 1953) Wentworth. There were at 30th June 1953, 55 independent undertakings in various country towns in Victoria generating and distributing their own supplies. Operations of independent undertakings are governed by the Electric Light and Power Act 1928, which the Commission administers.

(b) *Composition and Control of Inter-connected Generating System.* Included in the inter-connected State generating system there were at 30th June, 1953 fourteen steam-electric, hydro-electric and diesel-electric power stations located at different centres in the State, and all comprised in one State-wide system. The distribution system comprised approximately 17,600 miles of high and low voltage power lines, ten terminal receiving stations and 8,600 distribution sub-stations. The Commission's inter-connected generating system comprises three principal groups of power stations, namely :—

Steam stations.

Yallourn—burning raw brown coal; Metropolitan and provincial stations—burning mainly briquettes and brown coal. (Supplementary fuels used in metropolitan power stations comprise oil fuel, black coal and coke).

Hydro stations.

Eildon-Rubicon; Kiewa. (With the closing down of the former Sugarloaf power station, and pending the completion of the new Eildon power station, only the four mountain stream stations in the Eildon-Rubicon group were operating for the greater part of 1952-53.

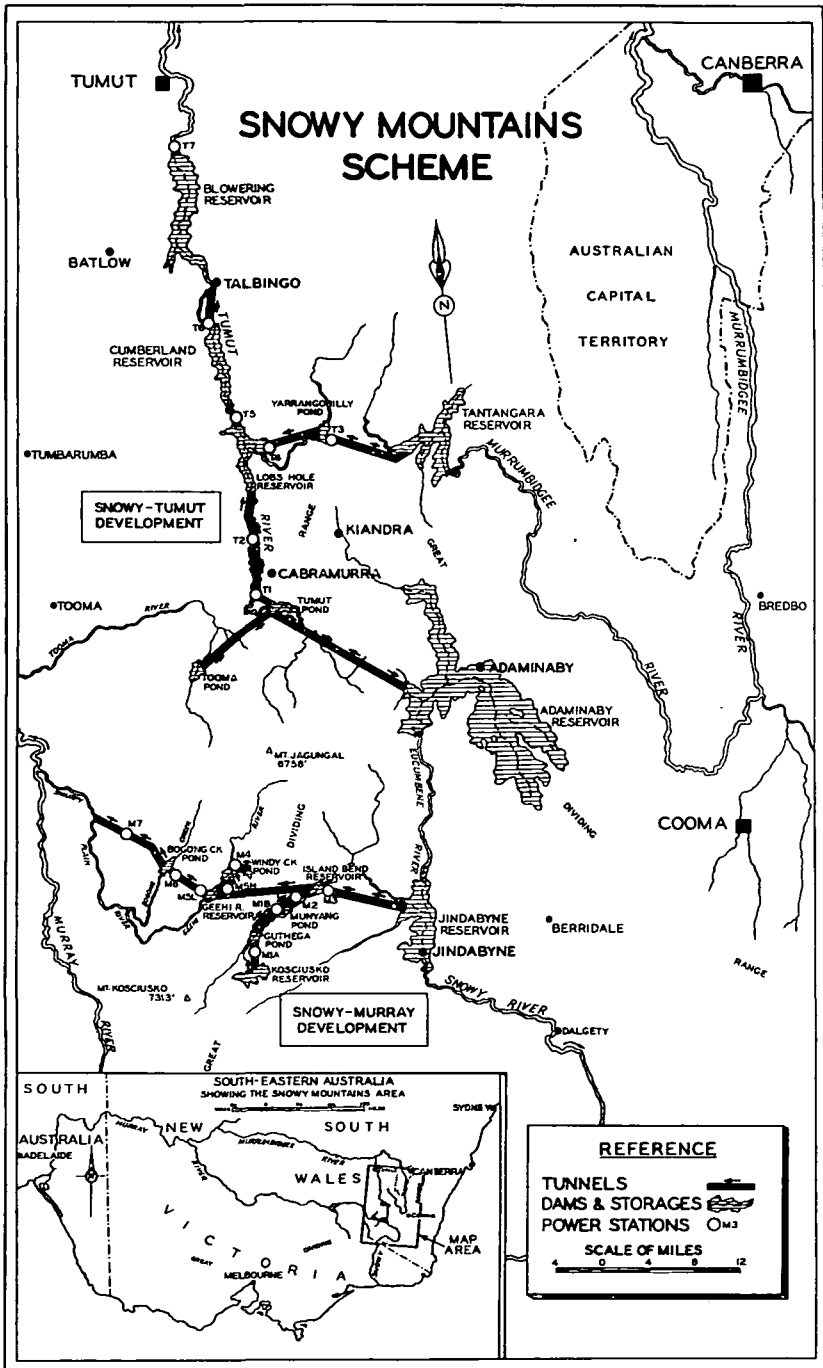
Diesel stations.

Shepparton; Warrnambool.

In meeting the total demand on the system which, of course, fluctuates throughout the day and from month to month throughout the year, each group of stations is assigned a predetermined function dependent upon the availability of power from each group and the overall economics of generation. The various stations are utilized in a combination that will most economically meet the system load at a given time. For a description of the arrangement of the system thus involved see Official Year Book No. 39, p. 1170.

(c) *Organization.* In the Commission's organization, the functions of generating and distributing electrical energy are under the control of two separate departments—the Production Department in charge of power stations, brown coal winning, briquette manufacture, terminal stations and main substations, and the Electricity Supply Department, responsible for distribution to consumers. Energy throughout the inter-connected system is delivered by the Production Department to the Electricity Supply Department from the main transmission network, and not specifically from local power stations, since all power stations in the interconnected system, wherever they are situated feed into a common "pool". The territory covered by the Electricity Supply Department is divided into nine areas, each constituting a supply branch. The Metropolitan Branch supplies Melbourne and suburbs, with the exception of certain areas supplied by City Councils reticulating Commission electricity. Energy is supplied by the Production Department to the Metropolitan Branch, and those metropolitan municipal supply authorities which purchase electricity in bulk, at metropolitan terminal stations and a number of main transmission substations. Supply to the Eastern Metropolitan Branch (which has its headquarters at Dandenong) is on similar lines.

Headquarters of the Electricity Supply Department's branches outside the metropolis are located at Dandenong (Eastern Metropolitan), Traralgon (Gippsland), Geelong, Colac (South Western), Ballarat, Castlemaine (Midland), Bendigo and Benalla (North Eastern), Mildura region is a sub-branch of the Bendigo Branch.



Supply to the Gippsland Branch is obtained from the system via Yallourn power station at 22,000 volts and by 66,000 volt transmission lines extending within the branch to Maffra in the east, Leongatha in southern Gippsland and Warragul in western Gippsland.

Supply to the Geelong Branch is obtained from the two Geelong power stations and Geelong terminal station, the three being inter-connected with the rest of the system by a 66,000 volt transmission line to Newport power station.

Supply to the South Western Branch is obtained through Geelong terminal station by a 66,000 volt transmission line extending through Colac to Warrnambool, where the new peak load power station to reinforce supply began operating during 1952.

Ballarat Branch obtains its supply through the two Ballarat power stations and Ballarat terminal station which are inter-connected with the rest of the system by a 66,000-volt transmission line from Sunshine terminal station in the Melbourne Metropolitan area.

Both the Midland and Bendigo Branches obtain their supply through the 66,000-volt power line from Thomastown terminal station, one of the major metropolitan terminal stations in the system.

For the North Eastern Branch, supply is obtained through Rubicon "A" switching station and the Kiewa hydro-electric undertaking, while local reinforcement of supply is provided by Shepparton power station. Inter-connexion with the rest of the system is provided by the 66,000-volt transmission line extending from Thomastown terminal station to Kiewa via Rubicon "A" and Benalla, with branches to Shepparton and Kyabram, Yarrawonga and Mulwala (New South Wales), and via Wangaratta to Wodonga for supply to Albury.

The Commission also supplies two independent regions which are not at present included in the inter-connected State supply network, namely, Hamilton and Mildura, the latter having been acquired on 1st October, 1953. Power plant for Hamilton comprises one diesel station (3,020 kW) and for the Mildura region two inter-connected steam stations, namely Mildura (7,000 kW) and Redcliffs (10,000 kW).

(v) *New Capacity.* The Commission is engaged upon electric power projects which, provided construction programmes can be maintained, are designed to increase the installed capacity of the State generating system to approximately 1,000,000 kW by 1958. This total is exclusive of hydro generating plant at the Hume and Big Eildon Dams, since their use is conditioned by irrigation requirements and they cannot, therefore, be counted upon to meet peak loading on the system which occurs in winter-time.

Major works brought into service since 30th June, 1953, or now under construction include—

(a) *Thermal stations.*

Yallourn extension—206,000 kW (under construction—first 50,000 kW generator in service during winter of 1954—second 50,000 kW generator for completion about the end of 1954).

Morwell—91,000 kW (initial stages), being the generating capacity available for public supply by 1960 at the new power station to be built in association with two new brown coal briquette factories. Further expansion would be possible, but development after 1960 has not yet been decided.

Metropolitan—45,000 kW at Spencer-street (Melbourne City Council) power station, comprising 30,000 kW brought into service for the latter months of 1953 and a 15,000 kW set due for completion during the winter of 1954.

Geelong—30,000 kW "packaged" units (completed, 1954).

Ballarat—20,000 kW "packaged" units (completed, 1954).

(Plant on order also includes a 40,000 kW steam-electric generator, the location of which has not yet been determined).

(b) *Hydro stations.*

Kiewa—62,000 kW station under construction and tunnelling started for another power station of larger capacity; further power stations projected at a later date.

Hume—25,000 kW representing Victoria's share of a 50,000 kW power station shared equally by Victoria and New South Wales (under construction).

Eildon Dam—135,000 kW—comprising 120,000 kW of new plant and 15,000 kW from re-designed plant (under construction).

(c) *Thermal regional stations.*

Redcliffs (Mildura)—10,000 kW "packaged unit" (completed 1954).

A 220 kV transmission line is under construction from the Kiewa undertaking to Thomastown terminal station; and another from Yallourn to Malvern terminal station to reinforce the existing 132,000 volt circuits already linking Yallourn with Metropolitan terminal stations.

The Commission's long-term plans for State-wide extension of electricity supply involve the ultimate construction of a 220 kV transmission line from Kiewa to Mildura by way of Shepparton—a distance of approximately 350 miles. The new regional station for Mildura at Redcliffs will function primarily as a peak-load station when the plan is implemented.

The Commission has submitted to the State Parliament its plan for the final phase of rural electrification of Victoria, extending supply to all populated regions of the State. The plan provides for the extension of State Electricity Commission supply to every home in Victoria except for about 15,000 homes located in the most isolated parts of the State. Implementation of this plan was, by 30th June, 1953, ahead of schedule.

§ 3. Queensland.

1. *General.* In Official Year Book No. 39 an account is given of the growth of electricity generation in Queensland, with particular reference to the City Electric Light Co. Ltd. of Brisbane (now the Southern Electric Authority of Queensland), the Brisbane City Council and the Toowoomba Electric Light and Power Co. Ltd.

The first of these organizations, which was operating in Brisbane well before the end of the last century, now supplies a large part of Brisbane's electric power requirements and a considerable rural area in the south-east corner of the State. By 1933 this organization was operating a modern power station at Bulimba, a suburb of Brisbane, with an installed generator capacity of 37,500 kW, from which it supplied more than 16,000 consumers and generated about 60 million kWh of energy per annum. Capacity is now 92,500 kW at Bulimba "A" plus 10,000 kW, "packaged plant" at Abermain (near Ipswich) and 60,000 kW at Bulimba "B" generating station. A 3,200 kW hydro-electric unit installed at Somerset Dam near Brisbane has also now been commissioned, and the output is fed into the Southern Electric Authority system. With these plants 489 million kWh were generated in 1952-53 while the total number of the Authority's consumers at 30th June, 1953 was 71,179.

The Brisbane City Council established an electricity supply service after the 1914-18 War, and by 1938 it was supplying an area of about 365 square miles, purchasing energy in bulk from a power station located at New Farm (administered by the Tramways and Power House Department) and from the City Electric Light Co. Ltd. Growth of the Council's electrical undertaking and power production is indicated by the following comparisons between 1937-38 and 1952-53 figures, respectively:—Installed capacity, 56,250 kW and 72,500 kW plus a "packaged" plant erected at Tennyson; units purchased and generated, 71 million kWh and 414 million kWh; consumers, 57,000 and 105,145. In 1952-53 New Farm Power house generated 414 million units and the Department of Transport (Tramways) consumed 38 million units.

During 1905, the Toowoomba Electric Light and Power Co. Ltd. established supply in Toowoomba, and now supplies a considerable area including portion of the Darling Downs. Power is generated at the Company's diesel stations of 3,300 kW supplemented by

bulk supplies purchased from the Southern Electric Authority of Queensland. In 1940 the company purchased the power undertakings at Warwick, and in 1946 the Killarney undertaking.

The generation and distribution of electric power in Queensland had, until the last decade, tended to lag behind developments in this field in other States of Australia. The comparatively slow growth in the production and consumption of electricity can be attributed to some extent to the absence, prior to 1938, of a central statutory authority constituted to undertake the functions of co-ordinating, unifying and controlling the production and transmission of electric power. In addition, Queensland's vast area, coupled with a low population density, made large-scale rural electrification, elsewhere than in the south-eastern portion of the State which surrounds the major centres of industry and population, an uneconomic proposition.

Before establishment of the Regional Electricity Boards in 1945, no attempts had been made to unify or co-ordinate electricity supplies, and rural electrification, apart from reticulation within certain townships, was practically unknown.

2. Royal Commission on Generation and Distribution of Electric Power in Queensland, 1936.—On 5th December, 1935, the Queensland Government, being concerned with the need to develop the State's power resources in the public interest, appointed a Royal Commission to inquire into and make recommendations on matters relating to the generation and distribution of electric power in Queensland. The Commission throughout the inquiry tended to concentrate mainly on proposals for electrification of south-eastern Queensland and establishment of a suitable statutory authority to control and unify the development of electrical undertakings in the State. (An account of the results of its investigations and of the alternative proposals put before it will be found on p. 1182 of Official Year Book No. 39.)

The Commission recommended that, in order to achieve a properly planned scheme for the electrification of the south-eastern area, control of generation and distribution of electric power be vested in the State, or, alternatively, if establishment of an operating commission were not found practicable, that electrification under public control with ultimate public ownership be implemented. The Commission concluded that in areas of Queensland outside the south-eastern portion of the State, except for a section of the country from Townsville north to Mossman and west to Herberton where immediate and detailed investigations should be made, there existed only local problems of generation and distribution, not justifying further consideration at that time.

3. The State Electricity Commission of Queensland.—In 1937, the State Government legislated to constitute a State Electricity Commission (legislation administering the generation and distribution of electricity in Queensland prior to the establishment of the Commission is referred to on p. 1181 of Year Book No. 39), which commenced to function during January, 1938—to it was passed administration of the Electric Light and Power Acts 1896–1938. The Commission's main powers were :—to secure a proper and efficient supply of electric power ; review tariffs ; grant licences to supply electricity ; secure the safety of the public ; and control and advise electrical undertakings generally. It was thus a controlling authority as distinct from an operating authority. In addition, the Commission was empowered to co-ordinate the industry's development throughout Queensland. Between 1938 and 1953, the number of private companies was reduced by absorption and acquisition from twenty-one to six, and publicly owned undertakings, by amalgamation into Regional Authorities, from forty-seven to forty-two including thirteen new schemes for small Western Queensland towns.

By agreement with the Commission in 1939, the City Electric Light Co. Ltd. (now the Southern Electric Authority of Queensland) became the co-ordinating authority for the provision of electricity in an area of some 10,062 square miles, extending from the New South Wales-Queensland border to Gympie, north of Brisbane. The Company acquired the undertakings at Boonah, Beaudesert, Gympie, Coolangatta, Ipswich, Nambour, Southport, Redcliffe and the Somerset Dam supply and transmission line to Brisbane. Certain restrictions were placed on the Company's dividend rate, namely, limitation to the rate on Commonwealth bonds plus 2 per cent. During 1940, a similar agreement

was made with the Toowoomba Electric Light and Power Co. Ltd. for the supply of electricity in the Toowoomba, Warwick, Killarney and Allora districts, subsequently being extended to cover a comprehensive area of 9,324 square miles, including Stanthorpe and other districts. Transmission line extensions since that year have made supply available to a number of adjacent districts on the Darling Downs. The City Electric Light Co. Ltd. was converted to a public authority as from 1st February, 1953 by the Southern Electric Authority of Queensland Act of 1952 *see* para. 5 below), and the Government has the right to acquire the Toowoomba company in 1954 or later.

Amending legislation, passed by the Queensland Parliament in March, 1948, changed the constitution of the State Electricity Commission from a body corporate to a corporation sole. On 1st July, 1948, a Commissioner for Electricity Supply was appointed in lieu of the previous Commission of four Commissioners. Since its inception in 1938, the Commission has made considerable progress in its task of developing the State's power resources and promoting a more widespread use of electric power. The degree of utilization of electrical energy in Queensland now compares favorably with other States in the Commonwealth.

4. **Regional Electricity Boards.**—With a view to facilitating the control and development of electricity supply in areas of low population density or those having a predominantly primary producing economy, the Government in 1945 passed the Regional Electric Authorities Act. This legislation, as later amended, provides for the creation of regions of electricity supply and constitution of Regional Electricity Boards. The Act provided for transfer to the Boards of local authority electricity undertakings in their regions, and for acquisition by the Boards of privately owned undertakings when purchasing rights fell due. Each Board comprises representatives of local authorities in the region and a representative of the Commission. Financial operations of the Boards are under the control of the Commission.

Soon after passage of the Regional Electric Authorities Act, four regions were defined and four Regional Boards constituted, namely, Wide Bay, Capricornia, Townsville and Cairns. A fifth Board, entitled South Burnett, became an operating authority in October, 1947, but on 1st July, 1951 was absorbed in the Wide Bay Regional Board and the organization is now known as the Wide Bay-Burnett Regional Electricity Board. As power was to be obtained from the Wide Bay Regional Board's station at Howard, the Commission decided that development of the two regions could be planned more effectively by a single authority.

Activities of the four Regional Boards in 1952-53 compared with operations of the stations located in regions in 1945-46, and totals for Queensland as a whole, are shown in the following table:—

QUEENSLAND : REGIONAL OPERATIONS.

Region.	1945-46.		1952-53.	
	Units Generated.	No. of Consumers.	Units Generated.	No. of Consumers.
	m.kWh		m.kWh	
Wide Bay-Burnett	13.7	11,467	39.3	20,348
Capricornia	19.5	11,196	45.6	16,798
Townsville	25.8	11,612	67.8	16,903
Cairns	22.7	9,722	61.6	15,398
Total	81.7	43,997	214.3	69,447
Queensland	487.0	194,429	1,349.1	290,179

Generator capacity of the four existing Regional Boards installed at 31st December, 1953 was :—Wide Bay-Burnett, 15,000 kW ; Capricornia, 22,500 kW ; Townsville, 22,500 kW ; Cairns, 15,370 kW ; total, 75,370 kW.

5. **Creation of Southern Electric Authority of Queensland.**—A further major step in electrical progress, comparable with that taken when the agreements with the City Electric Light Co. Ltd. and Toowoomba Electric Light and Power Co. Ltd. were first entered into, was taken by the passing of the Southern Electric Authority of Queensland Act of 1952. This Act constituted the City Electric Light Co. Ltd. as a public authority to be known as the Southern Electric Authority of Queensland.

Two Government representatives are included on the Board of the new Authority, whose establishment prepares the way for the complete amalgamation, in due course, of the electrical undertakings serving the south-eastern Queensland area of supply.

An important advantage gained by the creation of this Authority is that on 30th June, 1968, acquisition of the Authority by the State Government can be effected without the necessity of a cash payment as the Government will have the power to convert the Authority's existing stock to inscribed stock. Furthermore, the replacement of the City Electric Light Co. Ltd. by the Southern Electric Authority as a public body relieves electricity consumers in the Authority's area of supply from the burden of taxation which has hitherto been payable by the City Electric Light Co. Ltd., but will not require to be met by the new Authority. An agreement has been signed between the State Government and the Southern Electric Authority giving effect to the principles contained in the new legislation.

Arrangements have now been concluded whereby the Southern Electric Authority has acquired most of the shares of the Toowoomba Electric Light and Power Co. Ltd., bringing this company's area of supply under its control. The Southern Electric Authority will thus be responsible for the electrical supply and development of a consolidated area of 19,386 square miles.

6. **New Capacity.**—(i) *Regions.* To provide for development of the electric power resources in the regions, the State Electricity Commission formulated a ten-year programme divided into two five-year periods. In the first, it was planned to erect main transmission systems to connect existing power stations located within the regions and supplement generating capacity by the construction of new stations. Work on this section of the plan is now nearing completion. In the second period, the transmission system will be extended to more sparsely settled areas, the ultimate purpose being the provision of "ring" transmission lines throughout each region and inter-connexion between the regions.

A number of new generating stations have been commissioned as follows :—Wide Bay (Burnett Region), of which 15,000 kW was placed in service during September, 1951—a further 7,500 kW in 1954 and a further set of 15,000 kW is scheduled for installation in late 1955 ; Rockhampton (Capricornia Region) of which 22,500 kW was placed in service during September, 1952 and a further 15,000 kW is scheduled for installation in 1955 ; and Townsville (Townsville Region) of which 22,500 kW was commissioned in July, 1953, with a further 15,000 kW to follow in late 1954 or early 1955. Each of these stations will have an ultimate capacity of 52,500 kW and be steam-operated. In the Cairns Region, construction has commenced on the Tully Falls hydro-electric scheme and an 18,000 kW turbo alternator set should be giving a supply of electric power by the end of 1955. The second set of 18,000 kW should be ready during 1956. The schedule is designed for an ultimate installed capacity of 92,400 kW. To augment existing capacity and to meet anticipated demands pending operation of Tully Falls, the Cairns Regional Board has installed seventeen diesel units with a total capacity of 11,410 kW and a further diesel plant of a capacity of 1,250 kW is now in process of erection.

The Tully Falls scheme is planned to eventually link with the Burdekin Falls Hydro-Electric project. These schemes and the existing Barron Falls hydro-electric plant will exploit North Queensland's principal hydro-electric potential estimated conservatively at more than 316,000 kW.

At Mackay, where supply was first given in 1924, and Bowen, both situated on the coast between the Capricornia and Townsville Regions, the local Councils operate power stations of 4,500 kW and 1,000 kW respectively. The Mackay City Council

is embarking on a scheme for rural development under an arrangement with the State Electricity Commission. To cater for the anticipated growth in demand, the capacity of its station will be increased to 9,500 kW in 1954-55. At Bowen, the Town Council, which established the service in 1925, is extending the station's capacity by installation of one 1,000 kW unit. During 1935, a small (3,800 kW) power house—Australia's first underground hydro station—was placed in service at Barron Falls near Cairns. When the Cairns Regional Board was established during 1946, operation of the station passed to the Board's control and now comprises part of its generating plant, totalling 15,370 kW, supplying an area of approximately 42,000 square miles.

(ii) *Western Queensland.* In Western Queensland, where a number of small isolated generating stations supply power to some of the larger towns, the Commission has evolved a plan to increase and modernize existing capacity. It involves installation of small internal combustion units ranging in size from 100 kW to 600 kW according to the load likely to be experienced, and conversion from direct to alternating current supply. The Government is assisting the scheme by subsidy—a feature of electrical development in Queensland. In general, the assistance provided comprises subsidies of up to one-third of capital cost on annual loan charges, with special subsidies of up to 50 per cent. for authorities in isolated areas.

In addition to improving supplies to the larger western towns, a scheme has been devised for electricity supplies for smaller towns in the western districts, where consumers range from 50 to 200. Subsidies of 65 and 60 per cent. will apply in those cases where the number of consumers supplied is less than 100 and 200, respectively. This plan is now being implemented and at 30th June, 1954, fifteen townships in the west of Queensland have been provided with the amenities of electricity. Work is at present proceeding on similar schemes for a further seven townships and such supply is expected to be available before the close of 1954. The power is being supplied by small oil driven generating sets with automatic controls, which can be run with a minimum of operating attendance.

Coal-burning gas producers have been successfully commissioned for public electricity supply purposes in the West. They have been or are now being installed at Longreach, Clermont, Dalby, Blackall and Barcaldine and further extensions of their use in Western Queensland is predicted as lower tariffs and more efficient production of electricity should follow their use.

(iii) *South-eastern Queensland.* To increase the availability of electric power in the south-eastern area of the State, the two major generating authorities, in conjunction with the Commission, have power station projects under construction which are designed to place in service by 1956 new generating units totalling 335,300 kW. The Southern Electricity Authority is building a station known as Bulimba "B" on a site adjacent to Bulimba "A"—60,000 kW has been installed—but the ultimate capacity may reach 180,000 kW. A 3,200 kW unit at Somerset Dam near Brisbane is now in service and feeds into the Southern Electric Authority's system. At Tennyson in the Brisbane area the Brisbane City Council is constructing a new power station—initial capacity 60,000 kW which may be ultimately increased to 180,000 kW. The first 30,000 kW set is expected to be ready early in 1955 and the second set early in 1956. To supplement capacity pending operations of these projects, "packaged" generating units totalling 20,000 kW were obtained from overseas and commissioned early in 1953, one 10,000 kW set has been installed at Tennyson and another 10,000 kW set at Ipswich.

The power stations of the two major generating authorities at New Farm and Bulimba are interconnected at 33,000 volts and bulk supply is provided to the Toowoomba Electric Light and Power Co., from the 110,000 volt transmission system of the Southern Electric Authority.

(iv) *The Burdekin River Hydro-electric Project.* In the vicinity of Townsville, the Commission, acting on behalf of the Burdekin River Authority, has investigated the proposed hydro-electric development of the Burdekin. This project is linked with the plan to conserve the waters of the river for irrigation and flood mitigation and surveys undertaken indicate that approximately 80,000 kW could be generated. It has been estimated that a hydro-electric station approaching this size should meet the requirements of Townsville and the coal mines in the region of Collinsville, for at least 20 years, and also transmit supply to Bowen and Proserpine and possibly to the Mackay area, and

by obviating the continuous operation of thermal plant achieve significant savings in fuel. In addition, construction of this hydro-electric station will obviate the need to install new thermal capacity at Townsville.

§ 4. South Australia.

1. **General.**—An account referring to the companies generating electric power in South Australia prior to the advent of the Adelaide Electric Supply Co. Ltd., and describing the development of that company's activities, is given in Official Year Book No. 39. Also included in the account is some reference to the early measures of public control over electricity supply in South Australia and the extent to which they were applied, and also to the inquiries into the activities of the Adelaide Electric Supply Co. Ltd. in 1932 and 1935.

Following upon an inquiry instituted by the Government in 1943 relative to measures for increasing electricity supply to the metropolitan area and country districts the Electricity Act 1943 was passed which, *inter alia*, established the South Australian Electricity Commission. However, until the State assumed full responsibility for the supply of electric power, this body was not able to do much more than exercise the formal functions conferred on it by the Act.

Under the provisions of Section 3 of the Adelaide Electric Supply Company Act 1944, a Royal Commission was appointed to inquire into and report upon the supply of electricity by the Company and upon all matters concerning it. The Commission presented its report on 28th August, 1945, the main substance of which was, subject to certain considerations and assumptions, that the Government acquire the assets and liabilities of the Adelaide Electric Supply Co. Ltd., and the responsibility for the generation and transmission of electric power in South Australia be vested in a public authority to be called the South Australian Electricity Trust, or, alternatively, if acquisition were not considered desirable, that prices charged for the supply of electricity by the Company be fixed by regulation and determined from time to time by a Committee appointed by the Governor in Council, giving due regard to the interests of the public and a fair return to the shareholders of the Company. The Commission also recommended that an inquiry be held forthwith by the South Australian Electricity Commission regarding the co-ordination of electricity supplies in the State, and that the Commission have power to veto any proposals for the construction of works to generate and transmit electric power.

2. **The Electricity Trust of South Australia.**—Early in 1946, a Bill was passed transferring the assets of the Adelaide Electric Supply Co. Ltd. to the newly formed Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supplies. This legislation provided that the Trust should take over the powers vested in the South Australian Electricity Commission under the 1943 Act, which, after establishment of the Trust, would cease to exist. In addition to the powers specified in the Adelaide Electric Supply Company's Acts 1897-1931, the Trust may, *inter alia*, supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other persons who generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other persons, and give or receive supplies of electricity in bulk.

3. **Capacity and Production.**—There are three main categories of organizations generating electric power in South Australia, namely :—(a) Governmental, which include the Electricity Trust; (b) Local Authorities, e.g., municipal and district councils, Renmark Irrigation Trust, Municipal Tramways Trust; and (c) Other, including individuals and firms primarily engaged in generating power for sale, firms generating power primarily for their own use but supplying outside consumers, and firms generating power for their own use.

In 1952-53 total installed capacity in South Australia was 266,650 kW, an increase of 45,200 kW on the year before. The units generated totalled 806 million kWh compared with 761 million kWh in the previous year.

Of the total installed capacity, the Electricity Trust of South Australia operated plant with a capacity of 206,090 kW. It is thus the most important authority supplying electricity in the State. There were approximately 199,149 ultimate consumers of electricity, of whom 177,934 were supplied by the Trust. Its major steam stations were Osborne "A" (79,000 kW) and Osborne "B" (120,000 kW) while the balance of the capacity controlled consists of a limited number of small internal combustion plants located in rural districts.

No hydro-electric potential exists in South Australia. Steam generating units comprise 92 per cent. of installed capacity and the balance, 8 per cent., is internal combustion equipment. Until recently, all fuel consumed in the thermal stations was obtained from sources outside the State, and at times power restrictions were necessary owing to the inadequacy of supplies.

4. *Leigh Creek and other new Capacity.*—With a view to reducing the dependence on external sources of fuel, steps have been taken to produce local coal and to install plant to use it. Fairly extensive deposits of low-grade sub-bituminous coal are obtainable at Leigh Creek, about 360 miles north of Adelaide. Under the Electricity Trust of South Australia Act Amendment Act 1946, the Trust was given authority to develop Leigh Creek coal for use in its own undertakings and also for sale to other consumers. Production from the Leigh Creek field commenced in 1944 and in the year ended 30th June, 1953, 399,546 tons of coal were sold. Of this amount the Electricity Undertaking used 256,000 tons.

In order to cope with the rapidly increasing demand for power, the Electricity Trust is installing two additional 30,000 kW units at Osborne "B" Power Station. These will complete the "B" station which will then have a total capacity of 180,000 kW. Another major work under construction is the power station at Port Augusta, where three 30,000 kW units will be installed. The first of these will be commissioned in July, 1954. This power station is located at Port Augusta because of its proximity to the Leigh Creek coalfield and the station will use Leigh Creek coal exclusively. A new standard gauge railway line to connect Leigh Creek with Port Augusta is being constructed by the Commonwealth Railways Department. The power station is inter-connected with the Metropolitan Area by two transmission lines which will also supply power at intermediate points. The Trust has now decided to construct a second power station at Port Augusta to be known as Port Augusta "B". This station will have a capacity of 180,000 kW making the combined capacity at Port Augusta 270,000 kW. With the two Port Augusta power stations and the extensions to Osborne "B" station the planned increase in generating capacity is 330,000 kW.

5. *The Municipal Tramways Trust.*—In addition to the instrumentalities mentioned above which are engaged in the generation and distribution of electric power in South Australia, the Municipal Tramways Trust operates a power station of 26,000 kW at Port Adelaide, which supplies energy for traction purposes. In 1943 a 5,500 kW frequency changer was installed to form a link between the power stations of the Trust and the Electricity Trust of South Australia to permit interchange of power when necessary. In 1953 the service consumed approximately 22 million kWh of electricity.

§ 5. Western Australia.

1. *General.*—Electrical undertakings in Perth and Fremantle formerly owned by the Perth City Council, the Western Australian Government Electricity Supply, the Fremantle Municipal Tramways and Electric Lighting Board and other metropolitan municipal and road board supply authorities have now been taken over by the State Electricity Commission of Western Australia. For information on the early history of electricity supply in the metropolitan area see Official Year Book No. 39, p. 1189.

2. *Metropolitan Undertaking.*—Statistics relating to activities at the Metropolitan undertaking are shown in the following comparative table.

WESTERN AUSTRALIA : METROPOLITAN UNDERTAKING.

Particulars.	1928-29	1938-39.	1952-53.
Plant capacity kW	32,000	57,000	103,000
Maximum load kW	21,500	33,000	85,000
Units generated Million kWh	80	137	350
Coal used per unit generated .. lb.	3.1	2.77	1.71
Coal used—			
Collie small.. .. tons	110,460	165,355	266,789
Imported "	427	3,367	..

As a result of a separate inquiry conducted at the same time as the early investigations into the proposed new station at South Fremantle, a recommendation was made favouring conversion of the East Perth 40 cycle system to the British and Australian Standard Frequency of 50 cycles per second. The recommendation was adopted and implemented by making the frequency of generation at South Fremantle 50 cycles and installing at East Perth a frequency changer able to convert 25,000 kW of energy from one frequency to the other. Change-over of consumers' plant is proceeding and a large number of important loads are now supplied at 50 cycles.

3. *Kalgoorlie.*—In Kalgoorlie, the Municipal Council in 1895 first established electricity supply and by 1945 it was supplying 3,350 consumers with direct current from a diesel station of 1,350 kW generating capacity. Primarily established to supply power for the gold mines and for traction, the Kalgoorlie Electric Power and Lighting Corporation operates a steam station of 18,750 kW and maintains a 22 kV line of 21 miles to the Celebration mine. Alternating current is also supplied to about 1,000 consumers, and bulk supplies are provided to the Kalgoorlie Electric Tramways Limited. The Corporation's undertaking generates approximately 45 million kWh and consumes about 100,000 tons of wood fuel per annum.

New boilers are now being installed to permit steam raising from Collie coal, since depletion of timber in neighbouring areas has proceeded to the point where firing on wood fuel is no longer economic.

4. *General Pattern of Electricity Supply.*—The pattern of the generation and distribution of electric power in Western Australia consisted until recently of a number of isolated systems each supplying a particular area. Except in the metropolitan area and in the area embraced by the South-West Power Scheme (See para. 6 below), where in both cases electricity supply is in the hands of the State Electricity Commission of Western Australia, local authorities are generally responsible for the supply of electricity for domestic, industrial and traction purposes. In the area between the Great Southern Railway from Northam to Albany and the west coast, however, the State Electricity Commission has now constructed transmission lines to give central station supply to the towns and their surrounding rural areas. In addition, there are several mining companies which generate electricity for use in their mines. In order to cater for the expected growth in demand, capacity of the State's major generating stations is being increased and designs are proceeding for the inter-connexion of the Perth-Fremantle system with the south-western area.

The main load centre of the State is, of course, the Perth-Fremantle area into which is concentrated the major portion of the State's population and industry. The pending inter-connexion between the Metropolitan and Country systems is, however, expected to lead to a gradual decentralization of load.

5. *The State Electricity Commission of Western Australia.*—(i) *Origin and Aims.* In order to ensure an organized and co-ordinated future growth of electricity generation and distribution throughout the State, the Government introduced a Bill in 1945 to establish the State Electricity Commission, which, together with an Electricity Bill, became law early in 1946. Under these Acts, the Commission was given power, *inter*

alia, to secure the ultimate co-ordination of all State or other electrical undertakings in the State, to construct and operate power stations and transmission lines and purchase as a going concern and carry on the undertaking of any supply authority. Under the Electricity Act, which should be read in conjunction with, and is subject to, the State Electricity Commission Act, no person or organization is permitted to construct or extend an electricity supply undertaking without consent from the Commission. Local authorities are empowered to operate and construct power stations and other works associated with the supply of electricity, provided that authority is first obtained from the Commission and any proposals are not inconsistent with the Commission's plans.

(ii) *New Projects.* Since its inception in 1946, the Commission has proceeded with the task of increasing generating capacity in an endeavour to cater for a greatly increased demand for power. Long-range plans have been formulated to inter-connect the south-western portion of the State with the Perth-Fremantle system. One of its most important and immediate problems was to increase the capacity of the generating equipment serving Perth and Fremantle. During the 1939-45 War years, it became evident that the growth of demand for electric power would necessitate provision of additional generating equipment in the metropolitan area as soon as possible. Accordingly, the Government Electricity Supply authority commenced design work for a new station of 50,000 kW capacity. Contracts were let in 1943 and construction commenced on a site selected at South Fremantle, on the coast south of Fremantle proper. Responsibility for completion of this project was given to the Commission under the Act of 1946. As it was considered that an even larger station would be required, provision was made for the installation of two additional units giving an ultimate capacity of 100,000 kW. Steam is furnished by eight boilers designed to use pulverized coal from Collie, which is located about 120 miles from the station. By 1951, two units had been placed in service and the output was being fed into the metropolitan system. The Commission plans to have all units in operation before the end of 1954.

Most of the plant at the East Perth power station, which passed to the Commission's control in 1946, is due for retirement. Work is now proceeding upon dismantling the oldest boilers and generators in order to make room within the existing buildings for new and modern plant which will possess the merit of high efficiency, yet may be cheaply installed by requiring a minimum of site preparation, building and distribution expenditure. Current contracts provide for the installation of 30,000 kW of new plant in this station. A new cooling plant is also being provided.

6. *South-west Development.*—At the request of the Government, the Electricity Advisory Committee in 1945 submitted a report recommending, amongst other things, that a National Power Scheme for the south-west be proceeded with (implementation of the recommendation of a previous Committee in 1939 had been prevented by the conditions then prevailing). The plan provided for acquisition of the existing Collie power station and installation of additional generating capacity, construction of a power station at Bunbury and inter-connexion of the south-west scheme with the metropolitan system. On 12th October, 1946, the State Electricity Commission acquired the Collie power station, which prior to 1946 was owned and operated by the Collie Power Company Limited. At the date of acquisition, the station's installed capacity was 5,000 kW, comprising two steam units. The capacity of the station was increased to 12,500 kW in 1952.

Since 1950, the Commission has acquired a number of electrical undertakings from municipal bodies and private organizations in the south-west area and is proceeding with arrangements for the purchase of others. In August, 1951, the first portion of the South-West Power Scheme was officially opened at Collie and many of the south-west towns have now been connected by transmission line to the Collie Power Station. When completed, a system of power lines will reticulate electricity over an area of approximately 1,800 square miles. Contracts have been let for the first three 30,000 kW units for a new power station at Bunbury, which will be inter-connected by transmission lines to the Collie and South Fremantle stations, permitting an interchange of power between the metropolitan and south-west systems.

§ 6. Tasmania.

1. *General.*—A considerable part of the water catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at lower cost than elsewhere in Australia, or in most other countries. Other contributing factors to the low costs are that rainfall is distributed fairly evenly throughout the year, with comparatively small yearly variations. The cheap power has led to the establishment in Tasmania of several large electro-chemical works with high load factor, and as a consequence the system load factor is also very high and at present is 65 per cent.

For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930 see Official Year Book No. 39, pp. 1192-3.

2. *The Hydro-Electric Commission.*—(i) *Present System.* In 1929 the Government passed the Hydro-Electric Commission Act, under which was established the Hydro-Electric Commission, and which vests in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania and authorizes it to develop and reticulate electric power for all purposes. In 1930 this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.

After the creation of the Commission it was decided to utilize the controlled flow of water from the Great Lake and the fall in the level existing between there and the Waddamana forebay lagoon. An earthen dam was built to divert the water from the Shannon River, first into a canal, and then by two pipelines to the Shannon Power Station 258 feet below, where 10,500 kW. was added to the system in 1934. The water, after passing through Shannon Power Station, discharges into the Waddamana Canal, to be used again at Waddamana Power station. It soon became necessary to consider a larger scheme, and in 1933 it was decided to utilize the run-off of a catchment to the west of the Great Lake nearer the regions of heavy rainfall. Construction was started in 1934 and the initial installation of three 15,000 kW Pelton Wheel turbines operating under a head of 980 feet was placed in service in February, 1938. This and other works made it economical to increase the turbine capacity of the Tarraleah Station to 90,000 kW.

Before the outbreak of the 1939-45 War, it was decided that in order to make better use of the Great Lake storage it would be necessary to increase the capacity of the Waddamana Station and to duplicate the Waddamana canal. Although the war impeded progress, two units of 12,000 kW had been installed by its termination, while a third unit was put into commission during 1946.

The power station was brought to its ultimate development by the installation of a fourth unit in 1949, which brought the total capacity to 48,000 kW at Waddamana "B".

Work on the Clark Dam started in 1939, and is now completed. The Butler's Gorge power station at the foot of the dam was put into commission in September, 1951. The single turbine operates at a maximum rated output of 12,200 kW and to increase the security of the system and to permit variable seasonal loading of Tarraleah, a second canal will be constructed from the Clark Dam to Tarraleah.

(ii) *New Capacity.* The Hydro-Electric Commission is at present engaged upon the most progressive construction programme in its history, and it is expected that the present generating capacity will be almost doubled by 1960. It is considered that at least 2,400,000 kW of continuous power can be economically developed. So far 286,700 kW of generating plant is in commission, while present construction is planned to bring this total to 572,700 kW by 1960. There will remain, however, very considerable resources for future development.

The Trevallyn Power Development is being undertaken primarily to meet the requirements of the aluminium industry. It involves the construction of a power station at sea level—though 30 miles from the sea—together with civil engineering works to divert water from the Second Basin in the South Esk River to a power station on the River Tamar, about 2 miles from Launceston.

The extensive plateau area between the Great Lake and Lake St. Clair drains into two main catchment areas—the Nive River and the Lake Echo-Dee River Catchments. The Tungatinah Power Development will regulate most of these waters and following its completion practically the whole run-off from the Central Plateau will have been brought under control.

The difference in levels between Lake Echo and Dee Lagoon will be about 600 feet and in order to utilize this head, a power station (to be known as Lake Echo Power Station) will be built on the banks of the New Dee Lagoon. It is proposed to install a single generating set in this station and the altimeter will have a capacity of 36,000 kW.

Lake Echo will provide the main storage reservoir for Tungatinah Power Station and it will be drawn upon mainly in times of drought. Lake Echo power station will therefore not operate continuously but only when water is needed to augment the natural run-off from the Nive River Catchment.

The Tungatinah Power Development will regulate the run-off from approximately 400 square miles of country. The safe continuous flow will enable about 48,500 kW to be generated.

However, in view of the considerable pondage available, the station will be used to provide peak load and spare plant capacity. Turbines with a total capacity of 125,000 kW will therefore be installed. The first three units each of 25,000 kW were put into operation between June and October, 1953 and a fourth unit is scheduled to be in operation in mid-1954.

Originally the Wayatinah Power Development Scheme called for one power station to be located on the Derwent River near its junction with the Florentine River. It has recently been decided to vary the original plan and, instead of a single power station on the Derwent River near the junction with the Florentine, there will be two power stations, the first on the Nive River about half a mile downstream from the Nive crossing by the Ouse-Tarraleah Road, and the second near the Derwent River approximately 1 mile downstream from the Florentine junction. The lower station will have a capacity of 45,000 kW while the upper station will probably have a capacity of 93,000 kW so that the total capacity of the development will be about 138,000 kW.

There is every indication that the demand for electric power in Tasmania will increase rapidly. The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present programme.

3. Power Usage by Secondary Industry.—After 1930, every effort was made to keep pace with anticipated increases in demand by means of a progressive construction policy. The abundant and comparatively cheap supplies of electricity and other natural resources attracted to Tasmania a number of important secondary industries for which energy costs constitute a significant proportion of the total cost of production. Some of the more important organizations and their continuous power demands when plant is operating are as follows :—Electrolytic Zinc Company of Australasia Ltd., 51,000 kW ; Australian Commonwealth Carbide Company Ltd., 6,500 kW ; Goliath Portland Cement Company Ltd., 1,800 kW ; Associated Pulp and Paper Mills Ltd, 8,600 kW ; Australian Newsprint Mills Ltd., 24,000 kW ; and Australian Aluminium Production Commission, 30,000 kW (when in production).

§ 7. Commonwealth Territories.

1. Internal Territories.—(i) *General.* The electricity supply undertakings at Canberra in the Australian Capital Territory and at Darwin, Katherine, Tennant Creek and Alice Springs in the Northern Territory are operated by the Commonwealth Government. Administration and control of these undertakings is vested in the Commonwealth Department of Works.

(ii) *Australian Capital Territory.* Supply was first established at Canberra during 1915. The Department owns steam stand-by plant of 2,100 kW capacity which is operated in conjunction with the New South Wales Electricity Commission's generating equipment. The major portion of the Capital City's power requirements are supplied in bulk from the New South Wales inter-connected system. Within the next few years, defence projects at present under construction in Canberra will greatly increase the demand for electrical energy. These requirements will be met from the Snowy Scheme, the first section of which was scheduled for operation in June, 1954, and the power produced is to be fed into the New South Wales inter-connected system at Cooma.

(iii) *Northern Territory.* At Darwin, supply was established by the Town Council in October, 1934, but later, during April, 1937, responsibility for generation and supply was placed in the hands of the Northern Territory Administration. The power station is equipped with diesel generating plant of 2,010 kW capacity. During 1951, the first

of two new 850 kW diesel sets was placed in service. Small diesel generating units supply the requirements of Katherine, Tennant Creek and Alice Springs.

In 1948 it was announced that the Department of Works and Housing (now the Department of Works) had selected a site for a hydro-electric station on the Adelaide River, 72 miles from Darwin. The scheme is designed to augment supply to Darwin and suburbs when the diesel equipment at present installed is unable to cope with the demand for power. No constructional work has yet been undertaken on the project.

2. **External Territories—Papua and New Guinea.**—Responsibility for the operation and establishment of electrical undertakings in Papua and New Guinea is vested in the Administration of the Territory of Papua-New Guinea, whose headquarters are located at Port Moresby. The total capacity of the diesel equipment installed is 4,270 kW operating in the following centres—Port Moresby, 2,158 kW; Rabaul 545 kW; Lae, 598 kW; Madang, 230 kW; Samarai, 200 kW; Kaveing, 85 kW; Wewak, 131 kW; Lorengan, 100 kW; and 223 kW distributed among eleven outstations where generating capacity is between 5 kW and 60 kW. New power plant is under construction at Lae (874 kW) and Rabaul (1,451 kW). The townships of Wan and Bulolo are supplied by the Bulolo Gold Dredging Co., which operates a hydro-electric plant of 5,500 kW. This power is produced mainly to supply the alluvial dredges and, in addition, now supplies the recently constructed plywood mill at Bulolo.

Vast hydro-electric potential exists in New Guinea—it has been estimated at 15,000,000 kW, but because of the island's location, absence of large load centres and lack of industrialization, only a very small proportion could, at present, be economically developed.

In 1950 it was announced that the Commonwealth Government had joined with British Aluminium Co. Ltd. of London to locate and develop large capacity hydro-electric schemes in New Guinea. A new company was formed, known as New Guinea Resources Prospecting Co. Ltd., with a capital of £100,000. The Commonwealth holds 51 per cent. of the shares and has a controlling interest on a board of five members. The agreement for formation and operation of the Company is administered by the Commonwealth Department of Supply, except in matters requiring compliance with the law of New Guinea, when responsibility for administration rests with the Department of Territories. Surveys and comprehensive investigations are in progress.

The following hydro-electric schemes are under construction :—Port Moresby—at Rouna on the Laloki River providing 3,000 kW when complete with provision for expansion to 5,000 kW. It is anticipated that the power station should be in operation during 1956. The present project only utilizes portion of the power available from the Laloki River and the economic ultimate development will be to the order of 50,000 kW; Goroka—with an initial capacity of 100 kW and Aiyura (for the Agricultural Experimental Station) with an initial capacity of 30 kW. Stream gauging and other preliminary investigations for hydro-electric schemes have been carried out at Lae, Rabaul and Madang.

D. STATISTICAL SUMMARY, 1948-49 AND 1952-53.

The following table shows statistics for each State separately and for the six States combined for 1948-49 and 1952-53 and relates to :—(i) the numbers and installed capacity of central electric generating stations, (ii) the values of production and output and the average numbers of persons employed in the generating side of the electricity supply industry and (iii) the amount of electricity generated in both years and the number of ultimate consumers of electricity in 1952-53.

For further statistics of the electricity supply industry (years 1938-39 and 1945-46 to 1951-52) see Chapter XXIV.—Manufacturing Industry.

CENTRAL ELECTRIC STATIONS.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1948-49.							
Generating Stations—							
Government .. No.	10	10	..	2	9	2	33
Local Authority ..	41	33	36	13	42	..	165
Companies ..	40	25	11	23	65	1	165
Total	91	68	47	38	116	3	363
Installed Capacity of Generators—							
Steam .. kW	869,109	518,950	206,334	(a)	78,225	(a)	1,869,769
Hydro ..	33,155	52,419	4,141	(a)	..	(a)	272,763
Internal combustion ..	51,581	17,237	25,506	(a)	37,476	(a)	143,476
Total	953,845	588,606	235,981	(a)	115,701	(a)	2,286,008
Persons employed(b) No.	3,853	2,059	885	(a)	915	(a)	8,822
Value of output(c) £,000	13,368	5,512	2,893	(a)	2,172	(a)	26,938
Value of production(d) ..	6,582	2,653	905	(a)	664	(a)	12,233
Electricity generated(e) Million kWh	3,717	2,504	890	567	399	976	9,053
1952-53.							
Generating Stations—							
Government .. No.	18	11	..	7	8	5	49
Local Authority ..	36	33	43	14	37	..	163
Companies ..	32	24	9	21	50	1	137
Total	86	68	52	42	95	6	349
Installed capacity of Generators—							
Steam .. kW	1,132,699	608,300	303,524	(a)	135,400	(a)	2,434,990
Hydro ..	35,030	52,419	3,960	(a)	..	(a)	313,000
Internal combustion ..	90,436	35,003	40,334	(a)	45,136	(a)	223,067
Total	1,258,165	695,722	347,818	(a)	180,536	(a)	2,971,975
Persons employed(b) No.	4,851	2,608	1,176	(a)	1,003	(a)	10,891
Value of output(c) £,000	26,762	14,095	7,599	(a)	5,110	(a)	60,085
Value of production(d) ..	10,606	6,352	2,566	(a)	2,200	(a)	24,582
Electricity generated (e) Million kWh	4,868	3,193	1,349	822	569	1,244	12,045
Ultimate consumers(f) No.	897,286	655,055	290,179	199,149	110,521	93,100	2,245,290

(a) Not available for publication; included in total for Australia. (b) Average employment over whole year including Working Proprietors. (c) Value of electricity produced plus certain earnings. (d) Value added to materials and fuel in the process of generation. (e) Total generated including that generated by factories for their own use. (f) Approximate figures supplied by the electricity authority in each State. This detail is not available for 1948-49. An "ultimate consumer" is a person, business, undertaking, etc., that has contracted to receive electric power from a public or private organization supplying this service. The number of ultimate consumers is not synonymous with the number of persons served with electricity because one ultimate consumer may embrace three or four persons, e.g., in a household.

CHAPTER XXVI.

WATER CONSERVATION AND IRRIGATION.

A. RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS.

§ 1. Introduction.

Official Year Book No. 37, pp. 1096-1141, contained a special article "The Conservation and Use of Water in Australia" prepared by Mr. Ulrich Ellis of Canberra. In subsequent issues much of Mr. Ellis's article of a statistical nature has been advanced, as has the general information on the more important developments in this field, but for details of general, descriptive and historical matter reference should be made to the original article. Appended to the special article was a bibliography of selected books, reports, papers, etc. dealing with the development of the water resources of Australia and their conservation (*see* pp. 1140-41).

For further details on geographical and climatic features determining the Australian water pattern reference should be made to Chapter II.—Physiography; on water supply and sewerage in metropolitan areas, cities and towns to Chapter XV.—Local Government; and on the generation of hydro-electric power to Chapter XXV.—Electric Power Generation and Distribution.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States was published on pp. 1073-9 of Official Year Book No. 40.

§ 2. Water Resources and their Utilization.

1. *Surface Supplies.*—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. Therefore, it is impossible at present to estimate, with any degree of reliability, the total average annual flow of Australian streams but it has been doubted whether the total average annual flow of all Australian rivers would exceed 60,000,000 acre feet, a figure small in comparison with the flow of rivers in other continents, some examples of which are given below expressed as mean annual discharges in millions of acre feet: Nile, 72; Danube, 228; Amazon, 1,780; Volga, 143; Mississippi, 474; and the ten main rivers of the United States of America, 900 (in the aggregate).

2. *Major Dams and Reservoirs.*—The table below lists existing major dams and reservoirs together with those under construction or projected as at June, 1954.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA.

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
EXISTING DAMS AND RESERVOIRS.				
Hume	Murray River near Albury	1,382,000	110	Part of Murray River Scheme— storage for domestic, stock and irrigation purposes. To be increased to 2,500,000 acre feet. Hydro-electric power to be developed.
Miena	Great Lake, Tas- mania	1,125,000	40	Regulates water to Waddamana hydro-electric power station.
Burrinjuck ..	Murrumbidgee River, New South Wales	652,200	247	Storage for irrigation and pro- duction of hydro-electric power.
Lake Victoria ..	Murray River near South Australian border, in New South Wales	551,700	..	Natural storage for irrigation in South Australia.
Waranga	Goulburn River, Victoria	333,400	..	Earthen embankment, 23,800 feet long. Irrigation storage.
Eildon	Upper Goulburn River, Victoria	361,000	..	Rock filled embankment, 2,300 feet long and concrete spillway, 700 feet. To be increased to 2,750,000 acre feet. Irrigation storage.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued.*

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
EXISTING DAMS AND RESERVOIRS— <i>continued.</i>				
Wyangala ..	Lachlan River, New South Wales	303,900	190	Storage for domestic, stock and irrigation purposes and for generation of hydro-electric power.
Rocklands ..	Glenelg River, Victoria	272,000	..	Part of Wimmera-Mallee domestic and stock water supply system.
Clark ..	Derwent River, Tasmania	243,000	200	Serves Tarrareah hydro-electric power station.
Avon ..	Nepman River, New South Wales	173,800	230	Part of Sydney water supply.
Lake Brewster ..	Lachlan River, near Hillston, New South Wales	108,000	..	Storage of rural water supplies for the Lower Lachlan.
Glenamaggle ..	Gippsland, Victoria	106,000	100	Storage for irrigation.

DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED.

Burdekin Falls ..	Burdekin River, North Queensland	6,584,000	150	Projected for generation of hydro-electric power, irrigation and flood mitigation.
Adaminaby ..	Euclumbene River, New South Wales	3,500,000	390	Projected as part of Snowy Mountains Hydro-electric Scheme.
Elldon ..	Upper Goulburn River, Victoria	2,750,000	..	Existing dam being enlarged for irrigation storage and production of hydro-electric power.
Menindee Lakes Project	Darling River near Menindee, New South Wales	2,000,000	..	Part of Darling River water conservation scheme—under construction.
Warragamba ..	Warragamba River, New South Wales	1,678,500	415	Under construction for Sydney water supply.
Jindabyne ..	Snowy River, New South Wales	1,200,000	260	Projected as part of Snowy Mountains Hydro-electric Scheme.
Burrendong ..	Macquarie River, near Wellington, New South Wales	914,000	193	Under construction for rural water supplies.
Blowering ..	Tumut River, New South Wales	846,000	300	Projected as part of Snowy diversion scheme.
Somerset ..	Stanley River, Queensland	724,000	130	Under construction for Brisbane-Ipswich water supply.
Tantangara ..	Murrumbidgee River, New South Wales	600,000	183	Projected as part of Snowy Mountains Hydro-electric Scheme.
Warkworth ..	Wollombi Brook (Hunter Valley), New South Wales	400,000	100	Projected as a flood mitigation dam for the Hunter Valley.
Lake Echo ..	Lake Echo, Tasmania	384,000	55	Under construction for hydro-electric purposes.
Keepit ..	Narroi River, near Gunnedah, New South Wales	345,000	135	Under construction for rural water supplies.
Tinaroo Falls ..	Barron River, North Queensland	320,000	133	Under construction for irrigation purposes in the Mareeba-Dimbulah area.
Glenbawn ..	Hunter River, near Scone, New South Wales	296,000	240	Under construction as part of Hunter Valley conservation work.
Koombooloomba ..	Tully River, North Queensland	146,000	123	Under construction for hydro-electric and possibly irrigation purposes.
Cairn Curran ..	Loddon River, Victoria	120,000	..	Under construction as part of Murray-Loddon supply system.
Upper Yarra ..	Yarra River, Victoria	110,000	270	Under construction for Melbourne water supply.

The maps on pp. 1073-9 of Official Year Book No. 40 show the positions of the above-mentioned dams and reservoirs.

3. *Irrigation.*—(i) *History.* For some brief remarks on the history of irrigation in Australia referring to the efforts of the Chaffey Brothers and to the Victorian Irrigation Act in 1886 see issues of the Official Year Book prior to No. 39.

(ii) *Extent and Nature of Irrigated Culture.* About half of Australia's irrigated acreage is now in Victoria, and about two-thirds is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In these areas served by the Murray and its tributaries irrigation water is used extensively for vines, orchards, pastures, fodders, and for domestic and stock purposes. Approximately half of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where vegetables, orchards, fodders and pastures are served. Irrigation schemes have not been developed in Tasmania or the Northern Territory.

The following table shows the area of land irrigated in each State during the years 1938-39 and 1949-50 to 1953-54 :—

AREA OF LAND UNDER IRRIGATED CULTURE.

(Acres.)

Season.	N.S.W. (a)	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1938-39 ..	6183,518	515,357	48,953	43,602	14,278	8,599	50	814,357
1949-50 ..	628,610	662,290	90,543	49,089	31,573	7,525	637	1,470,267
1950-51 ..	597,773	716,051	83,150	79,062	28,197	7,242	468	1,511,943
1951-52 ..	596,601	723,797	113,040	58,427	29,106	6,830	656	1,528,457
1952-53 ..	494,900	715,030	126,693	57,057	31,067	8,414	606	1,473,767
1953-54 ..	540,243	821,025	146,282	62,062	34,247	9,412	800	1,614,071

(a) Source : Water Conservation and Irrigation Commission. (b) Source : State Rivers and Water Supply Commission. (c) Excludes pasture and fallow lands.

The next table shows the area of land irrigated in each State during 1953-54 according to the nature of irrigated culture.

AREA OF LAND UNDER IRRIGATED CULTURE, 1953-54.

(Acres.)

Crop.	N.S.W. (a)	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Rice ..	38,858	..	(c)	..	..	..	..	38,858
Vegetables ..	16,138	13,607	19,784	7,218	6,755	(c)	116	63,618
Fruit ..	18,680	36,398	..	13,064	4,347	802	14	162,714
Vineyards ..	13,433	44,458	4,011	26,704	863	..	..	64,109
Sugar-cane ..	(c)	..	64,109	..	..	..	..	1,193
Hops ..	..	(c)	..	..	..	1,193	..	746
Cotton ..	..	..	746	..	..	..	..	..
Other Crops (including Fodder and Fallow land)	129,595	93,764	(d)35,693	1,964	1,108	2,106	566	264,796
Total, Crops	216,704	188,227	124,343	48,890	13,073	4,101	696	596,034
Pastures ..	323,539	6632,798	21,939	(e) 13,172	21,174	5,311	104	1,018,037
Total	540,243	821,025	146,282	62,062	34,247	9,412	800	1,614,071

(a) Source : Water Conservation and Irrigation Commission. (b) Source : State Rivers and Water Supply Commission. (c) Included in Other Crops. (d) Includes tobacco, 3,626 acres. (e) Includes lucerne for pasture.

(iii) *Irrigation Trends.* In Official Year Book No. 37, p. 1099, the following trends in irrigation practice were described :—the improvement of irrigation techniques in established areas, a growing appreciation of the benefits and necessity of irrigation in humid and sub-humid areas with a flush annual rainfall, the use of irrigation to stabilize the stock industries, especially on an "extensive" basis, consideration regarding the provision of weirs to prevent the entry of salt water, the increasing quest for cheap electric power to aid pumping operations for stock, domestic and irrigation purposes, and an increase in the extent of spray irrigation.

(iv) *Research.* Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following :—high water tables due to the application of water ; surface accumulation of salt and other soil changes associated with irrigation ; methods of applying water efficiently ; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle ; and growth problems affecting plants and trees.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations :—Merbein (Victoria)—horticultural problems, particularly of the dried vine fruits industry ; Griffith (New South Wales)—influence of irrigation on plant life (using horticultural trees as test plants), irrigation methods, land drainage and soil structure ; Deniliquin (New South Wales)—pastures ; Werribee (Victoria)—diseases of dairy cattle : Ayr (Queensland) and the Kimberley Research Station (Western Australia)—tropical crops and pastures. In the maintenance of Merbein and Griffith Stations the Commonwealth is assisted, financially and otherwise, by the New South Wales Water Conservation and Irrigation Commission, by the Dried Fruits Export Control Board and by private organizations.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established. Research is also conducted in the field of water percolation in relation to soil structure.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation Areas. It is representative of the State Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including Extension Groups). Finance is provided by these authorities on an agreed basis. The objectives are :—to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed ; to provide a system for advising on local agricultural policy and organization ; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy ; to achieve a unified approach to sub-regional extension in all branches of agriculture ; to advise on the research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein ; to achieve close liaison between research and extension ; and to conduct research in extension methods.

4. *Preservation of Catchments.*—As water conservation commences on the catchments it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion to conserve soil generally, and to minimize effects of floods, overstocking, bush fires, and destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.

5. *Sub-surface Supplies.*—(i) *General.* While a more or less complete general picture of the available and potential surface water resources exists, much remains to be done with regard to the location and development of sub-surface supplies (artesian, sub-artesian and ground water), in view of their importance as the basis of settlement over large areas of Australia.

The extent and potentials of the artesian basins—particularly the Great Artesian Basin—have been fairly accurately determined, and the use of sub-artesian supplies is extensive and more development is possible. The shallower ground-water supplies, however, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed in any degree, except in a few localities.

(ii) *Artesian and Sub-artesian Supplies.* Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent. A map of Australia showing the extent of the known artesian basins appears on page 1211 of Official Year Book No. 39.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 550,000 square miles, comprising about 350,000 in Queensland, 76,000 in New South Wales, 100,000 in South Australia and 24,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal :—

PRINCIPAL WATER-BEARING BASINS : AUSTRALIA.

Name.	State.	Geological Age.	Area.	Depth of Water.
			Square Miles.	Feet.
Great Artesian ..	Queensland, New South Wales, South Australia and Northern Territory	Cretaceous-Jurassic ..	550,000	Up to 7,000
Murray ..	Victoria, New South Wales, and South Australia	Miocene	107,000	100 to 900
Torrens ..	South Australia	Recent Pleistocene ..	4,000	Up to 600
Coastal Plain ..	Western Australia	Recent Jurassic ..	10,000	200 to 2,500
Adelaide ..	South Australia ..	Recent Oligocene ..	1,100	100 to 500
Gippsland ..	Victoria ..	Pleistocene-Oligocene	1,800	200 to 1,800
Port Phillip ..	Victoria ..	Pleistocene-Oligocene	300	Up to 600
Eucla ..	Western Australia, South Australia	Pliocene-Miocene ..	68,000	300 to 2,000
North-west ..	Western Australia	Tertiary Permian ..	40,000	400 to 4,000
Collie ..	Western Australia	Permian	500	..
Desert ..	Western Australia	Permian	130,000	200 to 3,000

More than 3,000 artesian bores have been constructed within the Great Artesian Basin and the daily free discharge from all bores continuing to flow in Australia has been stated to exceed 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but it is unsuitable for plant life ; while in certain areas sub-artesian waters are suitable for all uses including irrigation. In some districts a considerable amount of irrigation is carried out from shallow ground-water supplies.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognized early that flows were diminishing as more bores were drilled, but it is now considered that while many of the bores will ultimately cease to flow, many will not cease, but will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed

by sandstone outcrops. Diminution in flows from artesian bores has emphasized the need to eliminate wastage as much as possible, and investigations have been made regarding wasteful methods of distribution of artesian water by open channels or "bore drains" and the careless use of water. (For greater detail on this subject see Official Year Book No. 37, pp. 1103-4.)

(iii) *Ground Water.* Ground water supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes, the most notable scheme being that conducted by the Hunter District Water Board where ground water from the Tomago sandbeds near the mouth of the Hunter River, New South Wales, is used to supplement water storages fed from surface sources. For further information on ground water see Official Year Book No. 37, p. 1104.

§ 3. National and Interstate Aspects.

1. *General.*—As the Commonwealth Constitution makes special reference to water problems, both the Federal and the State Governments have an interest in the control and conservation of water. The main responsibility for control of water resources resides in the individual State governments, but as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following sections.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945 national aspects of water conservation and use were emphasized. The report recommended the adoption of an all-Australian plan, having the assent of the various governments, to obviate lack of co-ordination, and that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

In 1946 a conference between the Commonwealth and States agreed to revive the Irrigation Production Advisory Committee first established under the authority of the Australian Agricultural Council in 1938. Its functions are :—(a) to prepare for the consideration of the Australian Agricultural Council, or any Committee of Ministers appointed by the Council, conclusions formed from investigations to be carried out by Commonwealth and State Officers into the various agricultural industries which it is possible to develop on irrigated lands ; (b) to undertake long-term co-ordination of land utilization in irrigable areas served by the River Murray and its tributaries, this involving co-ordination of all available lands and the carrying out of such supplementary investigations as may prove necessary.

2. *Murray River Scheme.*—(i) *General.* The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Murrumbidgee (1,050 miles), the Darling (1,760 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows :—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,506,000 acre feet ; Murrumbidgee River, 2,600,000 acre feet ; Goulburn River (including Broken River), 2,502,000 acre feet ; Darling River, 2,150,000 acre feet ; and Ovens River, 1,169,000 acre feet. Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, dairy produce, wool, fat lambs, rice, vegetables, poultry, eggs and pigs.

For a brief summary of the historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia see issues of the Year Book prior to No. 39. The Agreement provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(ii) *River Murray Waters Agreement.* Under the Agreement, construction works are carried out by the States (who are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of water in lockages and evaporation losses other than in the lakes at the Murray mouth, together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949 see Official Year Book No. 40 (p. 1065) and earlier issues.

At a Conference of Ministers held in July, 1949, to consider the diversion of the Snowy River, it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 400,000 acre feet per annum would be added to the Murray River and that a storage of not less than 1,500,000 acre feet should be provided, in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and found that an increase in capacity of 500,000 acre feet in storage on the Upper Murray River above Albury was the maximum that was economically justifiable for the regulation for irrigation purposes of the waters of the Upper Murray River and of waters added from the Snowy River. The Commission agreed that this increase could best be provided by increasing the size of the Hume Reservoir from its previously designed capacity of 2,000,000 acre feet to 2,500,000 acre feet, but if for hydro-electric purposes additional storages become justified in the future further increases would best be provided at some other site. It subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for this enlargement of the Hume Reservoir to 2,500,000 acre feet. A conference of Ministers considered the recommendation in July, 1954 and agreed to the enlargement. In addition it was agreed that the Commission should be given power to construct regulators to carry out such other work on the River Murray between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river.

The total estimated quantity of water diverted in 1953-54 for irrigation and other purposes from the Murray and its tributaries (under the River Murray Agreement) was as follows (in acre feet):—New South Wales, 975,000; Victoria, 2,006,000; South Australia, 164,000; a total of 3,145,000 acre feet.

(iii) *River Murray Works.* One of the major works of the Murray River Scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 33,000 acres. The design comprises a mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 106 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately one mile. Work on the installation of a hydro-electric generating station below the dam is now in progress. Two 25,000 kW turbo generators will be installed initially but the powerhouse may be extended later to house a third machine. Work is also proceeding on the completion of the reservoir to its recently approved capacity of 2,500,000 acre feet.

The Yarrawonga Diversion Weir was completed in 1939 to raise the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan Junction; and the other below the Lachlan Junction.

The Mulwala Canal, served by the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet per second, and will serve 1,500,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage, with a capacity of 551,700 acre feet and a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. Work is proceeding on the enlargement of the inlet channel to Lake Victoria to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 652,200 acre feet; Wyangala (Lachlan), 303,900 acre feet; Victoria—Eildon (Goulburn), 361,000 acre feet (now being increased to 2,750,000 acre feet); Waranga (Goulburn), 333,400 acre feet. No storages exist on the Murray in South Australia. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

3. New South Wales-Queensland Border Rivers Agreement.—The New South Wales-Queensland Border Rivers Agreement which was ratified by the Parliament of both States, was executed on 27th November, 1946 and came into effect on 1st July, 1947. However, the Dumaresq-Barwon Border Rivers Commission, which is charged with the duty of giving effect to the Agreement and the ratifying Acts, was not constituted until 1st May, 1948. The Agreement provides for the construction of certain works on parts of those portions of the Severn, Dumaresq, Macintyre and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland, for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Commission to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the barrier rivers and for the taking over of the existing weir in the Macintyre River at Coondiwindi and the existing weir in the Barwon River at Mungindi. The costs of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharged from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

The Water Conservation and Irrigation Commission of New South Wales, which is the constructing authority for the dam, has for some time past been carrying out investigations of alternate dam sites on the Dumaresq River near Mingoola Station Homestead which is approximately 39 miles from Tenterfield. These investigations have advanced to a stage where it has become necessary to carry out a geophysical survey of the site. The survey is being carried out by the Commonwealth Bureau of Mineral Resources

and until such time as the survey has been completed, it will not be possible for the Commission to determine the exact site of the dam and to authorize the preparation of the design thereof.

The Irrigation and Water Supply Commission of Queensland, which is the constructing authority for the new weirs and regulators, has carried out detailed investigations as to sites for such works. The construction of Bonshaw and Cunningham Weirs on the Dumaresq River was completed in January, 1953 and June, 1954 respectively.

Investigations are proceeding and designs are being prepared for a weir and regulator on the Barwon River at the offtake of the Boomi River and for a low level weir to establish a pumping pool at a location 32.9 miles on the Dumaresq River. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission.

The catchments for the border streams (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry, is being examined.

4. *Snowy Mountains Hydro-electric Scheme.**—(i) *General.* Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the committee of reports in 1948 and 1949, the Commonwealth Parliament in July, 1949 passed the Snowy Mountains Hydro-electric Power Act setting up an Authority to implement the proposals agreed upon.

The basis of the proposals is to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme will be constructed in two parts, the first being known as the Snowy-Murray system, where the water is to be diverted by tunnel from a large dam across the Snowy River at Jindabyne, to the Swampy Plains River in the Murray Valley; and the second as the Snowy-Tumut system, the water in which will be diverted by tunnel from a dam on the Eucumbene River—a tributary of the Snowy—at Adaminaby to the Tumut River, a tributary of the Murrumbidgee. The whole scheme will involve the construction of:—seven major dams (with a total storage capacity of approximately 7,000,000 acre feet); sixteen power stations; 86 miles of tunnels varying in diameter from 18 feet to 42 feet—one projected tunnel 30 miles long under the Alps will be one of the largest in the world; nearly 500 miles of racelines at high elevations.

The total expenditure was originally estimated to be £225,000,000 but latest expectations are that the cost will be approximately £422,000,000. The scheme will form the greatest engineering and developmental work ever undertaken in Australia and one of the major engineering projects of the world.

(ii) *Snowy Mountains Hydro-electric Power Act 1949.* The Snowy Mountains Hydro-electric Authority is constituted by a Commissioner; he is assisted by two Associate Commissioners. The functions of the Authority are defined in the Act as follows:—(a) to generate electricity by means of hydro-electric works in the Snowy Mountains area and (b) to supply electricity so generated to the Commonwealth for defence purposes and for consumption in the Australian Capital Territory. The general powers of the Authority as defined in the Act are as follows:—For the purpose of performing its functions the Authority shall have power to construct, maintain, operate, protect, manage and control works—(a) for the collection, diversion and storage of water in the Snowy Mountains Area; (b) for the generation of electricity in that area; (c) for the transmission of electricity generated by the Authority; and (d) incidental or

* See also Chapter XXV.—Electric Power Generation and Distribution, pp. 916-9.

related to the construction, maintenance, operation, protection, management or control of any of the works specified above. The Act provides that the Authority may sell to a State, or to an authority of a State, electricity generated by the Authority which is not immediately required by the Commonwealth for defence purposes or for consumption in the Australian Capital Territory.

(iii) *The Authority's Objectives and Programme.* The two basic objectives are the early production of electricity and the early diversion of water inland.

It is anticipated that the first instalment of power, estimated at approximately 60,000 kW will be available by early 1955 and additional generating capacity is scheduled to become available gradually up to 660,000 kW by 1962.

The Snowy Scheme will by 1958 or 1959 supply the Murrumbidgee River with 500,000 acre feet per annum of additional water. Ultimately the scheme will provide approximately 1,818,000 acre feet per annum to the two rivers of which 1,020,000 acre feet per annum will go to the Murrumbidgee and 798,000 acre feet to the Murray.

The Department of Public Works, New South Wales, has undertaken the design and construction of Adaminaby Dam on which work has already commenced, and the Department of Main Roads, New South Wales, and the Snowy Shire have undertaken the reconstruction of over 70 miles of existing roads. A contract has been placed with an overseas firm for the design and construction of the complete Guthega Project on the Upper Snowy River. This work is already well advanced and is expected to be completed early in 1955. Contracts for the construction of the Adaminaby Tunnel of the dam at Tumut Pond and of the power station on the Tumut River were placed during 1953-54.

B. STATES AND TERRITORIES.

§ 1. Australian Local Pattern of Water Conservation and Use.

The foregoing sections deal generally with water conservation and irrigation in Australia and with national and interstate projects. The following survey indicates the local pattern of water resources and the steps taken by the State Governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation. In New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water for the stock industries (mainly underground sources), and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

§ 2. New South Wales.

1. *General.*—(i) *Rainfall and History.* In issue No. 37 of this publication (p. 1110) information on the pattern of rainfall and the history of irrigation in New South Wales preceded the description of water conservation and use in that State, but it has now been omitted. (See also Chapter II.—Physiography, p. 18 of this issue.)

(ii) *Administration.* Under the amendment of the Irrigation Act, made by the Conservation Authority of New South Wales Act, 1949, which came into force on 1st July, 1949, the Water Conservation and Irrigation Commission of New South Wales now consists of three members appointed by the Governor, one of whom is appointed as Chairman. The operations of the Commission cover water conservation, control of irrigation areas, establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and

shallow boring, assistance under the provisions of the farm water supplies scheme and river improvement works.

Under the Water Act the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

For particulars of the New South Wales-Queensland Border Rivers Agreement ratified by Acts of both States in 1947 see page 950 of this Chapter.

2. Schemes Summarized.—(i) *Location and Type.* The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam and Lake Brewster on the Lachlan, another tributary. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc., in many places, and head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. Substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including Irrigation Areas, Irrigation Districts, Water Trust Districts, Flood Control and Irrigation Districts and River Improvement Districts. There are five Irrigation Areas :—The Murrumbidgee Irrigation Areas consisting of 403,256 acres served with water through a channel system off-taking from the river at Berembid Weir; the Coomealla Irrigation Area of 35,450 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,209 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee; and the Tullakool Irrigation Area of 16,305 acres supplied from the Edward River at Stevens Weir. All these areas are administered by the Commission, and details of the various schemes are given in sub-section (iii) below.

(ii) *Works.* The capacities of the main storages (in acre feet) are :—

Murray :—Half share of Hume Reservoir, weirs and locks to Wentworth (736,420); Stevens Weir, Edward River (7,165).

Murrumbidgee :—Burrinjuck Dam (652,200); Berembid Weir (10,000); Maude Weir (6,740); Redbank Weir (7,360).

Lachlan :—Wyangala Dam (303,900); Lake Cargelligo (29,435); Jemalong Weir (2,200); Lake Brewster (108,000).

Water from the Hume Reservoir is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for rice and other cereals and for pastures in the Tullakool Irrigation Area, for domestic and stock supply and irrigation in the Berriquin, Wakool and Denimein Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. Balance storages at Lake Cargelligo and at Lake Brewster conserve water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplies the districts of Jemalong and Wylde's Plains, serving an area of 22,556 acres. Wyangala is now producing hydro-electric power. Proposals for future development include provision of a head storage on the Belubula River.

The approximate total length of channels (including main canals) in New South Wales is 2,757 miles. The approximate length of drains and escape channels is 942 miles, and the approximate total length of pipe lines is 13 miles, making a grand total of 3,712 miles of channels and pipe lines, etc.

(iii) *Extent of Systems and Nature of Irrigated Culture.* The following table shows the areas of the various irrigation systems and the areas under irrigated culture in New South Wales during 1953-54, the latter according to the nature of irrigated culture.

AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE : NEW SOUTH WALES, 1953-54.

(Acres.)

System, etc.	Total Area.	Area under Irrigated Culture.										Total
		Rice.	Other Cereals Grown for Grain.	Lucerne. (a)	Other Fodder Crops.	Pastures.		Vineyards.	Orchards. (c)	Vegetables.	Fallow Land and Miscellaneous.	
						Sown. (b)	Natural.					
Irrigation Areas—												
Murrumbidgee (within the Areas)	403,256	24,628	9,160	3,893	813	60,127	3,070	5,826	13,521	3,116	31,354	154,508
Lands adjacent supplied under agreement	(d)	62	..	51	1	3,232	8,415	4	82	16	2,138	14,001
Ooomealla	35,450	..	..	15	..	..	..	3,757	587	16	..	4,375
Curlew	10,209	..	..	21	39	..	..	722	945	12	..	1,739
Hay	6,806	..	..	44	190	1,103	..	..	..	..	2	1,339
Tullakool	16,305	2,084	1,000	60	428	4,918	..	..	..	..	2,083	10,573
Total ..	472,026	26,774	10,160	3,084	1,471	69,380	11,485	10,309	15,135	3,160	35,577	186,535
Irrigation Districts—												
Benerambah	134,921	3,658	4,583	1,155	365	21,180	900	..	..	10	5,800	37,951
Tabbitta	5,980	106	200	60	30	870	20	..	..	..	150	1,436
Wah Wah	577,939	..	650	290	..	7,570	200	..	..	..	970	9,680
Berriquin	779,564	..	3,198	10,104	2,224	118,011	4,244	..	..	40	4,282	142,103
Wakool	495,430	8,320	4,357	1,515	989	44,791	2,750	..	..	12	3,015	65,749
Jemalong and Wyldes Plains	147,005	..	3,538	993	420	6,229	5,433	..	12	..	1,069	17,601
Denimeln (f)	224,550	..	3,034	5,988	1,730	5,136	3,888	..	..	..	283	20,059
Gumty	345	..	24	50	..	35	..	..	19	46	..	174
Total ..	2,364,840	12,084	19,584	20,155	5,758	204,122	17,435	..	31	108	15,569	294,846
Flood Control Districts—												
Lowbidgee	375,000	..	..	..	..	g 94,118	..	..	..	..	..	(g)94,118
Medgun	272,800	..	..	..	..	g 61,760	..	..	..	..	..	(g)61,760
Total ..	647,800	..	..	..	..	g 155,878	..	..	..	..	..	g 155,878
Irrigation Trusts—												
Pomona	1,580	..	..	..	..	..	..	770	130	..	..	900
Blairmore	315	..	8	44	42	46	..	..	..	..	..	140
Brangan	4,933	..	100	200	..	195	725	..	50	2	..	1,272
Bungunyah-Koraleigh	1,804	..	..	..	10	..	..	1,060	72	40	..	1,182
Glenview	661	..	..	22	..	41	336	..	71	..	..	470
Goodnight	1,167	..	..	..	4	..	..	519	41	..	..	594
Bana	3,446	..	..	..	..	..	..	..	..	..	..	(d)
Total ..	13,906	..	108	266	56	282	1,061	2,379	364	42	..	4,558
Water Trusts—Domestic and stock supplies	2,945,097	..	..	..	..	..	..	..	..	..	..	..
Licensed Diversions(h)—To Irrigate	(d)	..	..	11,400	6,076	15,887	3,887	745	3,150	12,828	(i) 331	54,304
Grand Total(e) ..	(d)	38,853	29,852	34,905	13,361	289,671	189,746	13,433	18,680	16,138	51,477	f 696,121

(a) Includes grazing and cutting. (b) Perennial and annual self-seeding. Perennial amounted to 32,449 acres of which 13,658 acres were in the Berriquin Irrigation District. (c) Citrus and deciduous. Deciduous amounted to 8,236 acres, of which 7,559 acres were in the Murrumbidgee Irrigation Area. (d) Not available. (e) Incomplete. (f) Works incomplete. (g) Area Irrigable; details of area actually irrigated are not available. (h) Excludes domestic and stock supplies for which particulars are not available. (i) Tobacco. (j) Includes Flood Control Districts—see (g).

3. **Murrumbidgee Irrigation Areas.**—(i) *Description.* These areas comprise about a third of the State's irrigated acreage and in 1953-54 received 306,000 acre feet of the total water allocated for stock, domestic supply and irrigation (978,620 acre feet). They are served by the Burrinjuck Dam (capacity 652,200 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied for the Irrigation Districts of Tabbita, Benerembah and Wah Wah and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter and spring freshets, fed by melting snows, and is released during the September-April irrigation season. It passes along the river channel to Berembid Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate 840 miles and drainage channels 810 miles.

In addition, 380 miles of supply channel run through adjacent irrigation districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control. The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations with a sparse population.

Population was 12,000 in 1923, 15,000 in 1929, 20,000 at the 1947 Census and was estimated at 24,900 at 30th June, 1954. At the 1947 Census the population of the Yanco district (with Leeton as the centre) was 9,000; and the population of the Mirrool Area (with Griffith as the centre) was 11,000.

(ii) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas, also the distribution of electricity throughout those areas. Other local government services, including town water supply, are provided by Shire Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1954 was 352,618 acres, including 41,292 held for short lease grazing, agriculture, etc.

(iii) *Production.* Since the scheme was inaugurated in 1911 the value of rural production from the Murrumbidgee Irrigation Areas and the adjoining Irrigation Districts supplied with water from the channels of the Murrumbidgee Irrigation Areas has aggregated approximately £34,000,000. During the year ended 30th June, 1954, production was valued at £8,280,000.

Livestock slaughtered contributed £1,094,000 (comprising sheep, £807,000; cattle, £220,000; pigs, £67,000); wool, £1,421,000; and other pastoral and dairying products, £263,000.

Rice (£2,280,000) and wheat and oats (£522,000) contributed a total of £2,801,000. Horticulture accounted for £2,255,000, comprising almonds, apricots, citrus, drying grapes, table grapes, wine grapes, figs and olives, peaches and nectarines, pears, plums and prunes, quinces and apples. The greatest individual contributions were made by peaches and nectarines, £714,000, grapes, £496,000 and citrus, £394,000.

The total value of all vegetables was £445,000, including root crops, £188,000, peas and beans, £101,000, tomatoes, £63,000, cabbages, cauliflowers, onions and other products.

Rice growing was initiated on the Murrumbidgee Irrigation Areas in 1924. Since then, aggregate production from those areas and from the other localities mentioned hereunder has been approximately 1,220,000 tons, valued at about £20,083,000 to the grower. In 1953-54 total area sown was 38,858 acres, including 28,454 acres on the

Murrumbidgee Irrigation Areas and adjoining districts, 8,320 acres at Wakool and 2,084 acres at Tullakool. The total quantity of water delivered for the rice crops during the 1953-54 season was 219,693 acre feet. Water supplied for rice represents about one-half of the total delivered on the Murrumbidgee Irrigation Area and slightly less than a quarter of the water artificially supplied for irrigation in New South Wales. During and after the 1939-45 War the area planted was increased to the limit of water available.

Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle about 300,000 bushels of fruit per year (compared with 54,600 in 1927-28). Sales turnover of the Leeton cannery in each of the past five years was over £1,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

4. *Other Irrigation Areas.*—The Curlwaa, Coomealla, Hay and Tullakool Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which also is responsible for operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,209 acres of which 2,307 acres at 30th June, 1954, comprised irrigated holdings. Production consists of dried vine fruits, deciduous fruits and fodder crops of a total estimated value in 1953-54, of £194,000.

Coomealla Area, 9 miles upstream from Curlwaa, comprises 35,450 acres of which 5,393 acres at 30th June, 1954 comprised irrigated holdings. Other land in the undeveloped part is leased for grazing. Production consists of vine and citrus fruits of an estimated value, in 1953-54 of £309,000. An extension of the Coomealla Irrigation Area has been undertaken in recent years to provide irrigation farms for ex-servicemen. As a result, 100 ex-servicemen have now been placed on these new farms.

Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which 1,164 acres are occupied as irrigated holdings. Annual production, valued in 1953-54 at £32,000, comprises dairy products, fat lambs, sheep, wool and fodders.

5. *Irrigation Districts.*—These Districts are set up under the Water Act for (a) domestic and stock water supply and (b) irrigation. They differ from water trusts in that the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders. The following are the districts or provisional districts constituted and the areas of land benefited:—*Murray River*—Wakool District (completed) 495,430 acres, Berriquin Provisional District (almost complete) 779,564 acres, Denibootea Provisional District (in progress) 304,321 acres, Denimein Provisional District (completed) 147,005 acres, Jernargo Provisional District (certain portions of which have been included in Berriquin District) 4,505 acres, Barramein Provisional District (domestic and stock supply only—works not yet commenced) 88,651 acres; *Murrumbidgee River* (completed)—Benerembah District 134,921 acres, Tabbitta District 5,980 acres, Wah Wah Provisional District 577,039 acres, Gumly Provisional District 345 acres; *Lachlan River* (completed)—Jemalong and Wylde's Plains District 224,556 acres.

Since the completion of the Hume Reservoir several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on "extensive" irrigation—that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. "Water right" means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1954, the total length of completed canal and channels was 812 miles, including Mulwala Canal 75 miles, Berrigan channel 22 miles, subsidiary channels 673 miles, escape channels 33 miles and cross drainage channels 9 miles. Off-take capacity of the Mulwala Canal is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be completed.

Wakool, with 361 miles of channel, contains 274 holdings and it is expected that the area developed by irrigation will comprise about one acre in 13 of the total area. The total area irrigated in 1953-54 was 65,749 acres and water supplied was 119,142 acre feet. Crops comprised fodders, pastures, rice, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and it is expected that the proportion of total area to be developed for irrigation will be considerably higher than in the case of Wakool. Total irrigated acreage was 142,103 at 30th June, 1954. Sheep and wheat growing are the main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1953-54 season for irrigation, etc. was 81,397 acre feet, and the area irrigated was 49,067 acres, including rice and other cereals, pastures and fodder crops.

For the same season 21,360 acre feet of water were supplied from the Lachlan River to irrigate a total area of 20,059 acres within the Jemalong and Wyldes Plains Districts.

6. **Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.**—The Water Act provides for the constitution of Trust Districts for domestic and stock water and irrigation and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted (the area in acres of each district is shown in parentheses)—*Murray River*—Tuppall Creek (78,080), Bullatale Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,985), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,001,210); *Lachlan River*—Torrigan, Muggabah and Merrimajee Creeks (170,240) Condobolin West Weir (4,480), Marrowie Creek (295,040), Ulonga (71,655), Micabil Weir (11,500); *Miscellaneous*—Algdudgerie Creek (9,760), Nidgerly Weir (46,880), Great Ana Branch of Darling River (995,200), Collarenebri town water supply (117)—making in all a total area of 2,945,097 acres. Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. The following are the Trust Districts (area in acres is shown in parentheses):—*Hunter River*—Blairmore (315); *Murray River*—Bama (3,446), Goodnight (1,167), Bungunyak—Koraleigh (1,804), Glenview (661), Bringan (4,933); *Darling River*—Pomona (1,580)—making in all a total area of 13,906 acres.

The Lowbidgee Provisional Flood Control and Irrigation District (375,000 acres), the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. There are 48 holdings. Another district, Medgun (272,800 acres) near Moree in the North-West is also now in operation. There are 20 holdings in the district and the area benefited by controlled floodings is approximately 61,800 acres.

7. **River and Lake, and Farm Water Supplies.**—During recent years the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and also financial assistance, are made available to aid individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams.

8. **Underground Water.**—Extensive use is made of artesian, sub-artesian, and shallow underground water. Eighty thousand square miles in the northern and western portions are covered by the Great Artesian Basin. Eighty-one Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover about 5,000,000 acres and water is distributed through 3,285 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1954, was 977 and the estimated total daily flow from 560 flowing bores was 59,189,000 gallons. The estimated flow in 1914-15 was 99,350,000 gallons per day for 372 bores. The deepest bore is Boronga No. 2 (4,570 feet), which also has the greatest flow, namely, 1,115,000 gallons per day. Of the total number of bores sunk, 224 have been installed by the Government in connexion with public watering places, Bore Water Trusts or Artesian Wells Districts.

Since 1912 the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1954, the total constructed by the Commission's plants was 4,417 and their average depth was 303 feet.

9. **Future Programme.**—The programme of post-war development already in hand includes the provision of eighteen dams and storages, eight diversion weirs and flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter and Burrendong on the Macquarie, while legislation has been passed authorizing the construction of a flood control dam at Warkworth in the Hunter Valley and a storage dam at Blowering on the Tumut River. In the case of Burrendong Dam work has been temporarily suspended in order to enable the Water Conservation and Irrigation Commission to concentrate its available resources on the speedy completion of works having higher priority. The Menindee Lakes storage project—part of the scheme for conserving the waters of the Darling River has been commenced, but as in the case of Burrendong Dam, work has been temporarily suspended. The Hunter River development concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. Total estimated capacity of all proposed new storages is 5,500,000 acre feet.

10. **Hydro-electricity.***—The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains Area (*see* Snowy Mountains Hydro-Electric Scheme, p. 916-9). However, there are possibilities of relatively large scale developments on the Clarence, Shoalhaven and Macleay Rivers as well as numerous minor schemes. These various schemes are being investigated by the New South Wales Government.

The largest existing hydro installations are the 20,000 kW station at Burrinjuck Dam on the Murrumbidgee River (1927) and the 7,000 kW station at Wyangala Dam on the Lachlan River (1947). The output of both these plants is dependent on the release of waters for irrigation purposes.

* *See also* Chapter XXV.—Electric Power Generation and Distribution, pp. 916-23.

Similar schemes, for which the water release will be dependent upon other than electrical requirements, are being constructed at the Hume Irrigation Dam on the Murray River and at Warragamba Dam which is being constructed to provide water supply for the Sydney Metropolitan Area. At Hume, two 25,000 kW units are to be installed and the output of the station will be shared equally between New South Wales and Victoria. At Warragamba, a 50,000 kW unit is to be installed.

Of the remaining hydro installations, the largest is that of the Northern Rivers County Council on the Nymboida River, a tributary of the Clarence. This station, which now has a capacity of 4,600 kW, commenced operation in 1924. The County Council also has two 100 kW hydro units in operation at Dorriggo on Bielsdown Creek, a tributary of the Nymboida River. The investigation of a number of much larger schemes for the further development of the Nymboida River is at present in progress.

The Clarence Gorge Scheme is a proposal for combined flood mitigation and hydro-electric generation on the Clarence River about 40 miles from Grafton and 240 miles from Newcastle. The proposal has been examined in sufficient detail to indicate that the scheme may provide for the installation of about 100,000 kW of hydro generating plant.

The New England County Council has under construction a 2,500 kW hydro scheme near Armidale on the Oakey River, a tributary of the Macleay River.

The Mullumbimby Municipal Council has in operation two 150 kW hydro units, which were installed in 1925, on Wilson's Creek, a tributary of the Richmond River.

The Bega Valley County Council operates a hydro-electric scheme at Brown Mountain, utilizing the headwaters of the Bemboka River. This installation, which now has a capacity of 1,900 kW, was opened in 1944. Work is in progress on extensions to provide for two further 1,000 kW units.

§ 3. Victoria.

1. *General.*—(i) *Rainfall.* Particulars of the rainfall pattern of Victoria were given on page 1117 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 18 of this issue.)

(ii) *Administration.* Although practical steps were taken to organize Victoria's water resources before the turn of the century, the passage of the Water Act in 1905 marked the commencement of sustained progress. The State Rivers and Water Supply Commission established by this Act is vested with the control of all irrigation, rural domestic and stock supplies, town water supplies and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally constituted Waterworks Trusts or local governing bodies.

The operations of the First Mildura Irrigation Trust and the various Waterworks Trusts and local governing bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

2. *Systems Summarized.*—(i) *Works.* Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 2,430,800 acre feet (including Victoria's share of the Hume Reservoir). By means of channels, bores, etc., one-fourth of the State is artificially supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 110,000 acres in 1906 to 821,025 in 1953-54, and irrigation channels command 2,146,622 acres.

The Commission controls 37 large reservoirs and 241 subsidiary storages. The capacities of the storages in acre feet within the various systems at 30th June, 1954 were as follows :—

Goulburn System:—Eildon Reservoir, 361,000 (being enlarged); Goulburn Weir, 20,700; Waranga Basin, 333,400; *Murray-Loddon System*:—Half share of River Murray Commission storages including Hume, Yarrawonga, Torrumbarry, Euston, Mildura and Wentworth, 802,420; Kow Swamp, Laanecoorie, Kerang-North-West Lakes, Lake Boga and Lake Cullulleraine, 148,210; total, 950,630; *Wimmera-Mallee*:—538,900; *Maffra-Sale*:—106,040; *Coliban*:—62,730; *Werribee*:—34,900; *Bellarine Peninsula*:—10,850; *Mornington Peninsula*:—5,800; *Otway*:—1,080; *Miscellaneous*:—4,770; *Total*:—2,430,800.

Irrigation channels extend 4,884 miles, domestic and stock channels 8,049 miles and drainage and flood protection channels 2,094 miles, a total of 15,027 miles. In addition, the Commission controls 1,224 miles of piping, comprising 273 miles of mains and 951 miles of reticulation. Farm holdings served with water total 43,923. Urban districts supplied by the Commission's channels and pipelines have a population of 175,310 persons in 130 towns, and a further 143 towns with a total population of 439,780 persons are supplied by Trusts under the supervision of the Commission.

To 30th June, 1954, the total capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £74,724,236, one-half of which was in respect of irrigation.

The total capital liability in respect of works under the control of the Commission at 30th June, 1954 was £71,795,000, of which £63,621,000 was borne by the State and £8,174,000 by water-users. Waterworks Trusts and local governing bodies had a total capital liability of £7,255,000 at 30th June, 1954, of which £3,341,000 was borne by the State and £3,914,000 by the Authorities.

(ii) *Extent of Systems and Nature of Irrigated Culture*. Although the area irrigated is less than 2 per cent. of the State, it yields approximately 11 per cent. of Victoria's rural production. The following table shows the areas of the various irrigation systems and the areas under irrigated culture during 1953-54.

AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: VICTORIA. 1953-54.

(Acres.)

System.	Total Area.	Area under Irrigated Culture.									Total.
		Cereals.	Lucerne.	Other Fodder Crops.	Pastures.		Vineyards.	Orchards.	Market Gardens.	Fallow and Miscellaneous.	
					Sown.	Natural.					
Goulburn	1,257,683	13,313	19,383	4,127	271,640	27,736	299	18,805	2,936	5,317	363,550
Murray—											
Torrumbarry Weir ..	377,678	12,787	5,376	2,765	135,626	47,872	5,588	2,191	835	6,774	219,814
Yarrawonga Weir ..	267,012	35	15,432	295	46,127	2,457	52	3,227	686	9	68,320
By Pumping	31,658	90	175	273	293	60	23,236	1,556	241	..	25,924
Total	676,348	12,912	20,983	3,333	182,046	50,389	28,876	6,974	1,762	6,783	314,058
Loddon and other Northern Systems ..	(a) 19,736	1,817	1,399	438	9,031	3,552	19	4,238	914	4,424	25,832
Southern Systems ..	147,855	55	1,853	230	32,253	1,070	..	551	4,316	651	40,979
Mildura and Private Diversions	(b) 45,000	3,977	4,898	1,539	28,037	6,667	15,264	5,830	3,679	6,709	76,600
Grand Total ..	2,146,622	32,074	48,516	9,667	523,007	89,414	44,458	36,398	13,607	23,884	821,023

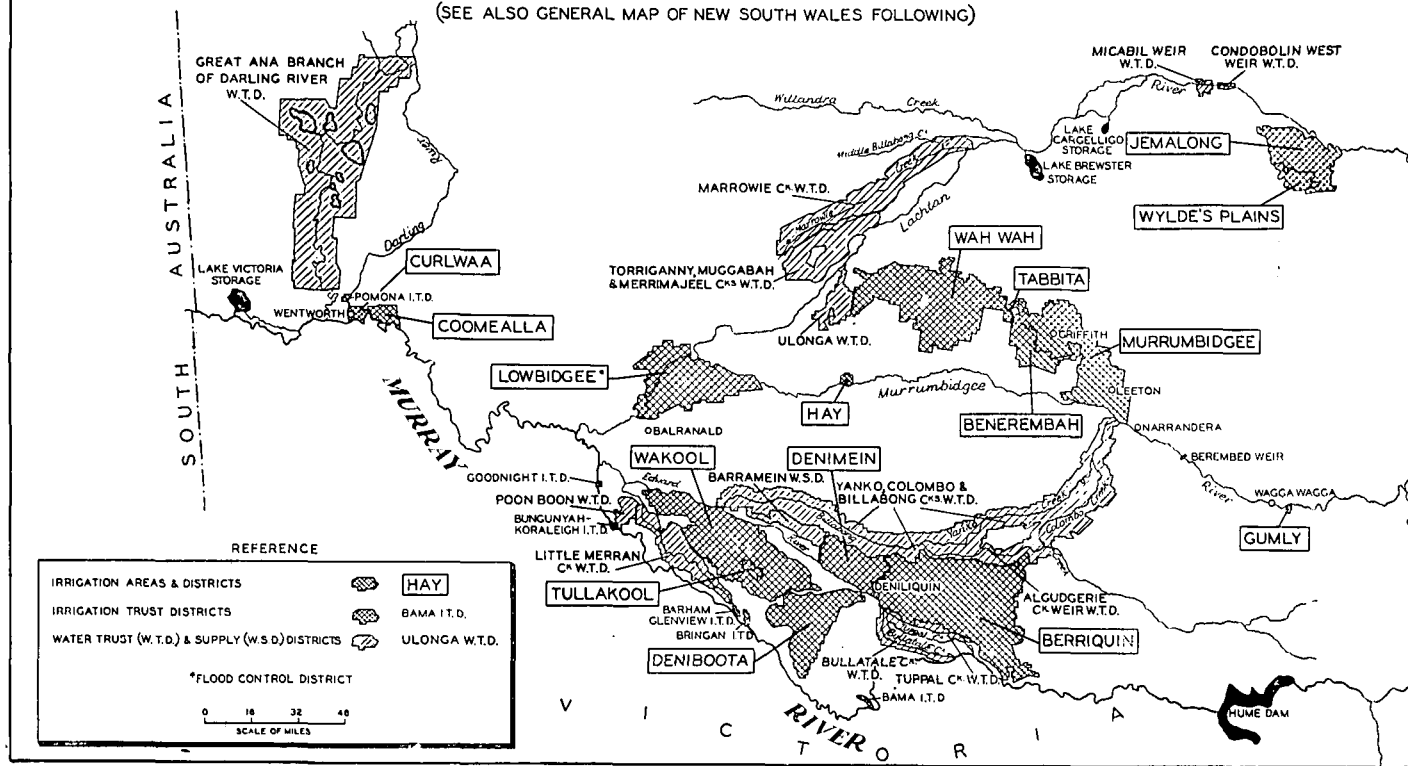
(a) Area of Campaspe District only.

(b) Area of First Mildura Trust District only.

(c) Includes lucerne for both hay and pasture.

WATER SUPPLY AND IRRIGATION AREAS AND DISTRICTS - NEW SOUTH WALES, 1952

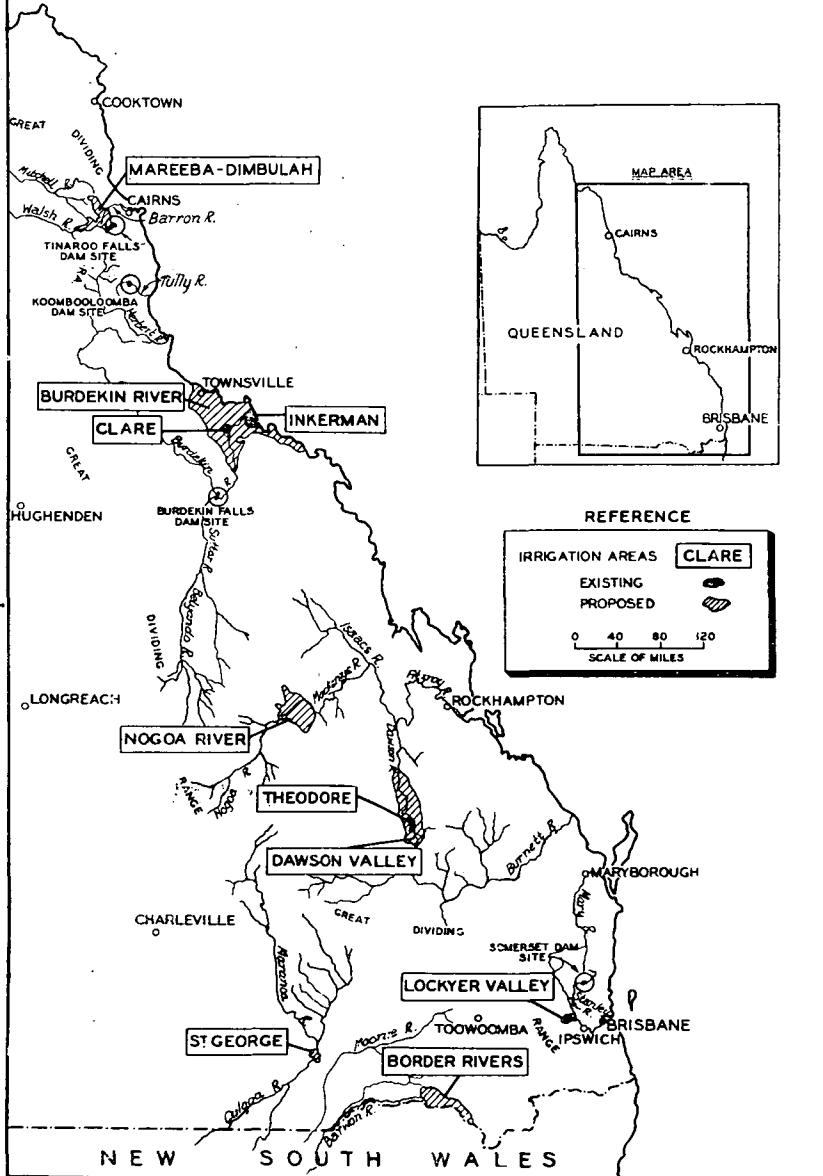
(SEE ALSO GENERAL MAP OF NEW SOUTH WALES FOLLOWING)



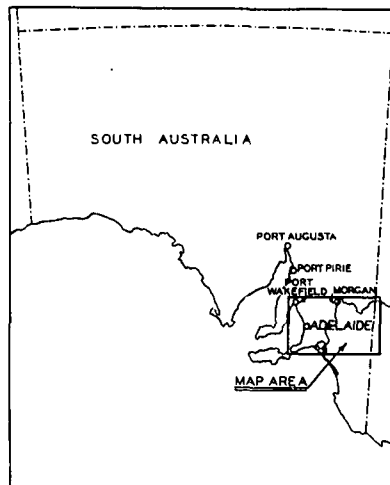
S O U T H A U S T R A L I A



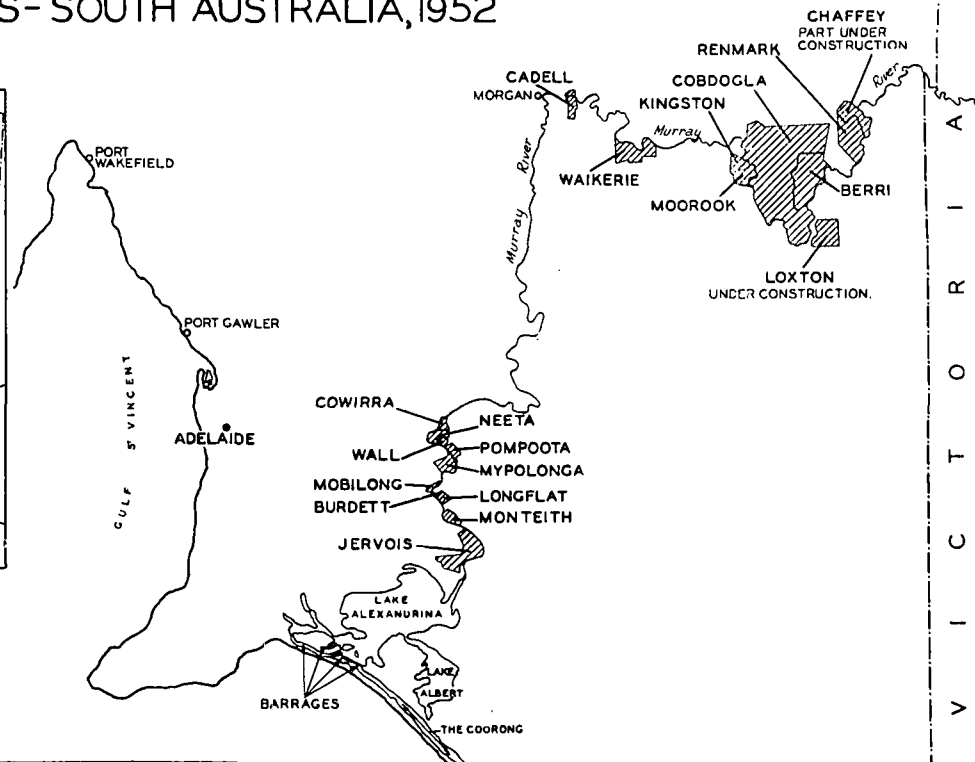
IRRIGATION AREAS-QUEENSLAND 1952



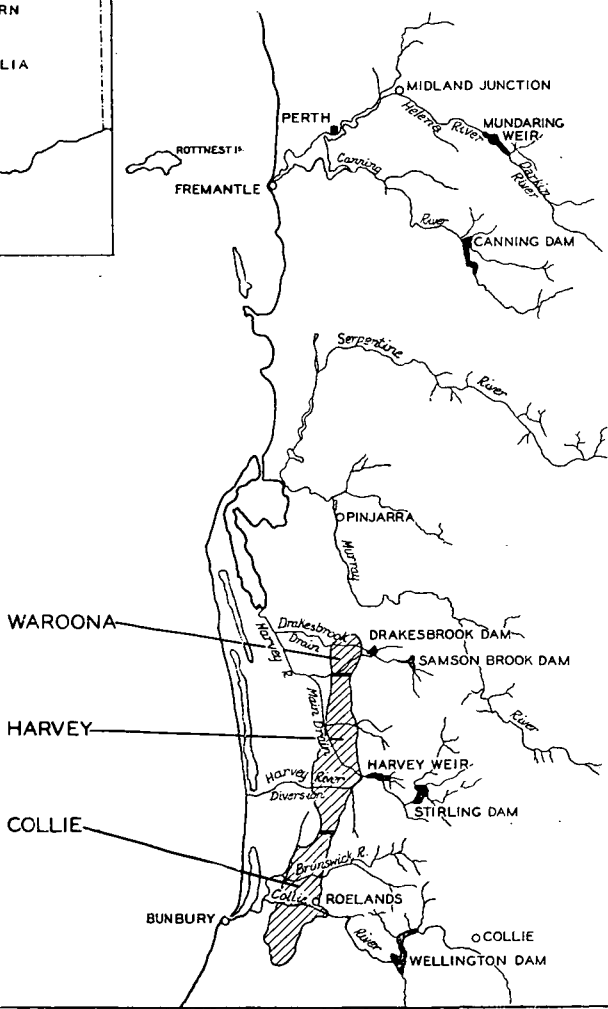
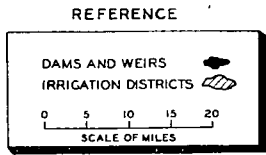
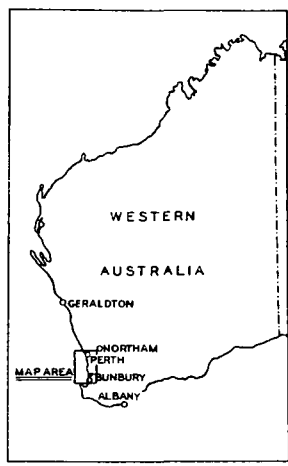
IRRIGATION AREAS- SOUTH AUSTRALIA, 1952



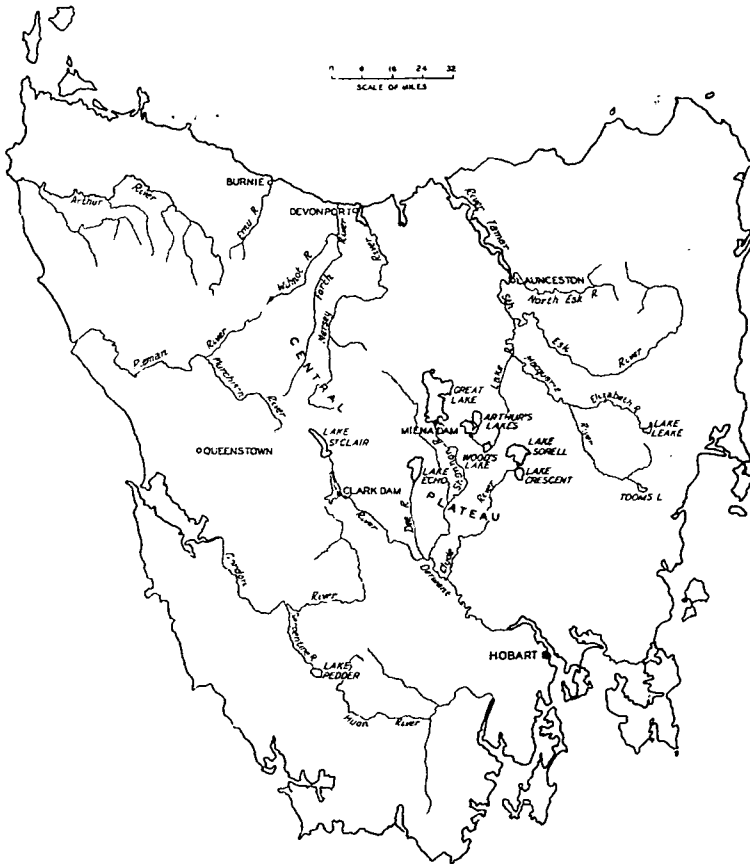
0 10 20 30 40 50
SCALE OF MILES



IRRIGATION DISTRICTS WESTERN AUSTRALIA, 1952



1952



(iii) *Production.* The influence of irrigation on Victorian production is illustrated by the following estimates, prepared by the Commission, of the value of production from irrigated areas :—1905-6, £500,000 ; 1925-26, £5,000,000 ; 1945-46, £12,000,000 ; 1952-53, £34,720,000. Detailed classification of the 1952-53 irrigation production estimates is as follows :—*Livestock* :—Dairying, beef and veal meats, etc., £10,650,000 ; Wool, lamb and mutton, £5,800,000 ; *Pigmeats*, poultry and eggs, £3,170,000 ; *total Livestock*, £19,620,000. *Horticulture* :—Vine fruits, £5,900,000 ; Fresh and canning fruits, £3,300,000 ; *total Horticulture*, £9,200,000. *Vegetables and other primary products*, £5,900,000.

3. *Goulburn System.*—This comprises the Eildon and Waranga Reservoirs, the Goulburn Weir and over 2,500 miles of distributory channels. The total capacity of these storages was 715,100 acre feet at 30th June, 1954 and these with the river flow gave a regulated supply in the vicinity of 800,000 acre feet per annum.

The Eildon Reservoir is at present being enlarged to a capacity of 2,750,000 acre feet and this will enable the supply to be doubled. It is anticipated that this enlargement will be completed in 1955.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, and where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District.

Two main outlet channels issue from the Waranga Reservoir ; one serves the Western part of the Rodney district, while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 196,300 acres east of the Goulburn ; 601,900 acres between the Goulburn and Campaspe : 379,300 acres between the Campaspe and Loddon ; and 80,200 acres west of the Loddon—a total of 1,257,700 acres.

The main products of the Goulburn districts are dairy products, fruit and wool and fat lambs. The development of the fruit canning industries is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooroopna canneries, together with that of city canneries—from Goulburn Valley fruit—amounts to an aggregate which represents 70 per cent. of Australia's total production of canned peaches, pears and apricots.

4. *Murray River System.*—The waters of the River Murray are used to supply an area of more than 700,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, except Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, supplied from Yarrawonga, will serve 280,000 acres when completed. At 30th June, 1954 550 miles of main and distributory channels were completed and supplied 267,000 acres west of Yarrawonga.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 377,700 acres with 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year.

Red Cliffs Irrigation District comprising 13,600 acres, of which, at present, 11,650 acres are irrigated, ranks first in importance among Victoria's pumping schemes. A system of main and distributory channels commands every holding in the district. The district, originally for soldier settlement, has been subdivided into 700 blocks. The area planted is composed mainly of vines and citrus. The first harvest (1924) returned 570 tons of dried fruit in addition to table grapes. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 9,200 acres and contains over 300 holdings averaging about 30 acres each. A reticulated pipe system supplies the town of Merbein, and the pumps also supply 51,200 acres forming part of the Millewa Waterworks District.

Nyah Irrigation District is supplied with water diverted from the Murray by a high-lift pumping plant, serving 3,840 acres in about 200 holdings devoted mainly to vineyards.

5. **First Mildura Trust District.**—The First Mildura Irrigation Trust—which is the only Irrigation Trust operating in Victoria—controls an area of 45,000 acres, of which 15,000 acres are irrigated. This area irrigated includes 12,000 acres of vines, 960 acres of citrus trees and small areas of apricots, peaches, prunes, figs, almonds, olives, lucerne and other fodders. It produces approximately 15,000 tons of raisins, currants and sultanas each year. The irrigation water is pumped from the River Murray and distributed through 168 miles of channels.

6. **Wimmera-Mallee System.**—The Wimmera-Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from the Grampians storages with a capacity of 538,900 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 11,000 square miles or nearly one-eighth of the State, which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 72,000 acre feet of water is distributed through 6,500 miles of open channel and some 4,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. About 10,000 farmers' tanks are served. In addition, forty-seven towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Horsham and Murtoa, near the main storage, 3,500 acres are irrigated for soft fruits and pastures. With the completion of the Rocklands Reservoir, this irrigation area is being extended to 7,000 acres.

The northern part of the system is affected by sand drifting into the channels, particularly in years of dry weather conditions, and the Commission is involved in substantial annual expenditure to remove this sand drift before the annual water distribution can be made. It is considered that this expenditure could be reduced by better farming methods, and efforts in this direction such as the sowing of rye-corn, and including the use of compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country, have resulted in marked savings in maintenance costs.

7. **Farm Water Supplies.**—The Rural Finance Corporation Act 1949 is designed, *inter alia*, to give farmers an opportunity of establishing or improving domestic and stock water supplies on their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams.

A Farm Water Supplies Branch has been set up by the State Rivers and Water Supply Commission to advise farmers on farm water supply matters even if finance is not required. Comprehensive booklets entitled "Farm Water Supplies for Domestic and Stock Purposes" and "Farm Irrigation and Drainage" prepared by this Branch have been widely circulated to landholders.

8. **Underground Resources.**—The first stage of a comprehensive survey of the underground water resources of Victoria has been completed. It provides records of bores in the Mallee, Wimmera and Glenelg regions, and a description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbost Flats, Llowalong Estate on the Avon River and elsewhere.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies in different parts of the basin. Over 300 bores exist in Victoria, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

9. *Future Programme.*—Victoria has reached the stage when the demand for water for irrigation, domestic and stock purposes is far greater than the supply, and a comprehensive programme of water conservation and distribution works to meet this demand is being carried out by the State Rivers and Water Supply Commission. A new storage on the Glenelg River known as the Rocklands Reservoir with a capacity of 272,000 acre feet has been completed. Work on the new Eildon Dam has made considerable progress and it is expected that this will be completed in 1955. This work will increase the capacity of the Reservoir from 306,000 acre feet to 2,750,000 acre feet by the building of a large earthen embankment 260 feet high and 3,300 feet long, the cost of which will be in the vicinity of £22,000,000. Work was also commenced (but is temporarily suspended) on the construction of a reservoir on the Loddon River to be known as the Cairn Curran Reservoir to have a capacity of 120,000 acre feet.

10. *Hydro-electricity.**—The Kiewa project in the Australian Alps, on the Kiewa River, a tributary of the Murray, will comprise a series of power stations with a total installed capacity of approximately 300,000 kW, and an average annual production of more than 800 million kWh. It will be one of the largest hydro-electric developments in Australia. The authority responsible for its construction and operation is the State Electricity Commission of Victoria. Work is in progress on the undertaking. The first of the Kiewa power stations has been operating since 1944. Its installed capacity is 26,000 kW and it is contributing annually an average of 58 million kWh of electricity to the State system. A second power station of 62,000 kW capacity is scheduled for completion in 1955. When this new power station is in full operation, average annual production of electricity at Kiewa will be approximately three times that of the original power station. Tunnelling is in progress in connexion with a third power station of still larger capacity; and work, suspended for three years on account of financial conditions, has been resumed on one of the main storage reservoirs at Rocky Valley on the Bogong High Plains.

More extensive utilization is to be made by the State Electricity Commission of irrigation waters from the Goulburn River in a new power station of 135,000 kW capacity which has superseded the former Sugarloaf power station at Eildon Dam. The new power station, already in partial operation, will operate on the increased flow of water from the new Big Eildon Reservoir now being constructed by the State Rivers and Water Supply Commission of Victoria (see above). The power station is scheduled for completion in 1956.

Located within a few miles of Eildon Dam is a group of four hydro-electric power stations operating on the natural flow of the Rubicon and Royston Rivers. With a total installed capacity of 12,900 kW, the group has an average annual production of 80 million kWh. The Rubicon and Royston stations form the oldest existing hydro development in Victoria. The stations came into service in 1928 and for 25 years operated in conjunction with the former Sugarloaf power station (at the old Eildon Dam). Maximum production of the group is in winter and spring when water flow is at its greatest. The Rubicon and Royston stations will continue to offset the winter-time reduction in output at the new Eildon power station, which is designed primarily to operate on the summer-time release of water for irrigation purposes.

Irrigation water will also be utilized at the Hume Reservoir where a new power station being erected by the New South Wales Public Works Department will serve both Victoria and New South Wales. Initially, the installed capacity of the power station will be 50,000 kW. Production of electricity, averaging about 200 million kWh a year, will be shared equally by the two States, each contributing its quota of the annual cost. Victoria's share of the electricity generated will be fed into the State system.

* See also Chapter XXV.—Electric Power Generation and Distribution, pp. 924–30.

§ 4. Queensland.

1. *General.*—(i) *Rainfall.* Particulars of the rainfall pattern of Queensland were given in Official Year Book No. 37, page 1122. (*See also Chapter II.—Physiography, p. 18 of this issue.*)

(ii) *Administration.* The first comprehensive Water Act in Queensland was the Water Act of 1926 which vested in the Crown the right to the use and flow of all streams, lakes, watercourses, etc. which flowed through or were within the boundaries of two or more occupiers, and also vested in the Commissioner of Irrigation and Water Supply the bed and banks of all boundary streams. The Irrigation Act of 1922 provided for the establishment of Irrigation Areas in approved localities. From 1922 to 1931 the Commissioner of Irrigation and Water Supply administered the Acts, but in 1931 the Land Administration Board was appointed to act as the Commissioner and continued to act until the Irrigation and Water Supply Commission Act of 1946 was proclaimed in 1947. Under this Act the Corporation of the Commissioner of Irrigation and Water Supply was reconstituted. The Commissioner is responsible for carrying out the provisions of the Irrigation Acts 1922 to 1949 and the Water Acts 1926 to 1942. He is also responsible for investigations into, and the planned development of, water resources of Queensland under the Land and Water Resources Development Acts 1943 to 1946. For particulars of the New South Wales-Queensland Border Rivers Agreement ratified by Acts of both States in 1947 see page 950.

(iii) *Water Utilization in Queensland.* Queensland's predominant interest in the field of water conservation has in the past been the provision of stock and domestic water supplies in its great pastoral areas which contain nearly half of the Commonwealth's cattle, a seventh of the sheep and a third of the horses. More than half the State's rural production is derived from cattle and sheep. The cattle are distributed throughout the State, but most thickly between the east coast and the 20-inch average annual isohyet. Sheep are mainly pastured on the inland areas west of this isohyet, whilst dairying is concentrated in the south-eastern quarter of the State. In addition to the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock, the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meat works and markets has lately received much attention.

The State's agricultural crops differ from those of other States in that a large proportion are tropical. Sugar-cane is the greatest individual crop, representing in value some 40 per cent. of total agricultural production. Approximately 14 per cent. of the sugar-cane acreage is irrigated and represents some 44 per cent. of the total irrigated area in Queensland. Queensland is Australia's major tobacco-producing State, and plans are in hand to increase greatly annual production of this crop by means of development under irrigation.

2. *Great Artesian Basin.*—(i) *General.* Western Queensland beyond the 20 inch rainfall belt is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores and, where surface storage is not readily available, on excavated tanks. The Great Artesian Basin in Queensland corresponds approximately with the area lying west and south of the Great Dividing Range, but excluding the Cloncurry Mineral Field and the Barkly Tableland. It comprises 350,000 square miles of the total State area of 670,500 square miles. Statistics of bores and flow as at 30th June, 1954 are:—Artesian bores drilled, 2,367; artesian bores still flowing, 1,432; total depth drilled, 3,415,000 feet; deepest bore, 7,009 feet; total estimated flow, 211,000,000 gallons per day. Artesian pressure and flow are both steadily diminishing despite new bores drilled. The rate of diminution varies widely throughout the basin. Present general average rates of diminution are:—pressure, 1–2 feet/head, total flow, 1½–2 per cent. per annum.

There are some 16,000 miles of bore drains and the greatest length served by one bore is 114 miles. This method of watering is somewhat wasteful, owing to evaporation and soakage, but it is the most economical in first cost. Not more than 5 per cent. of the water is actually used by stock, and present policy is to restrict working flows to serve limited drain systems of smaller dimensions and reduce evaporation and soakage losses. The average loss per mile of drain is 10,000 gallons per day; with smaller drains this is reduced to 7,000 gallons per day. Pipe lines are very rarely used for distribution owing to high initial cost.

Although artesian beds underlie such a large area of the State, only 80,000 square miles are primarily watered by bore drains. The remaining area is watered by artesian bores (with small or no flow and limited drains), sub-artesian bores, excavated tanks, dams and natural waterholes. In many districts, artesian bores are not economical watering facilities, because of depth, limited area to be watered, and difficult terrain, for distribution of water by drains. High costs have restricted deep drilling. Very few new bores exceed 2,000 feet in depth, and a new bore greater than 3,000 feet in depth is exceptional.

Shallow sub-artesian supplies, of variable quality and volume, are available at depths less than 1,000 feet over a large area of the basin. These beds are not connected with the artesian beds. An essential practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

In 1939, a special Committee was appointed to inquire into the geology and hydrology of the Basin and economic use of artesian supplies. A first progress report has been issued by this Committee and its final report is now being prepared. It has been established that the rate of diminution of flow is declining.

In the past, many excavated tanks failed in dry seasons, because of insufficient original depth and capacity, and subsequent silting. Mechanical plant is now almost exclusively in use and much larger tanks are being excavated, even in areas where artesian water may be obtained at a reasonable depth. New tanks with capacities of 20,000 cubic yards and depths of 25 feet are not uncommon. Two tanks with capacities of 65,000 cubic yards each, and depths of 42 feet and 46 feet respectively have been completed for watering stock in an area where a good artesian flow may be obtained at a depth less than 2,000 feet.

(ii) *Bore Water Areas.* The Constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at a cost beyond individual capacity and to conserve artesian supplies by fully utilizing the flows from existing bores resumed with the land for closer settlement. Bores and drains are constructed from loan funds repayable over a period of years. The areas are administered by Local Boards or by the Commissioner of Irrigation and Water Supply, acting as a Board. Rates are levied to meet interest, redemption, maintenance and administration costs. Statistics for the year 1953-54 are:—Areas constituted, 65; administered by Commissioner, 54; administered by Local Boards, 11; area benefited, 4,934,552 acres; average rate per acre, 1.8d.; number of flowing bores, 58; total flow, 26,908,000 gallons per day; drains served, 2,747 miles.

3. *Stock Route Watering.*—During 1935, a scheme was inaugurated to water adequately stock routes in the western portion of the State including main trunk routes connecting Eromanga to Burketown, Charleville to Normanton, and Clermont to Einasleigh, with branches to railheads, a total distance of 3,117 miles. Watering facilities were also provided on subsidiary routes. Under the Stock Routes and Rural Lands Protection Act of 1944 a co-ordinating board was constituted, representative of Government departments and pastoral interests, under the direction of the Minister for Lands, and with an officer of that Department as superintendent, whose duty was, *inter alia*, to investigate and implement a long-range, co-ordinated plan for adequate watering of all stock routes throughout the State. Natural waters are being supplemented by artificial facilities at intervals of about 9 miles. Construction is supervised by the Irrigation and Water Supply Commission and by local authorities. Completed facilities are vested in local authorities for control and maintenance. From 1935 to 30th June, 1954, 321 facilities had been completed and at 30th June, 1954, 175 facilities were under construction or investigation.

4. *Irrigation.*—(i) *General.* Irrigation as a means of stabilizing and increasing agricultural production is receiving growing attention in Queensland. In addition to the Theodore Irrigation Area on the Dawson River, orthodox projects served by a channel system are being developed at Clare, Millaroo and Dalbeg all on the Burdekin River, Gibber Gunyah on the Dawson River and St. George on the Balonne River. Construction of the Clare Irrigation Area is nearing completion whilst at Millaroo, Gibber Gunyah and St. George construction is well advanced. A start has been made in construction of part of the main channel system within the Mareeba-Dimbulah Irrigation Area. Because of the large variations in both monthly and annual river

flows, major developments cannot be undertaken until large storage works are provided. Most irrigation in Queensland is performed by private farmers operating under licence, and obtaining water by pumping from streams or from natural underground storages. Where available, electricity is the most popular source of power for pumping; the principal areas supplied with electricity comprise the Burdekin Delta and the Lockyer Valley.

Furrow irrigation is used for cotton, sugar-cane, most tobacco and some other crops. Spray irrigation is adopted to a considerable extent for fruit, vegetables, fodder crops and a small part of the tobacco. Spraying is well suited to the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Experimental use of the border check method in the irrigation of pasture and fodder crops has proved successful and may supersede other methods.

The following table shows for each division of the State the number of irrigators and the areas under irrigated culture for the year ended 31st March, 1954.

AREA OF LAND UNDER IRRIGATED CULTURE : QUEENSLAND. 1953-54.(a)

Division.	No. of Irrigators.	Area under Irrigated Culture (Acres).							Total
		Vegetables.	Fruit.	Sugar-cane.	Tobacco.	Cotton.	Other Crops.	Pastures.	
Southern Queensland ..	4,024	15,500	3,095	11,269	1,331	107	28,168	20,567	80,931
Central Queensland ..	334	592	146	20	..	487	2,833	540	4,612
Northern Queensland ..	1,425	3,692	770	52,820	2,295	164	1,066	832	61,639
Total	5,773	19,784	4,011	64,109	3,626	746	32,067	21,939	146,282

(a) Year ended 31st March, 1954.

The growth of irrigation is illustrated by the following figures for the total area of irrigated land :—1906, 9,922 acres ; 1916, 10,886 acres ; 1926, 24,250 acres ; 1936-37 44,509 acres ; 1946-47, 79,930 acres ; 1953-54, 146,282 acres.

The pattern of irrigation in Queensland is unlike that in southern States ; the more important developments in tropical and sub-tropical areas are therefore discussed briefly in the sub-sections following. It should be noted that the spring to autumn " irrigation season " of the temperate southern irrigated lands is not applicable, and that round-the-year irrigation is required throughout most of the State, the timing and duration of the summer " wet " season being too variable to enable a definite non-irrigation season to be fixed.

(ii) *Lockyer Valley.* West of Brisbane and within 50 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. The Valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation. Despite a mean rainfall of 30 inches the variation is great, and irrigation is necessary for continuous agricultural production. Surveys suggest that some 60,000 acres of land highly suitable for irrigation are available. Of this area only about 30 per cent. is under irrigation, the number of pumps operating from wells and open water exceeding 550 and 500 respectively. Over 60 per cent. of the farmers operate electric pumps for irrigation purposes and a special policy designed to encourage such development is fostered by the Southern Electric Authority of Queensland which serves the Valley. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,370 acre feet. These also tend to augment and conserve underground supplies. To study local problems, an Irrigation Research Station was established at Gatton in 1946 by the Bureau of Investigation.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(iii) *Burdekin River.* The Burdekin River, which joins the sea between Townsville and Bowen, is a major factor in the life of North Queensland. In most years heavy floods from a catchment twice the size of Tasmania cause extensive damage and traffic disabilities. On the other hand, the fertile Delta Area with its underground water supplies

at shallow depth has contributed greatly to the agricultural prosperity of North Queensland. The projected irrigation, hydro-electric and flood mitigation scheme, together with the high-level railway bridge at present under construction, will change the Burdekin from a mixed blessing to one of the Commonwealth's greatest resources for agricultural and industrial production. Present development is confined to the Delta Area. The average annual rainfall of this area is some 41 inches, but the major part falls in the months December to March. Consequently sugar growers and other farmers have tapped the underground water resources of the Delta to obtain supplies in the dry periods. Sugar is the main irrigated crop, though citrus, pineapples, vegetables and tobacco are also irrigated. The irrigated area is in excess of 30,000 acres, up to 1,000 acre feet of water being drawn daily from underground sources.

In the Home Hill-Inkerman areas on the south side of the Burdekin, water is obtained from shallow wells by electric pumps supplied from a local power station now controlled by the Townsville Regional Electricity Board. Around Ayr, on the north side of the river, electric power from the mains of the Townsville Regional Electricity Board is now being adopted in place of the individual internal combustion engines previously used. At both Home Hill and Ayr water for domestic supply is raised by a windmill on each property.

In 1940 the Burdekin River Trust was formed to safeguard the sugar areas of the Delta from erosion and floods. An Irrigation Research Station has recently been established to study the development of pastures and irrigated crops under local conditions.

A major multi-purpose scheme, involving irrigation, flood control and hydro-electric power generation, is being investigated by the various interested Government Departments under the general supervision of the Burdekin River Authority. The development envisaged would include a dam storing 6,584,000 acre feet, which would make water available for the irrigation of at least 250,000 acres. The principal industries anticipated are tobacco-growing, dairying and cattle fattening, with sorghum, sunflowers, peanuts, cotton and sugar-cane as other possible forms of production.

The Clare Irrigation Area, constituted in 1949, and the Millaroo Irrigation Area, constituted in 1952, are at present being developed for tobacco production. Located from 25 to 65 miles upstream from the mouth of the Burdekin, these areas comprise 12,000 acres and will obtain irrigation waters from central pumping stations drawing initially on the unregulated flow of the Burdekin. A temporary storage of 6,700 acre feet capacity has been constructed about 79 miles upstream from the mouth of the Burdekin. To 30th June, 1954, 70 farms had been opened for selection in the Clare Area and 21 farms in the Millaroo Area.

(iv) *Dawson Valley.* The Dawson River, a 392-mile long tributary of the Fitzroy River, rises in the Carnarvon Range and joins the Mackenzie River to form the Fitzroy 50 miles west of Rockhampton. Lands bordering the river in its northerly course of about 170 miles before its confluence with the Mackenzie River are commonly termed the Dawson Valley. A scheme for the development of the Dawson Valley under irrigation was inaugurated in 1923, providing for the irrigation of 70,000 acres. Storage for the scheme was to be provided by a dam at Nathan Gorge of 2,000,000 acre feet capacity. Much investigational and survey work on the scheme was carried out, but the general financial depression and limited loan funds brought about the cessation of this work. However, the initial step in construction had been completed, comprising a weir on the river at Theodore and irrigation works to serve an area of 3,500 acres supplied from a central pumping station. Two additional weirs have since been built, giving a total storage of 9,000 acre feet. Pasture, vegetables, cotton, fruit and dairying products are the principal produce. Attention has recently been given to the former plans for the Valley and earlier work is now under close scrutiny as a prelude to future development. Construction of works to serve some 2,400 acres at Gibber Gonyah, adjacent to the existing Theodore Area, is in progress.

(v) *Mareeba-Dimbulah Area.* The existence of large areas of sandy soils suitable for tobacco production in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah has led to large-scale investigations into possible irrigation development in the area. Surveys indicate that 40,000 acres of land suitable for irrigated culture, including 32,000 acres suitable for tobacco, are available. In 1953-54 some 2,250 acres of high-grade tobacco were grown. Six weirs of combined capacity of 1,800 acre feet have been completed on a number of streams to store water for

irrigation and a seventh, to store an additional 800 acre feet, is now under construction. During 1952 a report on the utilization of waters of the Barron and Walsh Rivers was prepared and establishment of an irrigation undertaking approved by the Queensland Government. The projected undertaking provides for construction of a major storage at Tinaroo Falls on the Barron River to store 320,000 acre feet, and construction of irrigation works to serve 78,000 acres commanded by this storage. Further development by construction of a second storage at Nullinga on the Walsh River has been deferred for the present. Tobacco will be the basic crop while peanuts, vegetables, maize, cotton and stock fattening also appear suitable.

(vi) *Border Rivers Project.* The development of the rivers constituting portion of the border between Queensland and New South Wales is under the authority of the Dumaresq-Barwon Border Rivers Commission on which each State is represented. For information on the project see page 950.

(vii) *Balonne River.* The St. George Irrigation Area has been constituted and construction of works to serve some 11,000 acres is in progress. Water supply for the area will be obtained by pumping from the combined weir and road bridge on the Balonne River at St. George.

5. *Bureau of Investigation.*—Under the Land and Water Resources Development Act of 1943 a Bureau of Investigation has been set up for the co-ordinated investigation of land and water resources development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture, under the chairmanship of the Co-ordinator-General of Public Works. Among notable work carried out by the Bureau of Investigation since its inception has been the trial planting of irrigated pastures with a view to developing mixtures suited to the special conditions of each part of the State. Other valuable work has included the mapping of the ultimate land uses of the State and the detailed investigation of the agricultural and pastoral potentialities of many regions.

6. *Channel Country.*—Extensive investigations of the Channel Country fed by inland rivers in the south-western corner of the State have been made by the Bureau of Investigation. This country is intersected by shallow and irregular flood channels through which huge volumes of flood waters pass in favourable seasons; consequent on the flooding, a heavy growth of natural pastures is produced on the flooded lands, providing feed in quantities far in excess of that required for the normal stock population of the area. If the occurrence of flooding could be made more reliable by means of storages to create artificial floods, the pastoral resources of the area would be enormous. However, inquiries directed on these lines have revealed that little can be done to increase or stabilize the turn-off of fat cattle by artificial storage, but that improved transport facilities are essential.

At 30th June, 1952, 41 watering facilities, at an estimated cost of approximately £277,000, had been proposed under a Federal-State agreement for stock routes through, and in the approaches to, the Channel Country. By 30th June, 1954, six had been completed. In addition, eight large excavated tanks and three bores were finished, but still required equipping with windmills, tanks and troughs.

7. *Hydro-electricity.**—Behind the coastal plain of the Cairns-Ingham area is an extensive plateau, the elevation ranging from 2,000 to 3,000 feet, although isolated peaks exceed 4,000 feet. The short coastal streams which rise on the plateau descend rapidly into deep gorges, which they have cut through the old divide. With heavy monsoonal rainfall on their catchments and concentrated fall, these streams represent a considerable potential source of power, but storage, which can in most cases be provided, is essential to control the very variable flow.

The Barron Falls Scheme, 14 miles north-west of Cairns, came into operation in 1935. The installed plant operates under a head of 410 feet and comprises three 2,000 h.p. turbines each connected to a 1,320 kW generator. Average rainfall varies from 80–150 inches along the ranges to less than 35 inches in the western portion of the catchment. There is extreme variation from year to year, resulting in great fluctuation of stream flow which, at Kuranda, has varied from a maximum of 117,000 cusecs in 1911 to a minimum of 30 in 1915. Storage to regulate the flow is possible but has not yet been

provided. During periods of low flow the supply of electricity is supplemented by fuel plants at Cairns, Atherton and Innisfail. Power is distributed over 22,000 volt transmission lines serving the tableland and extending southward along the coast to Tully.

A small hydro-electric scheme on the Mossman River, 5 miles from Mossman, North Queensland, comprises two 120 h.p. turbines operating under a head of 200 feet.

A hydro-electric power scheme at Tully Falls is being constructed. Water controlled by Koombuloomba Dam to be built on the upper Tully River will be diverted, a short distance above Tully Falls, through a tunnel and steel penstocks to Pelton-driven generators under a head of 1,485 feet. Ultimate installation will be four 18,000 kW sets, two of which will be installed initially. Future automatic power plants upstream and downstream from Tully Falls will consist of two 7,500 kW sets under 405 feet head and one 5,400 kW set under 230 feet head. The combined peak load for the three plants will be 69,000 kW.

Other northern schemes which have been investigated include Freshwater Creek (3,900 kW); North Johnstone-Russell Rivers (32,000 kW); Beatrice-North Johnstone Rivers (9,000 kW); South Johnstone River (25,000 kW); extension of Barron Falls scheme (22,000 kW); Herbert River (90,000 kW). The total potential of the plateau region is therefore about 250,000 kW at 50 per cent. load factor.

A power plant immediately below the Burdekin Falls Dam of the proposed Burdekin River Irrigation Scheme will operate under an average head of 225 feet. The output of firm power will depend upon the varying demand for water for irrigation, but it is expected to average about 50,000 kW.

South of the Burdekin River no appreciable hydro-electric development is practicable. A plant of 3,200 kW capacity has been installed to utilize the outflow from Somerset Dam on the Stanley River a few miles above its confluence with the Brisbane River.

§ 5. South Australia.

1. *General.*—(i) *Rainfall.* Brief particulars of the climatic conditions in South Australia were given on page 1129 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 18 of this issue.)

(ii) *Administration.* Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister to “divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under, or on, any land entered upon for the purpose of supplying water to the inhabitants of any water district”.

(iii) *Methods of Catchment and Conservation.* Early steps were taken to vest all running streams, springs and “soaks” in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and “rainsheds” have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,319,937. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counteract evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.

2. *Irrigation.*—In South Australia irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby 250,000 acres at Renmark were made available for irrigation settlement. Including land allotted for War Service Land Settlement purposes, the Department of Lands administers in the Murray Valley an area of 32,503 acres of irrigable high land, together with 9,427 acres of reclaimed swamp and 164,885 acres of non-irrigable land in the irrigation areas and

32,264 acres of land temporarily leased and reserved for commonage or other purposes, amounting in all to 239,179 acres. In addition, the Renmark Irrigation Trust controls 20,557 acres, of which more than 8,800 are irrigated. Water used for irrigation purposes in 1953-54 in the high land irrigation areas controlled by the Department of Lands was approximately 100,000 acre feet, in addition to which approximately 60,000 acre feet were used on reclaimed areas by gravitational watering. In the Renmark area water used for irrigation in 1953-54 was 26,670 acre feet. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lemons, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes and citrus fruits. Before irrigation, these semi-arid lands were of little productive value. The following tables show the acreage devoted to various crops in the government-controlled and Renmark Irrigation Trust areas on the upper Murray, and in the government-controlled reclaimed swamp districts near the mouth of the Murray, which are devoted to dairying.

**IRRIGATION AREAS ADMINISTERED BY DEPARTMENT OF LANDS AND
RENMARK IRRIGATION TRUST, SOUTH AUSTRALIA : AREA OF LAND UNDER
IRRIGATED CULTURE, 1953-54.**

(Acres.)

Area.	Vine Fruits.	Tree Fruits.	Citrus Fruits.	Lucerne.	Other Fodders.	Total
Orchard Land—						
Berri	5,513	781	1,155	53	..	7,502
Cadell	622	120	90	20	..	852
Waikerie	2,095	458	1,090	20	..	3,663
Cobdogla	4,058	393	167	62	..	4,680
Moorook	384	117	203	26	..	730
Kingston	268	83	219	2	..	572
Mypolonga .. ..	..	414	432	..	..	846
Chaffey	815	73	9	69	..	966
Total	13,755	2,439	3,365	252	..	19,811
War Service Land Settlement—						
Cooltong	364	235	481	4	..	1,084
Loxton	2,577	655	1,556	34	..	4,822
Loveday	235	47	22	..	..	304
Grand Total	16,931	3,376	5,424	290	..	26,021
Renmark Irrigation Trust	7,310	650	930	..	..	8,890
Reclaimed Swamp Land—						
Monteith .. ..	..	..	..	..	979	979
Mypolonga .. ..	..	..	..	40	1,162	1,202
Wall .. ..	..	..	..	38	472	510
Burdett .. ..	..	..	..	..	97	97
Mobilong .. ..	..	..	..	..	448	448
Long Flat .. ..	..	..	..	..	358	358
Neeta .. ..	..	..	..	..	549	549
Pompoota .. ..	..	..	..	..	421	421
Cowirra .. ..	..	..	..	19	543	562
Jervois .. ..	..	..	..	227	3,519	3,746
Total .. ..	..	..	..	324	8,548	8,872

The expenditure incurred by the State Government to 30th June, 1954, in purchase of land, reclamation of swamps, preparation of irrigable lands for fruit growing, and purchase of pumping plants for drainage and water supply was approximately £5,347,000. Further irrigation development is being undertaken as a part of the Commonwealth-wide War Service Land Settlement Scheme. South Australia's share of horticultural plantings under the scheme is 13,000 acres, comprising citrus 3,500 acres, vines 8,300

acres, and deciduous tree fruits 1,200 acres. Schemes already approved and under construction will absorb between 7,500 and 8,000 acres, and further areas are being selected to take up the balance. The area of 13,000 acres would provide holdings for about 500 settlers, from which, if developed, the estimated production would be:—Citrus, 750,000 bushels; deciduous tree fruits—fresh, 6,000 tons; dried vine fruits, 2,500 tons; wine grapes, 11,000 tons. On present-day prices, the value of this production would approximate £1,500,000.

Renmark Irrigation Trust is administered by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 100 miles of channel for reticulation to 8,890 acres.

3. Water Supply Schemes.—(i) *Summary.* Water conservation and distribution works in South Australia have cost £35,444,000 (exclusive of river control and irrigation works on the River Murray which are dealt with above). A summary of statistical information concerning country supplies in 1953–54 is as follows:—Length of water mains, 5,717 miles; capacity of storages, 35,086 acre feet; approximate population served, 264,000; area served, approximately 4,500,000 acres; and total capital cost, £20,370,000.

Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges. Further developments currently being undertaken include the construction of a main pipeline and pumping stations for pumping water from the River Murray to Adelaide and, by means of a branch pipeline, to Warren Reservoir. Another reservoir (South Para Reservoir) to supplement the Warren and Barossa Reservoirs is also being constructed on the South Para River. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system. Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District, but demands have increased to such an extent in recent years that further sources of supply are necessary, and with this end in view a water-bearing area known as the Uley-Wanilla Basin has been developed, and water from it is now being used in the Tod River system.

(i) *Morgan-Whyalla Water Supply Scheme.* For particulars of the construction and works of the main 223-mile pipe line bringing water from the Murray at Morgan to Whyalla on Spencer Gulf see Official Year Book No. 37, page 1132. A 19-mile branch-line has also been constructed to Jamestown. The Morgan-Whyalla Water Supply Scheme forms part of the South Australian Country Water Supply system referred to above.

4. *Underground Water.*—The occupied portion of South Australia is, on the whole, well endowed with underground water. The extent of the several artesian basins is tolerably well known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put. Apart from numerous boreholes and wells tapping underground water for farms, stations and towns, two notable basins are being developed on Eyre Peninsula—one at Flinders (Streaky Bay) and the other at Uley-Wanilla, near Port Lincoln. Leigh Creek coalfield, some 360 miles north of Adelaide, derives its supply from a borehole at Sliding Rock mine, the water being pumped through a pipeline 25 miles long.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government, however, to provide watering places along stock routes, and pastoralists rely largely on supplies in suspended basins at shallower depths.

The use of the waters of the Murray Basin is essential to settlement in the Murray Mallee country and in the south-east of the State, especially for farms, but also for township supplies to Mount Gambier, Naracoorte, Bordertown and Pinnaroo. The maximum depth of township boreholes is 235 feet and the minimum 71 feet. Average tested yield is 14,808 gallons per day.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 40 drills. The whole

of the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne, and an examination of a large part of Kangaroo Island and Southern Eyre Peninsula has been completed in connexion with Soldier Settlement schemes. Examination of large areas in the Upper South-East has been undertaken in connexion with land development schemes.

The results of comprehensive surveys of underground supplies undertaken by geologists of the South Australian Government have been published in the State's geological survey bulletins in recent years.

5. *Farm Water Schemes.*—While the Department of Mines and the Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs on the Murray River.

6. *South-Eastern Drainage.*—For some information on the drainage schemes necessary for the disposal of surplus water in areas in the south-east of South Australia see Official Year Book No. 37, page 1133.

§ 6. Western Australia.

1. *General.*—(i) *Rainfall.* Brief particulars of the climatic conditions in Western Australia were given on page 1133 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 18 of this issue.)

(ii) *Administration.* Irrigation districts are administered under the Rights in Water and Irrigation Act 1914-1949 and the Government is advised by an Irrigation Commission representing the local irrigationists and government technical and financial branches. The Goldfields Water Supply is administered by a branch of the Public Works Water Supply Department and its responsibilities include control of water from this scheme for agricultural purposes. The metropolitan water supply is controlled by a separate department under the control of the Minister for Water Supply, Sewerage and Drainage. Under the Water Boards Act 1904-1953 eight towns are administered by local water boards and 39 are under direct Ministerial control. The Minister also controls three District Farming Schemes. Water rights over water flowing in streams and water courses are vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

2. *Irrigation.*—The main irrigation districts—Harvey, Waroona and Collie—are along the south-west railway line between Waroona (70 miles from Perth) and Dardanup (116 miles from Perth). The total area irrigated in these districts during 1953-54 was 22,552 acres and the total water used was 75,162 acre feet. The total acre waterings (i.e., the number of acres watered multiplied by the average number of waterings) was 110,675. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the existing Collie Irrigation District.

Harvey Districts (Nos. 1 and 2—32,663 acres) are supplied from the Harvey Weir (8,300 acre feet) and Stirling Dam (44,344 acre feet), Waroona District (10,325 acres) from Drakesbrook Dam (1,855 acre feet), and Samson Brook Dam (6,540 acre feet), and Collie District (28,762 acres) from Wellington Dam (27,800 acre feet).

The following table, which shows acre waterings supplied to crops in the irrigation districts of Harvey, Waroona and Collie during the seasons 1938-39 and 1949-50 to 1953-54 illustrates the growth of these irrigation schemes.

IRRIGATION, WESTERN AUSTRALIA : ACRE WATERINGS.

Year.	Pasture.	Fodder.	Potatoes.	Vegetables.	Orchard.	Flax, Broom, Millet, and Preparation of Ground.	All Crops.
1938-39	31,949	934	3,142	692	922	..	36,739
1949-50	79,373	685	4,591	4,297	1,369	4	90,319
1950-51	76,431	793	2,946	4,090	1,180	..	85,440
1951-52	88,091	1,417	2,793	2,442	1,088	..	95,831
1952-53	95,491	2,235	4,185	2,588	1,070	536	106,105
1953-54	98,645	3,435	4,405	3,003	1,072	115	110,675

3. **Water Supply Schemes.**—(i) *Goldfields Scheme.* Western Australia has one of Australia's most spectacular water supply schemes, and a brief account of its development will be found on page 1134 of Official Year Book No. 37, and an account in greater detail on page 576 of Official Year Book No. 6. Mundaring reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the goldfields, and has a capacity of 15,100 million gallons and a catchment of 569 square miles. The water now passes through 350 miles of steel main, mostly of 30-inch diameter, aided by seven pumping stations and one booster station, involving a total net lift of 1,280 feet.

Maximum pumping capacity from No. 1 Pumping Station at Mundaring is now 16 million gallons per day. The total capacity of all receiving and regulating tanks, etc., along the pipe line is 129 million gallons, which includes two standby reservoirs at Kalgoorlie having a combined capacity of 36 million gallons.

Hundreds of miles of branch mains and pipes have been laid to mining districts, towns and farming districts, the most important being the Norseman extension of 101 miles. The system serves 54 towns and water is reticulated to 1,804,600 acres of farming lands. Total length of mains is 1,812 miles and the population served is 68,000. Total quantity of water pumped from Mundaring in 1953-54 was 2,918 million gallons. Total cost of the system to the end of 1953-54 was £8,770,000.

(ii) *South-West Scheme (Comprehensive).* The Commonwealth Government has agreed to assist a scheme to extend water for agricultural areas and towns in the south-west of Western Australia, which will be administered by the State Government. Twenty-three towns and over 4,000,000 acres of agricultural country will benefit. The original estimated cost of this scheme was £4,300,000 of which the Commonwealth Government agreed to contribute 50 per cent., £2,150,000. The revised estimate at 1953 is £9,000,000. These estimates exclude the cost of the raising of Mundaring and Wellington Dams, the works of which form the headworks of the scheme and are financed solely by the State Government.

The work of raising Mundaring Weir 32 feet in height giving a total capacity of 15,100 million gallons was completed in 1951 and preparations are well in hand for commencing work in the raising of Wellington Dam 50 feet in height, increasing storage to 40,800 million gallons capacity. Forty-six miles of 30-inch pipe line from Wellington Dam to Narrogin have been laid, i.e., just over half the total distance. The new electric pumping station at Mundaring, having a maximum capacity of 16 million gallons per day, was opened in December, 1953 and construction of two electric stations on the Wellington Dam-Narrogin pipe line with a maximum capacity of nearly 7 million gallons per day is nearing completion.

(iii) *Rock Catchments.* An interesting feature of the State's conservation system is found in the Barbalin, Narembcen and Kondinin District Farming Land Schemes in the wheat belt, where extensive granite outcrops have been used as catchments. The rain is caught at the foot of the rocks, and pumped to tanks from which the water is reticulated to farms and to a number of small towns. For further particulars see Official Year Book No. 37, page 1135.

4. **Underground Water.**—Individual farmers, orchardists, market gardeners and others derive water from wells using windmills or, where power is available, pumps and motors are used to tap such supplies. The Department of Public Works has twelve hand-boring plants which are lent out to farmers to facilitate boring operations to an average depth of 150 feet, also eight power-boring plants which are hired to local authorities. The Department also contracts with private firms to bore for communal farm supplies. During the past 61 years 322 artesian and sub-artesian bores have been sunk, mostly for private purposes. The total daily flow of all recorded bores in Western Australia is 90,872,000 gallons, and the average depth at which water is struck is 791 feet. Maximum depth of any bore is 4,006 feet and minimum 21 feet.

5. **Ord River Scheme.**—The Ord River in the north-west of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 in the north. The hottest months (December to March) are also the months of highest rainfall. Communications and population are sparse. The Western Australian Government is considering a proposal to build a dam to conserve 2,000,000 acre feet of water, equipped with hydro-electric plant, which might

supply irrigation water for an area of 100,000 acres, if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. The economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

§ 7. Tasmania.

1. *General.*—(i) *Rainfall.* Brief particulars of the rainfall pattern in Tasmania were given on page 1136 of Official Year Book No. 37. (*See also* Chapter II.—Physiography, p. 18 of this issue.)

(ii) *Main Purposes of Conservation and Utilization.* Owing to Tasmania's fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for domestic and industrial purposes is more important than irrigation. Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare, but progressive landowners are beginning to take advantage of modern plant, such as bulldozers, to provide small excavated storages on their properties. Underground water is of poor quality and a small quantity exists over an area in the Midlands which has been exploited to a limited extent only by bores and windmills. Geological conditions do not appear to favour the utilization of ground water except on a minor scale. There is only one known flowing bore—at Spreyton—which yields 1,690 gallons per hour.

(iii) *Administration.* The State does not own all natural waters as in Victoria, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. Under the provisions of an Act passed in 1944, the Water, Sewerage and Drainage Board was constituted to consider the financial and technical practicability of all water supply schemes constructed by local authorities, other than the cities of Hobart and Launceston. Legislation was also enacted during 1952, empowering Local Authorities to take water from specific sources of supply and to construct waterworks. The Act does not cover irrigation, which is practised to a limited extent only by private interests. Provision has been made in the Act for the protection of riparian rights, but there is no general legislation for the control of water courses.

2. *Hydro-electricity.**—Tasmania depends entirely on water for power development. The Hydro-Electric Commission, the authority controlling the generation of electricity in Tasmania, conducts a continuous survey of the water power resources of the State assisted by modern methods such as aerial photography and geophysical exploration. Although the survey is not yet conclusive it is considered that at least 1,865,000 kW of continuous power can be economically developed. At present only 311,700 kW of generating plant is in commission, but plant under construction will raise this total to 447,100 kW by 1956. Further construction, approved by Parliament, is about to be commenced and will increase the total to 569,000 kW.

Most of the water potential is located on the Central Plateau with an area of about 1,500 square miles at an altitude of from 2,000 to 4,000 feet and subject to rainfall of from 30 inches a year in the east to 80 inches on the western perimeter. On the plateau are a large number of lakes which provide the means for storage at low cost. These include Great Lake with an area of 58 square miles, Lake St. Clair and Lake Echo, each more than 12 square miles, and others of smaller area.

The Derwent River and its tributaries which flow south-easterly carry off by far the greater part of the water which falls on the plateau and these rivers are therefore the most abundant source of power. They have been the cheapest to develop to date and most of the existing generating stations are located on them.

The three main rivers running westerly from the plateau—the Arthur, Pieman and Gordon—have only a small portion of their catchment areas at high level, but they run

* *See also* Chapter XXV.—Electric Power Generation and Distribution, pp. 939–40.

through regions of high rainfall and their power potentials are considerable. However, because of inaccessibility and climate, development of these rivers may be rather expensive and has been deferred in favor of more convenient schemes.

Rivers draining from the plateau towards the north and north-west coast, including the Emu, Forth and Mersey, have small catchments at high levels and no natural storages.

Two other important water power sources, independent of the Central Plateau, are the Esk River in the north and the Huon River in the south. A power station now under construction at Trevallyn, near Launceston, will utilize water from the Esk. The Huon has a large low-level catchment in the high-rainfall area near the west coast. Storage could be provided on it at a reasonable cost and because of the proximity to Hobart of a future power station, it has considerable value for peak load development.

3. **Industrial.**—Three principal industrial schemes have been installed privately. Australian Newsprint Mills Ltd. pump approximately 6,000,000 gallons a day from the Derwent River at Lawitta for the Boyer Mills. Associated Pulp and Paper Mills Ltd. pump several million gallons a day from Emu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Weybridge. In addition the State is actively engaged in the construction of a regional water scheme which will serve the Australian Aluminium Production Commission's plant at Bell Bay on the River Tamar. Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State, at present largely unsettled. Diversion to the eastern side of the watersheds is not regarded as practicable.

4. **Irrigation.**—There are no State irrigation projects, but preliminary inquiries as to the possibility of establishing one in the Coal River Valley have been made and legislation is under consideration. All systems operating are privately owned, and with one exception (at Bushy Park), are single-farm units. At Bushy Park a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder comprises areas devoted to vegetables and served by municipal water supplies. Irrigation, as practised in Tasmania, was applied in 1953-54 to 9,412 acres devoted to: hops (1,193 acres); fruit (802 acres); pastures (5,311 acres); green fodder, etc. (1,016 acres) and other crops (1,090 acres).

§ 8. Northern Territory.

1. **Climate and Topography.**—Some particulars of the climate and main topographical features of the Northern Territory were given on page 1138 of Official Year Book No. 37, and in this issue information on climatic conditions will be found in Chapter II.—Physiography, and a brief outline of contour and physical characteristics in Chapter V.—The Territories of Australia.

2. **Administration.**—Under the Control of Waters Ordinance (1938) of the Northern Territory natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under conditions prescribed.

3. **Underground Water.**—Artesian water is found mainly in the south-east where the Great Artesian Basin enters the Territory. Pastoral (beef) production accounts for the bulk of the Territory's income, and the marked seasonal conditions affect the industry's economy. During the wet summer season there is adequate water, but during the winter most natural watering points disappear, and pastures dry. Bores supplement the permanent watering points, which are mainly along river frontages. The cattle industry is concentrated in the area in which the feed retains an appreciable nutritive value during the winter despite the dry conditions. This area is not in the wetter coastal regions, but in the inland belt of 15 to 25 inch rainfall and to the north of Alice Springs. Lack of bores is a limiting factor in the industry's economy, as cattle are able to thrive only within certain distances of reliable water.

In 1954 some 980 equipped bores were recorded, comprising 786 on pastoral properties (54 provided by the Government by way of assistance to pastoralists), 158 established by the Government on stock routes, 18 on Native Affairs Settlements, 11 on mining fields, 6 for Town Water Supplies and one maintained by the Postmaster-General's Department.

Latest details of bores on pastoral properties relate to 1952 and probably understate the present position. Compared with 1951 the figures for the various districts are:—

District.						1951.	1952.
Alice Springs	..	..	..	..	..	287	357
Barkly Tablelands	..	..	..	..	..	232	288
Victoria River Downs	..	..	..	..	..	80	87
Total	..	..	..	..	..	599	732

The number of stock route bores, watering some 2,500 miles of stock routes, has increased by approximately 50 per cent. in the seven years 1947-1954, and the present figure of 158 bores represents on the average approximately one per 16 miles.

4. **Irrigation.**—There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (80,350 acre feet) which serves Darwin with a reticulated supply. Irrigation has therefore assumed no current importance. For particulars of potentialities *see* p. 1138 of Official Year Book No. 37.

§ 9. Papua and New Guinea.

1. **Rainfall.**—Rainfall in Papua and New Guinea varies considerably from approximately 250 inches near Lindenhafen (New Britain) and 231 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua).

2. **General.**—For a general description of these territories *see* Chapter V.—The Territories of Australia, page 114 of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development. The main water conservation interest in New Guinea at present is the hydro-electric potential.

The Territory of Papua and New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet. However, complete data regarding water resources are not available.

The largest rivers in the Territory include the Fly (a description of which is given in Chapter XXVI. of Year Book No. 40), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles) and the Markham (110 miles).

It is known that the opportunities for production of hydro-electric power are extensive. However, present investigations have been limited to those areas where an early demand for power is likely to arise.

There are possibilities for major hydro-electric development in the following localities: Rouna Falls (near Port Moresby), Upper Snake and Busu-Erap-Leron (near Lae), Upper Ramu (near Markham-Ramu Divide—80 miles from Lae) and Hathor Gorge (on Purari River) with an estimated average power (kW) of 100,000; 150,000; 2,000,000; 250,000; and 3,000,000 respectively. These have estimated run-offs of 1,400; 600; 12,000; 1,000 and 75,000 cusecs respectively.

In an area of 150,000 sq. miles of the Eastern New Guinea Mainland the power potential has been estimated at 150 kW per square mile which compares favourably with potentials of 170 kW per square mile for Switzerland and 95 kW per square mile for Norway.

CHAPTER XXVII.

DEFENCE.

§ 1. Department of Defence.

1. **Introduction.**—At the outbreak of the 1939–45 War, the Department of Defence comprised the three Fighting Services and a Central Secretariat. In November, 1939 separate Departments, each with its own Minister, were created for the control and administration of the Navy, Army and Air Force. The Defence Department as then reconstituted retained responsibility for over-all defence policy and for the conduct during the war of the business of the War Cabinet, set up in September, 1939, and the Advisory War Council, set up in October, 1940. These bodies ceased to function after the war.

2. **Functions and Organization.**—(i) *Functions.* Subject to the authority of Cabinet, the Minister and Department of Defence are responsible for :—

- (1) The formulation and general application of a unified defence policy relating to the Defence Forces and their requirements, including :—(a) co-operation in British Commonwealth and regional defence and the defence aspect of the Charter of the United Nations ; (b) the supply aspect of defence policy, including the review of production programmes and capacity ; (c) the scientific aspect of defence policy ; and (d) the financial requirements of defence policy, and the allocation of funds made available.
- (2) The defence aspect of Armistice and Peace Terms, Control Commissions, and Forces of Occupation.
- (3) Matters of policy or principle and important questions having a joint Service or inter-Departmental defence aspect.
- (4) The defence aspect of questions relating to the organization and machinery for :—(a) co-operation in British Commonwealth defence ; (b) co-operation in regional security, including obligations under the United Nations Charter ; (c) higher direction in war ; and (d) higher direction of the Services.
- (5) The Commonwealth War Book, which is a summary of national plans for an emergency as developed in Departmental War Books.
- (6) The administration of inter-Service organizations, such as the joint intelligence machinery.
- (7) The defence aspect of :—the strength and organization of the Forces. higher appointments in the Services, Honours and Awards.
- (8) Advice on the military aspect of civil defence.

(ii) *Organization, higher defence machinery, the control of the joint Service machinery and the Secretariat of the Council of Defence.* The joint Service and inter-Departmental advisory machinery of the Department consists of various committees headed by the Defence Committee, the Chiefs of Staff Committee and the Joint War Production Committee. The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman, and the Chiefs of Staff of the three Services. In general, its function is to advise on defence policy as a whole, and on matters of policy or principle and important questions having a joint Service or inter-Departmental defence aspect. The main responsibility of the Chiefs of Staff Committee in peace is the preparation of strategic appreciations and military plans. The function of the Joint War Production Committee is, briefly, to examine the relation between strategical plans and their requirements to ensure that the war potential for them exists. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the Principal Administrative Officers Committee (Maintenance and

Matériel), the Principal Administrative Officers Committee (Personnel), the Defence Research and Development Policy Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

(iii) *Board of Business Administration.* In view of the heavy defence expenditure, the Government, in July, 1953, established the Board of Business Administration in the Department of Defence. The Board deals with joint Service matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired. The Board comprises businessmen who serve in a part-time honorary capacity and consists of an independent chairman and the business advisers of the three Service Departments.

3. *Basis of Current Defence Policy.*—The aim of Australian Defence Policy is to co-operate in repelling aggression.

The basis of Defence Policy has been transformed from preparedness by a critical date, to the capacity to maintain it at a level that can reasonably be sustained for a long haul having regard to the essential demands of other sectors of the national economy, including national development.

The size of the Defence effort having been determined by the amount of the Defence Vote, the relative strengths of the Navy, Army and Air Force are governed by the probable form and scale of attack. Strategically, this falls into two divisions :—

(i) Local defence of Australian territories and waters, which is the absolute responsibility of the Australian Government. This is the first priority for the Services.

(ii) Oversea defence based on global strategy to defend vital interests and to bring about the defeat of the enemy. Australia is committed as a member of the British Commonwealth, and in accordance with the provisions of the Anzus Treaty, the South-east Asia Collective Defence Treaty, and the Charter of the United Nations, to co-operate in collective security.

4. *The Defence Programme.*—(i) *Programme.* The Government's current Defence Programme has been directed to a re-balancing and stabilization of the defence effort at a peak figure of about £200 million having in view the strategic basis of policy and the related priorities. This has involved some adjustments both between and within the Armed Services to achieve the maximum security from the Vote, including adjustments to improve the balance between equipment and man-power to enable increased provision to be made for modern equipment.

In view of the probable nature and scale of attack, priority is being given by the Navy to surface anti-submarine vessels, and the responsibility for air protection at sea within the range of land-based aircraft has been assigned to the Air Force. Close operational co-operation will be maintained between the Navy and Air Force. The Fleet Air Arm is being retained at a reduced but nevertheless substantial strength in balanced relation to the other Services. There will be a weighting of the defence effort in favour of the Air Force.

Until the release of the Forces in Korea, and the Government is aware of what will be necessary in the light of developments in South-East Asia, no change is being made in the present organization and strength of the Permanent Army. Substantial provision has been made for the acquisition of modern equipment for the Army.

In the field of research and development, Australia is making its principal contribution through the Long Range Weapons Establishment which is a joint United Kingdom—Australian effort, for the testing of guided weapons. The executive authority for this project is the Department of Supply which is also responsible for design and inspection services and for the provision of the material requirements of the forces other than munitions.

The Department of Defence Production is responsible for manufacture and supply of munitions and aircraft. Provision is being made for further progress with the Defence Production Capital Programme for the expansion of production capacity and the replacement and modernization of existing facilities to meet the material requirements of the Services.

(ii) *Financial.* Details of Defence Expenditure for 1953-54 and the allocation of the Defence Vote for 1954-55 are set out in the two tables which follow:—

ALLOCATION OF DEFENCE VOTE OF £200,000,000 FOR 1954-55.
(£'000.)

Service or Department.	Mainten- ance.	Capital Material Requirements, Machinery, Plant and Equipment.	Capital Buildings, Works and Acquisi- tions.	Miscel- laneous.	Total Expenditure.
Defence	670	15	30	..	715
Navy	31,987	14,528	1,650	..	48,165
Army	49,210	18,402	4,573	..	72,185
Air	36,197	17,529	3,680	..	57,406
Defence Production	2,744	2,271	1,464	..	6,479
Supply	10,778	1,507	2,662	13	14,960
Civil Defence .. .. .	..	..	..	90	90
Total	131,586	54,252	14,059	103	200,000

DEFENCE EXPENDITURE, 1953-54.
(£'000.)

Service or Department.	Mainten- ance.	Material Requirements, Machinery, Plant and Equipment.	Buildings, Works and Acquisi- tions.	Miscel- laneous.	Total Expenditure.
Defence	568	25	41	..	634
Navy	31,811	12,085	1,065	..	44,961
Army	53,169	7,860	3,312	..	64,341
Air	32,106	13,322	3,311	..	48,739
Defence Production	4,525	1,625	1,084	31	7,265
Supply	9,042	977	1,740	26	11,785
Defence Equipment and Supplies .. .. .	..	..	..	(a) 12,000	(a) 12,000
Total	131,221	35,894	10,553	12,057	189,725

(a) Paid to the Defence Equipment and Supplies Trust Account.

(iii) *Personnel Strengths.* The personnel strengths of the Services at 31st December, 1954 were:—

Category.	Navy.	Army.	Air Force.	Total.
Permanent Forces	(a) 13,396	23,389	14,838	51,623
Citizen Forces—				
Volunteers	5,044	15,296	2,334	22,674
National Service Personnel	3,368	66,765	587	70,720
Total Citizen Forces	8,412	82,061	2,921	93,394
Total Permanent and Citizen Forces	21,808	105,450	17,759	145,017

(a) Excludes midshipmen not on pay—157.

In addition to the above personnel, 21,409 Army and 12,555 Air Force National Service Personnel had completed their training at 31st December, 1954 and were on the General Reserve.

5. Australian Participation in Korea, Malaya and the Middle East.—(i) *Korea.*

(a) *Australian Contribution in Korea.*

Navy—A Royal Australian Naval Force of two ships since June, 1950, which has consisted from time to time of either two destroyers or a frigate and a destroyer. In addition, the Aircraft Carrier H.M.A.S. *Sydney* relieved H.M.S. *Glory* in October, 1951 for a period of three months, and for a further period of six months from November, 1953.

Army—At 30th September, 1954 the forces in Korea consisted of—

(i) 1st and 3rd Infantry Battalions, Royal Australian Regiment.

(ii) A proportion of a Brigade Headquarters and of the Headquarters of 1st Commonwealth Division.

(iii) An element of the British Commonwealth Communications Zone.

The periods of service in Korea of the respective Battalions have been as follows :—

3rd Battalion—September, 1950 to November, 1954.

1st Battalion—March, 1952 to March, 1953.

2nd Battalion—March, 1953 to March, 1954.

1st Battalion—relieved 2nd Battalion, March, 1954.

Air Force—No. 91 (Composite) Wing, formed of No. 77 (Fighter) Squadron (which has been in Korea since June, 1950), and No. 36 (Transport) Squadron, together with the necessary administrative and maintenance units for their support.

The total number of Australian personnel with service in the Japan-Korea area to 31st December, 1954 was 4,187.

(b) *Reduction of Commonwealth Forces in Korea.*

Reductions of the British Commonwealth Forces in Korea were decided in September, 1954 as part of a general plan for reduction of United Nations Forces serving in the theatre. The following Australian forces were withdrawn by the end of 1954—

Navy—one destroyer.

Army—3rd Battalion, and other elements;

Air Force—No. 77 (Fighter) Squadron.

The number of Australian personnel serving in the Japan-Korea area at 31st December, 1954 was 2,740.

(NOTE.—Early in 1955 No. 91 (Composite) Wing was disbanded and the majority of its administrative and maintenance units were withdrawn from the theatre together with No. 36 Transport Squadron. R.A.A.F. Transport Flight, Japan, was then formed comprising three transport aircraft and small administrative and maintenance elements.)

(c) *Command Arrangements.*

Overall operational control of the United Nations Forces in Korea is the responsibility of the United States Unified Command, which was established by the Security Council. The Commander-in-Chief, British Commonwealth Forces, Korea (an Australian Lieutenant-General), is responsible for the non-operational control and administration of the British Commonwealth Forces in Korea, the land forces of which comprise 1st Commonwealth Division, United Nations Forces.

(ii) *Malaya.* No. 1 (Bomber) Squadron and No. 38 (Transport) Squadron of the R.A.A.F. were engaged in anti-bandit operations in Malaya from June, 1950. The Transport Squadron was withdrawn at the end of 1952 but No. 1 (Bomber) Squadron is continuing operations in Malaya.

(iii) *Middle East.* No. 78 (Fighter) Wing which left Australia in June, 1952 for service as part of the peace-time Air Force garrison in the Middle East returned to Australia in January, 1955.

For further details see sections relating to the respective Services.

6. *National Service Training.*—(i) *Liability.* The National Service Act 1951-1953 requires every male ordinarily resident in Australia, other than certain officials in the service of international bodies, diplomatic personnel, men already serving in the Permanent Forces and aboriginal natives of Australia, who attains the age of 18 years or who has attained the age of 18 years since 1st November, 1950, to register when called upon to do so by notice published in the *Gazette*.

Every registrant is liable to be called up for service unless he is exempt on the grounds of being subject to prescribed physical or mental disabilities, a theological student, a minister of religion, a member of a religious order, or a person who has established a conscientious objection to all forms of military service. Persons who establish a conscientious objection to combatant service only are called up for non-combatant duties.

Provision is made for deferment of call-up for limited periods of students and apprentices and of individuals who can establish before a court that their call-up would result in exceptional hardship to themselves, their parents or dependants. In September, 1954 the Government announced that, for the time being, the training of those who do not live within reasonable distances of C.M.F. training centres and those engaged full-time as rural workers in the production of foods and raw materials would be deferred. The total number of National Servicemen to be trained will continue at the present figure of 33,750 annually.

(ii) *Conditions of Service.* Service under the National Service Scheme is with the Citizen Naval Forces, the Citizen Military Forces or the Citizen Air Force but no person is called up for service with the Citizen Naval Forces or the Citizen Air Force unless he has volunteered for service beyond the limits of Australia.

In the Navy and Air Force, National Servicemen are required to serve a total period of 154 days training which is performed in one continuous period except in the case of students who may complete their service in two periods of 77 days in successive years. In the case of the Army, the total period of training is 140 days, consisting of 98 days continuous training and 21 days training in camps or week-end bivouacs in each of the following two years. In all cases the Act requires a further term of service as reservists until five years from the date of call up. (*See also* sections dealing with the respective Services.)

(iii) *Strength.* To 31st December, 1954, 113,172 persons had been called up for training.

§ 2. Naval Defence.

1. *State Systems.*—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 2, p. 1084.

2. *The Present System.*—(i) *General.* (a) *Royal Australian Navy up to end of 1939-45 War:* An outline of the development of Australian Naval policy was given in Official Year Book No. 3, p. 1060 and No. 12, p. 1012. Some account of the building of the Australian Navy, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921-23. An account of the growth and activities of the Royal Australian Navy during the 1939-45 War is given in Official Year Book No. 36, pp. 1023-27.

(b) *Post-war Programme.* The following is a summary of the Naval Programme:—

(1) *Ships in Commission*—The Fleet consists of:—

Carrier Force : 2 Light Fleet Carriers, 4 Destroyers.

Escort Forces : 4 Frigates.

Surveying Duties : 2 Survey Ships and their tenders.

Training Ships : 1 Frigate, 5 Ocean Minesweepers.

Auxiliary Vessels : 3 Boom Defence Vessels, 1 Ocean-going Tug, 1 Armament Store Carrier, 3 Patrol Vessels, 2 General Purpose Vessels, 3 Search and Rescue Vessels.

- (2) In addition to the ships in Commission, a substantial reserve fleet will be maintained in good condition against any future emergency.
- (3) Personnel—The strength of the Royal Australian Navy has been pegged at 14,400, comprising 1,578 Officers and 12,822 ratings.
- (4) Reserve and National Service Training—Reserve training was resumed as from 1st January, 1950 for members of the Royal Australian Naval Reserve. Training consists of 45 two-hour drill attendances at night or on Saturdays in naval training establishments in each of the capital cities, plus 13 days continuous training each year in H.M.A. ships or training establishments, including special schools. In addition, payment is made for further voluntary home training up to a maximum of 12 days. Selected members may undergo special courses up to a limit of six months during the whole of their service in the Reserve, whilst up to 12 months training or service may be performed in H.M.A. ships or establishments with similar qualifications. Engagements are for three years. Rates of pay have been aligned (with minor modifications) with those applicable to the Permanent Naval Forces. The training for members of the Royal Australian Naval Reserve (Sea-going) is normally 28 days every two years whilst members of the Royal Australian Naval Volunteer Reserve are under no training obligations.

Naval National Service personnel commenced training on 30th July, 1951. On completion of their 154 days initial training in naval establishments and H.M.A. ships, personnel will be attached to the Naval Reserve Training Establishment in their State until completion of their five-year liability for mobilization in war or emergency. The present annual intake of National Servicemen is 1,200.

Revised post-war conditions of service in the Royal Australian Fleet Reserve were introduced as from 13th December, 1950. This Reserve is comprised of two classes, viz.:—(a) former ratings who receive full benefits under the Defence Forces Benefits Act and are required to serve five years in the Royal Australian Fleet Reserve as a consideration for receipt of these benefits, and (b) former ratings who have previously served in the Permanent Naval Forces of the Royal Australian Navy, Royal Navy, or a Dominion Navy subject to a minimum period of three years' service and an absence of not more than five years. No retainer is payable to members under (a) and no obligatory training is carried out but 14 days paid voluntary training can be undertaken. Members under (b) receive an annual retainer of £24 subject to completing annual training; if enrolled within 12 months of discharge from Permanent Naval Forces—7 days; if enrolled after a lapse of 12 months since discharge from Permanent Naval Forces—14 days; additional paid voluntary training up to 14 days may be carried out. Ratings receive pay applicable to Royal Australian Navy personnel whilst under training.

- (5) Fleet Air Arm—The Fleet Air Arm of the Royal Australian Navy consists of five front line squadrons, one operational carrier, H.M.A.S. *Sydney*, one training carrier, H.M.A.S. *Vengeance*, and one Naval Air Station, H.M.A.S. *Albatross* at Nowra, New South Wales. A new aircraft carrier H.M.A.S. *Melbourne*, which is fitted with the angled deck and the steam catapult will be commissioned in the United Kingdom in 1955. Also in 1955, some front line squadrons will re-equip with turbo-jet and turbo-prop aircraft.

- (6) *Ship Construction and Repair*—Provision is made for the maintenance in Australia of a nucleus ship construction and repair industry capable of rapid expansion in war. The present approved programme provides for the construction of three destroyers, four anti-submarine frigates, one boom-working vessel and two inshore minesweepers (work not yet commenced); the conversion of four "Q" class destroyers to fast anti-submarine frigates (one has been completed and work on three is in progress) and twelve minesweepers into comprehensive ocean minesweepers (ten have been completed); the modernization of two "Tribal" class destroyers (which have been completed); and the large refit of H.M.A.S. *Hobart*. In addition an aircraft carrier and a fleet tanker are being built in the United Kingdom for the Royal Australian Navy.

(c) *The Relation of New Weapons*. Careful consideration has been given to the implications of new weapons, and the decisions in regard to the Navy are based on the broad conclusions of great naval powers that these weapons should be introduced by the normal process of evolution, first into existing ships, and later perhaps into an entirely new form of fighting ship. The same authority supports the view that there will be no rapid development which will render vessels such as carriers, cruisers and destroyers obsolete in the near future.

(ii) *Naval Board*. The Australian Navy is administered by a Board consisting of the Minister for the Navy with four Naval Members, and the Secretary, Department of the Navy; the seat of administration is at Melbourne.

(iii) *Naval College*. Seventy-one cadet midshipmen (including four from the Royal New Zealand Navy) entered the Naval College for training in the year commenced January, 1954. At 30th June, 1954 there were 182 cadet midshipmen undergoing training at the College.

(iv) *Training Establishments*. Flinders Naval Depot, Victoria, remains the principal training establishment for ratings in the permanent forces, while several advanced training schools are established in Port Jackson, New South Wales. Air training is carried out at Nowra, New South Wales.

(v) *The Australia Naval Station*. Defined limits of the Australia Station are as follows:—

Eastern—

From 3° 30' North, 169° East, south to 1° South, thence east to 170° East, thence south along this meridian to 30° South, thence to 45° South, 160° East, thence south, along this meridian.

Northern—

From 3° 30' North, 169° East, west to 125° East, thence south to the Coast of Celebes, thence west along the Coast of Celebes to 120° East, thence south to 11° 30' South, thence west to 11° 30' South, 95° 15' East.

Western—

From 11° 30' South, 95° 15' East, south along this meridian to 30° South, thence west along this parallel to 80° East, thence south along this meridian.

(vi) *Foreign Service*. The R.A.N. is represented in Japan by H.M.A.S. *Commonwealth* base establishment in Kure. During the year ended June, 1954 the following ships of the Royal Australian Navy served in Korean waters:—H.M.A. Ships, *Sydney*, *Murchison*, *Arunta*, *Tobruk* and *Culgoa*.

(vii) *Papua and New Guinea Division of the Royal Australian Navy*. A Papua and New Guinea Division of the Royal Australian Navy, consisting of native ratings, was inaugurated in July, 1951 as a separate part of the Permanent Naval Forces, for employment in Papua and New Guinea and waters adjacent thereto.

3. Ships of the Royal Australian Navy.—The following ships were in commission or in reserve in June, 1954 :—

SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1954.

Vessel.	Description.	Displacement.
		Tons.
In Commission—		
<i>Sydney</i>	Aircraft Carrier	14,000
<i>Vengeance</i>	"	14,000
<i>Anzac</i>	Destroyer	2,325
<i>Tobruk</i>	"	2,436
<i>Arunta</i>	"	1,870
<i>Warramunga</i>	"	1,870
<i>Quadrant</i>	Frigate	1,760
<i>Shoalhaven</i>	"	1,544
<i>Murchison</i>	"	1,544
<i>Condamine</i>	"	1,420
<i>Hawkesbury</i>	"	1,420
<i>Barcoo</i> (Surveying Ship)	"	1,544
<i>Warrego</i> (Surveying Ship)	"	1,060
<i>Wagga</i>	Ocean Minesweeper	650
<i>Cootamundra</i>	"	650
<i>Junee</i>	"	650
<i>Fremantle</i>	"	650
<i>Gladstone</i>	"	650
<i>Lachlan</i> (Surveying Ship), on loan to the Royal New Zealand Navy	Frigate	1,420
In Reserve—		
<i>Bataan</i>	Destroyer	1,870
<i>Quailty</i>	"	1,760
<i>Barwon</i>	Frigate	1,420
<i>Burdekin</i>	"	1,420
<i>Culgoa</i>	"	1,420
<i>Diamantina</i>	"	1,420
<i>Gascoyne</i>	"	1,420
<i>Macquarie</i>	"	1,420
<i>Swan</i>	"	1,060
<i>Ararat</i>	Ocean Minesweeper	650
<i>Bunbury</i>	"	650
<i>Bowen</i>	"	650
<i>Bundaberg</i>	"	650
<i>Benalla</i>	"	650
<i>Castlemaine</i>	"	650
<i>Deloraine</i>	"	650
<i>Dubbo</i>	"	650
<i>Glennelg</i>	"	650
<i>Gympie</i>	"	650
<i>Horsham</i>	"	650
<i>Katoomba</i>	"	650
<i>Kapunda</i>	"	650
<i>Latrobe</i>	"	650
<i>Lithgow</i>	"	650
<i>Mildura</i>	"	650

SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1954—*continued*.

Vessel.	Description.	Displacement.
In Reserve—<i>continued</i>.		Tons.
<i>Parkes</i>	Ocean Minesweeper	650
<i>Rockhampton</i>	"	650
<i>Strahan</i>	"	650
<i>Shepparton</i>	"	650
<i>Townsville</i>	"	650
<i>Platypus</i>	Depot Ship	3,455
Under Dockyard Control—		
<i>Hobart</i>	Cruiser	7,100
<i>Queenborough</i>	Destroyer	1,760
<i>Quiberon</i>	"	1,760
<i>Quickmatch</i>	"	1,760
<i>Colac</i>	Ocean Minesweeper	650
<i>Cowra</i>	"	650
Miscellaneous vessels in commission and reserve—sixty-one		

4. **Strength of Royal Australian Navy.**—The serving strength of the Royal Australian Naval Forces, both permanent and reserves, at 30th June, 1954 was 1,200 officers and 12,657 ratings including 60 native ratings of the Papua and New Guinea Division of the Royal Australian Navy. In addition, 12 officers and 244 ratings of the Women's Royal Australian Naval Service were serving and 194 cadet midshipmen were undergoing training, including 182 at the Naval College. Reserve strength comprised 1,240 officers and 5,474 ratings.

§ 3. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. *See also* Official Year Book No. 12, p. 999.

The strength of the military forces of the States on 31st December, 1900 (the eve of Federation) was:—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353. This total is exclusive of cadets, reservists and rifle club members.

2. **Commonwealth Systems.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in sixteen phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous army in 1902 up to the decision to increase the training strength of the militia to 70,000 in the year before the 1939–45 War (phases 1–7), *see* Official Year Book No. 36 and earlier issues.

Phases 8–10, covering the period immediately prior to, and just following, the outbreak of the 1939–45 War, relate to the initial steps necessary to put the Australian Military Forces on a war-time basis, and to its organization into commands.

The eleventh phase, in January, 1942, was the division of Northern, Eastern and Southern Commands into separate commands and base headquarters to handle operational and administrative matters respectively, and the twelfth phase was the revision of the

machinery for command administration of lines of communication areas. The thirteenth phase was the appointment of Lieutenant-General Sir Iven Mackay as G.O.C.-in-C. Home Forces commanding the forces in Northern, Eastern and Southern Commands. The fourteenth phase covered the period following the outbreak of war with Japan and the entry of United States of America Forces into the South-West Pacific Area, and related to the appointment of General Sir Thomas Blamey as Commander-in-Chief, Australian Military Forces, the cessation of the Military Board, and the replacement of the system of commands and bases by the field army and lines of communication areas. In March, 1943, First and Second Armies took over from Queensland, New South Wales and Victoria Lines of Communication Areas the command of all coast and static anti-aircraft artillery defences and training establishments. On 16th June, 1944 Western Command was re-established and took over the combined responsibilities of Third Australian Corps and Western Australia Line of Communication Area.

The fifteenth phase was the re-introduction in March, 1946, of the Military Board and the organization of commands and military districts, and the sixteenth phase was the commencement of the National Service Training Scheme in August, 1951 (*see* § 1, para. 6 above and sub-para. (iv) (c) following).

For greater detail on phases 8–14 *see* Official Year Book No. 38 and earlier issues.

(ii) *Population of Military Age, 30th June, 1953.* The following particulars show the numbers of males of military age in the population of Australia as at 30th June, 1953. The total number of cadet age, 14 and under 18, was 478,316; of citizen soldier age, 18 and under 26, 979,183; and 26 and under 35, 1,258,834; making a total of 2,716,333. 18 and under 35, which is considered the best period for military service. In addition to the above-mentioned there were 2,261,702 males 35 and under 60, in Australia at 30th June, 1954.

(iii) *Allotment of Units.* Under the Command Organization (*see* above) units are raised on a territorial basis, each State supplying its proportion of the personnel required for the fighting services, the organization at 30th June, 1954 being as follows:—

COMMAND ORGANIZATION.

Army Headquarters.						
Northern Command	Eastern Command	Southern Command	Central Command	Western Command	Tasmania Command	Northern Territory Command
All formations and units in 1st Military District and New Guinea.	All formations and units in 2nd Military District.	All formations and units in 3rd Military District.	All formations and units in 4th Military District.	All formations and units in 5th Military District.	All formations and units in 6th Military District.	All formations and units in 7th Military District.

Commands conform generally to State boundaries as follows:—Northern Command, Queensland; Eastern Command, New South Wales; Southern Command, Victoria; Central Command, South Australia; Western Command, Western Australia; Tasmania Command and Northern Territory Command. New Guinea is the responsibility of Northern Command.

(iv) *Military Training Systems.* (a) *General.* Particulars of the military training systems in operation prior to the 1939–45 War, first on a compulsory basis and later voluntary, will be found in Official Year Book No. 38 and earlier issues.

The present plan for the raising of the Australian Regular Army envisages a total of 26,000 soldiers and 5,000 civilians. The plan for the Citizen Military Force contemplates a strength of 72,000, including National Servicemen, by December, 1954.

(b) *The Australian Cadet Corps.* The Australian Cadet Corps is a voluntary organization comprised of School Cadet units and Regimental Cadet units. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies an important position in the scheme of national defence. School Cadet units are raised at educational establishments in all States of the Commonwealth. The minimum age for enrolment is the year in which the applicant reaches the age of 14 years, and cadets, who in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers, warrant and non-commissioned officers on an authorized establishment scale from within school units. School cadet units are not affiliated with Citizen Military Force Units.

Regimental Cadet units have been raised in close affiliation with Citizen Military Force units, whose uniform they wear with the addition of the word "Cadets" directly under the title of the parent unit. These units are manned by boys who either have left school or are students at schools where no School Cadet unit has been raised. Regimental Cadet units are now being disbanded.

The establishment of the whole Corps is 35,000 all ranks, and by April, 1954, comprised 265 School Cadet units with a posted strength of 29,875 all ranks and 1,236 Regimental Cadets posted to Citizen Military Force units.

(c) *National Service Training Scheme.* Under the National Service Scheme (see § 1, para. 6 above) the Army is required to train 29,250 trainees per year, effected by three intakes each of 9,750 trainees in January, April and August each year. The first intake commenced training in August, 1951.

(v) *Women's Services.* In November, 1950, approval was given for the enlistment of women into the Australian Regular Army, on a limited scale. Enlistment commenced immediately into the Australian Women's Army Corps. During June, 1951, the Australian Women's Army Corps was re-designated the Women's Royal Australian Army Corps (W.R.A.A.C.). Members are employed in establishments in direct substitution for male soldiers. The Women's Services in the Australian Regular Army now comprise two Corps only:—(a) Royal Australian Army Nursing Corps; (b) Women's Royal Australian Army Corps.

Women's Services have been incorporated in the Citizen Military Forces; it is proposed to raise sixteen companies of the Women's Royal Australian Army Corps and twelve companies of the Royal Australian Army Nursing Corps, a total of 3,900 all ranks, within the C.M.F.

(vi) *Korea.* On 2nd August, 1950, the Commonwealth Government announced its decision to raise and despatch to Korea one infantry battalion as part of Australia's contribution of military assistance to the United Nations. 3rd Battalion, The Royal Australian Regiment, stationed in Japan, brought up to strength by special enlistments flown to Japan from Australia, became the Special Korean Force, and on 27th September, 1950 sailed from Japan for Korea where it joined 27 British Brigade. For its gallantry on 24th and 25th April, 1951, 3rd Battalion was awarded the United States Presidential Citation by the United States of America. On 4th October, 1951, the Commonwealth Government announced that a second infantry battalion would be sent to Korea to join 3rd Battalion. On 3rd March, 1952, 1st Battalion, The Royal Australian Regiment, which had been brought up to strength at Ingleburn, New South Wales, embarked for Japan where it was equipped before moving to Korea. 1st Battalion joined 3rd Battalion, under operational control of 28 British Brigade, 1st Commonwealth Division, on 1st June, 1952. 2nd Battalion, The Royal Australian Regiment, after training at Puckapunyal, Victoria, relieved 1st Battalion in Korea on 21st March, 1953, the latter battalion returning to Australia. 2nd Battalion was relieved by 1st Battalion and returned to Australia in April, 1954, while 3rd Battalion returned to Australia in November, 1954.

(vii) *The Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945 the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946 the Staff School (Australia) was established at Seymour in Victoria and re-designated the Staff College in conformity with other Empire training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. The courses are of ten months' duration and are held from January to November each year. The normal intake is 30 students and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train selected officers for war, and in so doing to fit them for Command or Grade II. staff appointments. Each course includes, among the students, Army representatives of the United Kingdom and other Dominions and countries. Included in the 1953 course were students from the United Kingdom, Canada, New Zealand, India, Pakistan, the United States of America and Burma. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Empire, liaison is maintained with other Staff Colleges; and to this end there is also a reciprocal exchange of instructors. To this extent it may be said that the Staff College is imperial in character.

(viii) *Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations and provide for admission by "normal", "service" and "special" entries. The length of the normal course is four years; "service" entry cadets attend for three years; and "special" entries for one year.

While at the College, cadets receive pay and allowance of 14s. 1d. per day in their first year, rising to 22s. 9d. per day in their fourth. Uniform maintenance allowance of 1s. 9d. per day is additional, and a further 6d. per day is paid to cadets on attaining the age of 18 years. The course of instruction is organized into military and civil departments and the instructional staff comprises officers of the Army and civilian professors. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces under an agreement made with the Government of that Dominion.

(ix) *The Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the supply of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, National Servicemen, and civilians between the ages of 18 and 23 years, are eligible to apply for entrance. The course is of six months' duration, and on graduation, cadets are appointed second-lieutenants in the Australian Regular Army. They then normally proceed to further training at the Army School of the Arm or Service to which they have been allotted before being posted to regimental duties.

(x) *The Women's Royal Australian Army Corps School.* The W.R.A.A.C. School was established in 1952 at Mildura, Victoria. It has two wings, one whose primary task is the training of Officer Cadets for the W.R.A.A.C., the other being for the training of non-commissioned officers at all levels and for other special courses. The Officer Cadets are selected from eligible applicants, who may be serving members between 21 and 32 years of age, or civilians between 21 and 30 years of age. The course is of six months' duration, and on graduation, cadets are appointed lieutenants in the Women's Royal Australian Army Corps.

(xi) *The Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army, and to form a background for an Army career with prospects of promotion. The course is open to boys between the ages of 15 and 17 years and provides training in a number of highly skilled trades. A three-year course of intensive theoretical and practical work at the Apprentices' School is followed by one year in an appropriate Army workshop or technical unit. At the end of their third year, boys are given their Army trade test and also take the Victorian Apprenticeship Commission final grade public examinations, which ensures that they will be accepted as qualified tradesmen in civil life when they eventually leave the Army. In addition to trade training, the Apprentices' School provides general educational facilities up to the School Leaving Standard.

(xii) *Army Schools.* Army Schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements, and to produce trained instructors. In addition, a School of Tactics and Administration which has been established at Seymour, Victoria, provides qualifying and instructional courses in current tactical and administrative doctrine for members of all Arms and Services. Courses at Army Schools are conducted for members of both the Australian Regular Army and the Citizen Military Forces.

The following Army Schools have been established:—School of Tactics and Administration; Jungle Training Centre; Armoured School; School of Artillery; School of Military Engineering; School of Survey; School of Signals; School of Military Intelligence; School of Infantry; Royal Australian Army Medical Corps School of Army Health; Royal Australian Army Service Corps School; Royal Australian Army Ordnance Corps School; Royal Australian Electrical and Mechanical Engineers Training Centre; Transportation Training Centre.

(xiii) *Rifle Clubs.* The Australian Rifle Club movement, which had its origin in 1888, is provided for in the Defence Act and comprises an Australian Council of State Rifle Associations (which functions in an advisory capacity to the Minister and in the promotion of intra-empire and interstate rifle competitions), State Rifle Associations, District Rifle Club Unions and Rifle Clubs. When placed in recess, the efficient strength of the rifle club movement was 1,018 clubs and 36,478 members. Approximately 20 per cent. of this number served overseas and a further 60 per cent. performed home service duties during the 1939–45 War. Rifle shooting activities were resumed in 1946 and the strength of the movement as at 31st December, 1954 was 1,060 clubs and 43,035 members.

(xiv) *The Australian Battles Nomenclature Committee.* The Minister for the Army gave approval on 25th July, 1947 for the formation of the Australian Battles Nomenclature Committee to tabulate and classify the operations fought in the Pacific Zones in the 1939–45 War which involved the Australian Military Forces, to define their geographical and chronological limits and to advise the United Kingdom Battles Nomenclature Committee regarding operations in zones other than the Pacific Zone in which the Australian Military Forces participated. Sub-committees were later appointed to study the various campaigns in order to classify the operations into battles, actions and engagements.

3. **Strength of Australian Military Forces.**—The effective strength of the Australian Military Forces at 31st December, 1954 was as follows:—Australian Regular Army, 21,393; Regular Army Special Reserve, 3,021; Citizen Military Force (including National Service Trainees), 96,070; Australian Cadet Corps, 31,111.

§ 4. Air Defence.

1. **General.**—A statement respecting the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939–45 War appears in Official Year Book No. 36, p. 1027.

2. **Operations in Korea and Malaya.**—Reference to R.A.A.F. participation in operations in Korea is contained in Official Year Book No. 40, pp. 1112-13.

Australian assistance in the form of one transport squadron provided to the Malayan authorities is detailed in Official Year Book No. 40, page 1113.

One bomber squadron was also provided for operations in Malaya. The Lincolns of No. 1 Squadron arrived in July, 1950 and were soon in action. Up till 31st August, 1954 No. 1 Squadron had dropped about 20,000,000 lb. of bombs during operations against communist bandits. This bombing, which calls for extreme accuracy, was mainly on jungle hideouts frequented by the insurgents and was carried out in close co-operation with the ground forces.

3. **Administration and Organization.**—The Department of Air is responsible for policy for organization and control of the Royal Australian Air Force. The Air Board is responsible, subject to approved policy, for the control and administration of the Royal Australian Air Force, and is constituted as follows :—Chief of the Air Staff, Air Member for Personnel, Air Member for Technical Services, Air Member for Supply and Equipment, Citizen Air Force Member and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is located at Melbourne. An Overseas Headquarters is located at London and an Air Attaché at Washington, United States of America.

The units of the Royal Australian Air Force are organized in three functional Commands throughout Australia and its territories.

The Commands are :—

Home Command.—Home Command is responsible for the command of operational units and the conduct of their operations within Australia and its territories.

Training Command.—Training Command is responsible for the command of training units, recruitment and individual training in the R.A.A.F.

Maintenance Command.—Maintenance Command is responsible for the command of supply and servicing units, and supply and servicing, including technical services, of the R.A.A.F. in Australia.

The organization of the Royal Australian Air Force includes the following types of formations and units :—

- (a) **Area Headquarters.** There are three Area Headquarters (North Eastern, North Western and Western) responsible to Home Command for the command of units within their geographical areas.
- (b) **Sub-formations,** comprising a headquarters unit to control the activities of a number of units at one location. Each formation has a base squadron which provides common services to all units at the location.
- (c) **Flying Squadrons.** These bomber, fighter, transport, target-towing and maritime reconnaissance squadrons undertake the operational and operational training flying commitments of the R.A.A.F.
- (d) **Aircraft Depots.** These units specialize in major overhauls, etc., of aircraft and equipment and relieve flying unit ground staff of these commitments.
- (e) **Stores Depots.** Stores and equipment ordered by the R.A.A.F. are delivered to these centrally located depots for distribution to units.
- (f) **Flying Training, Ground Training, Navigation, Radio and Air Armament Training Units,** which specialize in the aircrew and ground training required by the R.A.A.F.
- (g) **Airfield Construction Squadrons.** These units specialize in the construction of R.A.A.F. aerodromes and associated buildings and works services.
- (h) **Royal Australian Air Force College.** This unit is the training college for officer cadet entrants to the R.A.A.F.
- (i) **Telecommunications Units.** These units are responsible for the communications services of the R.A.A.F.
- (j) **R.A.A.F. Staff College.** This college trains specially selected R.A.A.F. officers for higher staff and command posts.

4. **National Service Training Scheme.**—Under the National Service Training Scheme, 3,330 personnel undergo training each year (*see also* § 1, para. 6 above).

5. **Aircraft.**—Some of the aircraft which are at present being used in the Royal Australian Air Force are : bomber squadrons—Lincoln and Canberra ; fighter squadrons—Mustang, Vampire and Meteor ; transport squadrons—Dakota ; maritime reconnaissance squadrons—Lincoln and Neptune ; tactical reconnaissance—Mustang and Auster ; training—Tiger Moth, Wirraway, Mustang, Dakota, Lincoln, Beaufighter and Winjeel. Delivery to the R.A.A.F. of Avon Sabre aircraft commenced in September, 1954.

6. **Establishment.**—The Royal Australian Air Force establishment, as proposed, comprises—(a) a Home Defence Organization, (b) Task Force elements and (c) a Training Organization, consisting in all of approximately 16,450 personnel.

7. **Strength of Royal Australian Air Force.**—At 1st October, 1954 the strength of the Royal Australian Air Force was as follows :—Permanent Air Force, 14,882 ; Active Citizen Air Force, 745 ; Active Reserve, 1,569 and General Reserve, 19,724. In addition, 3,330 National Service Trainees undergo 154 days' training each year and are then transferred to the Reserve.

8. **Women's Royal Australian Air Force.**—At 1st October, 1954 the Women's Royal Australian Air Force had an establishment of 832, with an enlisted strength of 682. There are 27 musterings, excluding W.R.A.A.F.'s. in training. The entry age is 18 to 34 years inclusive. Parental consent must also accompany applications for those between the ages of 18 and 21 years. A good education is necessary. Applicants must be of British nationality, single, or a widow without dependants, and must be physically fit. Engagement period is four years with the option of re-enlistment for further periods of four years.

All trainee W.R.A.A.F.'s. undergo a month's initial training course at Point Cook, Victoria. On graduating they are posted for duty to R.A.A.F. units anywhere in Australia. Wherever possible, the Air Force endeavours to post W.R.A.A.F.'s. to R.A.A.F. units within their home State. This rule applies for those who wish to serve in their home State, but for W.R.A.A.F.'s. desirous of travel, they may indicate their preference and be posted to whichever State they desire.

§ 5. War Gratuities.

1. **1914–18 War.**—Reference is made in earlier issues of the Official Year Book (*see* No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the 1914–18 War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury Bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The total amount paid to 30th June, 1953 was £27,515,036 and bonds amounting to £11,780 had not been redeemed at that date.

2. **1939–45 War.**—Briefly the War Gratuity Act 1945–1947 provided for payment to members of the Forces of war gratuity (a) at the rate of £3 15s. per month of overseas service, subject to a qualifying period of 90 days continuous or 180 days in the aggregate in twelve months, and of certain subsequent periods in Australia, and (b) at the rate of 15s. per month of Australian service after 6th December, 1941, subject to a qualifying period of six months' service, other than that for which payment at the overseas rate was made. Except for those coming within certain specified categories, members who performed overseas qualifying service were paid a minimum of twelve months' gratuity at the overseas rate, irrespective of whether the full period of twelve months had been completed or not.

In cases of death due to war service either overseas or in Australia, where members of the family were totally dependent on the deceased member, a minimum payment equivalent to three years' gratuity calculated at the oversea gratuity rate could be made. In respect of all other cases of death, overseas and in Australia, due to war service, gratuity at the rate accruing to the member at the date of notification of his death was continued for a further seven months.

The period of entitlement to gratuity terminated at the date of discharge or on 30th June, 1947, whichever was the earlier. The bulk of the payments were made on 3rd March, 1951, but in certain circumstances payments were made at earlier dates. Compound interest was allowed at the rate of 3.25 per cent. per annum on the yearly credit balances. For greater detail of the provisions of the Act *see* Official Year Book No. 36, pp. 1073-4 or the Official Report prepared by the Central War Gratuity Board. This report, entitled "Report on the Administration of the War Gratuity Act 1945-47", was tabled in Parliament in December, 1953.

A Registrar of War Gratunities controls the register in which are kept the accounts of all persons entitled to war gratuity. Provision was made for financing the Act by appropriation from Consolidated Revenue Fund and by borrowing. The War Gratuity Appropriation Act 1948 created a trust account for the payment of gratuities. Particulars of the operations of this fund during the years 1949-50 to 1953-54 were as follows :—

WAR (1939-45) GRATUITY TRUST FUND.
(£'000.)

Particulars.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
Balance brought forward ..	30,051	36,751	5,934	4,545	4,351
Receipts	9,943	30,630	..	..	Dr. 4,000
Expenditure	3,243	61,447	1,389	194	87
Balance carried forward ..	36,751	5,934	4,545	4,351	264

§ 6. Department of Defence Production.

1. **General.**—On 11th May, 1951 a Department of Defence Production and a Department of Supply were established by a decision of the Government. These Departments took over the functions previously undertaken by a joint Supply Department. The Department of Defence Production is responsible broadly for the production of munitions (including aircraft) required by the Services in government-operated factories and in industry under contract to the Government. It is also responsible for all those matters incidental to production, including the planning of production capacity to meet expected future Service requirements. References to previous operations of the various sections and establishments of the Department are given in Official Year Book No. 38, pp. 1200-9.

2. **Functions of the Department and Acts Administered.**—The functions of the Department of Defence Production, as defined in the Administrative Arrangements approved by the Governor-General, are :—

- (i) Manufacture, acquisition, provision and supply of munitions for the defence forces, that is to say, armaments, aircraft, arms, ammunition, weapons, machine tools, war chemicals, radar (and such other items as may be mutually agreed with the Department of Supply as falling within the definition of munitions), including the materials and plant necessary for the production of those things and all matters incidental thereto, including :—

The receipt from the Service Departments and other authorities or Departments, of orders and forecasts of requirements of munitions ; appropriate liaison with the Higher Defence Machinery Service Departments and the Department of Supply to deal with Service

munitions programmes ; operation and management of factories, workshops and undertakings concerned in the production of munitions ; arrangements and all action necessary to secure the manufacture, processing and delivery of munitions ; investigations and development of Australian sources of munitions production, including the establishment of annexes or special capacity in industry for that purpose ; acquisition by the Commonwealth and the establishment of factories and workshops for the purpose of producing munitions ; provision and maintenance of stocks of materials and goods for the purpose of producing munitions.

- (ii) Employment and training of technicians, workmen and others for the purpose of producing munitions.
- (iii) Formation of Industry Advisory Committees to advise the Minister for Defence Production regarding :—

The allocation to industry of production programmes of munitions ; the establishing of additional munitions production facilities, including annexes and undertakings ; the obtaining of appropriate details of Australian industrial capacity required by the Department of Defence Production in allocating munitions production to industry ; any other matters associated with munitions production as specified by the Minister.

- (iv) Provision and control of stores, magazines and similar undertakings required in connexion with production of munitions and for other purposes as required.
- (v) Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions.
- (vi) Development of inventions originating in Government factories in the interests of defence production.

The Act administered by the Department is the Supply and Development Act 1939-1948.

3. Production.—(i) *Munitions.* The Department is responsible for the production in Australia of the munitions (other than specialized Navy requirements) for the Armed Services. The production is undertaken in Government-operated factories and industry. Broadly their roles are :—

- (a) Some processes are entirely undertaken by the Government factories in peace and war because of special requirements.
- (b) Some classes of equipment and components are produced entirely by industry in peace and war.
- (c) Production techniques of advanced equipment and components are developed in the Government factories in peace of which industry may undertake mass production in war.
- (d) limited requirements of standard equipment and components produced in peace by the Government factories are in war produced on a mass production basis in industry.

The following factories are currently in operation :—Ammunition—Footscray, Victoria ; Explosives—Albion, Maribyrnong, Victoria ; Mulwala and St. Mary's (part), New South Wales ; Ordnance—Maribyrnong, Bendigo, Echuca, Port Melbourne Marine Engine Works, all located in Victoria, and Small Arms Factory, Lithgow, New South Wales. The operation of these factories are complementary to each other in the manufacture of a range of basic munitions. The factories do not compete with each other ; the Ammunition Factory makes the brass and non-ferrous components of gun ammunition, including melting and rolling and these components are then passed to the Explosives Factory for filling with explosives and assembly. In the case of small arms ammunition, however, the factory makes the complete round, receiving the propellant from the Explosives Factory. The Ordnance Factories make principally guns, and in addition

make the steel shell bodies which are passed to the Explosives Factory to be filled with explosives and assembled with the brass and other components received from the Ammunition Factory. The Explosives Factory makes the propellant and high explosives for the brass components made at the Ammunition Factory and the steel components made at the Ordnance Factory. The Explosives Factory also assembles the gun ammunition. The Small Arms Factory is equipped to make the rifles and other small arms for which the Ammunition Factory makes the ammunition.

Production of munitions is a joint effort between the Government factories and private contractors in industry. In peace, industry produces components for ammunition and other stores plus complete equipments such as electronics and motor vehicles for the Services. Industry would also provide the capacity in war for mass production of these items and other components using the techniques developed in the Government factories.

(ii) *Aircraft.* (a) *General.* Matters relating to the production in Australia of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force and the Royal Australian Navy are administered by the Division of Aircraft Production of the Department of Defence Production. Aircraft repair and overhaul activities carried out for those Services in civilian establishments, as distinct from Service workshops, are also the function of the Division, together with the responsibility of supplying aircraft and engine spare parts and airborne equipment generally.

(b) *Aircraft, Engine and Other Production.* At 1st July, 1954, the approved production programme for the major aircraft manufacturing organizations in Australia comprised Canberra jet-engined bombers and Jindivik radio-controlled jet-propelled target aircraft at the Government Aircraft Factory, Avon Sabre jet-engined fighters, Winjeel basic trainers and Rolls Royce Avon turbo-jet engines at Commonwealth Aircraft Corporation Pty. Ltd., and Vampire jet-trainers at De Havilland Aircraft Pty. Ltd.

Associated concurrent activities included the production of maintenance parts of aero engines and of undercarriages and undercarriage parts at the Aircraft Engine Factory, the repair and overhaul of propellers at the Propeller Annexe, production of heavy forgings at the Heavy Forge Annexe and the manufacture of aircraft pressed metal parts at the Pressed Parts Annexe.

(c) *Design and Development Projects.* Concurrently with the production programmes, projects involving original design studies in aircraft and aero engine fields were advanced during the year at the Government Aircraft Factory and at the works of Commonwealth Aircraft Corporation Pty. Ltd.

At the former, the first stage of the design and development of radio-controlled target aircraft for use at the Rocket Range, Woomera, South Australia, covering both piloted and unmanned versions of the aircraft, had been completed at 1st July, 1954, and the quantity production of an improved version of the pilotless aircraft was in progress with modifications being incorporated progressively as flying experience with the aircraft increased.

The Commonwealth Aircraft Corporation advanced the Winjeel trainer from the prototype stage into production.

(d) *Repair and Overhaul.* During the year the broad policy was continued by the R.A.A.F. of returning to the factories in which they were produced all Australian-made aircraft and aero engines requiring major overhaul and the incorporation of modifications. Repair and overhaul of R.A.A.F. aircraft of other types and of carrier-based aircraft operated by the R.A.N. were undertaken by civilian personnel in the aircraft factories or in the works of contractors specially equipped to handle this type of work.

Lincoln aircraft were repaired and extensively modified at the Government Aircraft Factory, together with repair of Jindivik aircraft. Wirraway aircraft and single row Wasp radial engines and Rolls Royce Nene turbo-jet engines were overhauled by Commonwealth Aircraft Corporation Pty. Ltd. in Melbourne, while Rolls Royce Merlin and twin row Wasp engines from the R.A.A.F. and Rolls Royce Griffon and Bristol Centaurus engines from the R.A.N. were overhauled at the Aircraft Engine Factory in Sydney. Wright turbo-compound engines from R.A.A.F. Neptune aircraft were overhauled by Qantas Empire Airways.

Vampire, Mosquito and Tiger Moth aircraft and Gipsy Major and Goblin engines were repaired and overhauled at De Havilland Aircraft Pty. Ltd., and Dakota transport and Wirraway aircraft at the Government workshops at Parafield, South Australia.

The repair and overhaul of carrier-based Fairey "Firefly" and Hawker "Sea Fury" aircraft operated by the R.A.N. were handled by the Fairey-Aviation Company of Australasia Ltd. in Sydney.

Sycamore helicopter aircraft of Bristol design and the Alvis "Lionides" engines with which they are equipped were repaired and overhauled by Bristol Aviation Services, also in Sydney. The same company also undertook the repair and overhaul of Bristol Freighter aircraft for the R.A.A.F., including the Bristol Hercules engines with which those aircraft are equipped.

(e) *Avalon Test Field.* During the year, the new aircraft flight test field constructed at Avalon, near Geelong (Victoria), was further developed for the final assembly, fitting out and testing in flight of the Canberra bomber and Avon Sabre fighter aircraft built at the aircraft factories near Melbourne.

4. **Defence Production Planning.**—A Defence Supply Planning Branch was established in July, 1950 within the (then) Department of Supply to co-ordinate the planning of expansion of production capacity in government-owned factories and in industry. When the Department of Defence Production was created, the Branch was transferred to that Department as the Defence Production Planning Branch.

Broadly, the functions of the Branch are :—(i) to arrange production in industry of current requirements for the Defence Services ; (ii) to plan the expansion of production capacity to meet such requirements for mobilization and war.

The following production and related sections exist within the Branch :—(a) Ammunition ; (b) Radar and Telecommunications ; (c) Materials ; (d) Chemicals and Chemical Engineering ; (e) Weapons and their Equipment including equipment involving optics ; (f) Engineer Stores including Mobile Equipment and Small Craft ; (g) Production Plant and Equipment ; (h) Instruments ; (i) Electrical. The production sections have a particular reference to the manufacture of defence stores and components by industry.

The Defence Production Planning Branch is the executive instrument of a Committee of the same name. The three Defence Services, the Departments of Defence, Defence Production, Supply and National Development are represented on the Committee. This enables a close liaison to be maintained with the Departments concerned directly and indirectly with defence in the formation of defence production planning policy.

To advise the Department in the development of industrial mobilization plans to meet the requirements of war relating to particular industries, the following Industry Advisory Committees have been created :—Ammunition Industry, Electrical Industry, Explosives and Chemicals Industry, Materials Industry, Military Vehicles Industry, Machine Tools and Gauges Industry, Radar and Telecommunications Industry and Weapons and their Equipment.

The Department has undertaken a survey of industrial facilities to determine the ability of industry to meet the assessed war and mobilization requirements of the Armed Services.

5. Finance and Accounts.—The expenditure on munitions, munitions factories, aircraft production, etc., during 1952–53 and 1953–54 is shown in the following table:—

DEFENCE PRODUCTION : TOTAL EXPENDITURE.
(£'000.)

Particulars.	Expenditure.	
	1952–53.	1953–54.
Parliamentary Appropriations	(a) 9,186	7,307
Trust Fund Accounts—		
Government Factories and Establishments	14,928	13,422
Manufacture of Munitions	10,528	11,054
Munition Materials	31	34
Defence Production Materials	581	233
Aircraft	15,032	12,663
Strategic Stores and Equipment	2,001	..
Total Trust Fund Accounts	43,101	37,406
Total Expenditure	52,287	44,713

(a) Includes contribution under Superannuation Act and Audit.

§ 8. Department of Supply.

1. General.—Reference to the creation of the Department of Supply is contained in Official Year Book No. 39, p. 1257.

2. Functions of the Department.—The functions of the Department include (a) the manufacture, acquisition, provision and supply of services and goods other than “munitions” (that is to say foodstuffs, textiles, clothing, hardware, boots and other like supplies) required by Service and other authorities; (b) research and scientific development in relation to war *matériel*, including the operation of the Long Range Weapons and other defence science establishments; (c) design and associated technical development and inspection of war *matériel*; (d) planning for and procurement of strategic materials; (e) planning and establishment of manufacturing facilities for production of goods other than munitions; (f) formation of industry advisory committees in respect of production and procurement matters; (g) arranging contracts for supply of goods and performance of services; (h) acquisition, maintenance and disposal of stocks; (i) sale or disposal of surplus or unserviceable property (except buildings or land); (j) provision of Commonwealth transport facilities; (k) security service for Supply and Defence Production Departments; (l) arrangements for ascertaining costs and control and limitation of profits on production contracts; (m) co-ordinating estimates, allocation and commitment of resources for Defence Supply needs (including munitions) and liaison with the National Security Resources Board; (n) provision and control of stores required for or in connexion with matters administered by the Department of Supply; general storage for other Departments as required and to the extent facilities are available.

3. Acts Administered.—Acts administered by the Minister for Supply are the Aluminium Industry Act 1944–1954, Atomic Energy Act 1953 and Supply and Development Act 1939–1948.

4. Research and Development Branch.—(i) *General.* The Research and Development Branch, which is under the control of the Chief Scientist, is responsible for research and scientific development in relation to war *matériel* including the operation of the joint United Kingdom-Australian Long Range Weapons Organization. The headquarters of the Branch is situated at 339 Swanston-street, Melbourne, and the following establishments are included in the Branch :—Long Range Weapons Establishment, Salisbury, South Australia ; Chemical and Physical Research Laboratories, Salisbury, South Australia ; Defence Standards Laboratories, Maribyrnong, Melbourne ; Aeronautical Research Laboratories, Fishermen's Bend, Melbourne.

(ii) *Long Range Weapons Establishment, South Australia.* The Long Range Weapons Project is a joint United Kingdom-Australian one, the United Kingdom being responsible for the development of guided weapons and Australia providing the facilities necessary for the testing of such weapons. The Establishment is situated at Salisbury, South Australia, in premises established during the 1939-45 War for use as an explosives filling factory. In addition to the base establishment at Salisbury, there are two other centres, namely the Testing Ranges at Woomera and the R.A.A.F. Component at Mallala.

At Salisbury a staff of scientific, administrative and industrial personnel has been built up since the inception of the project. Many of the scientific personnel have been recruited from the United Kingdom and a number of Australian scientists have received training in United Kingdom Research Establishments under the Scientific Trainee Scheme.

Accommodation has been provided in the area for a number of United Kingdom firms which are developing guided weapons under contract to the British Ministry of Supply.

A modern airfield (Edinburgh Field) adjacent to the Long Range Weapons Establishment at Salisbury was opened in 1954 by H.R.H. the Duke of Edinburgh. The aircraft and flying personnel required for the project have been made available by the R.A.A.F.

Testing ranges have been provided at Woomera, which is approximately 280 miles north-west of Salisbury and 9 miles north of Pimba, which is on the trans-continental railway line.

A number of these testing ranges are now in operation and the tempo of trials is increasing. A modern township of 500 houses and extensive barracks accommodation has been built complete with Community Store, Hospital, School and all amenities usually found in an Australian country town.

(iii) *Aeronautical Research Laboratories.* The Aeronautical Research Laboratories at Fishermen's Bend have continued investigations in aerodynamics, structures, aircraft materials and general aeronautical engineering according to their approved programme with particular attention to defence problems. These laboratories also collaborate with the United Kingdom on aeronautical matters of mutual interest.

(iv) *Defence Standards Laboratories.* The Defence Standards Laboratories at Maribyrnong continue to give comprehensive service to industry, the Armed Services and to other Commonwealth and State Departments.

The broad function of these laboratories is the application of scientific knowledge and research to the problems arising in design, development, manufacture, inspection, storage, and use of war *matériel*. Research is also carried out in connexion with the development of new and improved materials, methods and equipment of known or potential interest.

(v) *Chemical and Physical Research Laboratories, Salisbury, South Australia.* A section of Defence Standards Laboratories Staff engaged on explosives and physical research has been transferred to the Salisbury area, and this Group, together with the Electronics Research Laboratory and the Propulsion Research Laboratory form a new establishment designated the Chemical and Physical Research Laboratories. These laboratories are engaged on research in the field of propulsion, explosives and specific problems in the field of electronics.

5. **Design and Inspection Branch.**—The functions of this Branch fall into two clearly defined categories : (a) Design catered for by the Technical Design Establishment, and (b) Inspection catered for by a specialized Inspection Service.

(a) *Design.* The word "Design" is used here in the wider sense of a design authority. For example, armament production in Australia is based on British designs, but it is necessary to have in Australia a design authority to which the production agencies can refer problems arising out of differences in British and Australian manufacturing practices, techniques, skills, materials and tooling. A high percentage of Army stores is of a commercial or near-commercial pattern. Examples of these are trucks, earth-moving equipment, electrical and general engineering equipment, and general stores. In many of these items the amount of design may be small or may be carried out by their manufacturers, but selection of types, makes and models, and their variation if necessary, calls for the existence of a design authority with facilities for testing, reporting and making recommendations to guide selection. In each field different problems arise for the design authority. For example, radio development for the Army is carried out by the trade, but a design authority is required as an executive link between the users and the designers and manufacturers.

To meet its responsibilities as a design authority, a Design Establishment has been set up with the following elements :—

Four design sections to deal with design problems relating to the selection and the manufacture of armaments, vehicles, signal equipment, and general engineering plant and equipment.

Common facilities for dealing with defects, standards, rationalization and standardization, production drawings, specifications, publications, testing of components and complete electrical and mechanical units, and the construction of mock-ups and models.

The ultimate objective of the design authority is to ensure proper selection of each of the many thousands of types of armaments, vehicles, telecommunications equipment, general engineering equipment, general stores, and clothing, etc., and that up-to-date specifications, drawings or sealed samples of each type are always available to the Army to support its demands and orders.

(b) *Inspection.* The Inspection Service whilst primarily intended for the inspection of supplies for the Army, also undertakes inspection on behalf of other Departments, and all proof of armament stores on behalf of the three Services.

The Inspection Service is divided into three main Groups, Engineering, Ammunition and Small Arms, and General Stores and Clothing. A Proof and Experimental Group and an Equipment Information Section are included. The latter holds and issues a complete range of Army drawings and specifications including United Kingdom and Australian Joint Service Specifications. It provides the data on which production is based.

6. **Contract Board**—(i) *General.* The Contract Board and its State Organization under the Supply and Development Act 1939–1948 and Regulations is the authority responsible for purchasing supplies or arranging services for the Military, Naval and Air Forces of the Commonwealth, as well as for the Departments of Supply and Defence Production. Under this Act and Regulations it is also charged with the responsibility of arranging for the sale or disposal on behalf of Commonwealth Departments of all surplus or unserviceable war *matériel*, goods and services approved for disposal.

(ii) *The Board and its Administrative Organization.* The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Defence Production, Navy, Army and Air. The Board's administrative organization is the Directorate of Contracts. In each State other than Victoria there is a District Contract Board with an administrative organization similar to the Directorate of Contracts. The table following shows, in respect of the Contract Board Organization, the purchases and realizations from disposals for the years 1952–53 and 1953–54.

CONTRACT BOARD ORGANIZATION : PURCHASES AND REALIZATIONS FROM DISPOSALS.

(£.)

State.	Purchases.		Realizations from Disposals.	
	1952-53.	1953-54.	1952-53.	1953-54.
Contract Board, Victoria	29,283,062	30,032,564	908,122	1,327,420
District Contract Board—				
New South Wales	8,347,442	6,161,285	493,945	785,378
Queensland	2,183,589	1,177,587	187,066	336,660
South Australia	1,420,950	924,090	129,323	180,367
Western Australia	746,954	518,556	84,589	228,992
Tasmania	112,801	147,507	18,317	21,905
Total	42,094,798	38,961,589	1,821,362	2,880,722

7. **Tinplate.**—During the year 1954, tinplate was in free supply from the United Kingdom and the United States of America, which are the main sources of supply for Australia.

Tinplate usage in most branches of the industry increased considerably, and the consumption for 1954 was higher than for some years. The average consumption over the ten years ended 30th June, 1954 was 113,000 tons per annum.

8. **Stores and Transport Branch.**—This Branch functions as the central authority for the provision of storage and transport facilities necessary to meet the official requirements of Commonwealth Departments and authorities. It has branches in all States and agents in Canberra and Darwin.

At 30th June, 1954 it had under its control, land, buildings, plant and machinery valued at over £5,750,000 and 2,450,000 square feet of storage space, of which 1,900,000 square feet was Government-owned and the balance held under tenancy.

9. **Finance Branch.**—The expenditure for Department of Supply activities during the years 1952-53 and 1953-54 are shown in the following table.

SUPPLY : TOTAL EXPENDITURE.

(£'000.)

Particulars.	Expenditure.	
	1952-53.	1953-54.
Parliamentary Appropriations	(a) 11,519	(b) 11,846
Special Appropriation—Aluminium Industry .. ..	..	2,451
Total Appropriations	11,519	14,297
Trust Fund Accounts—		
Aluminium Production	2,404	..
Minerals Production	130	155
Government Factory (Clothing)	1,706	2,275
Stores and Transport	4,924	4,467
Strategic Stores and Equipment Reserve	Cr. 644	2
Total Trust Fund Accounts	8,520	6,899
Total Expenditure	20,039	21,196

(a) Includes amount appropriated for audit, superannuation and debt charges.

(b) Includes amount appropriated for audit and superannuation charges.

10. **Australian Aluminium Production Commission.**—Basic plans for the manufacture of aluminium ingot in Australia were approved by the Commonwealth Government in April, 1941 as a defence measure designed to make this country independent of oversea supplies. In April, 1944 an agreement was made between the Commonwealth and Tasmanian Governments for the establishment of the industry in Tasmania. The Australian Aluminium Production Commission, consisting of representatives of each of the two Governments, was constituted on 1st May, 1945. By legislation passed in 1952 and 1954, the original fund of £3,000,000 to finance the undertaking was increased to £10,500,000 of which the Commonwealth Government will contribute £9,000,000 and the Tasmanian Government £1,500,000.

Workable deposits of bauxite (aluminium ore) have been proved in Tasmania, Victoria, New South Wales and the Northern Territory. The largest deposits are located in the Wessel Islands, Northern Territory, where nearly 10,000,000 tons of good grade ore have been proved, and also in the Inverell district of Northern New South Wales, where reserves exceeding 8,000,000 tons have been brought under the Commission's control. In the Wessel deposits alone, there is a sufficient supply to maintain aluminium production in Australia for over 100 years, based on the present planned production of 13,000 tons of aluminium ingot annually.

The combined Bayer-Hall alumina and reduction plant being erected at Bell Bay, Northern Tasmania, is nearing completion, and is expected to be in production by July, 1955. The plant will be supplied with power from a new generating station at Trevallyn, near Launceston.

CHAPTER XXVIII.

REPATRIATION.

§ 1. General.

An outline of the activities leading up to the formation of the Commonwealth Repatriation Commission was given in Official Year Book No. 15, p. 931. Some account was given also in the Official Year Book referred to, and in subsequent issues, of the policy and general activities of the Department, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to members of the Forces and dependants. (See Official Year Book No. 17, pp. 598-601.) In 1943 the Australian Soldiers' Repatriation Act was amended by the incorporation of the recommendations of the Parliamentary Committee appointed to inquire into pensions and repatriation benefits. A general increase was made of approximately 20 per cent. in the rates of war pensions and increases were also made in other repatriation benefits.

Under the Australian Soldiers' Repatriation Act 1950, rates of pension and medical sustenance were increased, and pensions and benefits under the Act were extended to those members of the Forces (and their dependants) engaged in operations in Korea and Malaya. Provision was also made for payment to a war widow, on re-marriage, of a gratuity equal to one year's war pension. In addition, an important amendment was a change in the basis of war pensioning. Previously, the basis was the daily rate of service pay, but under this legislation the rank, not the pay, of the service man or woman became the basis. This change was brought about as the result of the increased rates of pay of members of the Forces under the new pay code from 1st July, 1947, and the further increases since then. The constantly rising rates of pay made it evident that the basis of pensioning on the daily rate of pay would be unworkable; for example, the rates of pay of more or less senior officers of the 1914-18 War, and of the 1939-45 War discharged before 1st July, 1947, were less than the new rates of pay for present day lower ranks, with a consequent disparity in the rates of pension. To avoid this disparity, the daily rate of pay basis—which had been in operation since the original war pension legislation of 1914—was abandoned in favour of the basis of pensioning according to the rank of the member, the basis adopted by other countries.

The main activities of the Repatriation Commission at 30th June, 1954 were confined to the grant, review and assessment of war and service pensions, the provision of medical treatment, vocational training, the renewal and repair of artificial replacements and surgical appliances, the grant and review of sustenance and living allowances and the administration of the Soldiers' Children Education Scheme.

§ 2. War Pensions.

1. **General.**—The first provision for the payment of war pensions to members of the Forces and their dependants was made by the Commonwealth Parliament in the War Pensions Act 1914, which came into operation on 21st December, 1914. This Act was repealed in 1920 by the Australian Soldiers' Repatriation Act (amended from 31st December, 1950 to the Repatriation Act). Owing to limitations of space, only some of the main features relating to war pensions under the Repatriation Act 1920–1954 are shown in the following paragraphs:—

(i) *Eligibility for Pension.* There has been a considerable widening of the provision in this respect, to the benefit, mainly, of members of the Citizen Military Forces who have not served outside Australia. These provisions are summarized as follows:—

- (a) A member of the Forces who served (1) outside Australia, (2) in the Territories of Australia, such as Papua and New Guinea, or (3) within Australia in circumstances which can be regarded as actual combat against the enemy, is covered for war pension purposes in respect of incapacity or death which may result from any occurrence that happened during the period from the date of his enlistment to the date of the termination of his service in respect of that enlistment.
- (b) In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.
- (c) There is a third ground applicable to all in (a) and (b) who have had at least six months' camp service. This provides that, where a condition pre-existed enlistment, a pension may accrue if it is considered that such condition was aggravated by service.

(ii) *Pensions for Incapacity.* From 2nd October, 1952 the 100 per cent. pension rate for a member's incapacity was increased from £7 to £8 per fortnight (higher rates were payable in respect of certain commissioned ranks) and the rates for wives and children of such members were increased to £3 11s. and £1 7s. 6d. per fortnight respectively. From 5th November, 1953 an increase of 5s. and from 7th October, 1954 a further increase of 15s. was made in the member's 100 per cent. incapacity rate to £9 per fortnight (or higher according to rank). The rates for wives and children were unchanged.

(iii) *Supplementation of Pension.* Where a member in receipt of a pension at the maximum rate is, because of his war disability, temporarily (for at least three months) precluded from earning, an additional pension may be granted to bring the total pension to the member up to £18 10s. per fortnight.

(iv) *Women's Nursing and Auxiliary Services.* Members of Women's Services are entitled to pensions and other benefits as prescribed in the Act on the same basis as male members of the Forces.

(v) *Tuberculosis.* In the case of a member of the Forces who served in a theatre of war, and, at any time after discharge became or becomes incapacitated, or died or dies, from pulmonary tuberculosis, war pension is payable, and medical treatment is provided on application as if the incapacity or death resulted from an occurrence on service. (See also § 3. Service Pensions.)

(vi) *Special Rates.* Those who have been totally blinded as the result of war service and those who are permanently totally incapacitated receive as from 5th November, 1953, special pensions of £18 10s. per fortnight. The rates for Tuberculars, Class "B" (fit for light employment) were increased from £12 to £13 per fortnight. In addition to the special pension, an attendant's allowance of £3 10s. per fortnight may be granted to the war-blinded and to certain others who are deemed to be in need of an attendant.

A war-blinded member who is also affected with total loss of speech or total deafness is entitled from 2nd October, 1952 to an attendant's allowance of £7 per fortnight in lieu of that referred to above. The wife and any children under 16 years of age receive the same rates as shown in sub-para. (ii).

(vii) *Specified Disabilities.* Where the disability is amputation of a limb or limbs or total loss of vision in one eye, amounts ranging from 17s. to £9 10s. per fortnight in addition to the statutory rate of pension are payable as from 7th October, 1954. In addition, allowances of either £3 10s. or £7 per fortnight are payable in certain double amputation cases.

(viii) *Time Limit for Wives and Children Removed.* Prior to the 1950 amending Act, wives who were married and children who were born after 1st July, 1938 were ineligible to receive a war pension. This time limit was removed as from 2nd November, 1950.

(ix) *Rates of Pensions for Death.* (a) *Widows.* As already indicated, rates of pension, which were previously based on the daily rate of pay of the member, are now based on the rank of the member. From 7th October, 1954 the rates were increased by 15s. per fortnight, the minimum rate being increased from £7 5s. to £8 per fortnight. In addition to the pension, the widow receives an allowance if she has dependent children, if she is permanently unemployable, or if she is over 50 years of age; this allowance is £3 9s. per fortnight.

(b) *Children.* From 2nd October, 1952, the rate of pension for the eldest child (under 16 years of age) was increased to £2 13s. per fortnight, and that of each younger child to £1 17s. In addition to the pension, an amount of 12s. per fortnight may be paid in certain circumstances. Where both parents are dead each child is pensioned at the rate of £4 16s. per fortnight.

(x) *Widowed Mother on Death of Member.* A pension ranging from £4 10s. to £8 6s. per fortnight, according to the rank of the member, may be granted to a widowed mother of a deceased unmarried son, provided widowhood occurred either prior to or within three years after the death of the member. The pension may be supplemented by payment of an additional amount constituting the difference between the statutory pension and £11 5s. per fortnight or part thereof, according to the extent of other income of the pensioner. The value of property possessed by the widowed mother does not affect the issue. This rate, which took effect from 7th October, 1954, represents an increase of £1 10s. per fortnight on the previous rate of £9 15s. which operated from 5th November, 1953.

2. *Appeals Tribunals.*—The principal Act was amended as from 1st June, 1929 to create tribunals to hear appeals in regard to war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-members of the Forces or their dependants against a decision of the Repatriation Commission that an incapacity or the death of an ex-member did not arise out of war service. Assessment Appeal Tribunals were created to hear and decide any appeal against a current assessment or a "Nil" assessment of war pension made by the Repatriation Commission in respect of an incapacity of an ex-member of the Forces which had been accepted as arising out of war service. Provision was made by subsequent legislation to enable the Tribunals to hear appeals by certain members for service pensions.

3. *Summary of War Pensions, 1953-54.*—At 30th June, 1954, the number of war pensions for the 1914-18 War was 141,004, for the 1939-45 War, 421,251, and for the Korea and Malaya Operations 1,411, making a total of 563,666 with a liability of £36,878,337 per annum. The amount paid in pensions during the year 1953-54 was £36,797,944. The outstanding features for 1953-54 for each war were as follows.

WAR PENSIONS : SUMMARY, AUSTRALIA, 1953-54.

Particulars.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
New claims granted	3,063	33,370	698	37,131
Restorations	564	1,787	6	2,357
Claims rejected (gross)	1,559	13,733	450	15,742
Pensions reviewed	16,640	83,169	204	100,013
Pensions cancelled or discontinued ..	2,258	11,820	31	14,109
Deaths of pensioners	3,861	1,796	6	5,663
Number of pensions in force at 30th June, 1954	141,004	421,251	1,411	563,666
Annual pension liability at 30th June, 1954 £	16,574,412	20,211,273	92,652	36,878,337
Amount paid in pensions during the year 1953-54 £	(a)	(a)	(a)	36,797,044

(a) Not available.

4. Classes of War Pensions, Australia, 1953-54.—(a) *New Claims Granted.* The following is an analysis of the total number of new claims granted during 1953-54 :—

WAR PENSIONS : NEW CLAIMS GRANTED, AUSTRALIA, 1953-54.

Class.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Members	889	6,313	327	7,529
Wives of members	1,244	6,911	138	8,293
Children	758	19,603	191	20,552
Other dependants	172	543	42	757
Total	3,063	33,370	698	37,131

(b) *Pensions in Force.* The following table shows the number of pensions in force at 30th June, 1954 for each war and for each class of pensioner :—

WAR PENSIONS IN FORCE, AUSTRALIA, 30th JUNE, 1954.

Class.	Number of Pensioners at 30th June, 1954.			
	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Orphan children—				
Children of deceased members ..	808	9,788	72	10,668
Double orphans	47	185	..	232
War widows	17,700	9,540	55	27,295
Members	61,634	129,926	643	192,203
Children	5,583	160,700	315	166,598
Wives	52,184	104,224	256	156,664
Parents	2,757	6,683	62	9,502
Brothers and sisters	99	113	8	220
Others	192	92	..	284
Total	141,004	421,251	1,411	563,666

(c) *Special Rate Pensions.* At 30th June, 1954 special rate pensions of £18 10s. per fortnight were being paid to the following classes of members of the Forces :—

WAR PENSIONS : MEMBERS ON SPECIAL RATES, AUSTRALIA, 30th JUNE, 1954.

Class.	1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
Blinded members	208	191	2	401
Tubercular members	793	1,120	4	1,917
Totally and permanently incapacitated members	9,065	2,800	5	11,870
Tuberculars, Class "B" (a)	177	360	..	537

(a) Rate £13 per fortnight.

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5. Number of War Pensioners and Annual Liability, States, etc., 30th June, 1954.—
The following table shows the number of pensions in force and annual liability for each war at 30th June, 1954 according to place of payment. (The amount paid is shown on page 1015).

WAR PENSIONS : NUMBER OF PENSIONERS AND ANNUAL LIABILITY, 30th JUNE, 1954.

Where Paid.	Number of War Pensions in Force at 30th June, 1954.				Annual Pension Liability (£.)
	Incapacitated Members of the Forces.	Dependants of Incapacitated Members.	Dependants of Deceased Members.	Total.	
1914-18 WAR.					
New South Wales	20,208	18,931	7,114	46,253	5,522,302
Victoria	20,598	18,993	6,893	46,484	5,308,447
Queensland	7,193	6,672	1,867	15,732	1,890,190
South Australia	4,450	4,386	1,712	10,548	1,354,580
Western Australia	5,107	5,135	1,557	11,799	1,238,911
Tasmania	2,746	2,877	837	6,460	861,061
Total, Australia	60,302	56,994	19,980	137,276	16,175,491
London Office	1,113	1,235	918	3,266	351,623
Other Oversea Countries	219	161	82	462	47,298
Total	61,634	58,390	20,980	141,004	16,574,412
1939-45 WAR.					
New South Wales	46,923	90,616	9,705	147,244	7,135,966
Victoria	33,445	67,318	7,007	107,770	5,209,881
Queensland	16,907	36,265	3,282	56,454	2,725,037
South Australia	14,280	31,875	2,237	48,392	2,265,831
Western Australia	12,708	26,392	2,324	41,424	1,831,187
Tasmania	5,196	12,385	823	18,404	927,856
Total, Australia	129,459	264,851	25,378	419,688	20,095,758
London Office	309	483	345	1,137	90,097
Other Oversea Countries	158	218	50	426	25,418
Total	129,926	265,552	25,773	421,251	20,211,273
KOREA AND MALAYA OPERATIONS.					
New South Wales	235	210	81	526	34,377
Victoria	170	145	41	356	20,148
Queensland	84	81	28	193	13,293
South Australia	45	54	4	103	7,265
Western Australia	63	52	14	129	8,910
Tasmania	34	28	9	71	4,153
Total, Australia	631	570	177	1,378	88,146
London Office	4	..	16	20	3,088
Other Oversea Countries	8	2	3	13	1,418
Total	643	572	196	1,411	92,652

6. Summary of War Pensions, 1930-31, 1938-39 and 1945-46 to 1953-54.—
 (i) *Australia.* The following table shows, for each war, the number of pensions granted, claims rejected, pensions in force, and the annual liability for pensions in each of the years ended 30th June, 1946 to 1954, and the total annual liability for war pensions for each of the years ended 30th June, 1931, 1939 and 1946 to 1954 :—

WAR PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensions Granted.	Claims Rejected.	Number of War Pensions in Force at 30th June.				Annual Pension Liability at 30th June. (£.)
			Incapaci- tated Members of the Forces.	Depend- ants of Incapaci- tated Members.	Depend- ants of Deceased Members.	Total.	

1914-18 WAR.

1946	..	650	552	69,640	79,964	20,381	169,985	8,168,492
1947	..	811	572	68,375	73,825	19,759	161,959	8,163,025
1948	..	1,378	717	67,116	68,323	19,863	155,302	8,475,915
1949	..	1,902	768	66,264	63,937	20,137	150,338	9,654,011
1950	..	2,547	1,201	65,622	60,141	20,509	146,272	10,103,752
1951	..	8,567	1,480	64,889	62,918	20,709	148,516	13,271,144
1952	..	4,090	1,386	63,800	61,775	20,684	146,259	14,447,983
1953	..	3,090	1,136	62,703	60,000	20,793	143,496	15,674,373
1954	..	3,063	1,559	61,634	58,390	20,980	141,004	16,574,412

1939-45 WAR.

1946	..	92,986	66,766	68,097	95,829	25,479	189,405	5,604,964
1947	..	51,019	31,266	83,995	122,205	26,478	232,678	6,841,567
1948	..	39,188	13,614	91,657	142,112	26,530	260,299	7,759,793
1949	..	39,016	8,192	99,852	163,504	26,421	289,777	9,522,250
1950	..	44,392	7,312	108,922	189,413	26,649	324,984	10,638,011
1951	..	39,866	8,387	115,942	211,735	26,434	354,111	14,483,436
1952	..	36,259	8,864	120,889	231,068	26,232	378,189	15,862,473
1953	..	33,944	8,034	125,366	248,483	25,885	399,734	18,502,675
1954	..	33,370	13,733	129,926	265,552	25,773	421,251	20,211,273

KOREA AND MALAYA OPERATIONS.

1951	..	48	..	5	1	42	48	6,265
1952	..	312	153	159	109	99	367	30,873
1953	..	399	241	326	274	144	744	53,519
1954	..	698	450	643	572	196	1,411	92,652

TOTAL.

1931	..	11,555	920	75,316	172,389	35,617	283,322	7,774,806
1939	..	6,794	7,541	77,151	144,571	27,571	249,293	7,681,095
1946	..	93,636	67,318	137,737	175,793	45,860	359,390	13,773,456
1947	..	51,830	31,838	152,370	196,030	46,237	394,637	15,004,592
1948	..	40,566	14,331	158,773	210,435	46,393	415,601	16,235,708
1949	..	40,918	8,960	166,116	227,441	46,558	440,115	19,176,261
1950	..	46,939	8,513	174,544	249,554	47,158	471,256	20,741,763
1951	..	48,481	9,867	180,836	274,654	47,185	502,675	27,760,845
1952	..	40,661	10,403	184,848	292,952	47,015	524,815	30,341,329
1953	..	37,433	9,411	188,395	308,757	46,822	543,974	34,230,567
1954	..	37,131	15,742	192,203	324,514	46,949	563,666	36,878,337

(ii) *Amount Paid and Place of Payment.* The following table shows for the years 1948-49 to 1953-54 the amounts paid in pensions and place where paid :—

WAR PENSIONS : AMOUNT PAID.

(£.)

Place of Payment.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales(a) ..	6,713,900	7,392,793	9,446,734	11,046,938	11,769,571	12,578,067
Victoria ..	5,249,295	5,857,536	7,303,282	9,184,196	9,918,742	10,600,721
Queensland ..	2,074,951	2,381,093	3,016,499	3,777,019	4,109,763	4,591,219
South Australia(b) ..	1,717,225	1,947,536	2,452,245	3,046,575	3,349,407	3,583,510
Western Australia ..	1,758,028	1,887,885	2,272,533	2,714,606	2,921,367	3,086,783
Tasmania ..	908,734	1,017,889	1,297,490	1,560,560	1,714,609	1,820,440
Overseas ..	332,359	379,447	402,935	515,119	572,276	536,304
Total ..	18,754,492	20,864,179	26,191,718	31,845,013	34,355,795	36,797,044

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

§ 3. Service Pensions.

1. *General.* The payment of service pensions is provided for in the Repatriation Act 1920-1954 and has operated since 1st January, 1936.

Originally fixed on a lower scale, the rate of service pension for a member of the Forces now conforms to the rate of the age or invalid pension, which from 5th November, 1953 was £7 per fortnight. The maximum rate for the wife of a member is £3 10s. per fortnight; the rate for the first child under 16 years of age is 23s. per fortnight and 5s. per fortnight is payable for each of the younger children up to three in number. The actual rate payable in any case is determined after taking into consideration all other income, "except income derived from property" and property (apart from the home and certain other exemptions) owned by the pensioner, and no service pension can be paid where the other income and/or property exceeds certain specified limits. From 7th October, 1954 the "allowed income" was £364 per annum for a single man and £728 per annum in the case of a member and wife. If a member has property (apart from the home and certain other exemptions) exceeding in value £1,750 (£3,500 for a member and wife), that alone precludes payment of a pension. Pension is assessed according to the amount of income; if the income is less than the amount shown above, service pension is assessed at such rate as will, with that other income, bring the total income (including service pension) of the pensioner up to the "allowed income" provided that the pension cannot exceed the maximum rate specified for the particular class of case. If assessable property is held, then a deduction is made from the pension assessed according to income only, the deductions being made at 9d. per fortnight for each complete £10 of property in excess of £200 (or £400 in the case of member and wife).

Female members of the forces were made eligible in 1936 for consideration of service pensions if they embarked for service abroad ; previously they must have served in a theatre of war. In the same year an institutional rate of service pension not exceeding 12s. per fortnight was made available. This pension rate from 5th November, 1953 was £2 9s. per fortnight, and benefits particularly inmates of mental hospitals.

Eligibility for service pensions may be established on the following grounds :—

- (a) Sixty years of age or more, provided the member served in a theatre of war, but eligibility on this ground applies only to the member and not to his wife or children. In the case of a female member of the forces, the qualifying age is 55 years, and service abroad, not necessarily in a theatre of war, is sufficient.
- (b) Permanently unemployable, provided the member served in a theatre of war (or, in the case of a female member, served abroad). Under this class pensions may be paid to the member, his wife and children up to four in number.
- (c) Pulmonary tuberculosis, whether the member served in a theatre of war or not. Under this class, also, pensions are payable to the wife and children up to four in number.

Only those members who qualify under Class (c) are entitled to receive both service and invalid pensions at the same time.

From 1st November, 1941, service pensions were extended to veterans of the South African War 1899–1902, and in 1943 to members of the Forces of the 1939–45 War, and now also apply to members who served in the Korea and Malaya operations.

2. Operations, 1953–54.—The following table gives a summary relating to service pensions during 1953–54 :—

Claims granted during year—

Members of the Forces	..	..	..	..	2,948
Wives	..	..	..	..	841
Children	..	..	..	..	291
Total	..	..	..	..	4,080

Claims rejected during year—

Members of the Forces	..	..	..	..	886
Wives	..	..	..	..	248
Children	..	..	..	..	85
Total	..	..	..	..	1,219

Service pensions cancelled or discontinued during year	..	1,853
Deaths of pensioners during year	..	1,011
Pensions in force at 30th June, 1954	..	20,806
Annual pension liability on 30th June, 1954	..	£2,816,763
Amount paid in pensions during the year	..	£2,694,522

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3. Number of Service Pensioners and Amount Paid.—(i) *Summary, Australia, 1944-45 to 1953-54.* The following table shows the number of service pensions in force and the amount paid in pensions for the ten years 1944-45 to 1953-54 :—

SERVICE PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Number of Service Pensions in Force at 30th June—						Amount Paid in Pensions.
	Permanently Unemployable.			Suffering from Pulmonary Tuberculosis.		Total.	
	Age- Members of Forces.	Members of Forces.	Depen- dants.	Members of Forces.	Depen- dants.		
1945 ..	4,437	3,702	3,807	258	362	12,566	£ 648,996
1946 ..	4,971	3,896	3,633	244	345	13,089	804,880
1947 ..	5,894	4,312	3,657	254	358	14,475	904,120
1948 ..	6,610	4,660	3,791	271	358	15,690	1,238,112
1949 ..	7,070	4,613	3,699	271	365	16,018	1,328,955
1950 ..	7,448	4,608	3,598	299	385	16,338	1,431,687
1951 ..	7,456	4,492	3,911	279	374	16,512	1,507,258
1952 ..	7,587	4,561	4,270	269	389	17,076	1,778,380
1953 ..	8,703	4,971	4,780	291	432	19,177	2,225,044
1954 ..	9,648	5,294	5,092	321	451	20,806	2,694,522

(ii) *Amount Paid and State where Paid.* The following table shows for the years 1949-50 to 1953-54 the amounts paid in pensions and the State where paid :—

SERVICE PENSIONS : AMOUNT PAID.

(£.)

State Where Paid.		1949-50.	1950-51.	1951-52.	1952-53.	1953-54.
New South Wales(a)	..	477,845	515,730	609,432	764,803	977,815
Victoria ..	..	347,274	332,924	382,584	503,946	601,579
Queensland ..	..	247,842	265,754	325,546	396,090	467,038
South Australia (b)	..	142,339	155,384	174,303	215,626	259,438
Western Australia	..	165,639	184,744	224,558	278,115	302,617
Tasmania ..	..	50,748	52,722	61,957	66,464	86,035
Total ..	..	1,431,687	1,507,258	1,778,380	2,225,044	2,694,522

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

§ 4. Medical Treatment of Returned Soldiers Suffering from War Service Disabilities.

At 30th June, 1954 there were 5,477 in-patients, including a number whose care was undertaken by the Repatriation Commission on behalf of other countries or Commonwealth Departments. There were 383,160 out-patient attendances for treatment during the year, excluding 767,497 treatments by the 3,415 local medical officers resident in metropolitan and country areas and New Guinea. The expenditure to 30th June, 1954 was £63,122,099.

§ 5. General Benefits and Miscellaneous.

1. *Other Departmental Activities.*—(i) *General.* During the 1939–45 War, the ordinary activities of the Department in the way of general benefits for the welfare of members and dependants were carried on without interruption. They were mainly education and training of children under the Soldiers' Children Education Scheme, medical benefits for widows and children of deceased members and for widowed mothers of deceased unmarried members, funeral expenses for certain classes of members and dependants, and allowances to certain classes of dependants in lieu of pension.

By legislation passed in June, 1940, these benefits were extended to members engaged in the 1939–45 War and in November, 1950 to those engaged in the Korea and Malaya Operations and new benefits designed for the re-establishment of members after discharge from the Forces were made available. The re-establishment benefits administered by the Repatriation Commission are:—payments of re-employment allowance while awaiting employment; provision of tools of trade and equipment where such are necessary to the member's employment; transportation expenses to meet the cost of fares and removal of household belongings, where a member, or member and family, take up training, employment, a business, or settle on the land; supplementation of wages of apprentices whose apprenticeships were interrupted by war service; re-establishment loans to enable members and widows to establish themselves in businesses, practices or other occupations, including (until the Division of War Service Land Settlement began operations early in 1946) agricultural occupations; payment of re-establishment allowance during the early stages of establishment in business; gifts up to £75 for furniture to members who are blinded or totally and permanently incapacitated, also to widows with children under 16 years of age; and free passages to Australia for wives, widows and children of members who married abroad (and passages outward from Australia in certain cases of members and dependants).

In 1949 the Commission took over the functions of the Re-establishment Division of the former Department of Post-war Reconstruction, and is responsible for the co-ordination of all matters relating to training under the Commonwealth Reconstruction Training Scheme. Re-establishment of the more seriously disabled where ordinary training is not sufficient continues to be a function of the Commission, and special means have to be found to overcome each problem.

(ii) *Review of General Benefits.* The following paragraph gives particulars of the more important general benefits for each war (those for Korea and Malaya Operations are included under the 1939–45 War) for the period from 8th April, 1918 to 30th June, 1954.

(a) Employment—

1914-18 War : Number of applications, 251,200 ; Expenditure—sustenance while awaiting employment, £1,768,000 ; tools of trade and fares, etc. (gift), £554,000 ; tools of trade (loan), £21,800.

1939-45 War : The placing of members in employment was carried out by the Commission for only a short period prior to the inauguration of the Department of Labour and National Service, but the Commission has the responsibility of payment of re-employment allowance, provision of tools of trade and payment of fares and removal expenses. Number of cases and expenditure to 30th June, 1954 were as follows :—Re-employment allowances—66,653, £1,027,402 ; tools of trade (gift)—261,259, £1,893,701 ; (loan)—19,449, £292,051 ; fares and removal expenses, 16,562, £241,402.

(b) Vocational Training—

1914-18 War : Number of members completed training in full-time courses, 27,696 ; expenditure, £4,849,600.

1939-45 War : Number of members completed training in full-time re-establishment courses 56,756 ; number still in training, 1,082 ; expenditure, £49,974,850. An additional sum of £3,874,152 was expended on supplementation of apprentices wages.

(c) Business Loans—

1914-18 War : 6,130, £421,800.

1939-45 War : 27,897, £7,449,255. Allowances pending productivity of business—1,425, £88,024, Fares and removal expenses to member proceeding to a business, £495.

(d) Furniture Grants—

1914-18 War : Expenditure—gift (to members blinded or totally and permanently incapacitated and to widows), £75,190 ; loan (to other classes of members), £1,031,570 ; total number of cases, 35,400.

1939-45 War : Gift (no loan cases)—widows, 5,694, £396,556 ; members, 375, £23,157.

(e) Free Passages—

1914-18 War : £509,120.

1939-45 War : To Australia—4,749, £310,698 ; from Australia—67, £10,363.

(f) Soldiers' Children Education Scheme—

Main Scheme : Full-time training as from 12 years of age.

Particulars.	1914-18 War.	1939-45 War.
Applications	32,804	14,995
Approved	31,123	14,780
Completed training	25,303	6,687
Withdrawn during training	4,088	552
Awaiting next stage of training	27	144
In training	1,705	7,397
Expenditure	£4,388,572	

Minor benefits prior to entrance to main scheme : For all Wars, £88,094.

(iii) *Total Expenditure on General Benefits.* The total expenditure on general benefits, apart from war and service pensions, from 8th April, 1918 to 30th June, 1954, for all wars since 1914 was £100,172,157 (including loan £9,427,511). Of this total the largest amounts were absorbed by medical treatment with £63,122,099, vocational training with £8,799,652, and expenses in providing employment, £5,871,708.

2. *Expenditure of Repatriation Commission, 1953-54.*—The expenditure of the Commission for the year ended 30th June, 1954 was £54,161,936, distributed as follows :—

Repatriation benefits—					£
Loans to members	..	..	..	..	227,176
Grants to members and general expenditure (including main- tenance of training schools, medical institutions, etc.)	..	..	..	..	11,271,624
Assistance to members in necessitous circumstances	..	..	..	..	1,035
Total	..	..	..	..	11,499,835
Soldiers' Children Education Scheme	..	..	..	..	340,496
War and Service Pensions	..	..	..	..	39,425,344
Administrative costs—					£
Salaries	..	..	..	..	2,411,182
Contingencies	..	..	..	..	485,079
					2,896,261
Grand total	..	..	..	..	54,161,936

3. *Settlement on the Land of Returned Service Personnel.*—Reference to the settlement on the land of returned service personnel will be found in Chapter IV.—Land Tenure and Settlement.

CHAPTER XXIX.

MISCELLANEOUS.

This chapter comprises miscellaneous statistics and other descriptive information not directly related to the subjects of the preceding chapters, arranged in sections as follows :—

1. Valuation of Australian Production ; 2. Indexes of Production ; 3. New Building ; 4. Consumption of Foodstuffs and Beverages ; 5. Patents, Trade Marks and Designs ; 6. Copyright ; 7. Australian Ship-building Board ; 8. War Service Homes Division ; 9. Commonwealth Scientific and Industrial Research Organization ; 10. Australian Institute of Anatomy ; 11. Commonwealth Observatory ; 12. Standards Association of Australia ; 13. Film Censorship Board ; 14. Australian National Film Board and the Film Division ; 15. National Safety Council of Australia ; 16. Australian Road Safety Council ; 17. Atomic Energy Commission ; 18. The United Nations ; 19. Diplomatic and other Representatives Overseas and in Australia ; 20. Retail Trade.

§ 1. Valuation of Australian Production.

1. **General.**—The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally at the Conference held in 1935. The figures published below have been compiled by the State Statisticians from the best data available, and relate to 1952-53. The adoption of substantially uniform methods of valuing production and of estimating elements of costs of production and marketing renders the results comparable as between States.

Attention is directed to the fact that the values shown in the tables herein refer only to production of primary industries and factories and exclude the building and construction industry, those industrial establishments not classified as factories, and certain agricultural and farmyard produce obtained from areas of less than one acre.

The following is a brief explanation of the terms used :—

- (a) *Gross Value of Production* is the value placed on recorded production at the wholesale price realized in the principal markets. (In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.)
- (b) *Local Value* (i.e. the gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. (Marketing costs include freight, costs of containers, commission and other charges incidental thereto.)
- (c) *Net Value of Production* represents local value less value of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays and other costs. No deductions have been made for depreciation or certain maintenance costs as particulars are not available for all States. The Net Value of Production is the only satisfactory measure to use when comparing or combining the value of primary industries with those of other industries.

It should be noted that there is an overstatement in the net value of production for New South Wales and Tasmania by the inclusion of power costs in rural industries. These costs, which amounted to £1,892,000 in New South Wales in 1940-41 and £86,510 in Tasmania in 1941-42 have not been ascertained in later years. Costs of materials used in the process of production are not available for all States in respect of Bee-farming, Trapping, Forestry and Fisheries, and local values have been used for these industries with consequent overstatement in net values.

2. Value of Production, Australia, 1952-53.—The following table shows particulars of the gross, local and net values of production in Australia by industries during the year 1952-53 :—

GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES : AUSTRALIA, 1952-53.

(£'000.)

Industry.	Gross Production valued at Principal Markets.	Local Value—Gross Production valued at Place of Production.	Net Value of Production (without deduction of depreciation or maintenance).
Agriculture	382,959	328,096	276,398
Pastoral	557,495	517,232	493,745
Dairying	168,861	159,228	135,745
Poultry	54,868	49,651	35,213
Bee-farming	1,197	1,066	(a) 1,066
Total, Rural	1,165,380	1,055,273	942,167
Trapping	6,284	5,595	(a) 5,595
Forestry	45,306	41,864	(a) 41,864
Fisheries	7,911	6,897	(a) 6,897
Mines and Quarries ..	(a) 136,844	136,844	109,671
Total, Non-rural ..	196,345	191,200	164,027
Total, All Primary ..	1,361,725	1,246,473	1,106,194
Factories	(b) 1,082,862	(b) 1,082,862	1,082,862
Total, All Industries ..	2,444,587	2,329,335	2,189,056

(a) Local value.

(b) Net value.

3. Net Value of Production, States, 1952-53.—The following tables show the total net value of production, and the net value per head of population, for each industry and State during the year 1952-53 :—

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES, 1952-53.

(£'000.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Austral'a.
Agriculture ..	66,623	65,067	53,684	51,244	28,977	10,803	276,398
Pastoral ..	206,872	108,459	82,442	49,918	38,642	7,412	493,745
Dairying ..	45,668	42,687	30,158	9,427	3,911	3,894	135,745
Poultry ..	14,615	14,886	1,147	2,058	1,449	1,053	35,213
Bee-farming(b) ..	359	269	97	223	100	18	1,066
Total, Rural ..	334,137	231,368	167,528	112,870	73,079	23,185	942,167
Trapping(b) ..	1,793	2,717	129	541	230	185	5,595
Forestry(b) ..	15,492	8,904	7,102	3,790	3,328	3,248	41,864
Fisheries(b) ..	2,233	753	844	851	1,610	606	6,897
Mines and Quarries	63,166	6,632	13,860	5,153	12,410	7,325	(c) 109,671
Total, Non-rural ..	82,684	19,006	21,935	10,335	17,578	11,364	(c) 164,027
Total, All Primary	416,821	250,374	189,463	123,205	90,657	34,549	(c) 1,106,194
Factories ..	457,742	358,032	98,209	89,189	49,192	30,498	1,082,862
Total, All Industries ..	874,563	608,406	287,672	212,394	139,849	65,047	(c) 2,189,056

(a) See letterpress on page 1021.
the Northern Territory.

(b) Local value.

(c) Includes Mines and Quarries for

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES PER
HEAD OF POPULATION, 1952-53.**

(£ s. d.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Agriculture ..	19 9 7	27 10 10	42 19 9	68 7 5	47 5 10	34 19 5	31 15 3
Pastoral ..	60 9 8	45 18 3	66 0 4	66 12 0	63 1 3	23 19 10	56 14 6
Dairying ..	13 7 1	18 1 5	24 3 0	12 11 7	6 7 8	12 12 1	15 12 0
Poultry ..	4 5 6	6 6 0	0 18 4	2 14 11	2 7 4	3 8 6	4 0 11
Bee-farming(b) ..	0 2 1	0 2 3	0 1 7	0 5 11	0 3 3	0 1 2	0 2 5
Total, Rural ..	97 13 11	97 18 9	134 3 0	150 11 10	119 5 4	75 1 0	108 5 3
Trapping(b) ..	0 10 6	1 3 0	0 2 1	0 14 5	0 7 6	0 12 0	0 12 10
Forestry(b) ..	4 10 7	3 15 5	5 13 9	5 1 2	5 8 7	10 10 3	4 16 3
Fisheries(b) ..	0 13 1	0 6 4	0 13 6	1 2 9	2 12 7	1 19 3	0 15 10
Mines and Quarries ..	18 9 4	2 16 2	11 1 11	6 17 6	20 5 1	23 14 3	c 12 12 1
Total, Non-rural ..	24 3 6	8 0 11	17 11 3	13 15 10	28 13 9	36 15 9	c 18 17 0
Total, All Primary ..	121 17 5	105 19 8	151 14 3	164 7 8	147 19 1	111 16 9	c 127 2 3
Factories ..	133 16 9	151 11 0	78 12 10	118 19 11	80 5 8	98 14 5	124 8 7
Total, All Industries ..	255 14 7	257 10 8	230 7 1	283 7 7	228 4 9	210 11 2	c 251 10 10

(a) See letterpress on page 1021.

(b) Local value.

(c) Includes Mines and Quarries for the Northern Territory.

4. Net Value of Production, Australia, 1938-39 and 1948-49 to 1952-53.—The following table shows the estimated net value of production for Australia during the years 1948-49 to 1952-53 compared with 1938-39.

**ESTIMATED NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND
FACTORIES : AUSTRALIA.**

(£'000.)

Industry.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Agriculture ..	41,679	164,372	218,703	208,130	246,685	276,398
Pastoral ..	63,820	240,855	337,121	704,809	400,493	493,745
Dairying ..	33,782	67,552	81,102	89,352	103,776	135,745
Poultry ..	7,302	20,196	22,228	24,614	31,554	35,213
Bee-farming(b) ..	123	1,509	743	831	774	1,066
Total, Rural ..	146,706	494,484	659,897	1,027,736	783,282	942,167
Trapping(b) ..	1,422	7,786	5,716	6,629	6,713	5,595
Forestry(b) ..	7,811	20,305	23,195	28,428	37,905	41,864
Fisheries(b) ..	1,654	4,174	4,234	1,869	5,729	6,897
Mines and Quarries ..	27,375	48,353	52,327	71,150	97,199	109,671
Total, Non-rural ..	38,262	80,618	85,472	111,076	147,546	164,027
Total, All Primary ..	184,968	575,102	745,369	1,138,812	930,828	1,106,194
Factories ..	203,417	568,768	661,532	843,872	1,024,867	1,082,862
Total, All Industries ..	388,385	1,143,870	1,406,901	1,982,684	1,955,695	2,189,056

(a) See letterpress on page 1021.

(b) Local value.

In the chapters dealing with the respective industries (except trapping and mines and quarries) tables will be found showing the total and *per capita* values of production for the industry by States for a series of years up to 1952-53.

On page 750 of this issue is a graph showing the Net Value of Production, Australia for primary industries and factories for the years 1928-29 to 1952-53.

§ 2. Indexes of Production.

In the first two tables below, indexes of price and quantum of production are given for the following industrial groups, namely:—Agriculture, Pastoral, Farmyard and Dairying, and All Farming combined (including separate indexes for Wool and Products other than Wool). In the third table, indexes of quantum of production, exports and consumption of farm products for food use are shown. Indexes previously published in respect of Gold and Other Minerals, and All Mining combined, are under review and pending completion of investigations the publication of these results has been temporarily discontinued.

1. Farm Production Price Indexes.—The Farm Production Price Indexes shown in the following table relate to average "prices" of agriculture, pastoral, farmyard and dairying products realized in the principal markets of Australia. The "price" data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year and the index-numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage,

etc. of products marketed. The index-numbers for any year relate to the average values of products produced or marketed in that year, irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. "Prices" for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index-Numbers the average quantities of the relevant commodities produced in the period 1923-24 to 1927-28 were used as fixed weights. This series has been retained for years up to 1935-36, but re-computed to the base, average 1936-37 to 1938-39 = 100. For 1936-37 and later years, the original series was replaced in December, 1952 by a revised series in which average quantities of each product marketed during the period 1946-47 to 1950-51 are used as fixed weights. In the revised series, the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All Farming Index of quantities of crops marketed for livestock feeding in Australia.

FARM PRODUCTION: INDEXES OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA.

(Base: Average 1936-37 to 1938-39 = 100.)

Year.	Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1911-12	92	66	70	76	..	..
1912-13	86	77	78	81	..	..
1913-14	85	76	74	79	..	..
1914-15	143	85	80	105	..	..
1915-16	100	113	98	106	..	..
1916-17	96	127	103	112	..	..
1917-18	112	139	101	123	..	..
1918-19	133	139	111	132	..	..
1919-20	197	146	134	161	..	..
1920-21	170	137	170	155	..	..
1921-22	130	96	118	112	..	..
1922-23	136	127	125	130	..	..
1923-24	119	161	120	139	..	..
1924-25	139	159	105	142	(a) 206	..
1925-26	145	130	120	133	126	..
1926-27	129	125	120	125	129	..
1927-28	129	146	120	136	148	..
1928-29	117	129	122	123	125	..
1929-30	110	104	116	108	78	..
1930-31	76	82	93	82	65	..
1931-32	84	71	83	78	64	..
1932-33	79	69	74	74	66	..
1933-34	79	103	73	89	120	..
1934-35	88	77	79	81	74	..
1935-36(b)	94	99	87	95	107	..
1936-37	114	115	93	109	126	(a) 104
1937-38	98	98	102	99	95	100
1938-39	88	87	105	92	79	96
1939-40	100	105	105	104	102	105
1940-41	106	107	105	107	102	108
1941-42	111	108	107	110	102	(c) 113
1942-43	131	123	130	128	118	132
1943-44	(c) 149	128	147	(c) 139	118	(c) 146
1944-45	151	(c) 128	152	142	118	150
1945-46	(c) 174	133	159	157	118	169
1946-47	194	(c) 182	157	(c) 185	187	185
1947-48	267	(c) 263	183	247	301	230
1948-49	234	(c) 313	197	260	366	225
1949-50	(c) 272	396	228	316	483	(c) 261
1950-51	(c) 291	(c) 818	258	(c) 505	(c) 1,098	(c) 308
1951-52(c)	355	501	332	410	552	363
1952-53(c)	364	531	387	440	623	379
1953-54(d)	325	536	396	430	621	367

(a) Not available for previous years.
(d) Subject to revision.

(b) See letterpress preceding table.

(c) Revised.

2. *Indexes of Quantum of Farm Production.*—The indexes shown in the following table relate to gross output of farm products. They have been calculated by the fixed-base weighted aggregative method, the weights used being weighted average unit values obtained by dividing total gross value by total quantity produced for each commodity for the base period.

In the original published series, the period 1923-24 to 1927-28 was adopted as the base for weighting purposes. This series has been retained for years up to 1935-36, but the index-numbers have been re-computed to the base, average 1936-37 to 1938-39 = 100. For 1936-37 and later years, the original series was replaced in December, 1952 by a revised series in which average unit values for the period 1936-37 to 1938-39 are used as fixed weights. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All Farming Index, of quantities of crops fed to live-stock in Australia.

INDEXES OF QUANTUM OF FARM PRODUCTION, AUSTRALIA.

(Base : Average 1936-37 to 1938-39 = 100.)

Year.	Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1911-12	51	76	52	63	71	..
1912-13	64	70	50	64	62	..
1913-14	67	79	52	70	68	..
1914-15	30	77	50	57	62	..
1915-16	99	63	40	71	53	..
1916-17	80	61	49	65	54	..
1917-18	67	61	57	62	58	..
1918-19	53	69	56	61	73	..
1919-20	44	77	52	61	73	..
1920-21	87	62	57	69	62	..
1921-22	78	72	67	73	71	..
1922-23	74	76	61	73	71	..
1923-24	80	68	62	71	67	..
1924-25	95	80	76	84	81	..
1925-26	73	84	71	78	86	..
1926-27	90	89	68	86	95	..
1927-28	75	86	73	80	90	..
1928-29	91	92	75	89	99	..
1929-30	79	87	75	82	95	..
1930-31	111	84	82	93	92	..
1931-32	100	92	89	94	102	..
1932-33	110	99	94	102	106	..
1933-34	102	95	100	98	98	..
1934-35	88	98	104	96	102	..
1935-36(a)	91	95	99	94	98	..
1936-37	97	98	97	97	99	(b) 96
1937-38	107	103	101	104	103	105
1938-39	96	99	102	99	98	99
1939-40	120	107	108	107	115	105
1940-41	74	109	107	97	115	91
1941-42	104	112	104	104	118	99
1942-43	97	114	103	102	116	98
1943-44	86	115	100	100	119	94
1944-45	68	101	99	88	101	84
1945-46	100	86	103	92	92	92
1946-47	84	92	103	91	95	90
1947-48	122	98	107	109	101	111
1948-49	108	105	111	109	108	109
1949-50	117	112	111	115	115	115
1950-51	108	109	106	109	116	107
1951-52	103	105	97	103	112	100
1952-53(c)	121	126	108	121	131	118
1953-54(d)	129	124	108	124	128	122

(a) See letterpress preceding table.
(d) Subject to revision.

(b) Not available for previous years.

(c) Revised.

3. **Indexes of Quantum of Production, Exports and Consumption of Farm Products for Food Use.**—The indexes shown in the following table have been calculated by the fixed-base weighted aggregative method, the weights used being constant unit gross values of each farm product for the years 1936–37 to 1938–39. The items included comprise products in the form in which they are sold from farms in all cases except livestock sold for slaughter for meat which are included in terms of dressed carcass weight of meat. Quantity data relating to exports include exports of processed food in terms of farm product equivalent. The indexes of production relate basically to gross output of farm products for food use, including crops exported for stock-feeding overseas. Particulars are not available prior to 1946–47 except for the base years.

INDEXES OF QUANTUM OF PRODUCTION, EXPORTS AND CONSUMPTION OF FARM PRODUCTS FOR FOOD USE.

(Base : Average 1936–37 to 1938–39 = 100.)

Year.	Production.		Exports.		Consumption in Australia.	
	Total.	Per Head of Total Population.	Total.	Per Head of Total Population.	Total.	Per Head of Total Population.
1946–47 ..	90	82	73	66	107	98
1947–48 ..	113	102	113	102	110	99
1948–49 ..	110	97	112	99	111	98
1949–50 ..	116	99	116	99	114	98
1950–51 ..	109	90	104	86	120	99
1951–52 ..	100	81	70	57	119	96
1952–53 ..	119	93	113	89	119	94
1953–54(a) ..	122	94	101	78	124	96
1954–55(b) ..	120	91	112	85	126	95

(a) Subject to revision.

(b) Estimated.

§ 3. New Building.

1. **General.**—The statistics in this section relate to the operations of private contractors, Government authorities and owner-builders, with the exception of those relating to employment, which exclude the numbers of persons working on owner-built houses. In general, they relate to *new* building only, and data on alterations, additions, renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who engage in these operations. Figures for houses exclude converted military huts, flats and shop dwellings. Some houses built on farms are excluded but these do not affect the figures materially.

These statistics are available for each quarter from the September quarter, 1945.

The following definitions of terms used in this section are necessary for interpretation of the data presented :—

Owner-Builder. A person who is actually building his own house or is having his house built under his own direction without the services of a contractor who is responsible for the whole job.

Commenced. A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, it is probable that interpretations placed upon it by informants are not entirely uniform.

Completed. A building is regarded as having been completed when the builder has fulfilled the terms of the contract. As with commencements, the interpretations placed upon this definition may vary.

Under Construction. A building remaining uncompleted at the end of a period is regarded as being under construction, regardless of whether construction was actively proceeding on that particular date.

Employment. The figures of employment relate to persons actually working on new buildings on a specified day. They include working principals, employees, men working as, or for, sub-contractors and men temporarily laid off on account of weather. In addition, they include some employees engaged on alterations, additions, renovations or repairs to buildings *when these jobs are undertaken by a contractor who builds new buildings*. The figures exclude persons working on owner-built houses.

Values. All values shown exclude the value of land and represent the estimated value of buildings on completion.

2. Value of New Buildings.—(i) *Completed, 1953-54.* The following table shows the value of all new buildings completed in each State during 1953-54, according to the kind of building. It should be remembered that all values shown exclude the value of land and represent the estimated value of buildings on completion.

NEW BUILDINGS COMPLETED : VALUE, 1953-54.

(Including Estimated Value of Owner-built Houses.)

(£'000.)

Kind of Building.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Houses—								
Brick, Brick Veneer, Concrete and Stone...	23,043	21,307	2,379	14,145	8,639	2,355	1,077	72,945
Wood (Weatherboard, etc.) ..	17,396	31,963	13,371	4,738	1,828	4,181	1,023	74,500
Fibro Cement ..	28,418	3,061	2,117	1,448	9,392	191	6	44,633
Other ..	101	474	325	89	25	..	..	1,014
Total Houses ..	68,958	56,805	18,192	20,420	19,884	6,727	2,106	193,092
Flats ..	2,088	1,766	279	208	417	33	..	4,791
Shops with Dwellings ..	1,329	1,284	159	40	127	59	9	3,007
Shops without Dwellings	1,421	2,016	576	416	670	127	64	5,290
Hotels, Guest Houses, Boarding Houses, etc.	1,250	158	133	184	54	210	..	1,989
Factories ..	7,085	10,474	901	1,591	867	1,035	65	22,018
Other New Buildings ..	19,414	11,515	5,673	3,249	3,766	1,501	1,634	46,752
Total Other Buildings ..	32,587	27,213	7,721	5,688	5,901	2,965	1,772	83,847
Total New Buildings ..	101,545	84,018	25,913	26,108	25,785	9,692	3,878	276,939

(ii) *Commenced, Completed and Under Construction, 1946-47 to 1953-54.* The following table summarizes the values of all new buildings commenced, completed and under construction for each State for the years 1946-47 to 1953-54.

NEW BUILDINGS : VALUE.
(Including Estimated Value of Owner-built Houses.)
(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
COMMENCED.								
1946-47	a 30,458	20,422	9,319	4,848	3,036	2,718	749	a 71,550
1947-48	a 36,196	27,891	12,093	5,341	4,420	3,607	2,606	a 92,154
1948-49	a 45,154	37,935	13,192	7,599	5,825	5,371	1,792	a 116,868
1949-50	a 51,277	44,218	16,994	11,301	8,459	8,379	1,492	a 142,120
1950-51	a 79,750	74,750	21,082	17,827	14,186	10,336	2,439	a 220,370
1951-52	83,460	78,740	27,605	22,606	18,724	11,004	2,559	244,698
1952-53	71,005	60,244	25,680	25,819	20,919	6,611	2,788	213,066
1953-54	111,097	87,733	27,838	25,649	26,369	9,224	2,856	290,766

COMPLETED.								
1946-47	a 17,097	11,067	7,257	2,744	2,117	1,417	310	a 42,009
1947-48	a 24,305	17,891	10,390	4,080	3,328	2,279	509	a 62,782
1948-49	a 33,737	27,357	12,199	6,483	4,707	3,810	757	a 89,050
1949-50	a 40,920	34,684	13,953	9,074	5,352	5,342	1,462	a 110,787
1950-51	a 49,466	52,058	17,286	12,042	8,948	8,403	1,717	a 149,920
1951-52	76,207	68,615	25,339	18,123	14,426	10,511	2,723	215,944
1952-53	98,045	76,107	26,233	25,882	22,918	10,665	2,875	262,729
1953-54	101,543	84,018	25,913	26,108	25,785	9,692	3,878	276,939

UNDER CONSTRUCTION AT END OF YEAR.

1946-47	a 30,041	19,333	5,337	4,774	2,872	2,759	884	a 66,000
1947-48	a 44,461	30,623	7,232	6,170	4,452	4,146	3,013	a 100,097
1948-49	a 59,172	44,267	8,479	7,735	6,416	5,872	4,026	a 135,967
1949-50	a 75,006	56,096	11,805	10,519	10,022	8,989	4,396	a 176,833
1950-51	a 102,708	85,058	15,653	17,272	15,942	12,178	5,302	a 254,113
1951-52	a 125,674	102,670	18,728	23,813	22,302	13,770	6,208	a 313,165
1952-53	a 105,261	94,017	17,838	25,253	23,189	10,494	7,161	a 283,213
1953-54	120,460	101,433	19,699	23,730	25,701	11,782	7,249	310,054

(a) Partly estimated.

3. **Numbers of New Houses.**—(i) *Completed, 1953-54.* The following table shows the numbers of new houses completed in each State during 1953-54, according to the material of their outer walls.

NEW HOUSES COMPLETED : NUMBER, 1953-54.
(Including Owner-built Houses.)

Material of Outer Walls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Brick, Brick Veneer, Concrete and Stone ..	6,068	6,232	802	5,226	2,615	706	245	21,894
Wood (Weatherboard, etc.)	7,017	13,027	6,684	1,548	675	1,805	305	31,061
Fibro Cement	13,386	1,662	1,339	708	4,326	119	2	21,542
Other	42	180	136	40	11	..	..	409
Tota	26,513	21,101	8,961	7,522	7,627	2,630	552	74,906

(ii) *Commenced, Completed and Under Construction, 1946-47 to 1953-54.* The next table provides a summary, by States, of the numbers of new houses commenced, completed and under construction for the years 1946-47 to 1953-54.

NEW HOUSES : NUMBER.
(Including Owner-built Houses.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
COMMENCED.								
1946-47	17,720	12,981	8,925	3,269	2,405	1,642	323	47,265
1947-48	19,807	15,478	9,528	3,580	3,075	2,062	393	53,923
1948-49	21,291	16,487	9,361	4,561	3,843	2,849	534	58,926
1949-50	22,055	19,643	10,009	6,109	5,031	3,664	389	66,900
1950-51	25,162	26,949	10,698	7,966	6,970	4,122	877	82,744
1951-52	24,364	23,506	11,995	8,570	7,730	3,584	312	80,001
1952-53	21,030	21,254	9,381	7,967	7,012	2,285	528	64,457
1953-54	28,395	20,915	8,513	6,792	7,608	2,665	355	75,243
COMPLETED.								
1946-47	12,187	7,436	7,746	2,227	1,792	1,070	149	32,607
1947-48	14,858	11,846	9,204	3,009	2,771	1,544	271	43,503
1948-49	17,864	14,278	9,354	3,989	3,444	2,287	323	51,339
1949-50	18,766	15,611	9,447	4,904	3,509	2,852	404	55,493
1950-51	19,771	21,161	10,275	6,725	5,160	3,914	574	67,580
1951-52	23,351	23,952	11,803	7,711	6,577	3,999	584	77,976
1952-53	24,890	21,033	10,598	8,940	7,965	3,314	590	77,330
1953-54	26,513	21,101	8,961	7,522	7,627	2,630	552	74,906
UNDER CONSTRUCTION AT END OF YEAR.								
1946-47	14,737	11,680	3,627	2,654	1,521	1,557	368	36,144
1947-48	19,686	15,312	3,951	3,203	1,841	2,065	491	46,549
1948-49	23,113	17,521	3,958	3,940	2,439	2,575	696	54,242
1949-50	26,402	21,553	4,520	5,241	3,957	3,357	678	65,708
1950-51	31,793	27,341	4,943	6,529	3,764	3,558	801	80,909
1951-52	32,806	26,896	5,135	7,395	6,917	3,143	708	83,000
1952-53	28,946	22,053	3,918	6,464	5,951	2,114	646	70,092
1953-54	30,828	21,865	3,470	5,750	5,932	2,149	449	70,443

(a) Partly estimated.

4. Numbers of New Flats.—The figures in the foregoing two tables do not include particulars of new flats. The summary below shows the numbers of new flats commenced, completed and under construction in Australia for the years 1947-48 to 1953-54, together with State details for 1953-54. It should be noted : (i) that the figures are additional to the numbers of houses shown in other tables, (ii) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, and (iii) that new flats only are included, i.e., the conversions of old buildings into flats are omitted.

NEW FLATS : NUMBER.
(Individual Flats.)

State or Territory.	Commenced during Period.	Completed during Period.	Under Construction at end of Period.
1953-54—			
New South Wales	801	1,011	678
Victoria	746	689	771
Queensland	204	156	123
South Australia	158	99	115
Western Australia	451	212	474
Tasmania	58	13	46
Australian Capital Territory	28	..	28
Total	2,446	2,180	2,235
Total, 1952-53	1,055	2,627	1,979
„ 1951-52	1,811	2,006	3,426
„ 1950-51	2,096	1,684	3,621
„ 1949-50	2,292	1,494	3,210
„ 1948-49	2,021	1,345	2,416
„ 1947-48	1,581	768	1,734

5. Persons engaged in New Building.—The following table shows, by States, the number of persons (including contractors and sub-contractors actually working on jobs) engaged on jobs carried out by builders of new buildings at 30th June of the years 1948 to 1954. Particulars for 30th June, 1954 show the numbers of tradesmen, contractors, sub-contractors and wage earners engaged. For an explanation of the field of employment covered see para. 1 of this section.

PERSONS ENGAGED IN NEW BUILDING.

(Excluding Persons working on Owner-built Houses.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
30th June, 1954—								
Carpenters	14,638	12,180	8,534	3,019	3,473	2,333	472	44,749
Bricklayers	3,369	2,474	815	1,567	8	252	137	9,432
Painters	3,075	2,346	1,489	930	718	349	139	9,046
Electricians	1,802	934	833	340	294	151	44	4,398
Plumbers	3,259	1,905	1,214	737	648	235	69	8,067
Builders' Labourers ..	6,204	5,488	2,963	1,900	1,794	1,019	305	19,673
Other	4,253	3,149	1,421	1,545	1,400	487	175	12,430
Contractors(a) ..	3,690	2,353	2,361	762	559	437	61	10,223
Sub-contractors(a) ..	4,767	3,486	1,477	1,352	916	404	91	12,493
Wage earners ..	28,143	22,637	13,431	7,924	7,770	3,985	1,189	85,079
Total	36,600	28,476	17,269	10,038	9,245	4,826	1,341	107,795
Total 30th June, 1953 ..	31,790	26,564	16,074	9,371	8,820	5,180	1,812	99,611
" " " 1952 ..	39,779	31,653	17,037	10,371	8,654	5,267	2,229	114,990
" " " 1951 ..	45,470	34,420	16,623	10,168	7,985	6,700	2,075	123,441
" " " 1950 ..	42,393	31,684	15,643	8,743	6,908	5,700	2,022	113,093
" " " 1949 ..	41,982	28,442	14,030	7,727	6,220	4,920	1,389	104,710
" " " 1948 ..	41,131	26,728	12,766	7,120	5,591	3,798	918	98,052

(a) Actually working on jobs.

§ 4. Consumption of Foodstuffs and Beverages.

1. Quantities Consumed.—Previous issues of the Official Year Book up to No. 36 included a statistical survey of the movement in the consumption in Australia, in total and per head of population, of a selected number of commodities over a period of years up to 1940-41 (see Official Year Book No. 36, pp. 1098-1100). In issue No. 37 these long-term comparisons were replaced by more detailed information covering consumption of the principal foodstuffs and beverages in annual periods since 1944 in comparison with average annual consumption during the three years ended 1938-39. In this issue the annual periods extend from 1949-50 to 1953-54.

The estimates of total consumption and consumption per head of population in Australia in the two tables following have been compiled by deducting net exports from production and allowing for recorded movements in stocks of the respective commodities. While the estimates may generally be accepted as reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of poultry, game and fish (fresh and shell) and the quantities of visible oils and other fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc., which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. The absence of particulars of stocks for certain commodities has resulted in some inaccuracies in the estimates of annual consumption. Consumption of foodstuffs is measured in general "at producer" level. As a result no allowance is made for wastage before the foodstuffs are consumed, and except in a few special cases no adjustment has been made for changes in stocks held by wholesalers and retailers. In recent years, wastage of foodstuffs has possibly been less than hitherto because of more efficient distribution and storage methods. In addition, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by increased "back-yard" production. Neither of these factors has been taken into account, and it is possible that, as a result, some understatement has occurred in the following consumption estimates. Estimates have been made in certain cases to allow for changes in wholesalers' and retailers' stocks. Where no allowance is made it is considered unlikely that these stocks would make any appreciable difference to consumption estimates. Allowance has not been made for the purchase of foodstuffs for

despatch overseas as gifts in bulk and by parcel post. These deficiencies, however, do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head of population shown in the second table following have been checked, wherever possible, with data from other sources which confirm the reliability of the methods used. The data were obtained principally from the Food Consumption Survey conducted in 1944 by the Nutrition Committee of the National Health and Medical Research Council.

There has been a general upward movement in the consumption per head of population of most foodstuffs and beverages in Australia from the levels of consumption during the three years immediately preceding the 1939-45 War, but there are some notable exceptions, namely, beef, mutton, pig-meats, bacon and hams, eggs and cream.

More detailed information on the consumption of foodstuffs and beverages is contained in the Statistical Bulletin: *Food Production and the Consumption of Foodstuffs and Nutrients in Australia*, issued by this Bureau.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54. (a)
Milk and Milk Products—							
Fluid Whole Milk	Mil. gals.	161	241	236	240	242	245
Fresh Cream	'ooo tons	19.7	3.5	5.9	7.6	7.8	8.0
Condensed Milk (Sweetened and Unsweetened)	"	9.9	16.9	15.8	21.4	13.1	15.4
Concentrated Whole Milk	"	3.4	17.3	18.3	16.8	14.5	17.7
Powdered Milk—							
Full Cream	"	8.1	{ 11.7	9.9	10.8	9.7	10.1
Skim	"						
Infants' and Invalids' Foods (including Malted Milk)	"	3.0	4.3	6.8	6.6	5.7	7.5
Cheese	"	13.4	22.7	24.2	22.8	23.0	26.1
Total (in terms of Milk Solids)	"	120.5	176.1	176.7	170.8	176.4	183.2
Meat—							
Beef (bone-in weight)	"	442.0	446.9	488.2	452.8	466.7	478.4
Mutton (bone-in weight)	"	183.4	164.2	142.5	155.6	193.0	204.4
Lamb (bone-in weight)	"	46.1	98.3	91.2	91.6	112.4	106.8
Pork (bone-in weight)	"	31.8	26.0	25.2	27.6	22.7	30.2
Offal	"	25.7	34.4	32.5	34.7	40.4	41.7
Canned Meat (canned weight)	"	(b)	12.9	11.8	9.5	7.8	7.9
Bacon and Ham (cured weight)	"	31.4	34.6	30.8	27.5	28.3	28.0
Total (in terms of carcass weight)	"	776.1	836.8	840.8	817.9	888.3	908.5
Poultry, Game and Fish—							
Poultry and Rabbits (carcass weight)	"	29.8	54.4	56.2	57.7	59.1	60.3
Fish(e)—							
Fresh	"	19.7	20.2	18.6	21.0	20.2	21.9
Cured (including Smoked and Salted)	"	(d)	(d)	3.7	3.5	3.3	3.2
Crustaceans and Molluscs	"	2.1	3.0	2.7	2.2	2.6	3.2
Canned—Australian origin	"	12.4	10.1	{ 2.9	2.7	2.7	3.1
Imported	"						
Total(e)	"	51.5	64.7	70.2	72.7	65.4	73.0
Eggs and Egg Products—							
Shell Eggs	"	78.7	83.9	84.7	82.4	80.4	82.8
Liquid Whole Egg(e)	"	2.9	8.9	7.9	8.2	6.4	5.4
Egg Powder(e)	"	..	0.2	0.2	0.3	0.2	0.2
Total (Shell Egg equivalent)	"	81.6	93.0	92.8	90.9	87.0	88.4
Fats and Oils—							
Butter	'ooo tons	101.0	90.8	114.6	118.9	114.5	122.2
Margarine—							
Table	"	2.8	2.6	1.7	4.7	6.2	8.5
Other	"	12.2	22.7	22.5	24.9	21.8	22.2
Lard	"	5.2	4.0	3.8	3.9	3.9	3.9
Vegetable Oils and Other Fats	"	14.4	14.4	14.8	15.2	15.6	15.9
Total (Fat Content)	"	115.5	114.9	133.7	142.4	137.8	146.7

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA—*continued*.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54. (a)
Sugar and Syrups—							
Refined Sugar—							
As Sugar	'000 tons	216.5	242.3	251.9	244.4	250.0	254.7
In manufactured products ..	"	110.1	167.7	194.1	203.2	174.2	187.9
Honey, Glucose and Syrups ..	"	21.9	24.6	28.9	21.4	21.7	25.3
Total (Sugar Content) ..	"	343.9	429.4	468.9	464.5	441.5	462.7
Potatoes—							
White	"	318.5	391.8	341.7	412.9	376.1	485.4
Sweet	"	7.4	5.0	5.2	5.3	5.5	5.6
Total	"	325.9	396.8	346.9	418.2	381.6	491.0
Pulse and Nuts—							
Dried Pulse	"	4.5	12.8	11.8	12.4	8.9	11.3
Peanuts (weight without shell)	"	2.8	5.5	5.8	5.5	5.3	7.7
Edible Tree Nuts (weight without shell) ..	"	2.6	6.8	8.6	5.1	5.6	6.8
Cocoa (Raw Beans) ..	"	6.3	13.6	12.3	11.2	9.6	9.4
Total	"	16.2	38.7	38.5	34.2	29.4	35.2
Tomatoes and Fruit—							
Tomatoes (g)	"	(g) 48.0	94.4	83.5	82.7	84.1	73.1
Citrus Fruit (f)	"	97.8	121.8	149.3	117.5	113.7	150.7
Other Fresh Fruit	"	288.2	279.1	281.9	286.8	253.5	326.0
Jams	"	35.1	42.1	41.7	37.8	33.7	35.0
Dried Fruit	"	24.8	30.3	35.1	31.6	28.0	28.6
Canned Fruit	"	31.9	43.8	44.7	54.6	47.9	46.3
Total (Fresh Fruit equivalent)	"	580.3	684.5	724.9	691.0	630.6	734.4
Vegetables—							
Leafy, Green and Yellow Vegetables	"	(h)	163.6	182.6	175.4	173.0	166.8
Other Fresh Vegetables	"	(h)	255.7	260.4	273.5	249.5	235.3
Canned Vegetables	"	(h)	15.9	18.3	20.3	13.1	18.3
Total	"	(h)	435.2	461.3	469.2	435.6	420.4
Grain Products—							
Flour—							
White	"	} 574.0	{ 675.3	694.8	735.4	721.4	723.9
Wheatmeal for baking	"						
Breakfast Foods (i)	"						
Rice (Milled)	"						
Taploca, Sago, etc.	"						
Pearl Barley	"	3.0	2.6	2.3	2.4	2.2	2.1
Barley Meal and Polished Wheat (Rice substitute) ..	"	..	1.0	1.1	0.8	0.8	0.8
Edible Starch (Cornflour) ..	"	4.3	5.7	5.7	3.5	3.0	4.0
Total	"	629.7	772.2	798.1	841.2	825.3	828.6
Beverages—							
Tea	"	21.1	24.3	27.8	24.8	25.3	27.0
Coffee	"	2.0	3.7	2.7	3.2	2.6	4.3
Beer	Mil. gals.	80.1	151.5	169.5	181.0	190.7	205.2
Wine	"	4.2	12.1	13.4	15.3	11.9	12.1

(a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes invalid and health foods, semolina and wheat germ prior to 1951-52.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54. (a)
Milk and Milk Products—							
Fluid Whole Milk	Gallon	23.4	29.9	28.4	28.1	27.7	27.5
Fresh Cream	lb.	6.4	1.0	2.4	2.0	2.0	2.0
Condensed Milk (Sweetened and Unsweetened) ..	"	3.2	4.8	4.2	5.6	3.4	3.8
Concentrated Whole Milk ..	"	1.1	4.8	4.9	4.4	3.7	4.4
Powdered Milk—							
Full Cream	"	2.6	{ 3.3	2.7	2.8	2.5	2.5
Skim	"						
Infants' and Invalids' Foods (including Malted Milk) ..	"	1.0	1.2	1.8	1.7	1.4	1.9
Cheese	"	4.4	6.3	6.5	6.0	5.9	6.6
Total (in terms of Milk Solids)	"	39.3	48.9	47.8	47.2	45.2	45.9
Meat—							
Beef (bone-in weight) ..	"	144.1	124.3	131.6	118.9	119.7	120.4
Mutton (bone-in weight) ..	"	59.8	45.7	38.4	41.0	49.5	51.4
Lamb (bone-in weight) ..	"	15.0	27.4	24.6	24.0	28.8	26.9
Pork (bone-in weight) ..	"	10.4	7.2	6.8	7.3	5.8	7.6
Offal	"	8.4	9.6	8.8	9.1	10.3	10.5
Canned Meat (canned weight)	"	(b)	3.6	3.2	2.5	2.0	2.0
Bacon and Ham (cured weight)	"	10.2	9.6	8.3	7.2	7.3	7.0
Total (in terms of carcass weight)	"	253.0	232.9	226.6	214.8	227.7	228.6
Poultry, Game and Fish—							
Poultry and Rabbits (carcass weight)	"	9.7	15.1	15.1	15.1	15.1	15.1
Fish (c)—							
Fresh	"	6.4	5.6	5.0	5.5	5.2	5.5
Cured (including Smoked and Salted)	"	(d)	(d)	1.0	0.9	0.9	0.8
Crustaceans and Molluscs ..	"	0.7	1.0	0.7	0.6	0.7	0.8
Canned—							
Australian origin	"	4.1	2.8	{ 0.8	0.7	0.7	0.8
Imported	"						
Total (c)	"	16.8	18.1	18.9	19.0	16.8	18.3
Eggs and Egg Products—							
Shell Eggs	"	25.7	23.3	22.9	21.6	20.6	20.8
Liquid Whole Egg (e)	"	0.9	2.5	2.1	2.2	1.6	1.4
Egg Powder (e)	"	..	0.1	0.1	0.1	0.1	0.1
Total (Shell Egg equivalent)	{ No.	26.6 243	25.9 236	25.1 229	23.9 219	22.3 204	22.3 203
Fats and Oils—							
Butter	lb.	32.9	25.3	30.9	31.2	29.4	30.7
Margarine—							
Table	"	0.9	0.7	0.5	1.2	1.6	2.1
Other	"	4.0	6.3	6.1	6.5	5.6	5.6
Lard	"	1.7	1.2	1.0	1.0	1.0	1.0
Vegetable Oils and other Fats	"	4.7	4.0	4.0	4.0	4.0	4.0
Total (Fat Content)	"	37.6	32.0	36.0	37.3	35.3	36.9
Sugar and Syrups—							
Refined Sugar—							
As Sugar	"	70.6	67.4	67.9	64.2	64.1	64.1
In manufactured products ..	"	35.9	46.7	52.3	53.4	44.7	47.3
Honey, Glucose and Syrups ..	"	7.1	6.8	7.7	5.6	5.6	6.4
Total (Sugar Content)	"	112.0	119.5	126.2	122.0	113.3	116.4

See next page for notes.

**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE
FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION:
AUSTRALIA—continued.**

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53.	1953-54. (a)
Potatoes—							
White	lb.	103.8	109.0	92.1	108.3	96.4	122.2
Sweet	"	2.4	1.4	1.4	1.4	1.4	1.4
Total	"	106.2	110.4	93.5	109.7	97.8	123.6
Pulse and Nuts—							
Dried Pulse	"	1.5	3.6	3.2	3.3	2.3	2.8
Peanuts (weight without shell)	"	0.9	1.5	1.6	1.4	1.3	1.9
Edible Tree Nuts (weight without shell)	"	0.8	1.9	2.3	1.3	1.4	1.7
Cocoa (Raw Beans) ..	"	2.1	3.8	3.3	2.9	2.5	2.4
Total	"	5.3	10.8	10.4	8.9	7.5	8.8
Tomatoes and Fruit—							
Tomatoes (f)	"	(g) 15.7	26.3	22.5	21.7	21.6	18.4
Citrus Fruit (f)	"	31.9	33.9	40.2	30.8	29.2	37.9
Other Fresh Fruit	"	94.0	77.7	76.0	75.3	65.0	82.0
Jams	"	11.4	11.7	11.2	9.9	8.6	8.8
Dried Fruit	"	8.1	8.4	9.5	8.3	7.1	7.2
Canned Fruit	"	10.7	12.2	12.1	14.4	12.3	11.7
Total (Fresh Fruit equivalent)	"	189.2	190.6	195.6	181.5	161.7	184.0
Vegetables—							
Leafy, Green and Yellow Vegetables	"	(h)	45.5	49.2	46.1	44.3	42.0
Other Fresh Vegetables	"	(h)	71.2	70.1	71.8	63.9	59.3
Canned Vegetables	"	(h)	4.4	4.9	5.3	3.4	4.6
Total	"	(h)	121.1	124.2	123.2	111.6	105.9
Grain Products—							
Flour—							
White	"	} 187.1	{ 187.9	187.3	192.9	184.7	181.9
Wheatmeal for baking	"			9.1	8.6	8.0	7.9
Breakfast Foods (i)	"			11.5	11.4	13.2	12.9
Rice (milled)	"			1.1	4.0	3.4	3.4
Tapioca, Sago, etc.	"			0.8	0.6	0.5	0.4
Pearl Barley	"	1.0	0.7	0.6	0.6	0.6	0.5
Barley Meal and Polished Wheat (Rice substitute)	"	..	0.3	0.3	0.2	0.2	0.2
Edible Starch (Cornflour)	"	1.4	1.6	1.5	0.9	0.8	1.0
Total	"	205.3	214.9	215.0	220.6	211.4	208.2
Beverages—							
Tea	"	6.9	6.8	7.5	6.5	6.5	6.8
Coffee	"	0.6	1.0	0.7	0.8	0.7	1.1
Beer	Gallon	11.7	18.8	20.4	21.2	21.8	23.0
Wine	"	0.6	1.5	1.6	1.8	1.4	1.4

(a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes invalid and health foods, semolina and wheat germ prior to 1951-52.

2. **Level of Nutrient Intake.**—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1949-50 in comparison with the annual average for the three years 1936-37 to 1938-39. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of quantity consumption per head of population shown in the preceding table.

**ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION :
AUSTRALIA.
(Per Head per Day.)**

Nutrient.	Unit.	Average 1936-37 to 1938-39.	1949-50.	1950-51.	1951-52.	1952-53	1953-54. (a)
Calories ..	No.	3,117	3,201	3,269	3,240	3,256	3,330
Protein—							
Animal ..	gm.	58.7	60.8	59.9	57.6	56.4	57.4
Vegetable ..	"	30.9	33.7	33.5	34.2	33.0	33.5
Total ..	"	89.6	94.5	93.4	91.8	89.4	90.9
Fat ..	"	133.5	125.1	128.0	125.6	129.4	132.7
Carbohydrate ..	"	377.4	401.9	411.6	414.5	421.5	424.5
Calcium ..	mgm.	642	804	790	784	757	778
Iron ..	"	15.4	15.5	15.3	14.9	14.0	14.2
Vitamin A ..	I.U.	8,457	(b)	8,161	8,083	7,192	7,196
Ascorbic Acid ..	mgm.	85.8	88.1	87.0	83.2	80.3	89.5
Thiamin ..	"	1.4	1.4	1.4	1.4	1.3	1.3
Riboflavin ..	"	1.7	1.9	1.9	2.0	1.7	1.7
Niacin ..	"	18.7	18.3	18.0	19.9	18.1	18.7

(a) Subject to revision.

(b) Not available.

NOTE.—For the years 1952-53 and 1953-54 new conversion factors have been used based on factors contained in the "*Table of Composition of Australian Foods*" (Anita Osmond and Winifred Wilson, Canberra, 1954), but the comparison with previous years has not been significantly affected. Vitamin A is on a revised basis for all years shown.

§ 5. Patents, Trade Marks and Designs.

1. **Patents.**—(i) *General.* Patents for inventions are granted under the Patents Act 1952-1954, which extends to the Commonwealth of Australia and the Territories of Norfolk Island, Papua and New Guinea. The Act is administered by a Commissioner of Patents. The principal fees payable up to and including the grant of a patent amount to £17 10s. Renewal fees are payable as follows:—£5 before the expiration of the fourth year, and an amount progressively increasing by £1 before the expiration of each succeeding year up to the final fee of £16, payable before the expiration of the fifteenth year. An extension of time for six months for payment of a renewal fee may be obtained. Patents granted under the repealed Acts (Patents Act 1903-1950) are subject to the renewal fees under those Acts.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed, the number of letters patent sealed, and revenue of the Commonwealth Patent Office during the years 1939 and 1949 to 1953 are shown in the following table.

PATENTS : AUSTRALIA.

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
Applications ..	5,740	6,724	7,051	7,135	8,073	8,917
Applications accompanied by provisional specifications ..	3,161	3,174	3,359	2,894	3,406	3,973
Letters patent sealed ..	3,141	3,550	3,115	4,291	5,248	5,181
Revenue—						
Fees collected under Patents Act £	45,581	85,972	95,089	107,899	121,927	123,670
Receipts from publica- tions £	1,828	1,826	1,260	1,889	4,361	6,622
Total Revenue ..	£ 47,409	£ 87,798	£ 96,349	£ 109,788	£ 126,288	£ 130,292

2. **Trade Marks and Designs.**—(i) *Trade Marks.* Under the Trade Marks Act 1905-1948 the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1948. Special provisions for the registration of a "Commonwealth Trade Mark" are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable. The Act of 1948 provides for the registration of users of trade marks, and also for assignment of trade marks with or without the goodwill of the business concerned.

(ii) *Designs.* Under the Designs Act 1906-1950 the Commissioner of Patents is also Registrar of Designs.

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered, together with the revenue of the Trade Marks and Designs Office, during the years 1939 and 1949 to 1953.

TRADE MARKS AND DESIGNS : AUSTRALIA.

Particulars.		1939.	1949.	1950	1951.	1952.	1953.
Trade Marks—							
Received		1,992	3,732	3,796	3,583	3,988	4,305
Registered		1,580	1,165	1,003	2,649	4,044	1,469
Designs—							
Received		865	948	1,187	773	1,186	1,504
Registered		736	962	304	579	1,388	802
Fees collected under Commonwealth Acts—							
Trade Marks ..	£	15,951	20,673	24,472	27,955	47,365	41,053
Designs ..	£	1,082	1,386	1,371	1,521	2,165	4,060
Publications ..	£	19	18	10	4	8	..

No fees in respect of trade marks have been collected under State Acts since 1922.

§ 6. Copyright.

1. **Legislation.**—Copyright is regulated by the Commonwealth Copyright Act 1912-1950 wherein, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States of America, under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions contained therein.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright received and registered, and the revenue obtained for the years 1939 and 1949 to 1953.

COPYRIGHT : AUSTRALIA.

Particulars.	1939.	1949.	1950.	1951.	1952.	1953.
Applications received—						
Literary	1,438	1,380	1,476	1,399	1,434	1,134
Artistic	53	36	57	38	34	21
International	3	..	..	..	..	..
Applications registered—						
Literary	1,359	1,229	1,372	766	1,337	1,411
Artistic	38	28	68	..	36	15
International	1	..	..	..	..	..
Revenue £	411	339	373	368	577	1,156

§ 7. Australian Shipbuilding Board.

1. **Constitution.**—Previous reference to the constitution of the Australian Shipbuilding Board appeared in Official Year Book No. 37, page 1170. Originally established in 1941 under National Security Regulations, the Board has been reconstituted a number of times since its inception and in 1948 was constituted on a permanent basis under the Supply and Development Act. At present it operates under the control of the Minister for Shipping and Transport. In order to link the activities of the Board more closely with the Department of Shipping and Transport, the constitution of the Board was altered in April, 1952, to provide for representation by senior departmental officers. The present membership of the Board consists of a Chairman who is the General Manager, a Deputy Chairman, a Finance Member and two other members, one of whom represents the Naval Board.

2. **Functions.**—The functions of the Board relate to merchant shipping. Originally, they were to (i) report on the capacity of the industry; (ii) control building, repair and maintenance of ships and shipyards, etc.; (iii) arrange construction of vessels and yards, etc.; (iv) order and direct repair and docking of vessels; and (v) arrange supply of engines and other equipment for ships.

The first actions of the Board were to survey existing shipbuilding potentials and decide upon a construction programme. (*See* Official Year Book No. 37, p. 1170).

The Board also established facilities for the manufacture of marine engines at Rocklea in Queensland, and at Port Melbourne. The Rocklea plant, which produced engines for "A", "B" and "D" class freighters, was closed in 1949, but the Port Melbourne works are still in operation and in November, 1954, had constructed a total of thirteen steam and oil engines and had a further seven (all Doxford diesels) under construction.

Since its establishment the Board has become the ordering authority for all vessels to be constructed on behalf of the Commonwealth Government and private shipowners and has also undertaken the preparation of plans and drawings for the various yards, as the level of ship construction in Australia does not warrant each yard employing specialists in naval architecture. In this way the Board has increased the efficiency of the industry as a whole and has assisted in the development of individual yards.

The Board is now responsible for—(i) the design of vessels; (ii) calling of tenders and placement of orders; (iii) co-ordination of the Board's supplies to shipbuilders, e.g.,

machinery and certain equipment ; (iv) supervision of construction ; (v) acceptance of vessels after sea trials ; and (vi) administration associated with ship repairs, marine engines, spare parts, etc.

To bring the cost to purchasers of Australian tonnage more into line with the cost of comparable vessels built in the United Kingdom the Board is empowered to sell new Australian-built tonnage to private owners at prices up to 25 per cent. below their total construction cost. In order to take advantage of this, private shipowners are required to place their orders for vessels through the Board, which has thus become the ordering authority for all vessels built in Australian yards on which a subsidy is paid.

In September, 1954, the Tariff Board commenced an inquiry into the level and method of assistance which should be given to the Australian Shipbuilding Industry, with evidence being heard in Melbourne, Sydney and Brisbane. The findings of the Board are not expected to be made public until some time in 1955.

3. Construction Programme.—At 1st November, 1954 the Board had 19 vessels under construction or on order in Australian shipbuilding yards. These comprised : 5 "M.B.C." class, 10,000 tons d.w. motor bulk carriers ; 3 "S.B.C." class, 10,000 tons d.w. steam bulk carriers ; 3 "B.H.T." class, 10,000 tons d.w. steam iron-ore carriers ; 2 "M.C." class, 7,000 tons d.w. motor colliers ; 2 "S.C.O.4" class, 4,000 tons d.w. steam colliers ; 1 "B" class, 6,000 tons d.w. freighter ; 1 "P.C.V." class, 3,000 tons d.w. passenger/cargo vessel ; and 2 "M.G.C." class, 2,000 tons d.w. motor bulk grain carriers. At the same date, 45 vessels exceeding 300 gross tons had been built to the order of the Board, as follows :—13 "A" class, 9,000 tons d.w. freighters ; 1 "B.H.T." class, 10,000 tons d.w. steam iron-ore carriers ; 1 "M.C." class, 7,000 tons d.w. motor collier ; 10 "B" class, 6,000 tons d.w. freighters ; 9 "D" class, 3,000 tons d.w. freighters ; 5 "E" class, 700 tons d.w. freighters ; 2 "U/S" class, 3,000 tons d.w. freighters ; 2 "D/A" class, 3,000 tons d.w. freighters ; 1 "M/M" class, 2,000 tons d.w. motor collier ; and 1 passenger/cargo vessel of 3,000 tons d.w.

Since its inception, the Board has been responsible also for the construction of 24 wooden vessels of 300 tons gross, together with a 1,000 ton floating dock. It was also responsible for the foundation of the small craft construction during the 1939–45 War. This function was, however, later transferred to the Small Craft Construction Directorate, Department of Supply.

§ 8. War Service Homes Division.

The provision of War Service Homes is a function of the Department of Social Services, and the administration of the War Service Homes Act is under the control of the Director of War Service Homes.

The War Service Homes Act 1918–1954 is a measure for the provision of homes for Australian ex-servicemen who served during the 1914–18 War or during any war in which His Majesty became engaged on or after 3rd September, 1939, including, subject to the statutory provisions of the Act, service in Korea or Malaya. Provision is also made for assistance to the female dependants of Australian ex-servicemen and other classes of eligible persons as defined in the Act. Assistance may be granted to an eligible person and the wife or husband of that person, as the case may be, as joint tenants.

The maximum amount of loan or advance which may be granted under the Act is £2,750. Periods of repayment may be approved up to 45 years. In the case of a widow or widowed mother of an Australian ex-serviceman the period may be extended to a maximum of 50 years.

The War Service Homes Division does not provide homes for occupation on a purely tenancy basis.

Since the inception of operations under the War Service Homes Act (figures in parentheses indicate cases where eligibility has been established and assistance granted as a result of service during the 1939-45 War or in Korea or Malaya) 132,853 (83,755) applications have been approved; 49,370 (26,875) homes have either been built, or assistance to build them has been given; 52,350 (37,530) homes have been purchased; and 14,004 (10,607) mortgages have been discharged. The total number of homes provided under the War Service Homes Act to 30th June, 1954 was 115,724, including 75,012 to persons who served during the 1939-45 War or in Korea or Malaya.

In addition, the Division had approved 10,888 transfers and resales, of which 2,675 were in respect of persons whose eligibility had been established as a result of service during 1939-45 or in Korea or Malaya.

During 1953-54, 12,700 (12,064) applications were approved; 6,290 (6,047) homes were either built or assistance to build them was given; 5,302 (5,041) homes were purchased; and 807 (785) mortgages were discharged. The total number of homes provided during the financial year 1953-54 was 12,399 (11,873). Transfers and resales approved numbered 861 (727).

At 30th June, 1954, 3,371 homes, including 709 group projects, were in course of construction; 1,132 contracts, of which 328 were for group homes, had been let but work had not started; and 1,175 tenders, including 194 for group homes, had been called but not finally dealt with. The majority of these homes are being provided for persons who served during the 1939-45 War.

The total capital expenditure from inception to 30th June, 1954, was £169,333,184, including £26,874,642 for 1953-54. Receipts from inception to 30th June, 1954 amounted to £72,214,704, including £9,399,795 during 1953-54. Of the total receipts, £37,468,745 has been paid to the National Debt Sinking Fund, including £5,326,025 for 1953-54.

At 30th June, 1954 the total amount of insurances in force, including cover notes, amounted to £197,746,557. From 1st July, 1953 to 30th June, 1954 the premium income amounted to £117,751, and expenditure from the War Service Homes Insurance Trust Account to £102,448.

At 30th June, 1954 arrears of instalments outstanding amounted to £273,509, or 0.40 per cent. of the total instalments due.

§ 9. Commonwealth Scientific and Industrial Research Organization.

1. **General.**—By the Science and Industry Research Act 1919, the previously existing Commonwealth Council for Scientific and Industrial Research was reorganized under the title of the Commonwealth Scientific and Industrial Research Organization. An account of the organization and work of the former Council, and of the earlier Commonwealth Institute of Science and Industry from which the Council was formed, was given in earlier issues of the Official Year Book. (See No. 14, p. 1061 and No. 37, p. 1183).

2. **Science and Industry Research Act 1949.**—This Act provides for—

- (a) an Executive of the Organization consisting of five members to be appointed by the Governor-General, at least three of whom shall be persons possessing scientific qualifications; and
- (b) an Advisory Council of the Organization, consisting of the members of the Executive, the Chairman of each State Committee constituted under the Act, and such other members as the Advisory Council, with the consent of the Minister, co-opt by reason of their scientific knowledge.

The powers and functions of the Organization are as follows :—(a) To initiate and carry out scientific researches in connexion with primary or secondary industries in Australia ; (b) to train research workers and to establish industrial research studentships and fellowships ; (c) to make grants in aid of pure scientific research ; (d) to establish and make grants to industrial research associations in any industry ; (e) to test and standardize scientific apparatus and instruments ; (f) to collect and disseminate scientific and technical information ; (g) to publish scientific and technical reports and periodicals ; and (h) to act as a means of liaison between Australia and other countries in matters of scientific research.

3. **Science and Industry Endowment Act 1926-1949.**—Under this Act, the Government established a fund of £100,000, the income from which is used to provide assistance (a) to persons engaged in scientific research ; and (b) in the training of students in scientific research. Provision is made for gifts or bequests to the fund, which is controlled by a trust consisting of the Executive of the Organization. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Organization.**—The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Undesirable centralization has been avoided mainly in two ways. In the first place, the policy has been followed of establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found. Secondly, the Act provides for the establishment of a State Committee in each of the six States. These Committees are widely representative of scientific and industrial interests, and advise the Executive or the Advisory Council on general matters and on particular questions of investigation and research.

For about twelve years after its establishment, the work of the previous Council was devoted mainly to the solution of problems affecting the agricultural and pastoral industries. Unlike manufacturing concerns, which can often employ their own scientific staffs, the farmers and the pastoralists are dependent on outside help for the solution of their problems which require research. It was a recognition of the greater need of the primary producer which directed the Council's early policy. However, in 1937, the Commonwealth Government decided to extend the activities of the C.S.I.R. so as to provide assistance to secondary industries, and several laboratories have been established for work in that field ; it was thus in the fortunate position of being able to render to these industries assistance of vital importance almost immediately after the outbreak of war. In fact, the remarkable technological advances and developments in secondary industrial production during the war would to a large extent have been impossible had it not been for the assistance rendered by scientific research, and this may well serve as a forceful illustration of what may be accomplished in times of peace.

For the purpose of carrying out its research work there are established within the Organization a number of Divisions and Sections. The Divisions, of which there are now seventeen, comprise the major establishments for which special laboratory buildings have been erected and equipped ; the Sections generally include establishments which have not reached a stage of development, so far as the scope and magnitude of their operations are concerned, to justify their designation as Divisions. As the Organization's investigations extend on a Commonwealth-wide basis and as many of the investigations which are being conducted—particularly those concerned with problems affecting the agricultural and pastoral industries—necessitate experimental work in the field, a number of field stations have been established in various parts of Australia.

The Divisions which have been established are as follows :—

- (1) Plant Industry, with main laboratories at Canberra and Brisbane and field stations.
- (2) Entomology, with main laboratories at Canberra and field stations.
- (3) Animal Health and Production, with main laboratories in Melbourne, Sydney and Brisbane and field stations.

- (4) Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- (5) Soils, with main laboratories at Adelaide and extensive operations in the field.
- (6) Forest Products, with main laboratories in Melbourne and field experiments.
- (7) Food Preservation and Transport, with main laboratories at Homebush, New South Wales, and a subsidiary laboratory in Brisbane.
- (8) Fisheries, with main laboratories at Cronulla, New South Wales, subsidiary laboratories in Perth (Western Australia), Dunwich (Queensland) and Thursday Island, and experimental work in coastal waters of Australia.
- (9), (10), (11) Metrology, Physics and Electrotechnology, comprising the National Standards Laboratory at Sydney.
- (12) Radiophysics, with main laboratory at Sydney.
- (13) Industrial Chemistry, with main laboratories in Melbourne
- (14) Tribophysics, with laboratories in Melbourne.
- (15) Building Research, with laboratories in Melbourne.
- (16) Mathematical Statistics, with main laboratory in Adelaide.
- (17) Meteorological Physics, with main laboratory in Melbourne and field station.

The following are the Sections :—

- (1) Commonwealth Research Station, Murray Irrigation Area, Merbein, Victoria.
- (2) Irrigation Research Station, Griffith, New South Wales.
- (3) Radio Research Board, Sydney.
- (4) Dairy Research, Melbourne.
- (5) Mineragraphic Investigations, Melbourne.
- (6) Ore-dressing Investigations, Melbourne and Kalgoorlie.
- (7) Plant Fibre, Melbourne.
- (8) Physical Metallurgy, Melbourne.
- (9) Wool Textile Research Laboratories, Geelong, Melbourne and Sydney.
- (10) Oenological Research, Adelaide.
- (11) Coal Research, Sydney.
- (12) Mathematical Instruments, Sydney.
- (13) Wildlife Survey, with main laboratory in Canberra, subsidiary laboratory at Albury, and field experiments.
- (14) Land Research and Regional Survey, with headquarters in Canberra, and field stations at Ayr (Queensland), Katherine (Northern Territory) and Ivanhoe (Kimberley, Western Australia).
- (15) Animal Genetics, Sydney.

In addition to its investigational work, the Organization deals with inquiries covering a wide range of scientific and technical subjects and maintains Scientific Research Liaison Offices in London and Washington.

An Agricultural Research Liaison Section established at the Organization's Head Office assists in making results in agricultural research speedily available to State Departments of Agriculture for use in their extension work.

The Organization's Head Office, with administrative and executive staff, is in Melbourne, and associated with it are the Organization's Central Library, Agricultural Research Liaison Section and Central Experimental Workshops. The funds for the Organization are provided from two main sources, namely, from Commonwealth revenue by Parliamentary appropriation, and from industry directly or indirectly by way of contributions and special grants. The fact that contributions and grants account for over one-eighth of the total annual expenditure indicates that the C.S.I.R.O. has succeeded in a very large measure in gaining the confidence of the public.

The activities of the C.S.I.R.O. are now so comprehensive in their scope and so widely distributed that it is not an easy matter to present in a concise form an adequate picture of them. For details of the investigations in progress, reference should be made to the Annual Report of the Organization.

§ 10. Australian Institute of Anatomy.

1. **Foundation of Institute.**—The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a museum in which such specimens could be preserved for future generations. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, national effort in this direction was neglected in Australia. The late Sir Colin MacKenzie, the first Director of the Institute of Anatomy, however, very kindly presented to the Commonwealth Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation by the Commonwealth Government. In 1931 the Institute became an integral part of the Commonwealth Department of Health.

2. **Additions to Original Collection.**—The original collection has been greatly augmented. A list of gifts to the Australian nation may be found in Official Year Book No. 39, p. 1277.

3. **Endowments for Orations and Lectures.**—In addition to the aforementioned donations of material, there have been several endowments for orations and lectures, particulars of which are shown in previous issues of the Official Year Book.

4. **The Scope of the Institute.**—The building occupies a site which adjoins that of the Australian National University.

The Institute consists of two separate and distinct entities: A museum section and a laboratory section. In the museum section there is displayed a portion of the original collection of anatomical specimens assembled by the late Sir Colin MacKenzie, together with ethnological collections which have been added since the foundation of the Institute. The material in the museums, which are open to the general public, has been arranged so as to present simple lessons in human hygiene, to display the anatomical features and peculiarities of the Australian fauna, and to display interesting aspects of the character of Australian Aborigines and Natives of Papua and New Guinea.

The remainder of the building houses a number of units of the Department of Health, including a biochemical laboratory as well as research units which are studying problems in the biological and medical sciences. Since 1938 the research work has been concentrated on laboratory and field research in problems of nutrition.

§ 11. Commonwealth Observatory.

1. **Foundation of Observatory.**—The Observatory was founded primarily to prosecute astrophysical research, including the study of the relations between solar and terrestrial phenomena. A short history of the foundation of the Observatory appears in Official Year Book No. 19, p. 979.

2. **Site of Observatory.**—The Observatory is situated on Mount Stromlo, which forms part of a ridge of hills about seven miles west of Canberra. The highest point in the ridge is 2,560 feet above sea level, that is about 700 feet above the general level of the surrounding country.

3. **Equipment.**—Some of the major items of astrophysical equipment have been obtained through the generosity of private donors. Thus a 30-inch reflector was donated by the late J. H. Reynolds, Esq.; a 9-inch refractor was presented by the late Mr. James

Oddie; and the trustees of the late Lord Farnham made available a 6-inch refractor. Other major equipment comprises a solar tower telescope with an 18-inch coelostat and a 3-inch reversible transit instrument. The Observatory was the successful tenderer at a public sale for the purchase from the Victorian Government of the long-disused 48-inch reflector of the now closed Melbourne Observatory. This instrument is being modernized by conversion into a Schmidt Gregorian telescope with a 50-inch primary mirror. A 74-inch reflector has been constructed in the works of Sir Howard Grubb Parsons and its installation at Mount Stromlo is nearly complete.

4. *Functions of Observatory.*—Investigations in the fields of stellar spectroscopy, stellar photometry and variable stars are being carried out. In addition to covering the type of astrophysical research for which the Observatory was founded, the field of work has been extended to include experimental and theoretical investigations of the ionosphere, and the determination of time. The observatory is now responsible for the accuracy of the Australian Time Service. Considerable attention is being given to the development of this work, and a highly accurate quartz clock system has been installed. A photographic zenith tube has been acquired for time determination.

5. *International Co-operation.*—The Commonwealth Observatory works in close liaison with overseas observatories and major equipment has been or is being installed at Mt. Stromlo in co-operation with the University Observatories of Yale and Columbia (U.S.A.), Uppsala (Sweden), and Munich (Germany).

§ 12. Standards Association of Australia.

The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice.

The Association was established in July, 1929 by the amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth Association of Simplified Practice. It is an independent body in close touch with modern industrial requirements and has the full recognition and support of the Commonwealth and State Governments and industry. It was incorporated by Royal Charter in 1950.

The sole executive authority of the Association is vested in the Council, on which industry is fully represented, together with official representatives of the Commonwealth and State Governments and their technical departments, and of scientific, professional and commercial organizations. Voluntary assistance is rendered in the drafting of specifications and codes by several thousand individuals who are experts in their particular fields, and are organized into some hundreds of committees. These committees are grouped under broad industry headings including civil engineering and building construction, mechanical engineering, electrical engineering, chemical industry, timber industry, transportation, aircraft materials, ferrous and non-ferrous metallurgy, textiles, mining, ceramics, medical and dental materials, household and domestic economy, miscellaneous and general.

These committees are comprised of nominated representatives of manufacturing, distributing and purchasing organizations, and of scientific and other expert authorities in the particular field of the project being dealt with. The operations of these committees are co-ordinated and supervised by committees broadly representative of the whole industry within which the respective projects are included.

The specifications of the Association provide a suitable standard of performance, quality and dimension and an equitable basis for tendering. They help to eliminate redundant qualities and sizes. They enable purchasers to obtain their requirements with greater assurance of satisfaction, with more rapid delivery and without the necessity of drafting individual specifications.

The underlying principles covering the preparation of the specifications and codes are that they shall be in accordance with the needs of industry; that the common interests of producer and consumer be maintained; that periodical revision should keep the work abreast with progress; and that standardization be arrived at by general consent without coercion.

Organizations, companies, firms and individuals interested in the work of the Association are eligible for subscription membership. Members are entitled to free copies of the publications of the Association and to the use of the library and its Special Information Service. Bibliographical research is undertaken for committees, members of the Association, and industry in general. Many hundreds of inquiries are answered each year.

The Association has international affiliations and the standards of all British and foreign countries are filed in the library and are accessible to members. It is a member, representing Australia, of the International Organization for Standardization (I.S.O.). The Association also administers the Australian National Committees of the International Electrotechnical Commission, the World Power Conference and the International Commission on Large Dams.

The Association is also the representative of the British Standards Institution, and all British standards may be purchased from headquarters and branch offices in the various States.

The headquarters of the Association are at Science House, Gloucester Street, Sydney, and branches of the Association are situated at Temple Court, 422 Collins Street, Melbourne; School of Arts Building, 162 Ann Street, Brisbane; Alliance Building, Grenfell Street, Adelaide; Gledden Building, Hay Street, Perth; c/o Engineering Department, Hobart Technical College, Hobart; Department of Works, Canberra; and Howard Smith Chambers, Watt Street, Newcastle.

§ 13. Film Censorship Board.

1. **Legislation.**—The censorship of imported films derives its authority from Section 52 (g) of the Customs Act which gives power to prohibit the importation of goods. Under this section, regulations have been issued prohibiting the importation of films except under certain conditions and with the consent of the Minister. The regulations provide, *inter alia*, that no film shall be registered which in the opinion of the Censor is (a) blasphemous, indecent or obscene; (b) likely to be injurious to morality, or to encourage or incite to crime; (c) likely to be offensive to the people of any friendly nation; (d) likely to be offensive to the people of the British Empire; or (e) depicts any matter the exhibition of which is undesirable in the public interest.

The regulations governing the exportation of Australian-made films are similar with the addition that no film may be exported which in the opinion of the Censorship is likely to prove detrimental or prejudicial to the Commonwealth of Australia.

The Censorship consists of a Censorship Board of three persons and an Appeal Censor, the headquarters being in Sydney. There is also a right of appeal to the Minister.

In addition to the censorship of moving pictures, the Censorship may refuse to admit into Australia any advertising matter proposed to be used in connexion with the exhibition of any film. In regard to films and advertising matter produced in Australia, legislation of a uniform nature is now operative in all States except South Australia. Under the State legislation the Commonwealth Film Censorship Organization acts as censor for the States concerned by virtue of agreements entered into between the Commonwealth and the respective State Governments.

2. **Import of Films.**—Imported standard size (35-millimetre) films dealt with by the Censorship for the year 1953 were as follows:—1,062 films of 3,298,794 feet passed without eliminations, 72 films of 575,664 feet passed after eliminations and 1 film of 6,945 feet rejected, making a total of 1,135 films of 3,881,403 feet. There was no appeal lodged against the rejection of the one film, which was feature-length dramatic. The countries of origin were as follows:—United States of America, 641 films of 2,554,686 feet; United Kingdom, 304 films of 771,853 feet; and other countries, 190 films of 554,864 feet.

The films which chiefly concern the Censorship are the feature or dramatic films. Of these, 400—3,168,939 feet were imported during 1953 (287—2,219,883 feet from the United States of America and 68—541,798 feet from the United Kingdom). Three hundred and twenty-seven—2,583,922 feet were passed without eliminations, 72—578,072

feet were passed with eliminations and one film of 6,945 feet was rejected without appeal. During 1952, 390 feature films were dealt with, 324 being passed without eliminations and 65 passed with eliminations, while one film was rejected in its original form to enable reconstruction and change of title, and was subsequently passed for public exhibition.

There were also imported, during 1953, 4,944 miniature films (16 millimetres) of 3,038,911 feet and 3,369 miniature films (9.5 and 8 millimetres) of 1,109,828 feet. One 8-millimetre film and five 16-millimetre films were rejected. No appeals were lodged against rejection of the films.

3. **Export of Films.**—The number of films exported for the year 1953 was 1,316 of 1,316,053 feet, of which 912 films of 1,091,554 feet were sent to British countries, including Trust Territories.

§ 14. Australian National Film Board and the Film Division.

1. **The Australian National Film Board.**—The Australian National Film Board was inaugurated in April, 1945, on the recommendations of a Commonwealth Government inter-departmental committee which considered the suggestions of a conference of interested individuals and Commonwealth and State officials, including Directors of Education, called in November, 1944 by the Ministers for Information and Post-war Reconstruction. It was attached, for administrative purposes, to the Department of Information.

With the abolition of the Department of Information in March, 1950, administration of the Board was transferred to the News and Information Bureau, Department of the Interior.

In November, 1950, the Board was reconstituted as an advisory body to the Minister for the Interior on matters concerned with the production, distribution and acquisition of films required by Commonwealth departments for the following purposes:—

- (a) for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration;
- (b) for dissemination abroad to expand trade and commerce with other countries, encourage tourist traffic with Australia, improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The constitution provides for a membership of ten, with the Secretary of the Department of the Interior, Chairman, the Director of the News and Information Bureau, Deputy Chairman, and the remainder representative of Commonwealth Departments, State Government instrumentalities and organizations interested in the production, distribution or utilization of films for national publicity.

2. **The Film Division of the News and Information Bureau.**—Production and distribution of all films required by Commonwealth Departments is undertaken by the staff of the Film Division, News and Information Bureau, Department of the Interior, or by commercial enterprises under the supervision of officers of the Film Division. Theatrical distribution in Australia, and both theatrical and non-theatrical distribution overseas, of all Film Division productions are organized by the News and Information Bureau's home office or its oversea representatives. Non-theatrical distribution in Australia is organized through the National Library, Canberra, in co-operation with State film distribution agencies.

The first Australian Government organization for the production of motion pictures for national publicity purposes was the Cinema and Photographic Branch of the Department of Commerce, set up in Melbourne in 1920. Early in the 1939–45 War, the newly-established Department of Information was made responsible for the operation of the Cinema Branch and for an Official War Photography Unit.

Since 1946 the Film Division has produced 206 films for general exhibition, as well as training and special purpose films. Prints are dispatched to 32 oversea centres where distribution is arranged by News and Information Bureau officers or other Australian representatives. In Britain there is regular distribution through more than a thousand theatres, and a large non-theatrical and educational series of circuits. By arrangement with the British Broadcasting Corporation, items of topical interest photographed by the Film Division are flown to London for television. In the United States of America there is wide non-theatrical distribution and considerable use of the films by television networks. An exchange arrangement with the National Film Board of Canada secures extensive distribution in Canada. French versions, prepared in Paris under the supervision of the Australian Embassy, circulate through France and French-speaking countries. Selected films have also been recorded in Dutch, German, Italian, Japanese, Hindustani, Tamil and other Indian dialects.

In addition to films made on the initiative of the News and Information Bureau, the Film Division has produced, or is producing, films under the sponsorship or with the co-operation of Commonwealth Departments and many other bodies such as the Commonwealth Bank of Australia, the Road Safety Council, Overseas Telecommunications Commission, Snowy Mountains Hydro-electric Authority, Australian Wine Board, the Australian National University and the Australian Broadcasting Commission.

The co-operation of the Australian motion picture industry with the Commonwealth, spontaneously offered at the outset of the 1939-45 War, continues. Special films for urgent national appeals are planned, produced and distributed with the assistance of the National Films Council of the motion picture industry and its Film Production Advisory Committee.

§ 15. National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purposes of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions wherever the need for reducing the toll of accidents has been shown. To this end it conducts continuous propaganda through the press and in other ways. It also forms Junior Safety Councils in the schools for developing a safety conscience among children. The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the schools and conduct the scholars across in safety. Posters are available to schools in connexion with Health and Safety lessons. Films specially taken are available for children's and home safety instruction.

A "Safe Driving" campaign for individual motor drivers is conducted as well as a "Freedom from Accidents" competition among employee drivers, those completing a year free from any accident for which they are responsible being given a certificate to that effect. An industrial service of four posters per month, together with slips for pay envelopes, constitutes a regular service for the dissemination of safety advice, and was supplied to over 100,000 workers in factories in 1953-54. Committees deal with specific problems regarding traffic, films, safety in industry, air safety and home dangers. The Air Safety Committee has issued a 32-page booklet "Air Sense" for distribution with pilots' private licences through the Civil Aviation Department, and has a plan for assistance to aircraft in distress which is being implemented throughout Australia.

The Council is supported by Government grants, public subscription and sales of service, and is a non-profit organization. Its work is carried on by a small staff controlled by committees and governed by an executive. The following committees, whose work is of an entirely honorary nature, are in operation, namely, Executive, Traffic, Industrial Safety, Home, Air Safety and Propaganda.

§ 16. Australian Road Safety Council.

1. **Origin and Organization.**—The Australian Road Safety Council was formed in June, 1947, through the instrumentality of the Australian Transport Advisory Council.

The prime movers for the establishment of the Council were the Australian Automobile Association, which submitted a comprehensive plan; the New South Wales Minister for Transport, who advocated expansion, on a nation-wide basis, of road safety activities on lines similar to those of the Road Safety Council of New South Wales; and the National Safety Council of South Australia, which conveyed recommendations from a Special Safety Convention held in Adelaide in 1946.

At that time, in addition to the above-mentioned organizations in New South Wales and South Australia, there was a road safety organization in Victoria. Steps were immediately taken to form Councils in Queensland, Western Australia and Tasmania, and subsequently for the internal Territories.

The Australian Road Safety Council is the composite body of Road Safety Councils of the following States and Territories (internal) of Australia :—

Governmental.—New South Wales, Road Safety Council of New South Wales; Queensland, Road Safety Council of Queensland; Tasmania, Road Safety Council of Tasmania; the Australian Capital Territory and the Northern Territory, Road Safety Councils of the Australian Capital Territory and the Northern Territory respectively.

Non-Governmental.—Victoria, Victorian Road Safety Division, National Safety Council of Australia; South Australia, Road Safety Division, National Safety Council of South Australia; Western Australia, Road Safety Division, National Safety Council of Western Australia.

The Council is representative, geographically and technically, of the whole Commonwealth, and comprises nominees of practically all classes of road users, together with representatives of road transport, the Department of Defence and police administrations from each State. National organizations represented on the Council are :—The Federal Chamber of Automotive Industries, Council of Fire and Accident Underwriters, Australian Road Transport Federation, Australian Automobile Association, Transport Workers' Union of Australia, Federation of Motor Cycle Importers and Distributors of Australia, and Auto Cycle Council of Australia.

The Council meets annually, and an Executive Committee operates between conferences. *Special committees on education, public relations and films meet as required.*

An annual grant of £100,000 is made available by the Commonwealth Government under the Commonwealth Aid Roads Act. Of this £60,000 is allocated to the State road safety councils for local activities, and the remaining £40,000 is applied to the national campaign. This is supplemented by assistance, financial and otherwise, by State Governments, and indirectly by commercial organizations.

2. **Mode of Operation.**—The role of the Australian Road Safety Council is primarily in the field of education and public relations. Its task is to increase public awareness of the seriousness of the road accident problem, which, in the year ended December, 1953, resulted in 81,085 accidents involving casualties or damage in excess of £10 to property, the deaths of 1,863 persons and injuries to 41,848 persons. (For further information on the subject of Traffic Accidents see pp. 171–173 of this Year Book.)

The Council works in close collaboration with two other committees also established by the Australian Transport Advisory Council, namely, the Australian Motor Vehicle Standards and the Australian Road Traffic Code Committees. All three committees are administered by the Commonwealth Department of Shipping and Transport, which is the executive department for the Australian Transport Advisory Council.

The Australian Motor Vehicle Standards Committee develops essential basic motor vehicle standards, such as maximum lengths, weights, height, carrying capacity of vehicles, and minimum lighting, braking and other mechanical efficiencies. In addition

to ensuring a greater safety factor, these standards will eliminate many conflicting State requirements which had an adverse effect on design and production costs.

The Australian Road Traffic Code Committee is charged with the responsibility of progressively preparing a "blue print" uniform national traffic code for incorporation in State legislation. Speed limits, right hand turns, rules governing approaches to intersections, qualifications of drivers, pedestrian behaviour, are a few of the numerous aspects which come within its purview.

The campaign for road accident prevention resolves broadly into three main elements relating to (i) the Road User, (ii) the Road, and (iii) the Vehicle. Similarly the attack falls into three main divisions—(i) Education, (ii) Enforcement, and (iii) Engineering. The link between the components is, broadly :—

The Road User	{	Education (public relations media, instruction in schools, homes, etc.).
		Enforcement (of correct road usage—through the police and the courts, uniform traffic laws, etc.).
The Road ..	{	Engineering (technical improvements of all kinds, safer roads and vehicles, improved illumination, uniform vehicle standards, etc.).
The Vehicle ..		

In addition to the foregoing activities, the Council convenes special national conferences, as required by the Australian Transport Advisory Council, to consider specific road safety problems. Typical of these have been the special committee appointed in 1951 to discuss level crossing accidents which recommended, among other measures, the appointment in each State of a committee to investigate level crossings and report on safety provisions, the elimination of some railway level crossings and the closure of others where practicable and desirable; a special meeting held in June, 1953, to discuss methods of reducing the high incidence of motor cycle accidents, at which various measures to offset the greater vulnerability of motor cyclists were recommended; and a further special meeting held in May, 1954, to consider the problem of "Youth and Road Safety".

§ 17. Australian Atomic Energy Commission.

In November, 1952 a Commission of three members was appointed to control the Commonwealth's activities in relation to uranium and atomic energy, and in April, 1953, upon the enactment of the Atomic Energy Act 1953, the Commission was established as a statutory authority, with powers and functions as defined in the Act. The Commission is a corporate and autonomous body, controlling its own service. It functions under the direction of the Minister for Supply.

Commonwealth arrangements for securing collective advice on atomic energy matters date from 1949, when the Industrial Atomic Energy Policy Committee was established to study possible industrial applications of atomic energy, and to recommend a programme of development. This committee functioned until 1952, when it was disbanded at its own suggestion and succeeded by the Atomic Energy Policy Committee, a re-constituted body with enlarged terms of reference. In the light of recommendations by the 1952 Committee, and scientific and organizational developments overseas in relation to atomic energy, the Government decided on the establishment of the Commission, and legislation was enacted in 1953 to give effect to this decision.

The functions of the Commission are broadly as follows :—Firstly, it is responsible for promoting the search for and production of uranium, and it has wide powers to take action to this end. Secondly, it is given authority to develop the practical uses of atomic energy, by constructing and operating plant for this purpose, carrying out research, and generally fostering the advancement of atomic energy technology. These powers and functions are set out in detail in Part II. of the 1953 Act. In general, and subject to the Commonwealth's defence powers and particular provisions of the Act, they are to be exercised in or in relation to the Territories of the Commonwealth. The development

of the uranium resources of the States is a State matter, and it is likewise open to the States to take such action as they wish to develop the peaceful uses of atomic energy.

On the mining side of its activities the Commission has the co-operation of the Bureau of Mineral Resources of the Department of National Development, and under these arrangements the Bureau is carrying out a programme of exploration in the Northern Territory. The object of this programme, which is being carried out by geophysical, geological and radiometric surveys, is to distinguish the areas in which there are indications of the presence of uranium ores, with a view to making these areas available for development by private enterprise. Territory Enterprises Pty. Limited, a subsidiary of Consolidated Zinc Corporation Limited, is already mining, on behalf of the Commonwealth, the large ore deposit at Rum Jungle, discovered by a private prospector in 1949, and the treatment plant which it is constructing is nearing completion. Finance for this project has been provided by the Combined Development Agency, a joint United States-United Kingdom authority operating from Washington. While this is a governmental project, the Commission's objective is to interest private capital in developing other prospects which have been located elsewhere in the Territory. The response of private enterprise has been active and is growing rapidly, and there are good grounds for the hope that the industry will grow to large dimensions. Encouraging discoveries of uranium ore have now been made at widespread points within the Commonwealth.

As regards developmental work on the scientific side, the Commission has been carrying out investigations overseas, and is laying the foundations of a research and development programme. As part of this programme a group of Australian scientists which has been doing research at the United Kingdom Atomic Energy Research Establishment at Harwell has been taken on to the Commission's staff, together with research groups who have been working in Australia. Arrangements for having research carried out by universities and other institutions are also envisaged. Discussions are proceeding with the United Kingdom as to the possibilities of a co-ordinated programme of research and development, and the Commission is to erect research laboratories near Sydney. It is now in the process, also, of recruiting additional scientists. The general object in view is a full participation by Australia in the advancement of atomic energy technology, in order that it may be possible to take advantage of the expected practical uses of this new source of power as soon as they are realizable.

§ 18. The United Nations.

1. **General.**—The Moscow Declaration of 1943 concerning a new international organization for the maintenance of international peace and security marked the end of the League of Nations. The dissolution of the League, and the transfer of certain of its functions to the new body, the United Nations, took place over subsequent years. Information concerning the League of Nations was given in issue No. 35 and earlier issues of the Official Year Book.

The Charter of the United Nations was drawn up by the delegates of fifty nations at the United Nations Conference on International Organization at San Francisco from 25th April to 26th June, 1945. Australia's ratification was deposited on 1st November, 1945. There are now* 60 member states: Afghanistan, Argentina, Australia, Belgium, Bolivia, Brazil, Burma, Byelorussia, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, The Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Indonesia, Iran, Iraq, Israel, Lebanon, Liberia, Luxemburg, Mexico, The Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, The Philippines, Poland, Saudi Arabia, Sweden, Syria, Thailand, Turkey, The Ukraine, The Union of South Africa, The Union of Soviet Socialist Republics, The United Kingdom, The United States of America, Uruguay, Venezuela, Yemen, Yugoslavia.

* January, 1955.

The full record of the Conference is contained in the Report by the Australian Delegates on the United Nations Conference on International Organization held at San Francisco, United States of America, from 25th April to 26th June, 1945.

At San Francisco an Executive Committee and a Preparatory Commission were established, and when these bodies had completed their work of preparation for the first meeting of the United Nations, the General Assembly met in London on 10th January, 1946.

The principal organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat.

2. **General Assembly.**—This is the forum of the United Nations. In it each member state is represented and has one vote. It meets in regular annual sessions and has provision for special sessions. With the exception of disputes which are before the Security Council and matters essentially within the domestic jurisdiction of any State, it has power to discuss any matter within the scope of the Charter and to make recommendations upon it. The Assembly elects the non-permanent members of the other major organs and considers annual reports from them. Upon the recommendation of the Security Council, it may expel a member which has persistently violated the principles of the Charter.

3. **The Security Council.**—This has the primary responsibility for the maintenance of international peace and security. It is composed of five permanent members, namely China, France, the United Kingdom, the Union of Soviet Socialist Republics and the United States of America, and six non-permanent members with two-year periods of office, of whom three retire at the end of each year. At the initial election three countries, including Australia, were elected for a term of two years and three others for a term of one year only. The following are the non-permanent members of the Security Council at present*: New Zealand, Brazil and Turkey (retiring at the end of 1955) and Belgium, Iran and Peru (retiring at the end of 1956). On procedural matters, decisions are taken by an affirmative vote of any seven members. But on all other matters decisions can only be made on the affirmative vote of seven members, including the concurring votes of all the permanent members. However, the powers which are parties to a dispute for peaceful settlement do not vote.

The Security Council is assisted by a Military Staff Committee consisting of the Chiefs of Staff of the permanent members of the Council or their representatives.

4. **The Economic and Social Council.**—This body consists of eighteen members, each elected for a period of three years. Its main functions are to make, or initiate, studies and reports, and to make recommendations to the General Assembly or to members of the United Nations, upon international, economic, social, cultural, educational, health and related matters. It may make recommendations for the purpose of promoting respect for, and observance of, human rights and fundamental freedoms for all.

The present* members of the Economic and Social Council are: Australia, Yugoslavia, Turkey, Venezuela, India, The United States (retiring 1955), The United Kingdom, The Union of Soviet Socialist Republics, Ecuador, Pakistan, Czechoslovakia and Norway (retiring 1956), France, China, Egypt, Argentina, The Dominican Republic and The Netherlands (retiring 1957).

5. **The Trusteeship Council.**—The Charter declares the political, social, cultural and economic advancement of the Trusteeship Territories to be a sacred trust. A Trusteeship Council has been set up composed of those members of the United Nations who are administering trust territories and an equal number of members who are not administering trust territories (including any permanent members of the Security Council who are not administering trust territories). Territories which may be placed under trusteeship in accord with individual trusteeship agreements are those previously held under mandate, those detached from enemy states as a result of the second World War and those dependent territories placed under the system by the states responsible for their

* January, 1955.

administration. Australia is automatically a member of the Trusteeship Council, as the Power administering the Trust Territories of New Guinea and Nauru. The present* members of the Trusteeship Council are: Australia, Belgium, France, New Zealand, the United Kingdom, the United States of America (administering States), and China, El Salvador, Haiti, India, Syria and the Union of Soviet Socialist Republics. China and the Union of Soviet Socialist Republics are eligible for permanent membership of the Trusteeship Council by virtue of their permanent membership of the Security Council.

The Council has among its duties the consideration of annual reports submitted by the trustee state, the carrying out of periodic inspections by agreement with it, and the formulation of questionnaires on the welfare and advancement of the dependent peoples.

6. The International Court of Justice.—This consists of fifteen judges, no two of whom may be nationals of the same state. Its jurisdiction comprises all cases which the parties refer to it, and all matters especially provided for in the Charter or in treaties and conventions in force. Provision exists in the Statute of the Court whereby States parties to the Statute may accept the jurisdiction of the Court as compulsory, either conditionally, or unconditionally in certain international disputes.

The present* members of the Court are: Judges Badawa (Egypt), Hsu Mo (China), Read (Canada), Winiarski (Poland), Zoricic (Yugoslavia)—all retiring in 1958; Judges Hackworth (United States of America) Sir Zafrullah Khan (Pakistan), Klaested (Norway), Kozhevnikov (U.S.S.R.), and Ugon (Uruguay)—all retiring in 1961; and Judges Lauterpacht (United Kingdom), Basdevant (France), Guerrero (El Salvador), Cordova (Mexico), and Quintana (Argentina)—all retiring in 1964.

Sir Zafrullah Khan was elected to replace Sir Benegal Rau (India) who died in 1953.

7. The Secretariat.—The Secretary-General is the head of the Secretariat of the organization. He is appointed by the General Assembly upon the recommendation of the Security Council, and he appoints his staff in accordance with the rules approved by the General Assembly. Mr. Trygve Lie (Norway) was appointed first Secretary-General, and at the Sixth Session of the General Assembly in 1950 was re-appointed for three further years as from 1st February, 1951. In November, 1952 Mr. Lie announced his intention of retiring and in April, 1953, Mr. Dag Hammarskjöld (Sweden) was appointed in his place.

8. Specialized Agencies.—In addition to these organs of the United Nations there are specialized agencies which co-operate closely with the United Nations in many fields on economic and social questions.

Those now* in operation are: The International Labour Organization; Food and Agricultural Organization; United Nations Educational, Scientific and Cultural Organization; International Civil Aviation Organization; International Bank for Reconstruction and Development; International Monetary Fund; Universal Postal Union; World Health Organization; International Telecommunication Union; World Meteorological Organization.

To enable co-ordination of the work of the specialized agencies arrangements have been made for them to submit reports on their activities and budgets to the United Nations where they are discussed by the Economic and Social Council and the General Assembly.

§ 19. Diplomatic and other Representatives Overseas and in Australia.

1. General.—The following statements show particulars of the various diplomatic and other representatives overseas and in Australia at 31st July, 1955. Full details of British and foreign representation in Australia—diplomatic and consular—and of permanent Australian missions overseas may be obtained from publications issued by the Department of External Affairs, Canberra. A statement is issued each quarter by the Department of Commerce and Agriculture, showing the latest particulars of the Australian Trade Commissioner Service overseas.

* January, 1955.

2. Australian Representation Overseas.—

AUSTRALIAN DIPLOMATIC AND OTHER REPRESENTATIVES OVERSEAS.

Her Majesty's Australian Ambassador Extraordinary and Plenipotentiary to—

France (Paris)—A. Stirling, C.B.E.*Germany, Federal Republic of* (Bonn)—J. D. L. Hood, C.B.E.*Indonesia* (Djakarta)—W. R. Crocker.*Ireland* (Dublin)—(Vacant); W. T. Doig (Chargé d'Affaires *ad interim*).*Japan* (Tokyo)—Dr. E. R. Walker.*The Netherlands* (The Hague)—H. A. McLure-Smith.*United States of America* (Washington, D.C.)—The Hon. Sir Percy Spender, K.B.E., Q.C.

Her Majesty's Australian Envoy Extraordinary and Minister Plenipotentiary to—

Brazil (Rio de Janeiro)—C. V. Kellway.*Burma* (Rangoon)—C. T. Moodie.*Cambodia* (Phnom Penh)—(Vacant); Administered from Vietnam.*Egypt* (Cairo)—A. R. Cutler, V.C.*Israel* (Tel Aviv)—B. C. Ballard.*Italy* (Rome)—D. P. McGuire, C.B.E.*Laos* (Vientiane)—(Vacant); Administered from Vietnam.*Philippines* (Manila)—K. C. O. Shann.*Thailand* (Bangkok)—D. O. Hay.*Vietnam* (Saigon)—D. W. McNicol.

High Commissioners for Australia in—

Canada (Ottawa)—Sir Douglas Copland, K.B.E., C.M.G.*Ceylon* (Colombo)—(Vacant).*India* (New Delhi)—P. R. Heydon.*New Zealand* (Wellington)—(Vacant).*Pakistan* (Karachi)—Major-General W. J. Cawthorn, C.B., C.I.E., C.B.E.*Union of South Africa* (Pretoria)—Lt.-Col. W. R. Hodgson, C.M.G., O.B.E.*United Kingdom of Great Britain and Northern Ireland* (London)—The Hon. Sir Thomas White, K.B.E., D.F.C., V.D.

Australian Military Mission—

Germany, Federal Republic of (Berlin)—Head, J. D. L. Hood, C.B.E.

Australian Mission—

United Nations (New York)—Minister, W. D. Forsyth.*United Nations* (Geneva)—Permanent Delegate, R. L. Harry.

Australian Commissioner in—

Malaya (Singapore)—Sir Alan Watt, C.B.E.

Consuls-General—

Switzerland (Geneva)—R. L. Harry.*United States of America* (New York)—Lieut.-General E. K. Smart, D.S.O., M.C.*United States of America* (San Francisco)—S. W. Jamieson.

Consuls—

New Caledonia (Noumea)—Dr. J. S. Cumpston, E.D.*Portuguese Timor* (Dili)—F. J. A. Whittaker.

Trade Commissioner Service of the Commonwealth of Australia—

- British West Indies*—J. B. Todd (Port of Spain).
Burma—K. W. Ward (Rangoon).
Canada—C. L. Steele (Montreal); H. Wrigley (Vancouver).
Central African Federation—G. P. H. Knight (Salisbury).
Ceylon—H. W. Goodger (Colombo).
Egypt—S. D. Shubart, Commercial Counsellor and Trade Commissioner (Cairo).
France—L. C. Holmes, Commercial Counsellor and Trade Commissioner (Paris).
Germany, Federal Republic of—R. R. Ellen, Commercial Counsellor and Trade Commissioner (Bonn).
Hong Kong—H. C. Menzies (Hong Kong).
India—K. L. Le Rossignol (Acting) (Calcutta); R. J. M. Rose (Acting) (Bombay).
Indonesia—B. T. Connolly, Commercial Counsellor and Trade Commissioner (Djakarta).
Italy—S. F. Lynch, Commercial Counsellor and Trade Commissioner (Rome).
Japan—D. L. Crawford, Commercial Counsellor and Trade Commissioner (Tokyo).
Malaya—K. M. Le Marchand, Commercial Counsellor and Trade Commissioner (Singapore).
New Zealand—W. R. Hudspeth (Wellington).
Pakistan—E. E. Jarvis, Commercial Secretary and Trade Commissioner (Karachi).
Union of South Africa—A. J. S. Day (Johannesburg).
United Kingdom of Great Britain and Northern Ireland—G. R. B. Patterson, Senior Trade Commissioner; H. K. H. Cook (London).
United States of America—A. L. Senger, Commercial Counsellor and Trade Commissioner (Washington, D.C.); F. R. Gullick (New York); W. D. Hardy (San Francisco).

3. **Oversea Representation in Australia.**—Consular representatives are not included in the following statement. Particulars of these are contained in a publication *Consular Representatives and Trade Commissioners in Australia*, issued by the Department of External Affairs, Canberra. There are more than 150 such representatives in Australia, and 40 countries are represented.

DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.

Ambassador Extraordinary and Plenipotentiary of—

- China*—(Vacant); Dr. Chen Tia-chu (Chargé d'Affaires *ad interim*) (Canberra B 945).
France—His Excellency Monsieur Louis Roché (Canberra F 345).
Federal Republic of Germany—His Excellency Dr. Walther Hess (Sydney FM 1041).
Indonesia—(Vacant; Mr. B. A. Ubani (Chargé d'Affaires *ad interim*) (Canberra B 199).
Ireland—His Excellency Mr. B. Gallagher (Canberra J 3251).
Japan—His Excellency Mr. Tadaatsu Suzuki (Canberra B 290).
The Netherlands—His Excellency Mr. A. M. L. Winkelman (Canberra X 1236).
United States of America—His Excellency Mr. Amos J. Peaslee (Canberra 655).

Envoy Extraordinary and Minister Plenipotentiary of—

- Austria*—Dr. J. Manz (Chargé d'Affaires) (Canberra U 8167).
Belgium—His Excellency Monsieur Jean Querton (Sydney FB 3934).
Brazil—His Excellency Senhor P. de A. Nabuco de Abreu (Canberra X 2680).
Burma—His Excellency U Sain Bwa (Canberra U 8131).
Chile—Senor Don Juan Domeyko (Chargé d'Affaires) (Sydney FU 3353).
Denmark—(Vacant); Mr. F. Henning Hergel, O.B.E. (Chargé d'Affaires *ad interim*) (Sydney BW 3547).
Finland—(Vacant); Mr. P. I. Simelius (Chargé d'Affaires) (Sydney FM 3116).
Greece—His Excellency Monsieur Dimitri N. Lambros (Canberra J 3261).
Israel—His Excellency Mr. Mordekhai Nurock (Sydney BW 2082).

Italy—His Excellency Signor Silvio Daneo (Sydney FB 3639).
The Philippines—His Excellency Dr. Roberto Regala (Sydney FA 1938).
Sweden—His Excellency Mr. J. Martin Kastengren (Canberra F 306).
Thailand—His Excellency Nai Konthi Suphamongkhon (Canberra U 8101)

High Commissioner for—

Canada—His Excellency Mr. W. Arthur Irwin (Canberra 665).
Ceylon—His Excellency Mr. P. R. Gunasekera (Canberra F 623).
India—His Excellency General K. M. Cariappa, O.B.E. (Canberra J 3295).
New Zealand—His Excellency Mr. G. E. L. Alderton, C.M.G. (Canberra B 953).
Pakistan—His Excellency Mr. Habibur Rahman (Sydney BL 3395).
Union of South Africa—His Excellency Mr. J. K. Uys (Canberra F 927).
United Kingdom of Great Britain and Northern Ireland—His Excellency Sir Stephen Holmes, K.C.M.G., M.C. (Canberra F 451).

Commissioner for—

Malta—Captain George F. L. Stivala, O.B.E. (Melbourne MU 1291).

TRADE COMMISSIONERS OF OVERSEA GOVERNMENTS IN AUSTRALIA.

Canada—Senior Canadian Government Trade Commissioner—Mr. J. C. Britton (Sydney BW 5696-7).

Canadian Government Trade Commissioner—Mr. R. W. Blake (Melbourne MU 4716).

India—Indian Trade Commissioner—Mr. S. V. Patel (Sydney BW 9518).

New Zealand—Senior New Zealand Government Trade Commissioner—Mr. J. A. Malcolm (Sydney BL 3941).

New Zealand Government Trade Commissioner—Mr. R. J. Inglis (Melbourne MU 8111).

United Kingdom of Great Britain and Northern Ireland—United Kingdom Senior Trade Commissioner—Mr. H. J. Gray (Canberra F 451).

United Kingdom Trade Commissioners—Mr. J. N. McKelvie (Canberra F 451); Messrs. A. R. Bruce, O.B.E., A. Hartland and J. D. Leithead (Sydney BW 8086); Messrs. A. R. Starck, O.B.E. and K. R. Allen (Melbourne MU 5556); Mr. R. Fell (Brisbane B 8588); Mr. P. Ingleson, C.M.G., M.B.E., M.C. (Perth BA 2042).

§ 20. Retail Trade.

1. **General.**—The statistics in this section relate to the number of retail establishments throughout Australia and the turnover of these establishments.

Information of this nature was first collected in respect of the year ended 30th June, 1948 by a full Census of all retail establishments. As this was the first Census of its type in Australia its scope and the data sought were the minima consistent with the objective of securing a record of the number of such establishments, their type, their geographical distribution, their aggregate sales of goods and a simple commodity dissection together with a record of the value of certain services provided. This Census was followed by a second Census of all retail establishments trading during the year ended 30th June, 1949, and a third Census has been taken for the year ended 30th June, 1953. In this recent Census, retailers were asked to furnish more detailed information concerning the dissection of their turnover into commodity groups and questions were asked about stocks of goods on hand, the number of persons engaged in the business and credit sales.

In general terms, the Censuses covered those establishments which normally sell goods by retail in shops, rooms, kiosks and yards. Certain types of establishments which sell services by retail (including repairs and materials therein) were also included, e.g., boot repairers, hairdressers, motor garages and service stations and cafés. The

Censuses included the retail sales of those factories or wholesalers who conducted a regular retail business, but excluded those who only occasionally sold goods by retail. Both new and second-hand goods were included in sales recorded by relevant retail establishments.

During the period between Censuses variations in the value of retail sales have been measured by means of quarterly sample surveys. Figures which were obtained by means of these surveys for the years 1949-50 to 1951-52 and 1953-54 have been revised as a result of information obtained from the 1952-53 Census, and these figures as well as some of the results of the 1952-53 Census are contained in this section.

2. Value of Retail Sales in Each Commodity Group, 1948-49 to 1953-54, Australia.—

The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1948-49 to 1953-54 on a comparable basis throughout. The figures for the years 1948-49 and 1952-53 were obtained from Censuses taken in respect of those years, whereas figures for the other years shown are estimates based on sample surveys and have been revised since previous publication.

An adjustment has been made in the figures previously published for sales of hardware, china and glassware for the years 1948-49 to 1951-52 and 1953-54 to provide comparability with the 1952-53 Census. In this Census, sales of all basic building materials such as timber, roofing tiles, bricks, etc. were excluded, whereas, in the 1948-49 Census (and subsequent surveys based on it) some sales of these items were included with hardware.

VALUE OF RETAIL SALES : COMMODITY GROUPS, AUSTRALIA. (£ million.)

Commodity Group.	Year ended 30th June—					
	1949.(a)	1950.(b)	1951.(b)	1952.(b)	1953.(a)	1954.(b)
Groceries.. ..	143.4	161.1	186.1	232.9	261.5	275.6
Butchers' Meat	65.3	75.4	92.3	118.7	127.8	134.2
Other Food(c)	116.6	131.7	155.5	187.8	206.8	224.0
Total Foodstuffs	325.3	368.2	433.9	539.4	596.1	633.8
Beer, Wine and Spirits	95.3	105.0	123.2	153.9	173.0	186.7
Clothing, Drapery, Piece-goods and Footwear	237.8	263.8	328.5	351.6	355.1	387.5
Hardware(d)	55.3	66.4	91.2	109.6	113.8	124.8
Electrical Goods	34.2	43.3	64.7	77.5	75.8	91.3
Furniture	46.4	54.5	76.9	76.1	72.8	81.0
Other Goods(e)	167.9	204.2	252.4	307.5	315.5	337.3
Total (excluding Motor Vehicles, etc.)	962.2	1,105.4	1,370.8	1,615.6	1,702.1	1,842.4
Motor Vehicles, Parts, Petrol, etc.(f)	166.1	273.3	382.0	433.3	417.3	493.5
Total	1,128.3	1,378.7	1,752.8	2,048.9	2,119.4	2,335.9

(a) Census figures. (b) Survey figures revised since previous issue. (c) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread. (d) Excludes basic building materials (e.g., timber, roofing tiles, bricks, etc.). (e) Includes tobacco, cigarettes, etc., newspapers, books and stationery, chemists' goods, grain and produce, jewellery, office equipment, etc. (f) Excludes farm machinery and implements, earth-moving equipment, etc.

In the foregoing table, figures for the years ended 30th June, 1949 to 1952 relate to establishments with total retail sales of £50 or more; for the years ended 30th June, 1953 and 1954 they relate to establishments with total retail sales of £500 or more. The total amount of retail sales of establishments so excluded in 1952-53 was not significant (less than 0.1 per cent. of total), and their omission does not affect the validity of the comparisons shown.

3. Takings for Certain Services, Australia.—The following table shows the amounts of "Other takings" recorded for the services specified in respect of establishments covered by the Retail Censuses of 1948-49 and 1952-53. The figures for the year ended 30th June, 1949 relate to establishments with "other takings" of £50 or more recorded for the services specified; for the year ended 30th June, 1953 they relate to establishments

with retail sales or "other takings" of £500 or more. The amount of "other takings" of establishments so excluded in 1952-53 was less than one per cent. of total takings shown for Repair Work Done and Meals in Cafés, Restaurants, etc., and less than three per cent. of total takings shown for Hairdressing.

TAKINGS FOR CERTAIN SERVICES, AUSTRALIA.

(£'000.)

Service.	1948-49.	1952-53.
Repair, Servicing and Maintenance Work Done(a)—		
Motor	25,273	56,864
Other	9,365	16,035
Total	34,638	72,899
Meals in Cafés, Restaurants, etc.	21,256	32,765
Meals and Accommodation in Hotels	11,263	24,936
Hairdressing	6,684	9,883

(a) Includes value of materials used and cost of labour.

4. Number of Establishments with Sales in each Commodity Group, 1952-53, States.—

The following table shows the number of establishments with sales in each of the commodity groups specified during the year ended 30th June, 1953 for each State. Many establishments recorded sales in more than one commodity group. Thus the aggregate of the number of establishments by commodity group is greater than the total number of individual establishments.

NUMBER OF RETAIL ESTABLISHMENTS WHICH SOLD GOODS IN EACH COMMODITY GROUP : STATES, 1952-53.(a)

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Foodstuffs—									
Groceries (including Bacon, Butter, etc.)	11,650	7,181	4,447	2,700	2,320	1,227	50	36	29,611
Butchers' Meat	2,833	2,120	1,150	826	606	346	10	12	7,903
Fresh Fruit and Vegetables	6,124	3,113	3,132	1,356	1,587	889	25	18	16,244
Bread, Cakes and Pastry	8,160	4,665	3,552	1,830	1,587	657	18	26	20,495
Confectionery, Ice Cream, Soft Drinks (including Milk Drinks)	12,226	7,246	4,860	2,798	2,617	1,284	44	33	31,108
Other Food (Fish, Poultry, Cooked Meats, Wrapped Lunches, etc.)	5,496	2,689	1,923	1,264	1,160	288	9	20	12,849
Beer, Tobacco, etc.—									
Beer, Wine and Spirits	3,004	2,191	1,400	709	734	318	35	25	8,416
Tobacco, Cigars and Cigarettes	17,013	10,080	6,543	3,714	3,539	1,689	60	58	42,696
Clothing, Drapery, etc.—									
Clothing—									
Men's and Boys' Wear	2,861	2,188	1,384	999	957	412	41	18	8,860
Women's, Girls' and Infants' Wear (including Hand Bags)	4,297	3,484	1,417	1,092	925	459	35	22	11,731
Drapery, Piece-goods, Manchester and Soft Furnishings	2,343	1,699	1,099	847	786	295	31	14	7,114
Footwear—									
Men's and Boys'	1,878	1,399	1,030	721	614	347	31	12	6,032
Women's, Girls' and Infants'	1,761	1,258	851	654	557	305	24	12	5,422
Hardware, Electrical Goods, Furniture—									
Builders' Hardware and Supplies (including Tools of Trade)(b)	1,715	1,472	806	664	692	172	14	13	5,548
Domestic Hardware, Kitchenware, China and Glassware	3,235	2,428	1,464	1,278	1,120	445	32	15	10,017
Domestic Refrigerators, Electrical Goods and Accessories, Radios and Musical Instruments	2,530	1,929	1,167	872	914	301	19	15	7,747
Furniture (including Bedding)	1,113	962	518	394	419	147	13	9	3,575
Floor Coverings	820	666	310	311	261	135	(c)	(c)	2,511
Business Machines and Equipment	120	80	77	38	58	22	(c)	(c)	308

For footnotes see next page.

**NUMBER OF RETAIL ESTABLISHMENTS WHICH SOLD GOODS IN EACH
COMMODITY GROUP : STATES, 1952-53.(a)—continued.**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Other Goods—</i>									
Newspapers, Periodicals, Books and Stationery	3,510	2,667	2,014	1,209	1,021	484	25	14	10,944
Chemists' Goods (including Toiletries, Cosmetics and Dispensing)	4,052	2,394	1,814	1,088	1,315	432	36	15	11,146
Sporting and Travel Goods	1,494	1,062	686	448	461	157	15	10	4,333
Jewellery, Watches, Clocks, Silverware, etc.	1,551	1,130	675	520	519	192	19	9	4,615
Grain, Feed, Fertilizers	1,527	1,066	1,029	539	604	248	(c)	(c)	5,026
Other Goods (not specified)	2,691	2,876	966	776	732	308	20	22	8,391
Total (excluding Motor Vehicles, etc.)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)	(d)
<i>Motor Vehicles, etc.(e)—</i>									
Tractors (including parts)	575	389	356	230	196	44	(c)	(c)	1,794
New Motor Vehicles (including Motor Cycles, etc.)	1,273	848	563	456	241	77	9	11	3,478
Used Motor Vehicles (including Motor Cycles, etc.)	1,267	824	612	466	293	83	(c)	(c)	3,564
Motor Parts, Accessories, Tyres, Tubes, etc.	2,960	2,252	1,440	1,031	947	291	27	14	8,962
Petrol, Oil, Motor Lubricants, etc.	3,899	2,801	1,943	1,252	1,049	429	31	15	11,509
Grand Total	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)	(f)

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more. The number of establishments in each State with retail sales in 1952-53 of less than £500 but more than £100 was as follows:—New South Wales, 1,126; Victoria, 989; Queensland, 449; South Australia, 279; Western Australia, 294; Tasmania, 100; Northern Territory and Australian Capital Territory, 5; Total, 3,242.

(b) Excludes basic building materials (e.g., timber, roofing tiles, etc.). (c) Not available for publication. (d) Not available. (e) Excludes farm machinery and implements, earth-moving equipment, etc. (f) Many establishments showed sales in more than one commodity group. Thus, the number of establishments selling goods in each commodity group does not add down to the total number of individual establishments which is as follows:—New South Wales, 40,523; Victoria, 32,864; Queensland, 15,051; South Australia, 9,673; Western Australia, 7,911; Tasmania, 3,637; Northern Territory, 146; Australian Capital Territory, 180; Total, 109,985.

5. Value of Retail Sales of Goods in each Commodity Group, 1952-53, States.—The following table shows the value of retail sales of goods in each of the commodity groups specified during the year ended 30th June, 1953.

**VALUE OF RETAIL SALES IN EACH COMMODITY GROUP : STATES, 1952-53.(a)
(£'000.)**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Foodstuffs—</i>									
Groceries (including Bacon, Butter, etc.)	104,479	64,727	42,357	20,549	20,670	8,687	709	827	263,005
Butchers' Meat	50,858	36,663	17,006	10,443	8,150	4,607	231	382	128,340
Fresh Fruit and Vegetables	22,157	15,854	7,104	4,437	4,420	1,582	76	99	55,729
Bread, Cakes and Pastry	22,529	16,940	7,607	4,789	3,563	1,999	71	149	57,647
Confectionery, Ice Cream, Soft Drinks (including Milk Drinks)	24,918	20,289	7,710	5,293	3,751	1,936	89	148	64,134
Other Food (Fish, Poultry, Cooked Meats, Wrapped Lunches, etc.)	12,593	8,912	3,570	2,301	1,918	555	35	128	30,012
<i>Beer, Tobacco, etc.—</i>									
Beer, Wine and Spirits	70,623	45,612	22,233	14,827	14,445	5,357	664	641	174,402
Tobacco, Cigars and Cigarettes	28,200	19,967	8,830	5,851	5,233	2,405	182	251	70,919
<i>Clothing, Drapery, etc.—</i>									
Clothing—									
Men's and Boys' Wear	36,486	25,964	12,107	8,634	6,336	3,328	135	256	93,246
Women's, Girls' and Infants' Wear (including Hand Bags)	56,515	41,914	16,780	13,589	9,403	5,761	124	386	144,477
Drapery, Piece-goods, Manchester and Soft Furnishings	27,587	18,501	10,144	6,269	4,793	2,039	94	132	69,559
<i>Footwear—</i>									
Men's and Boys'	6,678	4,779	2,257	1,593	1,319	659	41	51	17,377
Women's, Girls' and Infants'	12,846	9,058	3,621	2,803	2,282	1,117	24	87	31,846

**VALUE OF RETAIL SALES IN EACH COMMODITY GROUP:
STATES, 1952-53.(a)—continued.
(£'000.)**

Commodity Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Hardware, Electrical Goods, Furniture—</i>									
Builders' Hardware and Supplies (including Tools of Trade)(b)	28,069	16,317	8,577	4,433	5,164	1,588	117	212	64,477
Domestic Hardware, Kitchenware, China and Glassware	18,372	14,172	6,000	5,325	4,127	1,580	98	166	49,840
Domestic Refrigerators, Electrical Goods and Accessories, Radios and Musical Instruments	26,821	20,837	10,795	7,000	6,104	2,277	99	208	76,141
Furniture (including Bedding)	18,090	15,081	6,040	4,972	3,348	1,555	16	155	40,257
Floor Coverings	8,610	7,734	2,007	2,680	1,867	882	(c)	(c)	23,859
Business Machines and Equipment	4,739	3,751	1,684	948	795	298	(c)	(c)	12,218
<i>Other Goods—</i>									
Newspapers, Periodicals, Books and Stationery	22,221	16,497	6,292	3,310	3,277	1,539	21	191	53,348
Chemists' Goods (including Toilettries, Cosmetics and Dispensing)	21,278	14,374	6,422	4,068	3,247	1,458	35	177	51,059
Sporting and Travel Goods	4,756	3,049	1,441	781	839	381	9	65	11,321
Jewellery, Watches, Clocks, Silverware, etc.	9,751	6,292	3,055	2,026	1,818	649	37	86	23,714
Grain, Feed, Fertilizers	17,754	11,263	6,045	2,526	6,553	1,152	(c)	(c)	45,351
Other Goods (not specified above)	15,801	17,776	5,285	4,314	3,852	1,756	69	84	48,937
Total (excluding Motor Vehicles, etc.)	674,731	476,323	224,969	143,763	127,274	55,147	2,995	5,002	1,710,204
<i>Motor Vehicles, etc.(d)—</i>									
Tractors (including parts)	5,837	5,560	6,587	3,099	3,379	820	(e)	(e)	25,306
New Motor Vehicles (including Motor Cycles, etc.)	58,830	44,635	26,049	19,339	14,950	5,840	253	249	170,145
Used Motor Vehicles (including Motor Cycles, etc.)	31,846	18,112	11,358	10,785	8,579	2,691	(c)	(c)	83,547
Motor Parts, Accessories, Tyres, Tubes, etc.	20,909	15,731	8,828	5,340	4,629	1,874	161	91	57,563
Petrol, Oil, Motor Lubricants, etc.	32,541	24,020	10,046	6,609	5,812	2,479	147	195	81,939
Grand Total	824,694	584,381	287,837	189,025	164,623	68,851	3,617	5,682	2,128,704

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more. The total retail sales of the establishments with retail sales in 1952-53 of less than £500 but more than £100 were as follows:—New South Wales, £312,000; Victoria, £283,000; Queensland, £128,000; South Australia, £88,000; Western Australia, £85,000; Tasmania, £27,000; Northern Territory and Australian Capital Territory, £1,000; Total, £924,000. (b) Excludes basic building materials (e.g. timber, roofing tiles, etc.). (c) Not available for publication. (d) Excludes farm machinery and implements, earth-moving equipment, etc.

6. Number of Retail Establishments and Value of Retail Sales Classified According to Main Type of Business, 1952-53, States.—The following tables show the number of establishments and the value of retail sales made in 1952-53 in each State classified according to the main type of business. In classifying establishments by type of business, the description given by the proprietor was used as a guide but the classification was based mainly on the commodity group for which the largest item of turnover was recorded.

NUMBER OF RETAIL ESTABLISHMENTS CLASSIFIED ACCORDING TO MAIN TYPE OF BUSINESS: STATES, 1952-53.(a)

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Food Stores—</i>									
Grocers	9,698	5,284	3,756	1,889	1,837	1,042	40	23	23,569
Butchers	2,474	1,938	1,026	724	525	247	8	11	6,953
Fruiters	2,136	1,845	458	574	295	112	9	21	5,424
Bakers	1,845	1,503	693	393	337	163	8	8	4,946
Confectioners and Milk Bars	2,053	2,802	580	578	300	203	8	8	6,526
Cafés	728	345	366	79	138	21	8	8	1,688
Fishmongers and Poulterers	548	421	190	93	79	21	8	8	1,354
Other Food Stores	511	521	80	140	76	19	8	8	1,356
<i>Hotels, Tobacconists, etc.—</i>									
Hotels, Wine Saloons	2,303	1,855	1,261	633	529	306	18	7	6,912
Tobacconists	536	490	206	108	143	36	(b)	(b)	1,523
Tobacconists and Hairdressers	1,058	1,126	188	284	201	71	(b)	(b)	2,931

For footnotes see next page.

**NUMBER OF RETAIL ESTABLISHMENTS CLASSIFIED ACCORDING TO
MAIN TYPE OF BUSINESS: STATES, 1952-53.(a)—continued.**

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Clothiers, Drapers, etc.—</i>									
Clothiers	4,106	3,502	1,175	793	657	302	13	22	10,570
Drapers, Haberdashers, etc.	544	465	250	138	112	16			1,531
Footwear Stores	589	621	162	158	81	55	7	20	1,674
<i>Hardware, Electrical Goods, Furniture, etc., Stores—</i>									
Domestic and Builders' Hardware Stores	1,005	1,209	433	357	314	67	6	10	3,401
Electrical Goods, Radios and Musical Instruments Stores	1,083	354	528	265	248	123	7	7	3,120
Furniture and Floor Coverings Stores	626	681	281	163	176	64	(b)	(b)	1,998
Business Machines Stores	66	47	38	24	21	17			213
<i>Other Goods Stores—</i>									
Newsagents and Booksellers	1,024	877	418	197	271	77			2,872
Chemists	1,308	1,025	406	302	201	90			3,341
Sports Goods Stores	199	140	78	26	18	15			480
Watchmakers and Jewellers	667	509	217	133	96	47	10	40	1,679
Grain and Produce Merchants	389	267	116	94	94	18			979
Cycle Stores	181	232	93	67	47	13			633
Florists and Nurserymen	396	371	67	68	65	38			1,007
Other Types of Business	839	1,218	323	254	210	114			2,974
Total (excluding Motor Vehicle Dealers, etc.)	36,911	30,148	13,389	8,542	7,071	3,297	131	165	99,654
<i>Motor Vehicle Dealers, etc.—</i>									
Tractor Dealers	107	57	46	30	28	11			279
New Motor and Motor Cycle Dealers	250	174	129	93	86	27	(b)	(b)	763
Garages and Service Stations	2,600	2,094	1,268	821	587	243	10	11	7,634
Motor Parts and Tyre Dealers	396	219	137	98	80	47	(b)	(b)	979
Used Motor Vehicle Dealers	259	172	82	89	59	12	(b)	(b)	676
Total	40,523	32,864	15,051	9,673	7,911	3,637	146	18	109,985

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more.

(b) Not available for publication.

**VALUE OF RETAIL SALES OF GOODS CLASSIFIED ACCORDING TO MAIN TYPE
OF BUSINESS: STATES, 1952-53.(a)**

(£'000.)

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Food Stores—</i>									
Grocers	143,876	79,717	60,269	27,877	31,795	13,367	1,487	928	359,316
Butchers	50,557	36,728	16,923	10,469	7,994	4,562	235	382	127,850
Fruiterers	20,548	16,266	4,814	4,647	3,191	1,115			50,716
Bakers	18,316	14,444	5,874	4,116	2,860	1,667	91	401	47,476
Confectioners and Milk Bars	16,247	20,065	3,930	4,278	1,874	1,293			47,843
Cafés	3,982	1,222	1,775	518	371	53			7,974
Fishmongers and Poulterers	3,663	2,537	1,151	531	642	181	53	75	8,719
Other Food Stores	5,630	5,023	556	1,292	598	184			13,344
<i>Hotels, Tobacconists, etc.—</i>									
Hotels, Wine Saloons	69,922	46,050	22,772	15,269	14,573	5,716	603	584	175,489
Tobacconists	5,825	4,490	1,906	1,592	1,089	435	(b)	(b)	15,421
Tobacconists and Hairdressers	3,827	3,368	361	1,213	614	179	(b)	(b)	11,577
<i>Clothiers, Drapers, etc.—</i>									
Clothiers	137,517	103,876	39,681	34,807	21,682	12,482	165	1,227	351,437
Drapers, Haberdashers, etc.	21,933	10,340	9,466	2,572	6,930	576	86	119	51,892
Footwear Stores	10,979	9,679	3,116	2,657	2,259	1,235			30,055
<i>Hardware, Electrical Goods, Furniture, etc., Stores—</i>									
Domestic and Builders' Hardware Stores	35,506	24,924	11,227	7,945	5,552	2,466	200	211	88,071
Electrical Goods, Radios and Musical Instruments Stores	20,587	16,273	8,592	4,797	4,704	1,838	71	156	57,014
Furniture and Floor Coverings Stores	25,368	19,625	7,887	5,663	3,523	1,904	(b)	(b)	64,226
Business Machines Stores	4,626	3,646	1,716	999	669	317			11,973

For footnotes see next page.

VALUE OF RETAIL SALES OF GOODS CLASSIFIED ACCORDING TO MAIN
TYPE OF BUSINESS: STATES, 1952-53. (a)—continued.

(£'000.)

Main Type of Business.	N.S.W.	Vic.	Qld.	S.A.	Tas.	Tas.	N.T.	A.C.T.	Aust.
<i>Other Goods Stores—</i>									
Newsagents and Book-sellers	21,080	14,421	5,206	2,236	2,950	1,300	50	606	47,406
Chemists	18,150	11,911	5,377	3,159	2,354	1,115			42,239
Sports Goods Stores ..	2,376	1,883	700	258	224	315			5,820
Watchmakers and Jewellers	8,790	5,130	2,609	1,569	1,584	697			20,509
Grain and Produce Merchants	17,208	11,543	5,012	2,656	6,621	987			44,046
Cycle Stores	1,177	946	543	360	262	69			3,357
Florists and Nurserymen ..	1,941	1,979	401	395	333	260			5,312
Other Types of Business	7,198	8,960	2,888	1,794	2,361	824			24,079
Total (excluding Motor Vehicle Dealers, etc.)	(c) 676,829	(c) 477,046	(c) 224,760	(c) 143,709	(c) 127,609	(c) 55,137	(c) 3,075	(c) 5,004	(c) 1,713,169
<i>Motor Vehicle Dealers, etc.—</i>									
Tractor Dealers	3,454	2,617	3,470	1,990	1,987	666	..	..	14,184
New Motor and Motor Cycle Dealers	41,366	34,835	19,115	18,110	15,099	4,554	(b)	(b)	133,463
Garages and Service Stations	75,811	53,200	32,547	17,678	14,087	7,382	219	491	201,405
Motor Parts and Tyre Dealers	6,851	5,675	2,375	2,018	1,257	522	(b)	(b)	18,738
Used Motor Vehicle Dealers	20,383	10,918	5,570	5,520	4,684	590	(b)	(b)	47,745
Total	824,694	584,381	287,837	189,025	164,623	68,851	3,611	5,682	2,128,704

(a) All figures refer to establishments with total retail sales in 1952-53 of £500 or more, and are the total value of all commodities sold by the types of business shown. (b) Not available for publication.

(c) These figures differ from their counterparts in the table on page 1058 because they include retail sales of motor vehicles, etc., made by establishments whose main type of business is other than motor vehicles, and exclude retail sales of goods other than motor vehicles, etc., made by establishments whose main type of business is motor vehicles.

7. Takings for Certain Services : States, 1952-53.—The following table shows the amounts of "other takings" recorded for the services specified for each State in respect of the establishments covered by the Census of Retail Establishments, 1952-53. The figures relate to establishments with retail sales or "other takings" of £500 or more.

TAKINGS FOR CERTAIN SERVICES, STATES, 1952-53.

(£'000.)

Service.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<i>Repair, Servicing and Maintenance Work Done(a)—</i>									
Motor	19,916	15,394	9,373	5,290	4,755	1,905	89	142	56,864
Other	5,565	4,125	2,406	1,645	1,507	657	17	113	16,035
Total	25,481	19,519	11,779	6,935	6,262	2,562	106	255	72,899
<i>Meals in Cafés, Restaurants, etc. ..</i>	14,739	8,468	4,507	1,910	2,427	584	63	67	32,765
<i>Meals and Accommodation in Hotels</i>	9,053	6,696	3,708	1,949	1,937	1,169	109	315	24,936
<i>Hairdressing</i>	3,974	3,024	1,023	871	719	244	7	21	9,883

(a) Includes value of materials used and cost of labour.

CHAPTER XXX.

STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

§ 1. Statistical Organization in Australia.

1. Development of Australian Statistics.—(i) *Crown Colony Blue Books*. Statistical organization in Australia was founded in the "Blue Books" which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although primarily intended for administrative purposes, these documents have been important sources of statistical data, even though some important matters are not covered, and others only partially so. These Blue Books form the basis from which later statistical publications were developed. This led to an element of uniformity in statistical compilation within the British Empire.

(ii) *Statistical Registers*. Following the advent of Responsible Government which was granted during the period 1851–1860 to all Australian States except Western Australia—and to that State in 1890—the "Blue Book" was succeeded in all Australian States by "Statistical Registers". These were in many respects the old Blue Books in a new form, and were largely confined to summaries of the "by-product" statistics of Government administrative departments.

The first example of extensive Governmental organization for purely statistical purposes was the taking of periodic population censuses, which were initiated in all States under the Crown Colony régime. The growing need for quantitative data concerning the progress of the several young communities of Australia eventually led to the appointment of official Statisticians commissioned to prepare and publish such data.

(iii) *Statistical Conferences*. To enable the interchange of ideas between States, and to obtain uniform State Statistics which could be aggregated to Australian totals, conferences were held in the several States from as early as 1861. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906. These were held in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued since to the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.

2. Commonwealth Bureau of Census and Statistics.—(i) *Origin and Aims*. Under the provisions of section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament "to make laws for the peace, order and good government of the Commonwealth with respect to—" (*inter alia*) "(XI.) Census and statistics". In compliance with this provision, the Census and Statistics Act 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State has its own "Statistics Act", and although these are not identical in all States, they embody common principles. With the establishment of the Commonwealth Bureau, the movement towards uniformity in information collected and statistical methods employed received a great stimulus. The Commonwealth Bureau did not attempt to duplicate the existing statistical organization, but endeavoured to use the services of the State statistical offices whenever possible, and to undertake the initial collection of statistics only in fields not already occupied by the States, or in which efficiency demanded complete centralization. Frequent statistical conferences (*see above*) have assisted the uniform development of existing statistics, and have facilitated expansion into new fields.

The scope of the Commonwealth Bureau has constantly been widened, more particularly during the 1939-45 War, when the Bureau responded to the urgent demands of administration for immediate and accurate statistical information in various fields. Since the war, requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All the activities of the Bureau are covered by the Census and Statistics Act, which confers authority to collect information and contains stringent provisions to ensure that the information obtained is treated in strictest secrecy.

(ii) *Organization.* For administrative purposes the Commonwealth Bureau is divided into a number of Divisions. These are:—Census, Compiling, Development, Publications, Social Accounting and Administrative.

(a) *Census Division.* This Division of the Bureau is responsible for the taking of Population Censuses, and for all machine tabulation work in connexion therewith.

(b) *Compiling Division.* The Compiling Division is responsible for the compilation of all statistics other than those relating to the Census of Population. It is divided into the following Branches which deal with specific fields of statistical activity:—

Trade and Transport Branch—Responsible for the original compilation, tabulation and analysis of statistics relating to imports and exports, and for the compilation of statistics relating to road and rail transport, aviation, shipping, posts and telegraphs, telephones and wireless.

Prices Branch—Deals with the collection of retail and wholesale prices and the compilation of retail and wholesale price index numbers. A staff of trained field officers is maintained in the several States to facilitate the collection of accurate information.

Employment and Labour Branch—Compiles all employment estimates, wage and labour statistics.

Primary Production Branch—Deals with statistics relating to agricultural and pastoral activities, mining, forestry and fishing. Original data are largely supplied by State Statisticians.

Secondary Production Branch—Compiles all factory statistics both annual and monthly. Collates on a Commonwealth basis original annual data supplied by State Statisticians.

Finance and Taxation Branch—Compiles statistics of private finance (banking, insurance, exchange rates, etc.), public finance (Commonwealth, State and Local and Semi-Governmental authorities), and statistics relating to all aspects of Commonwealth taxation.

Demography Branch—Concerned with statistics of births, deaths, marriages and migration, and is responsible for periodic estimates of population.

Social Statistics Branch—Compiles all statistics relating to education, unemployment and sickness benefits, public health and welfare, and public justice.

(c) *Development Division.* This Division was created in order to develop new statistical collections to meet post-war demands for more adequate and up-to-date statistics, and also to examine current collections in the light of such requirements. It is divided into three Branches, namely:—

Sampling Techniques Branch—undertakes research into the application of sampling methods to statistical collections.

Development Branch—Develops new statistical collections and examines current collections in the light of present day requirements.

Business Statistics Branch—Conducts surveys and analyses statistics relating to Internal Trade (Retail), Business and Hire Purchase Activities, and Company Investments and Profits.

(d) *Publications Division.* This Division is responsible for the scrutiny, editing and graphical illustration of all Bureau publications, and, in collaboration with other Divisions, for the initiation, development and co-ordination of statistical publications. It also

maintains a regular flow of statistical series to certain international organizations, and revises statistical material in certain overseas and local publications.

(e) *Social Accounting Division.* This Division undertakes research into the theoretical and practical problems of social accounting and is also responsible for the Bureau's own specialized library of official and unofficial publications on statistics and economics. It is divided into three branches as follows :—

Balance of Payments Branch—collects and analyses statistics on Australia's balance of international payments.

National Income and Expenditure Branch—prepares estimates of national income and expenditure

Quantum Indexes Branch—undertakes research into quantum of production.

(f) *Administrative Division.* The Administrative Division is responsible for all aspects of staff recruitment and direction, supplies, payment of accounts, etc. The Reproduction Section of the Division is equipped with multilith and duplicating machines for processing statistical statements for more immediate requirements. In addition, a special section of this Division is responsible for the examination of statistical methods and systems, and the co-ordination of all statistics, in Commonwealth Departments (see para. 3 below). The Mechanical Tabulation Branch has now been transferred from the Census Division of the Bureau to the Administrative Division. This Branch is equipped with modern tabulating equipment and is responsible for all machine tabulating work required by other Divisions of the Bureau with the exception of Census.

3. *Relation of the Bureau to other Commonwealth Departments.*—In October, 1950 the Commonwealth Public Service Board issued a circular relative to the compilation of statistics in other Commonwealth Departments, in which it stated that the Commonwealth Statistician should be the co-ordinating authority on all statistics in Commonwealth Departments, and that, as a general principle, where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician should be consulted to ensure that they are necessary and that they are based on sound statistical methods; furthermore, that the Commonwealth Statistician should make a regular inspection, at least once every twelve months, of all statistical work done by Departments to ensure that their needs are met by the most economical means and without duplication of effort.

This project of co-ordination is being implemented as time and circumstances permit.

§ 2. Statistical Publications of Australia.

1. *General.*—The official statistical publications of Australia may be divided bibliographically into two main divisions, namely :—(i) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (ii) State publications dealing with individual States only.

2. *Commonwealth Publications.*—Commonwealth publications may be grouped under two heads, namely :—(i) Publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration to October, 1955 :—

Australian Balance of Payments.—Statements Nos. 1 to 3, 1928–29 to 1951–52.

Australian Life Tables, 1901–1910. Australian Joint Life Tables, 1901–1910.

Australian Life Tables, 1920–1922.

Australian Life Tables, 1932–1934. Australian Joint Life Tables, 1932–1934.

Australian Life Tables, 1946–1948.

Australian Mineral Industry Statistics (formerly *Minerals and Metals Bulletin*).—

Part 2 of Quarterly Bulletin issued jointly with the Bureau of Mineral Resources.

Australian Primary Industries.—Report prepared for the Empire Producers Conference, Sydney, March, 1938.

- Census (1911) Results.*—Bulletins. Vols. I. (Statistician's Report), II., and III., with Appendix "*Mathematical Theory of Population.*"
- Census (1921) Results.*—Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II. NOTE.—Part XXVII., Life Tables.
- Census (1933) Results.*—Bulletins, Nos. 1 to 25. Parts I. to XIV., forming Vol. I., Parts XV. to XXVIII., forming Vol. II., and Parts XXIX. to XXXVII., forming, with Statistician's Report and Australian Life Tables 1932-1934, Vol. III.
- Census (1947) Results.*—Bulletins, Nos. 1 to 25. Parts I. to XVI., forming Vol. I., Parts XVII. to XIX., forming Vol. II., and Parts XX. to XXVIII., forming, with Statistician's Report and Australian Life Tables 1946-1948, Vol. III.
- Census (1954) Results.*—See Price List at end of volume.
- **Census of Retail Establishments (1947-48) Results.*—Bulletins, Nos. 1 to 7.
- **Census of Retail Establishments (1948-49) Results.*—Bulletins, Nos. 1 to 7.
- **Census of Retail Establishments (1952-53) Results.*—Bulletins, Nos. 1 to 7.
- **Dairying Industry (formerly Summary of Dairying Industry).*—Statistical Bulletin, monthly; first issue, September, 1937.
- **Factories, Principal Statistics, Summary.*—Annually, 1948-49 to 1953-54. *Finance.*—Bulletins 1907 to 1916-17 annually; 1917-18 and 1918-19 (one vol.); 1919-20 and 1920-21 (one vol.); 1922-23 to 1952-53 annually.
- **Food Production and the Consumption of Foodstuffs and Nutrients in Australia, Report.* Half-yearly, 1946-47 to 1947-48; annually, 1948-49 to 1953-54.
- **Fruit Growing Industry Summary.*—Annually, 1944-45 to 1953-54.
- Labour and Industrial Statistics.*—Memoranda and Reports, various, to 1913.
- Labour Report.*—Annually, 1913 to 1953.
- **Live-stock Numbers (formerly Summary of Live-stock Statistics).*—Statistical Bulletin, annually, 1943 to 1954.
- Local Government in Australia.*—July, 1919.
- **Manufacturing Industries.*—Bulletins on Individual Industries, annually, 1936-37 to 1939-40, 1940-41 (issue incomplete), and 1944-45 to 1952-53.
- **Monthly Review of Business Statistics.*—First issue, October, 1937.
- **Occupation Survey (1945) Results.*—Detailed tables.
- Official Year Book of the Commonwealth of Australia.*—Annually, 1907 to present issue (No. 41). Issues Nos. 40 and 41 also published in parts.
- Oversea Trade.*—Bulletins, annually, 1906 to 1953-54.
- **Oversea Trade.*—Preliminary Bulletins. Annually, 1952-53 to 1954-55.
- **Oversea Trade Statistics: Imports Cleared for Home Consumption classified according to Individual Items of the Customs Tariff, 1950-51 to 1954-55.*
- Pocket Compendium of Australian Statistics (formerly Statistical Digest).*—1913, 1914, 1916, and 1918 to 1955 annually.
- Population and Vital Statistics.*—Bulletins and Reports, various, 1906-1910. *Demography*, 1911 to 1953 annually.
- Primary Industries.*—Bulletin, annual, 1950-51 to 1952-53, in two parts: Part I. Rural Industries; Part II. Non-Rural Industries and Value of Production.
- Production.*—Bulletin, annually, 1906 to 1947-48. From 1936-37 to 1949-50 issued in two parts.—Part I. Secondary Industries; Part II. Primary Industries (including Total Recorded Production); thereafter separate Bulletins (see *Primary Industries and Secondary Industries*).
- Professional Papers.*—Various. A full list appears in Official Year Book No. 13, p. 3.
- Quarterly Summary of Australian Statistics.*—First issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins Nos. 1 to 69).
- **Report of Proceedings of the Conference of British Commonwealth Statisticians, 1951.*

- **Rural Land Use and Crop Statistics* (formerly *Summary of Crop Statistics*).—Statistical Bulletin, annually, 1943-44 to 1952-53.
- Secondary Industries*.—Bulletin, annual, 1950-51 to 1952-53.
- Social Insurance*.—Report to the Hon. the Minister for Trade and Customs, 1910.
- Social Statistics*.—Bulletins, 1907 to 1915 annually, and 1918.
- Superannuation for the Commonwealth Public Service*.—Report to the Hon. the Minister for Home Affairs, 1910.
- **Survey of Motor Vehicles (1947-48) Results*.—Bulletins Nos. 1 to 7.
- Transport and Communication*.—Bulletins, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1953-54 annually.
- **Vegetables Grown on Farms for Human Consumption*.—Statistical Bulletin, annually, 1942-43 to 1953-54.
- Wages and Prices*.—January, 1932.
- Wealth*.—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.
- **Wheat Industry* (formerly *Summary of the Wheat Situation*).—Statistical Bulletin, periodically; first issue, July, 1936.

The foregoing list includes all the printed publications issued from the Bureau, and certain more important mimeographed publications issued for the most part annually. Other mimeographed statements, obtainable on application to the Commonwealth Statistician and dealing with a wide variety of subjects, are issued as follows:—

Annually—Bee Farming; Commonwealth and State Taxation Collections; Companies with Oversea Affiliations; Factory Products (Principal); Factory Statistics (Preliminary); Fire, Marine, and General Insurance; Meat Production and Utilization; Milking Machines on Rural Holdings; Oversea Trade between Australia and Eastern Countries; Registrations of New Motor Vehicles; Road Traffic Accidents; Rural Statistics of the Australian Capital Territory; Social Services, Expenditure by States; Tractors on Rural Holdings; University Statistics; Value of Production; Wheat Forecast and Estimate; Wool Production.

Half-yearly—Australian Balance of Payments; Trade of Australia with United Kingdom.

Quarterly—Building; Hire Purchase Business of Finance Companies; Interim Retail Price Index; Quarterly Business Survey; Retail Sale of Goods; Retail Price Variations—All Items ("C" Series) Index; Road Traffic Accidents.

Monthly—Banking; Dairying Industry; Demographic Review; Employment; Exports of Wool from Australia; Export Prices Index; Gold Mining Industry; Life Assurance; Oversea Trade; Production Statistics; Registrations of New Motor Vehicles; Savings Bank Deposits and Savings Certificates.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers*. Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth appear in the Official Year Books up to No. 13, but it is not now practicable to undertake the preparation of such lists.

3. *State Publications*.—The chief statistical publications of each State are set out hereunder. As with the Commonwealth Parliamentary and Departmental Reports and Papers, it is not practicable to enumerate the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local and semi-governmental authorities, etc., in each State.

- (a) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Pocket Year Book (annual); Statistical Bulletin (monthly to December, 1919, quarterly to June, 1943, then discontinued to September, 1948); Monthly Summary of Business Statistics.

* Obtainable from Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

- (b) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year-book (annual); Statistical Abstracts (quarterly to 1917, then discontinued to December, 1946).
- (c) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual to 1936, then discontinued); the Queensland Year Book (annual 1937 to 1941, then discontinued to 1945); Queensland Pocket Year Book (annual).
- (d) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book of South Australia (annual); Quarterly Summary of Statistics.
- (e) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual).
- (f) Tasmania—Statistical Register (annual); Pocket Year Book of Tasmania (annual); Monthly Review of Business Statistics.

§ 3. The Third Conference of British Commonwealth Statisticians, Canberra, 1951.

Conferences of the Government Statisticians of the British Commonwealth were held first in London in 1920 and then in Ottawa in 1935. The Third Conference was held in Canberra from 12th to 23rd November, 1951. Delegates were present from Australia, Canada, Ceylon, India, New Zealand and the United Kingdom (including a representative of the Colonial Office). Ireland, the Commonwealth Economic Committee and the United Nations were represented by observers, and the Australian State Government Statisticians were also present. A summary of the activities of the conference may be found in Official Year Book No. 39, page 1320.

§ 4. Select List of Works about, or published in, Australia.

(Compiled by the Librarian of the Commonwealth National Library.)

This list aims to meet the growing need, in Australia as publishing develops, and overseas as interest in Australia widens, for an authoritative current reference and reading list of books dealing with Australia or of Australian authorship, wherever published.

Australians will find these books in the National Library and in their State Libraries as well as in leading bookshops. Oversea readers may have access to them in the collections which the National Library maintains at 41 Australian posts abroad. They will be found also, increasingly, in leading libraries and bookshops in many countries. In the United States, for example, Australian books are included in the Farmington Plan in which 62 libraries and research institutions co-operate to ensure that at least one copy of all material published in any part of the world and likely to be required for a serious purpose will be available promptly somewhere in the country.

The list is classified broadly by subject and under each heading there is first a list of the principal standard books still in print, then a list of selected books and official publications (excluding annual reports) which were published during 1953. A few books published earlier, but received too late for inclusion in the previous list, are also included. Where known the retail price in the country of publication is given, but this is subject to fluctuation.

The Library also issues a series of select lists which include, *Australian Public Affairs Information Service* (monthly), subject index of material in new books, pamphlets, current periodicals and government publications from English speaking countries, with an important bearing on investigations in Australian political, economic, cultural and social affairs, and the following full bibliographies.

Monthly list of Australian Government Publications, covering both the Commonwealth and the States ;

Books published in Australia : a monthly list of books supplied to the National Library under copyright.

The two last-mentioned publications are cumulated annually as the *Annual Catalogue of Australian Publications* which includes also a list of books published overseas of Australian interest or by authors resident in Australia, a select list of the more important Australian periodical and serial publications and a directory of publishers.

General and Descriptive.

- ABBOTT, C. L. A. Australia's frontier province (the Northern Territory). Syd., Angus & Robertson, 1950. 78. 6d.
- AUSTRALIA : the *Herald* year book : a reference work of world wide range : No. 1 to date. Melb., Herald and Weekly Times, 1949 to date. 17s. 6d. Latest issue : 1950.
- AUSTRALIAN ENCYCLOPAEDIA : (ed. by A. W. Jose, H. J. Carter and T. G. Tucker : 3rd ed.) : 2v. Syd. Angus & Robertson, 1926-27. (o.p., but new ed. in preparation).
- FINLAYSON, H. H. The red centre : man and beast in the heart of Australia (2nd ed.). Syd., Angus & Robertson, 1952. 21s.
- FLATTELY, S. The Australian snow pictorial. Melb., Georgian House, 1952. 25s.
- GRATTON, C. H. Introducing Australia. (2nd Aust. ed.) Syd., Angus & Robertson, 1949. 7s. 6d.
- NOBLE, N. S., ed. The Australian environment (2nd ed.). Melb., C.S.I.R.O., 1950. 10s. 6d.
- OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA : No. 1 to date. Canb., Govt. Pr., 1908 to 1946-47 (No. 37). 5s. *per issue* ; after No. 38, 10s. Latest issue : No. 41, 1955.
- RATCLIFFE, F. N. Flying fox and drifting sand : the adventures of a biologist in Australia : Introd. by Julian Huxley. Syd., Angus & Robertson, 1951. 15s. First published in 1938.
- TAYLOR, T. G. Australia : a study of warm environments and their effect on British settlement (6th ed.). Lond., Methuen, 1951. 30s.
- WALKABOUT : Australian geographical magazine : v. 1 to date. Melb., Australian Geographical Society, 1934 to date. Monthly, 24s. *per annum*.

RECENT PUBLICATIONS.

- AUGHTERSON, W. V., ed. Taking stock ; aspects of mid-century life in Australia. Melb., Cheshire, 1953. 12s. 6d.
- AUSTRALIA—*News and Information Bureau*. Your guide to Canberra. Syd., F. H. Johnston, 1953. 2s.
- BEVAN, L., ed. The sunburnt country : introd. by Gilbert Murray. Lond., Collins, 1953. 15s.
- CAIGER, G., ed. The Australian way of life. Lond., Heinemann, 1953. 12s. 6d.
- EMMETT, E. T. Tasmania by road and track (2nd ed.). Melb., Melbourne Univ. Press, 1953. 13s. 6d.
- EWERS, J. K. With the sun on my back. Syd., Angus & Robertson, 1953. 21s.
- GRAVES, K. Tasmanian pastoral. Melb., Melbourne Univ. Press, 1953. 15s.
- HURLEY, J. F. Tasmania : a glance at its history, beauty, resources and development over a period 150 years : a camera study. Syd., Sanda, 1953.
- Western Australia : a camera study. Syd., Angus & Robertson, 1953. 42s.
- HURLEY, P. J. In search of Australia (4th ed.). Syd., Dymock's, 1953.
- LASERON, C. F. The face of Australia : the shaping of a continent : maps and sketches by the author. Syd., Angus & Robertson, 1953. 21s.
- LOUBÈRE, R. Australia, cinquième continent. Paris, Amiot Dumont, 1953.
- ROWNTREE, F. F. Battery Point sketch book. Hobart, Oldham, Beddome & Meredith, 1953. 4s.
- RUSSELL, A. Murray walkabout. Melb., Melbourne Univ. Press, 1953. 25s.
- TAYLOR, P. G. Frigate bird. Syd., Angus & Robertson, 1953. 18s. 6d.
- WHITE, H. L., ed. Canberra : a nation's capital : foreword by Sir Robert Garran. Syd., Angus & Robertson, 1954. 35s.
- WILLS, C. Australian passport. Lond., Dobson, 1953. 10s. 6d.
- WOOD, T. Cobbers : a personal record of a journey from Essex, in England, to Australia, Tasmania and some of the reefs and islands in the Coral Sea, made in the years 1930, 1931 and 1932 (3rd ed.). Lond., Oxford Univ. Press, 1953. 18s.

Territories Outside Australia.

- AUSTRALIA—*External Affairs, Department of.* Handbook and index to accompany a map of Antarctica produced by the Department of the Interior, 1939: by E. P. Bayliss and J. S. Cumpston. Canb., 1940. 28. 6d.
- AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITION, 1947-1949. Reports. Melb., Antarctic Division, Department of External Affairs, 1951 to date.
- GORDON, D. C. The Australian frontier in New Guinea 1870-1885. N.Y., Columbia Univ. Press, 1951. \$4.25.
- HOGGIN, H. I. Transformation scene: the changing culture of a New Guinea village. Lond., Routledge, 1951. 30s.
- MEAD, Margaret. From the South Seas: studies of adolescence and sex in primitive societies. 3 v. In 1. N.Y., Morrow, 1939. \$4.
- NEW ZEALAND ANTARCTIC SOCIETY. The Antarctic to-day: a mid-century survey: ed. by Frank A. Simpson. Well., Reed, 1952. 478. 6d.
- OFFICIAL HANDBOOK OF THE TERRITORY OF NEW GUINEA. Canb., Prime Minister's Department, 1943. 78. 6d.
- PAPUA AND NEW GUINEA, Territory of. Official research publications: no. 1 to date. Port Moresby, Govt. Pr., 1951 to date.
- PAPUA AND NEW GUINEA, Territory of.—Laws, statutes &c. Laws of the Territory of Papua-New Guinea, 1945-1949 (annotated) . . . together with supplements to the Laws of the Territory of Papua, 1888-1945 (annotated) and the laws of the Territory of New Guinea 1921-1945 (annotated). Syd., Govt. Pr., 1952.
- RISSENFELD, A. Megalithic culture of Melanesia. Leiden, Brill, 1950. 35 glds.
- WILLIAMS, F. E. Orokaiva magic. Oxf., Oxford Univ. Press, 1928. 12s. 6d.
- Orokaiva Society. Oxf., Oxford Univ. Press, 1930. 25s.
- Papua of the Trans-Fly. Oxf., Oxford Univ. Press, 1936. 30s.
- See also the annual reports of the Administrators of the various Territories, and reports to the General Assembly of the United Nations on trusteeship territories, the anthropological reports of the Governments of Papua and New Guinea, and material appearing in *Oceania*.

RECENT PUBLICATIONS.

- ELKIN, A. P. Social anthropology in Melanesia: a review of research. Melb., Oxford Univ. Press, 1953. 27s. 6d.
- KEESING, F. M. Social anthropology in Polynesia: a review of research. Melb., Oxford Univ. Press, 1953. 27s. 6d.
- MEAD, MARGARET. Growing up in New Guinea: a comparative study of primitive education (new ed.). N.Y., New American Library, 1953. 35s.
- SCHOLES, W. A. Seventh continent: saga of Australian exploration in Antarctica 1895-1950. Lond., Allen & Unwin, 1953. 21s.
- SIMPSON, C. Adam with arrows: inside New Guinea. Syd., Angus & Robertson, 1953. 25s.
- STANNER, W. E. H. The South Seas in transition: a study of post-war rehabilitation and reconstruction in three British Pacific dependencies. Syd., A'asian. Pub. Co., 1953. 50s.
- VOGEL, A. A. Papuans and pygmies. Lond., Barker, 1953. 16s.

History.

- CLARK, C. M. II., ed. Select documents in Australian history 1788-1850: selected and ed. by C. M. H. Clark with the assistance of L. S. Pryor. Syd., Angus & Robertson, 1950. 30s.
- CRAWFORD, R. M. Australia. Lond., Hutchinson's Univ. Library 1952. 8s. 6d.
- FITZPATRICK, B. C. British Empire in Australia: an economic history 1834-1939 (2nd ed.). Melb., Melbourne Univ. Press, 1949. 17s. 6d.
- HISTORICAL RECORDS OF AUSTRALIA: (ed. by J. F. Watson). Syd., Commonwealth National Library, 1914 to date. 12s. 6d. *per v.* 34 v. have so far appeared. Publication has been suspended since 1925.
- HISTORICAL STUDIES: Australia and New Zealand: no. 1 to date. Melb., Melbourne Univ. Press, 1940 to date. Bi-annual. 16s. *per annum*.
- LA NAUZE, J. A. Political economy in Australia: historical studies. Melb., Melbourne Univ. Press, 1949. 9s. 6d.
- O'BRIEN, E. M. The foundation of Australia (1786-1800): a study in English criminal practice and penal colonization in the eighteenth century: foreword by John M. Ward (2nd ed.). Syd., Angus & Robertson, 1950. 25s.
- SHANN, E. O. G. An economic history of Australia. Melb., Georgian House, 1948. 18s. First published in 1930.
- SHAW, A. G. L. Economic development of Australia (rev. ed.). Melb., Longmans, 1946. 8s. 6d.

RECENT PUBLICATIONS.

- COOPER, H. M. The unknown coast: being the explorations of Captain Matthew Flinders, R.N. along the shore of South Australia, 1802. Adel. Printed by Advertiser Printing Office, 1953. 50s.
- HARRIS, A. Settlers and convicts: or, Recollections of sixteen years' labour in the Australian backwoods: by an emigrant mechanic: with a foreword by C. M. H. Clark. Melb., Melbourne Univ. Press, 1953. 18s. 6d.
- First published in London, 1847.
- JILLET, J. W. L. Wings across the Tasman 1928-1953. Syd., Angus & Robertson, 1953. 18s. 6d.
- LEVY, M. C. I. Governor George Arthur: a colonial benevolent despot. Melb., Georgian House, 1953. 50s.
- TENNANT, KYLIE. Australia: her story. Lond., Macmillan, 1953. 15s.
- TRAVERS, B. H. The captain-general: being a study of Lachlan Macquarie, 1809-1821. Syd., Shakespeare Head, 1953. 21s.

Military and Naval History.

- AUSTRALIA—*Army, Department of—Public Relations Directorate.* The Australian army at war: an official record of service in two hemispheres, 1939-1945. Melb., 1947.
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* Excludes the works of individual authors, reference to which will be found in Miller, *Australian literature from its beginnings to 1935* and Serle, *An Australasian anthology*.

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- ANDERSON, H. A guide to ten Australian poets. Melb., Hawdon Davison Co., 1953. 31s. 6d.
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- BOOMERANG BOOKS: ed. by Enid Moodie Heddle. Adel., Longmans, 1952 to date.
 GUNN, JEANNIE. The little black princess of the Never-never. Melb., Robertson & Mullens, 1952. 12s. 9d.
 HARRIS, R. The adventures of Turkey, a boy of the Australian bush. Lond., Collins, 1952. 8s. 6d.
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 HILL, F. Southward ho with the Hentys: the adventures of a pioneer family who sailed from Sussex, England, aboard the barque Caroline in . . . 1829 and with Edward Henty established the first permanent settlement in Victoria. Melb., Whitcombe & Tombs, 1953. 6s. 9d.
 MARTIN, J. H. Aircraft of to-day and to-morrow: by J. H. and W. D. Martin. Syd., Angus & Robertson, 1953. 30s.
 PHIPSON, JOAN. Good luck to the rider: illus. by Margaret Horder. Syd., Angus & Robertson, 1953. 12s. 6d.
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 SHEAN, ISOBEL. To see the Queen: illus. by Cedric Flower. Lond., Faber, 1953. 9s. 6d.
 VILLIERS, A. J. And not to yield: a story of the Outward Bound school of adventure: illus. by Jean Main and David Cobb. N.Y., Scribner, 1953. \$2.50.

Sport.**RECENT PUBLICATIONS.**

- MILLER, K. Bumper : by Keith Miller and R. S. Whittington. Lond., Latimer House, 1953. 12s. 6d.
- MISSINGHAM, H. Good fishing : a handy guide for Australia with illustrations of the most commonly caught fish. Syd., Dymocks's, 1953. 10s. 6d.
- MOYES, A. G. Australian bowlers from Spofforth to Lindwall. Syd., Angus & Robertson, 1953. 15s. 6d.
- The South Africans in Australia, 1952-53. Lond., Harrap, 1953. 15s.
- WEST, P. The fight for the ashes 1953 : a complete account of the Australian tour : statistical analysis by Roy Webber : forewords by Lindsay Hassett and Len Hutton. Syd., A'sian. Pub. Co., 1953. 18s. 6d.
- WINNER, K., comp. Wild game of Australia : 14 colour plates of wild duck by N. H. E. McDonald. Melb., Motor Manual Publications, 1953. 27s.

DIARY OF PRINCIPAL ECONOMIC EVENTS, 1951 to 1954.

The principal economic events for the years 1931 to 1938 were shown on pp. 968 to 977 of Official Year Book No. 33, those for the years 1939 to 1944 on pp. 1129 to 1141 of Official Year Book No. 36 while those for the years 1945 to 1950 were included in the range of years—1945 to 1951—covered by the three Official Year Books following (Nos. 37 to 39). For reasons of space some of the items originally shown for the years 1951 and 1952 have been omitted from this issue. Previous issues should be consulted for additional information for these years.

1951.

The year opened with exceedingly favorable economic conditions, wool prices rising to an all-time record of about 17s. per lb. in March. Towards the end of the season these prices fell sharply from this extreme but the average for the season was 12s. per lb. Wool prices were still lower at the beginning of the 1951-52 selling season, but even so maintained the high average of 7s. per lb. over the first half of the season. Export prices for wheat remained steady at the high level of more than 16s. throughout the year. Weather conditions generally were favorable except in Queensland and northern New South Wales, where droughts and, towards the end of the year, fires caused damage to pastures and losses of stock. The average wheat yield (1951-52) was estimated at about 15.5 bushels per acre, but the total crop was considerably lower than in the previous year, owing to the reduced acreages sown. Milk production in 1951 declined by about 10 per cent. Beef production increased slightly, but there was a further sharp reduction in mutton and lamb production, which was below the pre-war level. Total meat production fell very slightly.

These trends in primary production and the general inflationary conditions were reflected in the balance of payments. The trade year 1950-51 ended with an excess of exports of about £240,000,000 (imports, £740,000,000, exports, £980,000,000), but the succeeding trade year opened with the usual excess of imports of the early months continuing, until by December the trend in the balance of payments showed imports running at more than £1,000,000,000 per year and exports at only about £700,000,000. Oversea reserves had been reduced by about £300,000,000 during the last six months.

To help counter inflation, a rigid control of new capital issues was re-imposed in February. A slight increase in bond rate was brought about in May by the issue of a loan at a discount of 1 per cent.; and in August a further increase was made to 3½ per cent. The Commonwealth Budget was designed to counter inflation and provided for increases in direct and indirect taxes and a surplus of £115,000,000, although at the same time the Commonwealth undertook to provide money out of this surplus to finance State works if sufficient loan money was not forthcoming. Despite the instructions issued late in 1950 about a more restrictive advance policy (see 29th November, 1950) bank advances increased by about 25 per cent. during the year.

The increase in employment slowed down during the first half of the year and practically ceased in the second half, despite continued net permanent migration of about 110,000 for the whole year. Prices and earnings, however, continued to increase. Wholesale and retail prices both increased by about 25 per cent. and cost of living adjustments added 38s. to the basic wage in addition to the increase of £1 at the end of 1950. Average earnings per head rose 30 per cent.

A series of one-day stoppages in the coal mines early in the year caused some temporary falling off in production in industries heavily dependent on coal, such as iron and steel and cement, but over the year production of these commodities was higher than, or up to, the level of the previous year, and black coal production was an all-time record of 17,600,000 tons. Eighty-five thousand houses were started, and 72,000 completed, 12 per cent. and 16 per cent., respectively, higher than in the previous year. About 9,000 imported pre-fabricated houses were delivered out of total orders for 21,000 placed by governmental authorities.

8th January.—Commonwealth Government decision to close down shale oil plant at Glen Davis, New South Wales; production to continue temporarily. (Tenders were called on 14th February, 1952 for the purchase of assets, in whole or part.)

2nd February.—Control of capital issues re-introduced in an effort to reduce inflationary pressure. (*See* 28th May and 2nd August.)

5th February.—Coal miners in eastern States began one day per week stoppages in protest against provisions of the Coal Industry Tribunal's award (20th December, 1950) for payments over and above the ordinary wage rate to employees who worked the full ten days of a pay-period. (Stoppages were discontinued in mid-March, *see* 3rd May.)

Meeting of Governors of central banks of Australia, Ceylon, Ireland, New Zealand, Pakistan, South Africa and the United Kingdom to discuss general banking problems and the international economic situation.

3rd March.—Commonwealth War Gratuities amounting to £52,800,000 paid to ex-service personnel of the 1939-45 War.

15th March.—Commonwealth Government to grant to States special financial assistance of £15,000,000 for 1950-51.

4th April.—Victorian Government acquired land in Gippsland as the site for the Lurgi Brown Coal Gasification Plant to supply Melbourne with gas.

9th April.—Appreciable drop in wool prices at Sydney after post-war rise to record levels.

30th April.—Electricity zoning commenced in New South Wales, a complete ban on the use of electricity for commerce and industry to apply between 7 a.m. and 9 p.m. on one day each week in five zones. (Subsequently modified, in general, to blackouts within previously specified zones.)

3rd May.—The Coal Industry Tribunal, in a review of certain portions of its decisions on a log of claims covering members of the Australian Coal and Shale Employees' Federation, rejected a claim for a wage increase, and directed that the "attendance allowance" was to stand. (*See* 5th February.)

15th May.—Industrial Arbitration (Amendment) Bill 1951 introduced into New South Wales Legislative Assembly providing for the inclusion in New South Wales industrial awards of three months' long-service leave on full pay after 20 years' continuous service. (Act assented to 12th September.)

28th May.—Capital Issues Control Regulations (*see* 2nd February) challenged in High Court. (On 12th September, 1952 the High Court declared the Regulations valid.)

17th June.—Announcement of signing of a trade agreement with Western Germany.

21st June.—Commonwealth Bank Bill 1951 providing for the restoration of the Commonwealth Bank Board, introduced into the House of Representatives. (Act assented to 16th July; operated from 21st August.)

29th June.—Conciliation and Arbitration Bill 1951, providing for secret union ballots in elections and on strike issues, greater control by the Arbitration Court, etc., introduced into House of Representatives. (Act assented to 19th July.)

5th July.—Defence Preparations Bill, providing authority until 31st December, 1953 for the Government to make regulations necessary for defence preparations and to adjust the economy to meet the threat of war, introduced into House of Representatives. (Act assented to 19th July.)

17th July.—Large upward cost of living adjustments in the basic wage announced by Commonwealth Court of Conciliation and Arbitration—increase of 13s. in the average weekly wage for the six capital cities.

19th July.—All States except Queensland fixed prices of controlled goods and services at levels ruling on 18th July. (The order was extended in New South Wales on 24th July to cover a wide variety of goods and services, but was relaxed on 20th August and removed on 9th October.)

20th July.—Final liquidation of the stock of the United Kingdom Dominion Wool Disposals Ltd. (Joint Organization) at London Wool Sales.

24th July.—Announcement of letting to a Norwegian firm of the first contract for the design and construction of a dam in the Snowy Mountains Hydro-electric Scheme. (The project, at Guthega, to cost £5,800,000 and to be completed by June, 1954.)

28th July.—Commonwealth Government to sell, for 45s. per share, its holdings of 863,596 ordinary shares in Amalgamated Wireless (Australasia) Ltd., comprising 51 per cent. of the issued capital.

30th July.—Conference of representatives of Commonwealth and State Governments, employers and trade unions, and other sections of the community, called by the Prime Minister, met in Sydney to discuss means of combating inflation.

2nd August.—New Capital Issues Control Regulations gazetted under the Defence Preparations Act 1951 to replace those operating under the Defence (Transitional Provisions) Act. (See 2nd February and 28th May.)

9th August.—The Prime Minister called a conference in Canberra of the Governor of the Commonwealth Bank, the heads of commercial banks, and the Secretary to the Treasury, to discuss bank credit policy.

10th August.—Conference in Canberra between the Government and representatives of insurance companies to consider general financial and investment policy.

14th August.—Announcement by Vacuum Oil Co. Pty. Ltd. that it will build a new oil refinery at Altona, near Melbourne, to be completed in about three years at a cost of £7,500,000.

15th August.—A new company to be formed to develop deposits of pyrites at Nairne, South Australia, for the production of sulphur.

16th–17th August.—The Loan Council approved a rise in the long-term bond rate from 3½ per cent. to 3¾ per cent., to apply to the Thirteenth Security Loan for £40,000,000 to be opened on 22nd August. The loan programme for 1951–52, after State works programmes had been reduced by approximately 25 per cent., was decided as follows :—Commonwealth, £23,000,000 ; States, £202,000,000 ; Local Authorities, £96,000,000.

21st August.—The Commonwealth Government issued instructions for the reduction of the staff of Commonwealth Departments by 10,000 (5 per cent.).

The Victorian State Electricity Commission's loan, calling for £6,000,000 at 3½ per cent. interest, was closed, under-subscribed by £3,350,000.

23rd August.—Wool-growers rejected by referendum the proposal for a reserve price plan for wool. (13th June, 1950.)

27th–30th August.—New season's wool auctions in Sydney realize prices about 25 per cent. below those of June.

1st September.—Major hire purchase finance companies in New South Wales and South Australia announced new conditions for hire purchase agreements, increasing deposit rates and reducing repayment periods. (See also 8th November.)

11th September.—Interest rates on loans to local and semi-governmental authorities raised from 3½ per cent. to 4½ per cent.

26th September.—Commonwealth Budget for 1951–52 introduced into the House of Representatives. (For details, see Official Year Book No. 39, p. 1340.)

— October.—Extensive bush fires in Queensland, Northern Territory and northern New South Wales damaged wide areas of country.

7th October.—Announced that Australia is to spend about £700,000,000 on defence during next three years.

12th October.—Details announced of a fifteen-year meat agreement with the United Kingdom to commence on 18th July, 1952.

18th October.—The Victorian Industrial Appeals Court ruled that dairy farm employees would work a 48-hour week instead of the 40-hour week granted in August by the Dairy Farm Workers' Wages Board. The Court increased the basic rates of pay by 10s. to £10 19s. per week, and increased the annual leave granted by the Board from two to three weeks.

Australia signed the Torquay Protocol to the General Agreement on Trade and Tariffs.

Further large upward adjustments in the basic wage announced by the Arbitration Court—average weekly wage for the six capitals increased by 11s. (See 17th July.)

8th November.—The Commonwealth Bank ceased to make credit available for the purchase of cars other than new cars for commerce. Private hire purchase firms also restricted credit and shortened repayment periods. (See also 1st September.)

12th–23rd November.—The Third Conference of Government Statisticians of the British Commonwealth held in Canberra.

20th November.—Announcement that current Australian gold output may be sold on "premium markets overseas", providing that it is sold for dollars.

— December.—Serious bush fires in the Blue Mountains area of New South Wales.

21st December.—British Commonwealth Sugar Agreement signed in London; Australian export quota fixed at 600,000 tons of raw sugar per annum. The agreement is to operate until 31st December, 1959, prices to be negotiated annually.

1952.

Migration was on a reduced scale during 1952, making a net addition to the population of 94,000. The decline in immigration was associated with unsettled employment conditions in Australia, which were reflected in the fall in total numbers employed (excluding rural and household domestic workers and the defence forces) from 2,637,000 in December, 1951, to 2,533,000 in December, 1952. Except for small increases in February and December, this decline in the level of employment continued throughout each month of 1952, while the number of persons on unemployment benefit increased from 2,000 to 40,000.

New houses numbering 68,000 were started and 79,000 completed during the year. Production of coal, gas, electricity, pig-iron and steel was maintained or increased, and electricity restrictions were much less severe than in recent years.

In the early part of the year continuing drought and bushfires, particularly in New South Wales, Queensland and the Northern Territory, seriously affected pastures and restricted meat and butter production. Conditions improved during the year and meat and milk production increased quickly. For crops, weather conditions generally were favorable and wheat production in 1952–53 was considerably higher than in 1951–52. Average yield per acre reached an all-time record of about 19 bushels. Wool production is estimated to have reached an all-time record in 1952–53, being 19 per cent. above 1951–52. More effective control of the rabbit pest through the spread of myxomatosis in recent years appears to have contributed to both an increase in sheep numbers and an increase in average clip per sheep.

The high level of imports reached in the latter half of 1951 continued into 1952. This increase in imports, together with a drop in the receipts for exports, had resulted in a balance of payments deficit on current account for the latter half of 1951, and the continuation of these conditions in 1952 led to the imposition of severe import restrictions to safeguard overseas reserves. Licences to import goods from dollar areas were also recalled and reviewed. The value of imports fell by more than 50 per cent. in the second half of the year and the balance of payments deficit of £269 million in the first half of the year was changed to a surplus of £75 million in the second half of the year.

Average earnings per employee continued to rise and in the December quarter were about 11 per cent. above the corresponding level of the previous year. Retail prices increased by about 10 per cent. and wholesale prices by about 9 per cent. during the year.

During 1952 uncertainty about the future of interest rates for public authority borrowing resulted in a number of loan failures until some stability in interest rates was reached towards the end of the year. Bank overdraft and deposit rates were also raised from the beginning of August.

2nd January.—The Australian Mutual Provident Society to take over a large low-rainfall area in the Mallee-Wimmera District for development and improvement for settlement under the Victorian Land (Development Leases) Act 1951. (*See also* 18th August, 1949, Official Year Book No. 39.)

5th January.—Australia and Pakistan signed a one-year trade agreement.

17th January.—Commonwealth Conciliation Commissioner Galvin refused an application by eleven metals trades unions for marginal wage increases. (*See* 29th February, 1st March, 1952, and 11th November, 1953.)

18th January.—Commonwealth Government to subsidize Air Beef Pty. Ltd. (operators of an inland slaughter works at Glenroy, Western Australia, transporting meat to the coast by air) to the extent of £10,000 a year.

21st January.—A conference of British Commonwealth Finance Ministers, attended by the Treasurer of Australia, issued a statement on the measures considered necessary to correct the sterling area situation.

22nd January.—Increase of 10s. in cost of living adjustment to the average weekly wage for the six capital cities announced by Commonwealth Court of Conciliation and Arbitration.

25th January.—Widespread bushfires in New South Wales, Victoria and the Australian Capital Territory.

19th February.—Good rains in the northern areas of New South Wales end the worst drought experienced for many years, during which extensive areas of pastures and crops were destroyed by bushfires. Drought conditions continued in Queensland and the Northern Territory.

23rd February.—Conversion of all Australian sulphuric acid plants from the use of imported sulphur to the use of locally-produced pyrites projected by the end of 1953.

Discovery announced of important high-grade uranium deposits at Rum Jungle in the Northern Territory.

26th February.—Introduction into the House of Representatives of the Fisheries and Pearl Fisheries Bills to conserve swimming and sedentary fisheries in Australian waters. (Acts assented to 13th March.)

29th February.—Welders employed by Australian Iron and Steel Ltd. at Port Kembla protested against the Galvin award (*see* 17th January). (By 16th May about 3,500 workers were directly involved in the dispute, which resulted in the closing down of the Australian Iron and Steel Ltd. plant, while many in associated industries were also affected. Work was resumed on 6th June.)

1st March.—Industrial dispute, involving maintenance workers of the State Electricity Commission of Victoria protesting against the Galvin award (*see* 17th January). Caused the introduction of power restrictions in Victoria. (The dispute ended on 12th April. Severe restrictions were imposed on the use of power from 15th April, but were eased on 18th April.)

7th March.—The Commonwealth Bank prohibited the establishment of further import credits until licences had been obtained for the goods involved.

8th March.—Imposition of severe restrictions on imports from all sources and on amounts available for Australians travelling overseas.

11th March.—Arrival of the President of the International Bank for Reconstruction and Development to survey development progress and to discuss loan prospects with the Commonwealth Government.

1st April.—Agreement between the Commonwealth and South Australian Governments and the combined Development Agency of the British and American Governments on the development of uranium deposits at Radium Hill, South Australia.

9th April.—The Waterside Workers' Federation, in connexion with its claim for higher margins, imposed an Australia-wide ban on overtime.

20th April.—Wages of about 50,000 workers in the pastoral industry in all States, except Queensland (where a State award is in operation), reduced by Commonwealth Conciliation Commissioner because of a decline in wool prices.

3rd May.—A special Loan Council meeting approved programmes amounting to £247,500,000 for Government loans and £128,000,000 for local and semi-governmental authorities loans, the Commonwealth Government being prepared to guarantee subscriptions to an extent of £125,000,000 (subsequently increased to £135,000,000).

7th May.—Introduction into the House of Representatives of the Aluminium Industry Bill, an amending bill designed to increase by £4,250,000 the capital originally contributed in 1944 (£3,000,000) for the establishment of the industry at Bell Bay, Tasmania, and provide for the annual production of 13,000 tons of aluminium ingots. (Act assented to 30th May.)

22nd May.—Modification of the Commonwealth Bank's advance policy to secure greater flexibility and to enable individual banks to apply the policy appropriately in individual cases.

The Conciliation and Arbitration Bill introduced into House of Representatives providing for a limited right of appeal from decisions of Conciliation Commissioners to a court of three Arbitration Court Judges, and an increase in the number of Arbitration Court Judges to at least seven, so that two full courts may sit at once. (Act assented to 17th June.)

23rd May.—Good rains brought relief to north and central Australia which had suffered from prolonged drought causing heavy losses in cattle industry.

29th May.—Bill introduced to approve agreement between the Commonwealth Government and the Bulolo Gold Dredging Ltd. to form a joint company to cut 10,000,000 super. feet of timber annually from pine forests at Bulolo, New Guinea. (Act assented to 17th June.)

18th June.—Wagga, Forbes, Cowra and many other towns were badly flooded by water from the Murrumbidgee and Lachlan Rivers and their tributaries.

24th June.—Employers' organizations lodged a claim with the Commonwealth Court of Conciliation and Arbitration seeking the following adjustments to awards of 25 metal trades unions, affecting about 250,000 workers in all States except Western Australia :— (i) Reduction in basic wage by amounts of from £2 5s. to £2 7s. per week ; (ii) Reduction of the female rate from 75 per cent. to 60 per cent. of the male rate ; (iii) An increase in working hours from 40 to 44 hours per week, to be worked in either 5 or 5½ days ; (iv) Abandonment of the system of automatic quarterly cost of living adjustments to the basic wage. (*See* 12th September, 1953.)

1st July.—New five-year Dairy Industry Stabilization Scheme commenced to operate.

7th July.—At a conference of the Prime Minister and State Premiers a total of £135,900,000 was decided on as tax reimbursement grant to the States for 1952-53, plus Special Grants to Victoria and Tasmania of £800,000 and £70,000 respectively.

9th July.—The International Bank for Reconstruction and Development announced the granting of a further loan to Australia of \$50,000,000 for a twenty-year term at 4½ per cent. interest.

14th July.—Relaxation of bank advance policy to provide hire-purchase finance for farm equipment announced.

24th July.—Announced that as a result of present economic situation Australia would accept only 80,000 immigrants in 1953, and that the migration programme for 1952 would also be reduced.

1st August.—Revocation of the order made by the Commonwealth Bank under National Security Regulations fixing maximum rates of interest. This was followed by a general increase in interest rates.

6th August.—The Commonwealth Budget for 1952-53 introduced into the House of Representatives. (For details, *See Official Year Book No. 40, p. 1198.*)

26th August.—Arrival of Santa Gertrudis cattle from King Ranch, Texas, U.S.A., to start the breed on the Darling Downs, Queensland.

27th August.—The new blast furnace lit at Port Kembla, New South Wales, expected to increase output of pig iron at that centre by 1,500 tons daily.

11th September.—Announced that Consolidated Zinc Pty. Ltd. would develop the Rum Jungle, Northern Territory, uranium deposits on behalf of the Commonwealth Government, the United States of America Atomic Energy Commission to supply uranium refining plant to begin operating in 1954.

30th September.—New South Wales Building Operations and Building Materials Control Act 1945 expired, ending all controls over building operations and materials in New South Wales.

6th October.—The Commonwealth Bank announced the cessation of restrictions on bank advances for any purpose, except where the control of capital issues is involved.

14th October.—The Navigation Bill, proposing the transfer of jurisdiction over maritime industrial disputes from the Maritime Industry Commission to a single judge of the Commonwealth Court of Conciliation and Arbitration and the abolition of the Maritime Industry Commission, introduced into the House of Representatives. (Act assented to 8th December.)

Broken Hill Proprietary Steel Industry Agreement Bill introduced into the Western Australian Legislative Assembly to ratify an agreement for the establishment of a steel rolling mill and fence post factory at a cost of approximately £4,000,000 at Kwinana, near Fremantle, Western Australia. (Act assented to 18th December.)

16th October.—A Bill to provide for the sale of the Commonwealth's holding of shares in Commonwealth Oil Refineries Ltd. to the Anglo-Iranian Oil Co. Ltd. introduced into the House of Representatives (Act assented to 6th November). The Anglo-Iranian Oil Co. Ltd. is to construct an oil refinery with a capacity of about 3,000,000 tons a year, to cost about £40,000,000, at Kwinana.

22nd October.—Owing to the increased production of coal, the Coal Industry Tribunal granted an application to advance the date for commencement of the long service leave scheme from 1st January, 1954 to 1st January, 1953. (*See 7th September, 1949, Official Year Book No. 39.*)

27th November-11th December.—The Prime Minister and other Australian Ministers attended the British Commonwealth Economic Conference in London. All subjects were discussed in the light of the necessity to curb inflation and rises in the cost of living, to encourage sound economic development, and to extend a multilateral trade and payment system over the widest possible area.

5th December.—The Coal Industry Stabilization Plan was announced by the Commonwealth Government, its main features being the financing by the Commonwealth of the stockpiling of surplus production, and of the sale of coal on a credit basis to major consumers; the foregoing by the Commonwealth of interest charges on mining plant which might become idle, and the daily review of production and demand.

31st December.—The first good rains for many months were recorded in Northern Territory drought-stricken areas.

1953.

The immigration programme was cut further during the year and net migration amounted to only about 43,000, compared with 94,000 in 1952 and over 100,000 in each of the preceding three years.

After the almost continuous decline in employment in 1952 there was an almost continuous increase in 1953 and total employment (excluding rural and household domestic employment and the defence forces) rose from 2,533,000 in December, 1952 to 2,612,000 in December, 1953—still below the peak of 2,643,000 in November, 1951. Numbers on unemployment benefit dropped to less than half the level of 41,600 reached in January.

Production of coal was down slightly from the 1952 level, but production of gas and electricity and of many basic materials (pig-iron and steel, lead, cement, superphosphate) continued to increase. Production of refrigerators, washing machines, radios and other domestic electrical goods, many clothing and textile lines and sporting goods increased substantially after the set back of the previous year. There was also some revival in house building, but the number of houses started, although some 3,000 higher than in the previous year, did not regain the 1951 level.

Seasonal conditions were satisfactory. Meat production was substantially increased. The average wheat yield was lower than the previous year's record but still high at 17 bushels per acre. Acreage was somewhat greater and total production was estimated at about 199 million bushels compared with 195 million bushels in the 1952-53 harvest. The wool clip for 1953-54 was only 3 per cent. under the record of the previous year.

After some weakness at the close of the 1952-53 season, wool prices firmed again at the opening sales in September and during the first half of the 1953-54 season averaged 85d. compared with 81.8d. in 1952-53. With rising wool, wheat, butter and meat prices offsetting other reductions, export prices generally remained above the previous year's level. The value of exports was considerably higher than in 1952. During the second half of the year imports also increased substantially over the low level of the previous twelve months, and the balance of payments credit on current account which reached about £100 million in the first half of the year dropped to about £20 million in the second half.

Rises in internal prices and earnings were much smaller. Average earnings per employee rose by 4 per cent., the basic wage by 2 per cent., retail prices by 4 per cent., and wholesale prices by 5 per cent. before falling towards the close of the year, compared with increases of about 10 per cent. in 1952.

Interest rates were kept stable during the year at $4\frac{1}{2}$ per cent. on Commonwealth bonds, $4\frac{3}{4}$ per cent. on local and semi-governmental securities and 5 per cent. on bank advances. Both Commonwealth loans raised during the year at $4\frac{1}{2}$ per cent. were oversubscribed (the October one by £15 million), and during the second half of the year there was some speculation about a possible drop in interest rates.

5th January.—Announced that new deposits of coal, bauxite, tin and zinc had been discovered as a result of surveys carried out by the Bureau of Mineral Resources, Geology and Geophysics.

8th January.—Ten-year agreement signed with the Combined Development Agency for sale to the United States of America of uranium from deposits at Rum Jungle, Northern Territory.

10th January.—Announced that United Kingdom and Queensland Governments had agreed to abandon the Queensland-British Food Corporation's farming project in Central Queensland.

22nd January.—For first time since 1945, basic wage adjustment for December quarter showed no change in average for six capital cities.

18th February.—Television Bill introduced into House of Representatives to permit the establishment of both National and Commercial television transmitting stations. (Act assented to 20th March.)

19th February.—Commonwealth Bank Bill 1953 and Banking Bill 1953 introduced into House of Representatives. The Commonwealth Bank Bill sets up the Commonwealth Trading Bank under a General Manager, in place of the General Banking Division of the Commonwealth Bank. The Banking Bill provides for a new method of determining the maximum amounts which the trading banks may be required to lodge with the Commonwealth Bank as the central bank and requires the Commonwealth Bank to conform to the special accounts provisions of the Banking Bill. (Both Acts assented to 28th March.)

20th February.—Premiers' Conference in Canberra to discuss return of income tax powers to the States. No agreement reached.

10th March.—Prime Minister announced that a Census of Australia would be taken in 1954.

1st April.—Further relaxation of import restrictions to allow additional imports to the value of £50,000,000 during the next twelve months other than from the dollar area and Japan.

13th April.—New International Wheat Agreement signed in Washington fixing Australia's annual wheat export quota at 75,000,000 bushels—Australian signature not to be effective unless agreement also signed by United Kingdom and India. (Later legislation introduced into House of Representatives, 11th October.)

17th April.—Basic wage rise of 3s. per week announced.

18th April.—Commonwealth Scientific and Industrial Research Organization announced that, after ten years' research, a process had been developed to prevent shrinkage in wool.

15th May.—Australia and United States of America signed conventions to end double taxation between the two countries. (Acts ratifying these conventions were assented to 11th December.)

19th May.—Australian Loan Council meeting at Canberra adopted programme of £231,000,000 for State Government works during 1953-54 (Commonwealth will contribute, however, only on a basis of a £200,000,000 programme). Borrowing programme of £90,486,000 by Local Government and Semi-governmental authorities also approved. Loan Council decided to retain ruling interest rates on public loans for at least twelve months.

8th June.—Britain and Australia signed agreement for reciprocity in social services benefits.

9th June.—Conference of Commonwealth Prime Ministers on defence, economic and political issues concluded in London.

24th June.—Contract prices for sale of Australian butter and cheese to the United Kingdom Ministry of Food during 1953-54 increased by approximately 3½ per cent.

1st July.—Commonwealth Medical Benefits Scheme commenced, under which persons who are contributors to an approved medical benefits organization are entitled to receive part reimbursement by the Commonwealth of payments made for medical services to themselves or their dependants.

Conditions of purchase by Australian Atomic Energy Commission of acceptable uranium ores and concentrates from 1st July announced, including guaranteed minimum prices for five years.

Further relaxation of restrictions on imports from sterling countries came into operation. Some increases in imports from Japan also to be allowed.

10th July.—Price of petrol reduced by 1½d. per gallon.

15th July.—Announced that the United Kingdom Government would pay higher prices, representing increases of 7½ and 5½ per cent. respectively, for Australian lamb and mutton in 1953-54.

Export controls removed from further Australian products.

22nd July.—Announced that the United Kingdom Ministry of Food had declined to enter into a long-term contract for the purchase of Australian canned fruits. (Later in the

year the Ministry agreed to the bulk purchase of the exportable surplus of canned apricots, peaches and pears for 1954 only. It was made clear, however, that it was the policy of the United Kingdom Government to return to open trading in all imported foodstuffs as rapidly as circumstances permit.)

7th August.—Shipping freights to United Kingdom rose by $7\frac{1}{2}$ per cent.

13th August.—Commonwealth Government rejected a Japanese request for a conference to discuss trade relations between Australia and Japan.

5th September.—Drilling for oil began at Exmouth Gulf in Western Australia.

9th September.—The Commonwealth Budget for 1953-54 introduced into the House of Representatives, providing for an estimated expenditure of £986,542,000, revenue of £986,757,000 and an estimated surplus of £215,000. The major items of estimated expenditure from Consolidated Revenue Fund were :—Defence Services, £200,000,000 ; War and Repatriation Services, £116,000,000 ; National Welfare Fund, £184,000,000 ; Payments to or for the States, £189,000,000 ; Capital Works and Services, £101,500,000. Estimated expenditure from Loan Fund includes £7,000,000 for War Service Land Settlement and £7,000,000 for redemption of War Savings Certificates. The Budget included proposals for increases in expenditure on repatriation benefits (£1,000,000) and social services benefits (£18,500,000) ; and reductions in taxation of an estimated annual value to taxpayers of £82,000,000. Proposals for reductions in taxation included reduced rates of income tax with increased allowances and exemptions (£40,000,000), company tax (£23,000,000), sales tax (£9,000,000), increased annual exemption from pay-roll tax (£4,000,000), and the abolition of entertainments tax (£5,000,000).

10th September.—Pearl Fisheries Bill introduced, providing for a licensing system and other measures to control pearl fisheries (Act assented to 17th September). *See also* 11th September.

11th September.—Australian sovereignty proclaimed over sea-bed, subsoil, and continental shelf adjoining Australia and Australian territories. (Australia subsequently agreed to submit issues arising from the Pearl Fisheries Act to the International Court of Justice for adjudication.)

12th September.—Commonwealth Court of Conciliation and Arbitration in a judgment, refused applications by employers for reduction of current basic wages and for an increase of standard hours of work and also refused applications by unions for increases of basic wages. The employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price indexes were, however, granted. Later, the extension by the Court, on its own motion, of this decision to awards not the subject of an application before the Court was challenged in the High Court by the unions concerned but the power of the Arbitration Court to so vary awards was upheld.

24th September.—Australian Council of Trade Unions Congress withdrew its policy of unqualified opposition to incentive payments, leaving individual unions free to accept incentive payment schemes if they so desire.

30th September.—Announced that Commonwealth Finance Ministers would confer in Sydney in January, 1954, on such subjects as the balance of payments, world trade and the development of economic resources.

1st October.—Announced that Australia would receive an increase of $5\frac{1}{2}$ per cent. in the price of beef and veal shipped to the United Kingdom during 1953-54 under the fifteen-year meat agreement with United Kingdom.

Further relaxation of import restrictions on goods from sterling areas came into operation, allowing additional annual imports valued at £45 million.

7th October.—All States agreed to a price of 14s. per bushel for wheat sold in Australia for the three years ending 1955-56.

13th October.—Wheat Marketing Bill providing for orderly marketing of wheat for next three harvests introduced into House of Representatives (Act assented to 26th October). All States have agreed to introduce complementary legislation but have not yet done so.

Bill providing for ratification of the International Wheat Agreement, under which portion of Australia's crop for the next three seasons will be exported within certain price limits, introduced into House of Representatives. (Act assented to 26th October.)

Queensland State Full Industrial Court rejected application by employers' organizations to end basic wage adjustments.

15th October.—First atomic weapon exploded at a proving ground north of Woomera.

22nd October.—Commonwealth Court of Conciliation and Arbitration refused New South Wales transport authorities permission to withdraw applications for relief from basic wage adjustments.

26th October.—Factories and Shops (Wages Boards) Bill 1953 introduced in Victoria to pay latest cost-of-living increase in basic wages. (Act assented to 25th November.)

30th October.—Tasmanian Government abolished price control on all goods other than copper.

11th November.—Commonwealth Court of Conciliation and Arbitration completed hearing of evidence by Australian Engineering Union and other organizations in the margins case and reserved its decision. (On 26th February, 1954 the Court announced that the case had been adjourned until November, 1954 for further hearing and determination.)

12th November.—Industrial Arbitration (Amendment) Bill, giving absolute preference to unionists, introduced in New South Wales Parliament. (Act assented to 17th December.)

3rd December.—Commonwealth Trading Bank of Australia commenced operations.

4th December.—Oil discovered at Exmouth Gulf, 680 miles north of Perth. The oil, discovered at a depth of approximately 3,600 feet, was stated to be a very high grade crude oil.

31st December.—With the expiration of the Defence Preparations Act, control of Capital Issues ceased.

Price control abandoned in Western Australia.

1954.

Immigration was greater than in 1953. Net migration increased from 43,000 in 1953 to 68,000 in 1954, but was still well below the level of the preceding four years. Employment increased continuously throughout 1954. Total employment (excluding rural and household domestic employment and the defence forces) rose from 2,612,000 in December, 1953 to 2,701,000 in December, 1954. In April total employment exceeded the previous peak of 2,643,000 reached in November, 1951. Numbers on unemployment benefit fell from 13,423 in January to 2,975 in November, 1954. Production of pig-iron and steel was practically the same as in 1953, but there were rises in the production of coal, gas and electricity, and many basic materials (copper, lead, zinc, acids, cement, superphosphate). Production of domestic electrical appliances and of many textile and clothing lines also increased. More new houses were commenced in 1954 than in 1953, but the number completed was slightly below the 1953 figure. Meat production increased slightly in 1954. The wheat acreage for 1954-55 was about the same as in 1952-53, but both the total crop and the average yield are estimated to be below the levels of the previous two seasons. A substantial fall in exports, however, resulted in a level of stocks at 30th November, more than twice as high as a year earlier. The 1954-55 wool clip is estimated to be practically the same as the record 1952-53 clip and about 3 per cent. higher than the 1953-54 clip. In April there was a further relaxation of import restrictions (imposed in March, 1952) on trade with countries other than dollar area and Japan, and imports were substantially higher than in 1953. A fall in wool and wheat prices and a lower volume of wheat exports contributed to a decline in exports. In the second half of 1954 there was a debit balance, estimated at £96 million, in the balance of payments on current account compared with a debit balance of £62 million in the

first half of the year, and a credit balance of £54 million in the second half of 1953. Quotas were re-imposed on some imports in October. Average earnings per employee rose by 4 per cent., the same as the previous year's rise. In 1954, however, retail and wholesale prices showed practically no change whereas in 1953 they rose by 4 per cent. and 3 per cent. respectively. Bank interest rates were not altered during the year. The three Commonwealth loans were issued at 4½ per cent. for long dated bonds and most local and semi-governmental loans at 4¾ per cent.

7th January.—Reciprocal agreement with the United Kingdom on Social Services became operative.

8th-15th January.—Conference of British Finance Ministers held in Sydney with the Prime Minister as Chairman and other Australian Ministers in attendance. Conference reaffirmed the British Commonwealth's objectives of strengthening the internal economies of member countries and of establishing with other countries the widest possible system of multilateral trade and payments.

19th January.—It was announced that Australia would sign the declaration extending until 30th June, 1955 the schedule of tariff concessions under the General Agreement on Tariffs and Trade.

5th February.—Tariff Board increased to seven by the appointment of three new members.

25th February.—Interim decision by Full Arbitration Court on claim by Metal Trades employees for increased margins left rates of pay unchanged (*see* 5th November, 1954).

4th March.—Loan of \$54 million from the International Bank, to be used to import capital goods and equipment.

10th March.—19th Security Loan of £35 million closed with a subscription of about £50 million.

1st April.—United Kingdom Free and Assisted Passages Migration Agreement with Australia renewed for another year.

9th April.—Contract for £25 million let to Kaiser group, of U.S.A. for the construction of the Eucumbene—Tumut tunnel and other works in the Snowy Mountains Scheme.

16th April.—Revision of the 15 year marketing agreement for Australian meat sold in the United Kingdom, occasioned by the change over from bulk purchasing to private trading.

27th April.—£3.9 million contract for building the Upper Tumut power station of the Snowy Mountains Scheme let to a French group of contractors.

4th June.—Queensland Industrial Court increased margins to workers under Mechanical Engineering Award.

16th June.—Premier of South Australia announced two new uranium finds in north-east of State.

28th June.—Australia signed International Tin Agreement as a consuming country. Savings Bank deposits in Australia reached £1,000 million for the first time.

30th June.—Loan Council approved borrowing programme of £290 million for 1954-55 comprising Government loans, £200 million, Semi-Governmental loans, £75 million, and Local Government loans, £15 million. Tax reimbursement Grants to States to be £150 million for 1954-55. Australian population census taken.

1st July.—Forecast that by 31st July stocks of wheat carried over by the four major producing countries will total 1,601 million bushels compared with 1,061 million in 1953.

4th July.—Commonwealth Budget for 1953-54 resulted in a surplus of £56,300,000. Favourable trade balance of £149,400,000 for 1953-54.

13th July.—Heavy rain and gales caused damage to 200 miles of coastal area from Queensland to Northern New South Wales with floods in river districts of S.E. Queensland and Northern New South Wales. For the seventh time in five years (and twice in 1954) the New South Wales North Coast towns have been flooded. Damage estimated at £17,000,000.

16th July.—Retail prices index for June showed, on average, a slight fall throughout Australia.

4th August.—£1,800,000 hydro-electric project approved for Warragamba Dam (New South Wales).

13th August.—Wool sold in Australia in 1953-54 season realized £390.7 million, £14 million less than last year, but third highest on record.

18th August.—Commonwealth Budget for 1954-55 estimated revenue of £1,015,100,000 and expenditure of £1,014,800,000. Concessions included a 9 per cent. reduction in income tax, reductions in rates of sales tax, and increased exemption level for pay roll tax.

19th August.—Miners' Federation convention unanimously agreed to the mechanical extraction of pillar coal. (See 20th September, 1954.)

31st August.—New South Wales Government granted £125,000 to New South Wales University of Technology for research in nuclear engineering (previously £50,000 was granted to the University of Sydney for research into nuclear physics). £50 million Commonwealth Cash and Conversion Loan oversubscribed by £1 million.

17th September.—Prime Minister officially opened at Rum Jungle first uranium plant established in Australia.

20th September.—Mechanical extraction of pillar coal commenced in some New South Wales mines.

29th September.—The Tariff Board annual report issued a warning against any general increase in the tariff level and on high cost in industry.

30th September.—New import restrictions announced on imported materials and equipment (goods on which quota restrictions were abandoned in April, 1954), on the basis of 100 per cent. of imports in the base year, 1950-51.

5th October.—Hon. H. E. Holt, Federal Minister for Labour and National Service, announced the formation of a National Joint Production Council representing management and workers.

14th October.—Announced that Commonwealth would grant £24 million for roads in 1954-55.

29th October.—Tariff changes increased tariffs on certain imports and increased protection to eight Australian industries. Government bounties on rayon yarn in Australia and scutched flax fibre produced from flax grown in Australia were announced.

3rd November.—Bounty paid on sulphuric acid as from 1st July, 1954. Legislation introduced to appropriate £600,000 annually for five years. Waterside workers declared a general strike on the Australian waterfront as a protest against proposed new Stevedoring legislation. (See 5th November.)

5th November.—Federal Arbitration Court granted higher margins for skilled workers in a judgment intended to be a guide to other wage fixing authorities. New Stevedoring legislation introduced into House of Representatives which, in effect, gave employers the right to nominate new waterside workers. Previously the right of deciding eligibility for work in the industry had been the prerogative solely of the Unions. Government will pay subsidy on gold produced in Australia, Papua and New Guinea in the next three years.

19th November.—Privy Council ruled New South Wales State Transport (Coordination) Act is invalid insofar as it applied to interstate Transport.

22nd November.—New arrangements for regulation of trading with Japan gave Japanese exporters the opportunity of obtaining a larger share of Australia's trade.

23rd November.—Commonwealth Government set target of migrants for 1954-55 at 115,000.

25th November.—Commonwealth Government called tenders for equipment necessary for television stations in Sydney and Melbourne.

2nd December.—Australian wheat prices guaranteed under the wheat stabilization plan will remain at 12s. 7d. per bushel for 1954-55 season.

10th December.—\$25 million loan floated by Australia on United States market oversubscribed.

14th December.—£13 million lag in cash section of Commonwealth Government £125 million cash and conversion loan.

15th December.—Increased margins for coal industry employees, applying in New South Wales, Queensland, Victoria and Tasmania, announced by Coal Industry Tribunal.

31st December.—Governor of Commonwealth Bank announced an increase of 5s. per cent. in rates of interest on bank fixed deposits and Savings Bank deposits, to operate from 1st January, 1955.

CHRONOLOGICAL TABLE.

CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTES.—For each earlier year this Table contains rarely more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items, and for more information the reader should therefore consult earlier issues.

The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table the names now borne by the States serve to indicate the localities.

Year.

- 1788 N.S.W.—Arrival of "First Fleet", under Captain Arthur Phillip, at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove, and formal possession of the colony was taken on 26th January. Formal proclamation of colony and establishment of regular government on 7th February. Branch Settlement established at Norfolk Island. French navigator La Pérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River.
- 1790 N.S.W.—Scarcity of provisions. "Second Fleet" reached Port Jackson. Landing of the New South Wales Corps.
- 1791 N.S.W.—Arrival of "Third Fleet". Territorial seal brought by Governor King.
- 1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fisherman at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—Hunter River coal-mines worked. First Customs House in Australia established at Sydney. Flinders' charts published.
- 1801 N.S.W.—First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette", first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur.
- 1806 N.S.W.—"The great flood" on the Hawkesbury. Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—First shipment of merchantable wool (245 lb.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Free school established.
- 1810 N.S.W.—Post Office officially established at Sydney.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson and Blaxland. Macquarie River discovered by Evans.
- 1814 N.S.W.—Flinders suggested the name "Australia", instead of "New Holland". Creation of Civil Courts.

Year.

- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
- 1816 N.S.W.—Sydney Hospital opened.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.
- 1818 N.S.W.—Liverpool Plains, and the Peel, Hastings and Manning Rivers discovered by Oxley, and Port Essington (N.T.) by Captain King.
- 1819 N.S.W.—First Savings Bank in Australia opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep from Camden Park (N.S.W.) flocks.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1822 N.S.W.—Formation of Agricultural Society of New South Wales.
- 1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
- 1824 N.S.W.—Constituted a Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Port Dundas Settlement formed at Melville Island, N. Terr.
- 1825 Tas.—Van Diemen's Land (Tasmania) proclaimed a separate colony. Qld.—Major Lockyer explored Brisbane River to its source and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Black line organized to force aborigines into Tasman's Peninsula, but failed. Small remnant subsequently (1830 to 1835) persuaded to settle on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of at auction. Mitchell's explorations north of Liverpool Plains. SS. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.—State Savings Bank established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Brothers. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against Murray River natives at Pinjarrah for continued attacks on settlers.
- 1835 Vic.—John Batman arrived at Port Phillip; foundation of Melbourne.
- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.

Year.

- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane—first free colonists. S.A.—“Overlanding” of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payments for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George’s Sound.
- 1841 N.S.W.—Gold found near Hartley. W.A.—Completion of Eyre’s overland journey from Adelaide to King George’s Sound. New Zealand proclaimed a separate colony.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). Qld.—Moreton Bay granted legislative representation as a distinct electoral division.
- 1844 Qld.—Leichhardt’s expedition to Port Essington (N.T.). S.A.—Sturt’s last expedition inland.
- 1845 N.S.W.—Mitchell’s explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper’s Creek.
- 1846 N.S.W.—Initiation of meat-preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia.
- 1847 N.S.W.—Iron-smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Qld.—Explorations by Leichhardt, Burnett and Kennedy.
- 1848 N.S.W.—National and Denominational School Boards established. Qld.—Leichhardt’s last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to gold-fields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignment of *Hashemy* convicts to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Sydney University founded. Vic.—Gold discovered at Clunes. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
- 1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Vic.—Port Phillip created an independent colony under the name of Victoria. Discovery of gold in various localities. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascended the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protested against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation. Vic.—Melbourne University founded.
- 1854 Vic.—Opening of first Victorian railway—Flinders Street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec. Telegraph first used.

Year.

- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.
Responsible Governments in N.S.W., Vic., S.A. and Tas. (Act of 1855).
- 1857 N.S.W.—Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne and Adelaide. Qld.—Canoona gold rush.
Population of Australia reached 1,000,000.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.
- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta. McDouall Stuart reached centre of continent and named "Central Mount Stuart".
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property (Torrens) Act passed. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the north-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
- 1864 Qld.—First sugar made from Queensland cane.
- 1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
- 1868 W.A.—Arrival of *Hougomont*, last convict ship.
- 1869 Vic.—Record gold nugget "Welcome Stranger" 2,284 oz. found near Dunolly. W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of trans-continental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff.
- 1872 Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. S.A.—University of Adelaide founded. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.
- 1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.
- 1876 N.S.W.—Completion of cable—Sydney to Wellington. W.A.—Giles crossed colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.
- 1877 W.A.—Opening of telegraphic communication with South Australia.
Population of Australia reached 2,000,000.
- 1878 Qld.—Restriction of Chinese immigration.
Introduction of telephone into Australia.
- 1879 N.S.W.—First artesian bore at Kallara Station, near Bourke. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.

- Year.
- 1880 N.S.W.—Public Instruction Act passed. Vic.—First Australian Telephone Exchange opened in Melbourne.
Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration.
First Australia-wide censuses on same date taken.
- 1882 W.A.—Nugget of gold found between Roebourne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities.
Federal Conference held at Sydney. Federal Council created.
- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell.
First session of Federal Council held at Hobart on 26th January.
- 1887 W.A.—Gold discovered at Southern Cross.
First "Colonial" Conference in London. Australasian Naval Defence Force Act passed.
- 1888 N.S.W.—Restrictive legislation against Chinese, imposing poll-tax of £100.
Qld.—Railway communication opened between Sydney and Brisbane.
Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Railway communication established between Brisbane and Adelaide.
W.A.—Framing of new Constitution. Tas.—University of Tasmania founded.
Population of Australia reached 3,000,000.
- 1890 W.A.—Responsible Government granted.
Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.
First Federal Convention in Sydney, draft bill framed and adopted.
- 1892 W.A.—Discovery of gold at Coolgardie.
- 1893 Financial crisis, chiefly affecting the eastern States.
- 1894 S.A.—Women's suffrage granted—first State to do so.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.
Conference of Premiers on Federation at Hobart.
- 1896 N.S.W.—People's Federal Convention at Bathurst. Vic.—Wages Board system established by Act of Parliament.
- 1897-8 Sessions of Federal Convention at Adelaide, Sydney and Melbourne.
- 1898 Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia and Tasmania. Requisite statutory number of votes not obtained in New South Wales.
- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia and Tasmania. First Labour Government (Queensland).
- 1900 N.S.W.—Old-age pensions instituted.
Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.

Year.

- 1901 Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established.
- 1902 Completion of Pacific Cable (all-British). First Federal Tariff.
- 1903 Coolgardie and Kalgoorlie Water Supply Scheme completed. Inauguration of the Federal High Court.
- 1904 Commonwealth Conciliation and Arbitration Act.
- 1905 Population of Australia reached 4,000,000. Re-introduction of assisted immigration in New South Wales.
- 1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth. Excise Tariff Act imposed duties on agricultural machinery except when manufactured "under conditions as to the remuneration of labour which are declared to be fair and reasonable"
- 1907 First telephone trunk line service between Capital Cities, i.e., Sydney and Melbourne. Imperial Conference in London. Declaration of first basic wage in "Harvester Judgment".
- 1908 Canberra chosen as site of Australian Capital.
- 1909 Imperial Defence Conference in London. Visit of Lord Kitchener to report and advise on Australian military defence. Queensland University founded.
- 1910 Penny Postage. Arrival of *Yarra* and *Parramatta*, first vessels built for the Royal Australian Navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
- 1911 First Federal Census. Transfer of Australian Capital Territory and Northern Territory to Commonwealth. Introduction of compulsory military training. University of Western Australia founded.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway.
- 1913 Australian Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Transfer of Norfolk Island to Commonwealth.
- European War declared 4th August. Australian Navy transferred to British Navy. Australian offer to equip and furnish 20,000 troops accepted. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser *Emden* destroyed by H.M.A.S. *Sydney* at Cocos Islands, 9th November. First contingent landed in Egypt. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.
- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W.
Australian and New Zealand troops landed at Gallipoli, 25th April.
Evacuation, 18th-20th December. Australian warships with Grand Fleet.
- 1916 Purchase of steamships by the Commonwealth.
Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine and Syria. Other troops transferred to France. First proposal for compulsory military service overseas defeated by referendum.
- 1917 National Ministry formed under Rt. Hon. W. M. Hughes. Transcontinental (Kalgoorlie-Port Augusta) Railway completed.
Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service overseas defeated by referendum.
- 1918 Population of Australia reached 5,000,000. Australia House (Strand, London) opened by the King.
Five Australian divisions in France formed into army corps, 1st January.
Armistice with Germany, 11th November. Repatriation Commission created.

- Year.
- 1919 Peace Conference. Return of Australian troops. Flight England to Australia by Capt. (Sir) Ross Smith and Lieut. (Sir) Keith Smith. Peace Treaty signed at Versailles, 28th June.
- 1920 Visit to Australia of H.R.H. the Prince of Wales. Imperial Statistical Conference in London.
- 1921 Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia. Second Federal Census.
- 1922 First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.
- 1923 First sod turned on the site of Federal Parliament House at Canberra.
- 1924 Directorate of Commonwealth Bank appointed. Australian Loan Council formed.
- 1925 Population of Australia reached 6,000,000. Solar Observatory established at Canberra.
- 1926 Council for Scientific and Industrial Research established. Imperial Conference. Dominion Status defined.
- 1927 Transfer of Seat of Commonwealth Government from Melbourne to Canberra. Beam wireless established. Financial agreement between Commonwealth and States.
- 1928 State Debts referendum carried.
- 1929 Commonwealth Bank empowered to mobilize gold reserve. Abolition of peacetime compulsory military training in favour of voluntary system.
- 1930 Effects of world-wide severe economic depression felt throughout Australia. Brisbane-Grafton (N.S.W.) railway, first step towards uniform gauge railway communication between capitals of mainland States, opened. First Australian—Rt. Hon. Sir Isaac Alfred Isaacs, G.C.M.G., Chief Justice of the High Court—appointed Governor-General of Australia.
- 1931 Depression continues. Initiation of Premiers' Conference plan to meet the financial situation. Commonwealth Bank Act amended to provide for temporary lower reserve against notes. England departed from gold standard. Commonwealth Bank assumed control of exchange rate and lowered it to 125 (previously 130).
- 1932 Sydney Harbour Bridge opened. Australian Broadcasting Commission established. Legislation passed enabling note reserve to be held in sterling securities. Imperial Economic Conference at Ottawa.
- 1933 World Economic Conference in London. Secession Referendum carried (Western Australia). Antarctica and Ashmore and Cartier Islands taken over by the Commonwealth. Third Federal Census.
- 1934 Inauguration of England-Australia Air Mail Service.
- 1935 Empire Statistical Conference at Ottawa.
- 1936 Joint Commonwealth and State Marketing Schemes invalidated by decision of the Privy Council in the James case. Tasmania linked with mainland by submarine telephone cable.
- 1937 Imperial Conference in London. Report of the Royal Commission on Monetary and Banking Systems in Australia.
- 1938 New Defence Programme involving expenditure of £63,000,000 over three years. New Trade Treaty with Japan.
- 1939 Population of Australia reached 7,000,000.
War declared on Germany, 3rd September. Royal Australian Navy placed at disposal of Great Britain. Advance party of Australians embarked for Middle East, 15th December.
- 1940 Exchange of Ministers between Australia and United States of America marked Australia's entry into field of direct diplomatic representation with countries other than the United Kingdom.
First Australian convoy (6th Australian Division) sailed for Middle East. Cruiser *Sydney* crippled Italian cruiser *Bartolomeo Colleoni*.

Year.

- 1941 Establishment of Commonwealth Child Endowment Scheme. United States Congress passed Lend-Lease Bill.
- Arrival of units of Eighth Australian Division in Malaya. Australian destroyers in "Tobruk Ferry Run". *Sydney* lost after fight with *Steiermark*. R.A.A.F. in defence of Britain, in Middle East and at Singapore. Australian forces engaged in Middle East, Greece, Crete and Syria. Japanese attack on Pearl Harbour. Australia declared war on Japan, 9th December.
- 1942 Federal uniform taxation adopted. Commonwealth widows' pensions introduced. Rationing of commodities.
- Japanese landed at Rabaul. Fall of Singapore. Darwin bombed. United States armed forces landed in Australia. Headquarters of South-West Pacific Command set up by General Douglas MacArthur in Melbourne. Coral Sea Battle. Japanese midget submarines in Sydney Harbour. Australian cruisers in attack on Solomon Islands. Australians withdrew from Kokoda. Japanese forced to withdraw from Milne Bay. Owen Stanley Ranges offensive. Ninth Australian Division at El Alamein (North Africa). Kokoda recaptured. Further Australian successes in New Guinea.
- 1943 Price Stabilization Scheme. Mortgage Bank Department of Commonwealth Bank opened. National Works Council formed.
- Australian forces combined with American forces to recapture many places in New Guinea. Commencement of long series of amphibious operations in which R.A.N. ships took part. R.A.A.F. from 1943 till end of war operated on all fronts.
- 1944 Pay-as-you-earn taxation operated from 1st July. Referendum refused Commonwealth Government increased powers in post-war period.
- Australian advances in Northern New Guinea. Allied invasion of France. Australians landed on New Britain; took over from Americans in Bougainville, Solomon Islands, and at Aitape, New Guinea.
- 1945 Captain Cook Dock opened by Governor-General, the Duke of Gloucester. Re-establishment and Employment Act. Banking Act to regulate banking and to protect the currency and public credit. Australia ratified United Nations Charter.
- Cessation of hostilities in Europe, 8th May. Cessation of hostilities against Japan, 15th August. Australian forces operating in New Guinea, Solomon Islands and Borneo. General demobilization commenced.
- 1946 Cessation of man-power controls. Commonwealth Government accepted responsibility for supply and maintenance of B.C.O.F. in Japan. Inauguration of Commonwealth Employment Service. United Kingdom—Dominion Wool Disposals Ltd. (Joint Organization) commenced operations. Act to establish National University at Canberra. Coal Industry Act providing, *inter alia*, for a joint Commonwealth-State authority. Commonwealth and State agreement on housing. Commonwealth Trans-Australia Airlines began operations. Constitution Alteration Referendum granted powers in regard to social services to Commonwealth. Double taxation relief agreement between Australia and Britain. Approval for establishment of guided missile range in Central Australia. Defence (Transitional Provisions) Act. Expiry of National Security Act.
- 1947 End of demobilization. Post-war defence programme to extend over five years approved. Census of Australia—first since 1933. Full High Court declared invalid section of Banking Act 1945 prohibiting banks from conducting business for State authorities. Legislation to nationalize trading banks enacted (*see* 1948). Australian National Antarctic Research Expedition to establish scientific research station at Heard Island. First "displaced persons" reached Australia.

Year.

- 1948 Forty-hour week effective throughout Australia. Membership of Commonwealth Parliament increased. Constitution Alteration (Rents and Prices) proposal defeated. High Court declared invalid certain vital sections of Banking Act 1947. Tuberculosis Act. International Trade Organization Act (General Agreement on Tariffs and Trade and Havana Charter for International Trade Organization).
- 1949 Nationality and Citizenship Act operative. Broadcasting Control Board came into operation. New Guinea placed under international trusteeship and administrative union of Papua and New Guinea established. Certain Australian aborigines for first time granted franchise at Federal elections. Establishment of New South Wales University of Technology. Dispute over claims for 35-hour week, 30s. a week wage increase, and long-service leave rendered all Australian black coal mines idle from 27th June until 15th August, causing restrictions in dependent services and unemployment. Establishment of Australian Whaling Commission. Reduction of 25 per cent. in Australia's imports from dollar areas. Devaluation of sterling against American dollar, and commensurate devaluation of Australian pound to two dollars twenty-four cents. Commencement of Snowy Mountains Hydro-electric Power Scheme. Australia's population reached 8,000,000.
- 1950 Senate and House of Representatives failed to agree on Commonwealth Bank Bill. Severest flooding for twenty-five years in south-east corner of New South Wales. Appointment of first Australian Ambassador to Republic of Indonesia. Appointment of first Australian Minister to Philippines. Sir Thomas Blamey first Australian to be elevated to rank of Field-Marshal. Arrival of Field-Marshal Sir William Slim, Chief of Imperial General Staff, for defence talks. First Minister for Israel in Australia arrived. Disastrous floods on north coast of New South Wales. Following attacks by forces of North Korea on forces of Republic of Korea and failure of Security Council's call for immediate cessation of hostilities, the Council called on members to furnish assistance to Republic of Korea. Australian naval and air forces in vicinity of Korea placed at disposal of United Nations, and decision to withdraw Australian troops with BCOF in Japan countermanded. Arrival of first Ambassador for Republic of Indonesia. Loan of \$100,000,000 for Australia by International Bank for Reconstruction and Development. Inauguration of modified free medicine scheme. All volunteers in Australian Regular Army and Citizen Military Forces to be liable for service anywhere in the world (*see below*). Australian ground troops joined British Commonwealth Brigade in Korean conflict. Introduction of Commonwealth Bank Bill 1950 (No. 2) in House of Representatives. Adult franchise for Victorian Legislative Council replaced existing franchise dependent on property qualifications. Commonwealth Court of Conciliation and Arbitration ruling of increase of £1 in male basic wage, and increase in female basic wage from 54 to 75 per cent. of male rate. Railway dispute caused cessation of railway services in Victoria from 16th October to 8th December, and in South Australia from 23rd October to 19th November. National Service Bill to establish a system of national training for defence forces of Australia introduced in House of Representatives—provides for compulsory registration and call-up at 18 years of age of all male British and certain non-British subjects resident in Australia (extended in 1954 to every male person ordinarily resident in Australia who attains, or who has attained, the age of 18 years since 1st November, 1950). Volunteers in Australian Citizen Military Forces to be liable for overseas service only in the event of a major war. Commonwealth Government to contribute £31,250,000 to Colombo Plan for Co-operative Economic Development in South and South-east Asia and £3,500,000 for technical assistance programme. Conference of Commonwealth Prime Ministers in London.

Year.

- 1951 Opening of Jubilee celebrations to mark the fiftieth year of Australian federation. British Government's confirmation of transfer of Heard Island and the Macdonald Islands (Southern Indian Ocean) to Australia as from 26th December, 1947. Governor-General granted double dissolution of nineteenth Parliament on the grounds that the Senate had "failed to pass" the Commonwealth Bank Bill (*see* 1950). Return of Menzies-Fadden Government after general election following double dissolution (*see* above). The Governor-General opened the twentieth Parliament with special Jubilee ceremonies. Official cessation of hostilities with Germany. Large upward adjustments in federal basic wage (13s. in six capital cities average). Conference of representatives of the Commonwealth and State Governments, employers and trade unions, and other sections of the community, called by the Prime Minister to discuss means of combating inflation. The Governor of the Commonwealth Bank, the heads of commercial banks and the Secretary to the Treasury in conference called by the Prime Minister to discuss bank credit policy. General financial and investment policy considered at conference between the Government and representatives of insurance companies. Security Treaty signed in Washington by the United States of America, Australia and New Zealand for action in the event of an armed attack in the Pacific. Japanese Peace Treaty signed at San Francisco by 49 nations including Australia. Constitution Alteration (Powers to deal with Communists and Communism) referendum resulted in a decision against the proposed Act. Australia to provide an additional infantry battalion for United Nations forces in Korea. The Prime Minister announced that Australia would spend about £700,000,000 on defence during the next three years. Further large upward adjustments (*see* above) in federal basic wage—11s. for six capital cities' average. Third Conference of Government Statisticians of the British Commonwealth held in Canberra. Opening of new Legislative Council of Papua and New Guinea, which included, for the first time in the history of Australian Legislature, representatives of the native peoples. New mace presented to the House of Representatives by a delegation from the House of Commons, to commemorate the Jubilee of the Australian Commonwealth.
- 1952 Nuclear experiments commenced at National University, Canberra. Refusal by Commonwealth Conciliation Commissioner of an application by eleven metal trades unions for marginal wage increases ("Galvin" Award) affected more than 250,000 metal trades workers throughout Australia. Widespread bushfires in New South Wales, Victoria and Australian Capital Territory. Prototype of first unmanned radio-controlled jet aircraft designed and built in Australia successfully tested. Death of His Majesty King George VI.; Princess Elizabeth proclaimed Queen. Third British Commonwealth Scientific Official Conference held in Canberra and Melbourne. Good rains in northern areas of New South Wales ended the worst drought experienced there for many years. Announcement that locally produced pyrites would replace imported sulphur in Australian sulphuric acid industry by the end of 1953. Important high-grade uranium deposits discovered at Rum Jungle, Northern Territory. Japanese Peace Treaty ratified. 1st Battalion, The Royal Australian Regiment, sailed from Sydney for service in Korea (the second battalion of Australian troops to serve there). Australia ratified the Pacific Pact between United States of America, New Zealand and Australia. Commonwealth Bank prohibited the establishment of further import credits until licences had been obtained for the goods involved. Imposition of severe restrictions on imports from all sources and on amounts available for Australians travelling overseas. Agreement between the Commonwealth and South Australian Governments and the Combined Development Agency of the British and American Governments, on the development of uranium

Year.

1952—
contd.

deposits at Radium Hill, South Australia. Sir Owen Dixon appointed Chief Justice of the High Court of Australia to succeed Sir John Latham. Australian ambassadors to Japan and West Germany appointed. At Berala, near Sydney, in the first collision between two electric trains in New South Wales to result in fatalities, ten persons were killed and more than 100 injured. Proclamation of termination of the war which commenced on 3rd September, 1939. Good rains brought relief to north and central Australia, which had suffered from prolonged drought conditions. Nine people died and 22 were injured in a level-crossing smash at Boronia in Victoria. An amendment to the Conciliation and Arbitration Act provided for a limited right of appeal to the Commonwealth Court of Conciliation and Arbitration from decisions of Conciliation Commissioners, and for an increase in the number of Judges. Agreement between the Commonwealth Government and Bulolo Gold Dredging Ltd. to cut timber from pine forests at Bulolo, New Guinea. Wagga, Forbes, Cowra and many other towns in central and south-west New South Wales experienced one of the worst floods in their history. In the Basic Wage and Standard Hours Inquiry before the Commonwealth Court of Conciliation and Arbitration, employers' organizations sought reductions in wages, longer hours and abandonment of the system of automatic quarterly cost of living adjustments to the basic wage. No. 78 Fighter Wing, R.A.A.F., departed for Malta to assist the R.A.F. in garrison duties in the Middle East. Reductions announced in Australia's 1952 and 1953 immigration programmes. Representatives of New Zealand, the United States of America and Australia met at Honolulu to consider the Pacific defence pact (A.N.Z.U.S.). Tenth General Assembly of the Union Radio Scientifique Internationale held in Sydney—the first meeting of an international scientific body outside Europe or America. Purchase by Commonwealth Government of one of the fourteen known authentic copies of "Magna Carta". Qantas Empire Airways began first direct service between Sydney and Johannesburg, South Africa, via Perth, Cocos Islands and Mauritius. Commonwealth legislation requiring employers to give preference in employment to ex-servicemen extended for three years. Commonwealth Government disposed of shares in Commonwealth Oil Refineries to the Anglo-Iranian Oil Co. which is to construct a £40,000,000 oil refinery at Kwinana, near Fremantle, Western Australia. Britain's first atomic weapon detonated on the Monte Bello Islands, near the north-west coast of Australia. Ratification by Western Australian Parliament of an agreement for the establishment at Kwinana, by the Broken Hill Proprietary Co. Ltd., of a steel rolling mill and fence post factory at a cost of approximately £4,000,000. Announcement of projected visit to Australia and New Zealand by Her Majesty Queen Elizabeth and H.R.H. the Duke of Edinburgh early in 1954. Death of Rt. Hon. W. M. Hughes. Agreement between the Commonwealth Government and Australian National Airways Pty. Ltd. guaranteeing the latter a loan to purchase new aircraft and an equal share with Trans-Australian Airlines in government business and reducing air route charges. British Commonwealth Economic Conference in London attended by Prime Minister of Australia. Death of Sister Kenny, world renowned for treatment of poliomyelitis. Good rains in Northern Territory terminated prolonged drought there.

1953 Ten-year agreement signed with Combined Development Agency for sale to the United States of America of uranium from deposits at Rum Jungle, Northern Territory. First Minister to Australia for Thailand and First Japanese Ambassador to Australia presented credentials to Governor-General. For first time since 1945, basic wage adjustment for December quarter showed no change in six capitals' average. Inquiry by Royal Commission into the establishment of television in Australia. Television Bill introduced to permit

Year.

1953—
contd.

the establishment of both National and Commercial television transmitting stations (Act assented to 20th March). Commonwealth Bank Bill 1953 and Banking Bill 1953 introduced (both Acts assented to 28th March). Premiers' Conference in Canberra failed to reach agreement on return of income tax powers to States. 2nd Battalion, The Royal Australian Regiment, sailed from Sydney for service in Korea. Prime Minister announced that a Census of Australia would be taken in 1954. Bill introduced into Northern Territory Legislative Council to give citizenship rights to Northern Territory aborigines, except those committed to State care (assented to 17th April). Atomic Energy Bill 1953, establishing Atomic Energy Commission, introduced (Act assented to 15th April). H.M.A.S. *Sydney* sailed from Melbourne for England with Coronation Contingent. National Health Bill 1953 introduced, consolidating legislation relating to pharmaceutical, medical and hospital benefits and other health services (Act assented to 18th December). Import restrictions further relaxed. New International Wheat Agreement signed in Washington. Commonwealth Scientific and Industrial Research Organization developed a process to prevent shrinkage in wool. Australian designed and built radio-controlled jet plane for use in guided missile research successfully tested. Field-Marshal Sir William Slim sworn in as Governor-General of Australia. Senate election resulted in Government parties retaining majority. Australia and United States of America signed conventions to end double taxation between the two countries (Acts ratifying these conventions assented to 11th December). Australian Loan Council adopted programme of £231,000,000 for 1953-54 (Commonwealth will contribute, however, only on basis of a £200,000,000 programme). Borrowing programme of £90,486,000 by Local Government and Semi-Governmental Authorities also approved. Loan Council decided to retain ruling interest rates on public loans for at least twelve months. Full Court of Victoria upheld validity of Electoral Reform Bill providing for two State seats for each Commonwealth Electorate. Coronation of Her Majesty Queen Elizabeth the Second. Britain and Australia signed agreement for reciprocity in social services benefits. First Australian-built Canberra jet bomber successfully tested. Conference of Commonwealth Prime Ministers on defence, economic and political issues held in London. New South Wales Parliament to introduce legislation to make New England University College a separate university, devoted mainly to agricultural studies and research. Commonwealth Medical Benefits Scheme commenced, under which persons who are contributors to an approved medical benefits organization are entitled to receive part reimbursement by the Commonwealth of payments made for medical services to themselves or their dependents. Korean armistice signed by United Nations and Communist Forces at Panmunjom, bringing to an end over three years of fighting. First Australian-built jet fighter made initial test flight. Pearl Fisheries Act providing for stricter control of pearl fisheries. Australia proclaimed sovereignty over sea-bed, subsoil and continental shelf adjoining Australia and Australian territories but agreed to submit issues arising from the Pearl Fisheries Act to the International Court of Justice for adjudication. Commonwealth Court of Conciliation and Arbitration refused applications by employers for reduction of current basic wages and for an increase of standard hours of work, and also refused applications by unions for increases of basic wages. The employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price index numbers were, however, granted. Later, the extension by the Court, on its own motion, of this decision to awards not the subject of an application before the Court was challenged in the High Court by the unions concerned but the power of the Arbitration Court to so vary awards was upheld. Arrangements made with United Kingdom for sharing cost of guided missile research at Woomera, South Australia. Atomic weapons exploded north of Woomera. Commonwealth Trading Bank of Australia commenced operations. Oil, stated to be a very high grade crude oil, discovered at Exmouth Gulf, about 680 miles north of Perth.

Year.

1954— Her Majesty the Queen and His Royal Highness the Duke of Edinburgh arrived in Sydney on 3rd February to commence their tour of Australia, making the first visit of the reigning sovereign to Australia. Dispute with Japan over extent of Australian sovereignty over sea-bed and control of pearl fisheries (*See* 1953). Australian and Japanese Governments exchanged notes for the submission of the dispute to the International Court of Justice and agreement signed on a provisional régime to regulate Japanese pearling in Australian waters in the interim. The Australian Antarctic Research Expedition established a station at Mawson on the coast of MacRobertson Land to conduct meteorological and other research (being the first permanent Australian station on the Antarctic Continent). An Australian Services mission visited Singapore for a conference between Service representatives of the United Kingdom, the United States of America, Australia, and New Zealand. Her Majesty the Queen opened the Federal Parliamentary session and unveiled the Australian-American War Memorial at Canberra. Australian Academy of Science incorporated by Her Majesty the Queen. New South Wales Government granted Sydney University £100,000 for nuclear research. Inaugural meeting of Nuclear Research Foundation. Commonwealth grant of £50,000 to Sydney University for fundamental nuclear research. Mr. C. T. Moodie appointed Australia's first Minister to Burma. Royal tour of Australia ended on 1st April. Contract for £25 million let to Kaiser group, of the United States of America, for the construction of the Eucumbene-Tumut tunnel and other works in the Snowy Mountains Scheme. Mr. and Mrs. Vladimir Petrov of the Soviet Embassy granted political asylum On 25th April, the Soviet Government informed the Australian Government that it had decided to recall its Embassy in Australia, and the Ambassador and his staff sailed from Fremantle on 29th April. The Australian Embassy left Moscow on the same date. Parliament passed Act appointing Royal Commission into espionage in Australia. Political conference on Korea and Indo-China opened in Geneva, with Australia represented by the Minister for External Affairs. £3.9 million contract for building the Upper Tumut power station of the Snowy Mountains Scheme let to a French group of contractors. Announcement made that Hume Reservoir would be increased to 2½ million acre feet. Royal Commission into Television recommended introduction of television into Australia as soon as practicable. Elections for the House of Representatives resulted in the Liberal Government being returned with a reduced majority. Australia took part in Five Power military talks, at Washington, on South-East Asia. Premier of South Australia announced two new uranium finds in north-east of State. Australian population census taken. Prime Minister announced the formation of two major Cabinet committees—the "Prime Minister's Committee" and the "Vice-President's Committee". Carnegie Corporation granted £250,000 to help finance the building of a giant radio telescope (the balance, £300,000, to be found in Australia). 21st Commonwealth Parliament opened. Pan Indian Ocean Science Congress held in Perth. R.A.A.F. took delivery of the first Australian built Avon Sabre jet fighter. Australia at the Manila Conference signed a treaty pledging collective defence against aggression in South-East Asia and the South-West Pacific. Mr. C. R. Attlee, Leader of the British Parliamentary Labour Party, and Mrs. Attlee, arrived in Sydney on a visit to Australia as guests of the Commonwealth. 3rd Battalion, Royal Australian Regiment, withdrawn from Korea. At Rum Jungle, Prime Minister officially opened first uranium treatment plant established in Australia. Minister for Labour and National Service announced the formation of a National Joint Production Council representing both management and workers. Atomic Energy Commission authorized to construct an advanced type of nuclear reactor and research laboratories as part of a programme of co-operation in atomic research with the United Kingdom. Control of Cocos Islands handed over to Australia by Great Britain. Chief Electoral Officer recommended a redistribution of electoral boundaries in Victoria,

Year.

1954—
contd.

Queensland and Tasmania because of variation in numbers in several divisions as well as redistribution in New South Wales, South Australia and Western Australia following the Census results by which New South Wales will lose one seat and South Australia and Western Australia will gain one each. Commonwealth Government called tenders for equipment necessary for television stations in Sydney and Melbourne. Liquor referendum favoured 10 p.m. closing in New South Wales. Privy Council ruled that New South Wales State Transport (Co-ordination) Act was invalid insofar as it applied to inter-state transport.

STATISTICAL SUMMARY, AUSTRALIA.

NOTE.—(1) In most cases where figures are available back to 1861, these were shown in Official Year Book No. 39, pp. xxviii-xxix.

(2) Most of the statistics in this Summary relate to the periods shown in the table headings. In those comparatively few cases where the statistics relate to other periods, this is indicated in footnotes.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1954.
Demography(a)—								
Population(b)	{ '000 Males .. 1,737	2,005	2,382	2,709	3,333	3,599	4,318	4,503
	{ '000 Females .. 1,504	1,820	2,192	2,712	3,220	3,545	4,221	4,400
	{ '000 Persons .. 3,241	3,825	4,574	5,511	6,553	7,144	8,539	8,903
Net Oversea Migration	{ '000 .. 26.9	3.0	74.4	17.5	-10.1	5.2	111.4	42.9
Marriages	{ Rate(c) .. 7.5	7.3	8.8	8.6	6.0	10.6	9.2	8.0
Divorces(d) and Judicial Separations	{ '000 .. 190	399	522	1,502	1,955	3,330	7,327	8,041
	{ Rate(c) .. 170	103	122	136	119	135	193	202
Births	{ '000 .. 34.5	27.2	27.2	25.0	18.2	18.9	22.0	22.9
	{ Rate(c) .. 47	46	48	54	57	71	82	80
Deaths	{ '000 .. 14.8	12.2	10.7	9.9	8.7	10.0	9.7	9.1
	{ Rate(c) .. 12.7	10.7	8.4	9.0	5.0	5.3	4.0	4.7
Infant Deaths	{ '000 .. 115.3	103.6	68.5	65.7	42.1	39.7	25.2	23.3
	{ Rate(e) ..							
Wages (Adult Males)(a)—								
Nominal Weekly Wage Index Numbers	(f)	8.8	1,000	1,826	1,752	1,997	4,495	5,539
Real Wage Index Numbers(g)	(f)	(f)	1,000	1,087	1,210	1,194	1,439	1,450
Production—								
Agricultural—								
Wheat	{ Area mill. acs. 3.3	5.1	7.4	9.7	14.7	12.0	10.4	10.8
	{ Yield mill. bus. 26	39	72	129	191	167	166	198
	{ Av. Yield bus. 7.7	7.5	9.6	13.3	12.9	13.9	15.4	18.4
Oats	{ Area '000 acs. 246	461	617	733	1,085	1,460	2,365	2,137
	{ Yield mill. bus. 5.7	9.8	9.6	12.1	15.2	22.3	34.3	33.0
	{ Av. Yield bus. 23.3	21.2	15.5	16.6	14.0	15.3	14.6	15.4
Barley	{ Area '000 acs. 68	75	110	299	342	784	1,118	1,803
	{ Yield mill. bus. 1.2	1.5	2.1	6.1	6.3	18.0	21.9	41.3
	{ Av. Yield bus. 17.3	20.4	17.7	20.4	18.4	23.0	19.6	23.0
Malze	{ Area '000 acs. 284	295	340	305	269	301	170	180
	{ Yield mill. bus. 9.3	7.0	8.9	7.8	7.1	7.4	4.0	5.0
	{ Av. Yield bus. 32.0	21.9	26.3	25.7	26.2	24.7	23.7	28.0
Hay	{ Area '000 acs. 942	1,688	2,518	2,995	2,635	2,758	1,549	1,935
	{ Yield '000 tons 1,067	2,025	2,868	3,902	3,167	3,575	2,345	3,049
	{ Av. Yield tons 1.13	1.20	1.14	1.30	1.20	1.30	1.51	1.58
Potatoes	{ Area '000 acs. 113	110	130	149	145	99	118	128
	{ Yield '000 tons 380	323	301	388	397	333	509	475
	{ Av. Yield tons 3.37	2.94	2.31	2.60	2.74	3.35	4.31	4.27
Sugar-cane	{ Area '000 acs. 45	87	101	128	242	255	280	340
	{ Yield '000 tons 738	1,368	1,682	2,437	4,213	5,154	5,327	9,014
	{ Av. Yield tons 16.2	15.7	16.7	19.0	17.4	20.3	18.9	26.5
Vineyards	{ Area '000 acs. 49	64	61	92	113	130	136	138
	{ Wine mill. gals. 3.4	5.3	5.0	8.5	14.2	16.0	35.3	31.0
Total Area of Crops	{ mill. acs. 5.4	8.4	12.1	15.4	21.2	20.5	19.8	21.1
Pastoral, Dairying etc.—								
Livestock	{ Horses mill. 1.6	1.6	2.3	2.4	1.8	1.6	0.9	0.8
	{ Cattle .. 11.1	8.5	11.8	14.4	12.3	13.6	14.0	15.6
	{ Sheep .. 106	72	97	86	111	125	118	127
	{ Pigs .. 0.9	0.9	1.1	1.0	1.2	1.5	1.0	1.2
Wool(f)	{ mill. lb. (a) 634	(n) 539	(a) 798	723	1,007	1,167	1,080	1,245
Butter	{ '000 tons (a) 19	(a) 46	(a) 95	(a) 119	175	168	135	160
Cheese	{ '000 tons (a) 4.5	(a) 5.3	(a) 7.1	(a) 14.6	14.0	30.1	40.6	49.2
Meat(k)—								
Beef and Veal	{ .. (f)	(f)	(f)	{ 339	350	534	582	704
Mutton and Lamb	{ .. (f)	(f)	(f)	{ 218	307	372	282	365
Pork	{ .. (f)	(f)	(f)	{ 11.1	22.7	58.1	35.0	34.4
Bacon and Ham	{ .. (a) 7.5	(a) 15.2	(a) 23.8	{ 26.2	31.8	42.5	36.6	36.7
Total Meat	{ .. (f)	(f)	(f)	{ 608	727	1,027	949	1,153

(a) Year ended previous December. (b) At 31st December of previous year. (c) Number per 1,000 of mean population. (d) Decreases made absolute, including decreases for nullity of marriage. (e) Number per 1,000 live births. (f) Not available. (g) Index of nominal weekly wage rates for adult males divided by the "C" Series Retail Price index number. (h) Subject to revision. (i) Productive cane. (j) In terms of tressy. (k) Bone-in weight in terms of fresh meat; cured weight, bacon and ham.

STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1105.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1954.
Production—continued.								
Mineral(a)(b)—								
Copper(c) .. '000 tons	(d)	(d)	(d)	(d)	13.5	20.9	17.9	36.6
Gold(e) .. '000 fine oz.	1,243	3,300	2,481	758	595	1,497	896	1,075
Lead(e) .. '000 tons	(d)	(d)	(d)	(d)	150.8	289.4	212.0	269.3
Zinc(e) .. '000 tons	(d)	(d)	(d)	(d)	66.1	232.6	189.2	239.3
Black Coal .. mill. tons	4.4	6.9	10.6	12.8	8.4	14.2	17.6	18.4
Brown Coal .. "	..	..	(e)	0.1	2.2	4.6	7.8	8.3
Forestry—								
Sawn output of native timber mill. sup. ft.	(d)	(a) 452	(a) 605	590	237	914	1,393	1,406
Factories—								
Number of factories '000	(f)	(f)	{ 14.5	18.0	21.7	27.0	45.8	49.6
Persons employed ..	(f)	(f)	{ 312	379	337	725	978	990
Salaries and wages paid £m.	(f)	(f)	{ 28	68	56	180	612	705
Net value of production(g)—								
Chemicals, etc. ..	(d)	(d)	{ 1.1	3.2	7.9	24.8	63.7	82.3
Industrial metals, etc. ..	(d)	(d)	{ 12.0	23.6	22.8	119.9	413.1	472.4
Textiles, etc. ..	(d)	(d)	{ 6.9	21.0	21.0	56.6	78.6	81.1
Clothing ..	(d)	(d)	{ 7.5	19.2	11.1	23.6	81.1	93.6
Food, etc. ..	(d)	(d)	{ 11.8	27.2	28.7	53.2	141.1	177.9
Paper, etc. ..	(d)	(d)	{ 4.2	9.0	9.6	17.1	68.2	79.3
All groups ..	23.3	29.1	{ 47.5	112.5	111.0	316.5	1,024.0	1,231.1
Value of plant and machinery ..	(d)	(d)	{ 31.4	78.1	121.5	169.2	412.5	581.2
Value of land and buildings ..	(d)	(d)	{ 32.5	67.3	106.6	156.3	360.2	484.3
Net value of production(h)—								
Agriculture .. £m.	17.0	23.8	38.8	81.9	49.7	64.0	246.7	268.5
Pastoral ..	31.3	27.2	52.7	75.1	43.0	85.4	400.5	491.7
Dairying ..	6.0	7.6	16.1	35.3	22.6	34.3	103.8	137.0
Poultry ..	1.9	2.0	4.0	9.0	5.7	6.5	31.5	34.8
Bee-farming ..	0.1	0.1	0.1	0.1	0.1	0.4	0.8	1.4
Total, Rural ..	56.3	60.7	111.7	201.4	121.1	190.6	783.3	933.4
Trapping ..	(d)	(d)	{ 4.8	(d)	1.5	5.0	6.7	5.4
Forestry ..	(d)	(d)	{ 4.8	9.1	3.9	1.8	37.9	41.7
Fisheries ..	4.4	2.8	{ 1.1	1.4	1.4	1.8	5.7	7.4
Mines and Quarries(i) ..	12.1	22.0	23.3	20.0	13.5	33.4	97.2	104.9
Total, Non-Rural ..	16.5	24.8	29.2	30.5	20.3	50.4	147.5	159.4
Total, Primary ..	72.8	85.5	140.9	231.9	141.4	241.0	930.8	1,092.8
Factories(g) ..	23.3	29.1	47.5	112.5	111.0	316.5	1,024.0	1,231.1
Total All Industries ..	96.1	114.6	188.4	344.4	252.4	557.5	1,954.8	2,323.9
Building(j)—								
Permits, New Dwellings { '000	(d)	(d)	(d)	(d)	{ 2.1	9.7	32.8	32.0
.. All Buildings(k) { £m.	(d)	(d)	(d)	(d)	{ 1.5	9.6	80.4	93.0
.. All Buildings(k) { £m.	(d)	(d)	(d)	(d)	{ 4.6	13.5	116.4	148.3
Oversea Trade—								
Imports .. £m. f.o.b.	(a)	(a)	(a)					
Exports .. " "	34	38	61	94	52	174	1,053	682
Principal Exports (l)—								
Wool .. { mill. lb.(m) ..	641	529	734	946	903	938	1,036	1,168
.. { £m. f.o.b. ..	20	15	26	48	32	58	323	410
Wheat .. { '000 tons ..	258	543	1,477	2,677	3,413	598	1,685	965
.. { £m. f.o.b. ..	1.9	2.8	9.6	28.6	19.2	4.6	55.3	31.0
Flour .. { '000 short tons ..	33	97	176	360	611	414	789	761
.. { £m. f.o.b. ..	0.3	0.6	1.4	5.5	3.8	4.2	33.0	29.7
Butter .. { mill. lb. ..	4	35	102	127	202	130	25	88
.. { £m. f.o.b. ..	0.2	1.4	4.6	8.0	10.3	8.1	4.6	16.1

(a) Year ended previous December. (b) Breaks in the continuity of the series occurred in 1931 and 1951. (c) Mine production, i.e., metal content of minerals produced. (d) Not available. (e) Less than .05. (f) Owing to variation in classification, effective comparison is impossible. (g) For definition see page 878. (h) Gross value from 1891 to 1921-22. Prior to 1922 figures are for years ended previous December. For definitions of gross and net value see page 1021. (i) Incomplete. (j) Six capital cities and suburbs. (k) Includes additions and alterations. (l) Australian produce except gold, which includes re-exports. (m) In terms of greasy.

STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1105.

Item.	Year ended 30th June—							
	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1954.
Oversea Trade—continued.	(a)	(a)	(a)					
Principal Exports(b)—continued.								
Hides and Skins	0.9	1.3	3.2	3.1	2.3	6.0	17.1	19.4
Meats	0.5	2.6	4.3	5.5	6.4	14.1	35.5	57.8
Fruit (c) .. .. .	..	0.2	0.5	3.0	4.8	4.0	19.5	32.4
Sugar .. .. .	..	(d)	(d)	(d)	2.5	2.6	6.9	31.6
Gold	5.7	14.3	12.0	3.5	11.0	9.2	7.0	13.8
Silver and Lead	1.9	2.3	3.2	2.7	2.9	7.4	32.1	31.0
Ores and Concentrates .. .. .	..	(d)	3.7	0.8	0.2	1.3	20.4	9.3
Principal Imports—		(a)	(a)					
Vegetable foodstuffs, etc. ..	(e)	3.6	3.7	4.0	2.6	6.1	25.4	25.7
Apparel, etc.		10.9	16.2	31.0	15.4	32.7	203.6	113.8
Oil, etc.		1.2	1.6	4.7	5.5	16.2	87.5	83.4
Metals, etc.		7.8	14.0	22.8	7.4	71.8	392.4	252.1
Rubber, etc.		0.5	1.4	1.7	0.8	3.2	35.1	11.7
Paper, etc.		1.6	2.6	4.4	4.4	4.3	68.6	34.1
Transport and Communication—								
Shipping—	(a)	(a)	(a)					
Oversea Vessels, { No. ...	3,778	4,028	4,174	3,111	3,057	2,544	4,136	4,128
Entrances and { mill. tons	4.7	6.5	10.0	9.1	11.4	10.8	18.2	17.7
Clearances								
Oversea Cargo—								
Discharged .. mill. tons(f)	(e)	(e)	(e)	2.4	3.0	5.5	14.4	11.3
Shipped			(e)	5.8	6.7	4.2	5.7	7.1
Interstate Vessels, { No. ...			9,605	9,782	7,957	9,100	7,544	9,522
Entrances and { mill. tons	(e)	(e)	13.1	12.8	11.1	12.9	15.8	19.2
Clearances								
Interstate Cargo Shipped			(e)	5.5	4.0	10.0	9.0	10.6
mill. tons(f)			(g)					
Government Railways—	(g)	(g)	(g)					
Route-miles	10.4	12.8	16.8	23.5	27.0	27.2	26.8	26.6
Passenger-journeys	84	115	228	335	303	475	501	511
Goods and livestock carried								
mill. tons	9.4	15.5	25.5	31.5	26.1	38.9	44.8	47.8
Train-miles run	29.7	38.2	55.2	56.1	63.8	88.5	93.4	93.5
Tramways and Omnibuses—								
Passenger-journeys—								
Trams	(e)	(e)	360	569	589	874	686	630
Omnibuses			(e)	(e)	(e)	264	555	565
Motor vehicles on the register—								
Cars	(e)	(e)	(e)	102	420	451	1,032	1,200
Commercial vehicles			(e)	(e)	96	251	583	605
Civil Aviation (Internal)—								
Plane-miles flown .. .. .	..	..	..	..	2.5	7.8	41.8	41.0
Passengers carried .. .. .	..	..	..	..	57	152	1,829	1,772
Passenger-miles .. .. .	..	..	..	..	(e)	76	722	702
Freight car- { '000 short tons	..	..	..	..	0.1	1.2	57.5	69.5
ried .. .. .	..	..	..	..	(e)	0.9	26.7	32.7
Postal—	(a)	(a)	(a)					
Postal matter dealt with(h)								
mill. articles	24.2	324	595	702	(i) 371	(i) 1,100	(i) 1,485	(i) 1,569
Telegrams and cablegrams mill.	10.0	9.9	13.3	16.8	13.9	26.1	29.8	25.1
Telephones—								
Instruments	7	20	103	259	485	739	1,301	1,475
Lines	(e)	25	85	196	304	531	927	1,050
Calls—Trunk	(e)	(e)	(e)	14.0	28.9	45.3	69.4	81.8
Local	(e)	(e)	(e)	221	369	664	968	1,032
Broadcast Listeners' Licences ..	..	..	..	(f) 36	369	1,320	1,961	2,042
Public Finance—								
Commonwealth—								
Consolidated Revenue Fund—		(g)	(g)					
Revenue .. .. .	..	11	21	64	72	210	1,017	1,023
Expenditure .. .. .	..	4	15	64	70	210	1,017	967
Net loan fund expenditure ..	..	..	1	5	4	213	55	69
Taxation collections .. .. .	..	9	16	50	54	180	934	900

(a) Year ended previous December. (b) Australian produce except gold, which includes re-exports. (c) Excludes fruit juices. (d) Less than .05. (e) Not available. (f) Tons weight plus tons measurement. (g) Year ended 30th June. (h) Letters, postcards, letter-cards and newspapers. (i) Includes packets. (j) Year 1923-24.

STATISTICAL SUMMARY, AUSTRALIA—continued.

NOTE.—See headnotes on page 1105.

Year ended 30th June—										
Item.	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1954.		
Public Finance—continued.										
State—										
Consolidated Revenue Funds—										
Revenue .. £m.	(a)	28	41	85	100	152	387	468		
Expenditure ..	(a)	29	41	87	121	149	390	465		
Net loan expenditure(b) ..	(a)	9	16	34	6	8	198	167		
Taxation collections ..	(a)	3	5	18	33	57	63	80		
Public Debt(c)—										
Commonwealth .. £m.	..	..	6	354	319	638	1,869	1,918
State ..	(d) 155	213	279	519	789	911	1,396	1,689		
Total ..	(d) 155	213	285	873	1,108	1,549	3,265	3,607		
Overseas ..	(a)	(a)	194	412	522	516	406	421		
In Australia ..	(a)	(a)	91	461	586	1,033	2,859	3,186		
Private Finance—										
Commonwealth Note Issue(e) £m.	(a)	(a)	8	54	51	103	303	344		
Cheque-paying banks(f)—										
Advances ..	(d) 125	94	109	183	261	270	677	695		
Deposits ..	(d) 98	91	143	280	319	387	1,189	1,326		
Bank clearings ..	(a)	338	662	1,702	1,581	2,828	12,160	11,740		
Savings bank deposits(g) ..	15	31	50	154	198	274	892	1,010		
Life Assurance(h)(i)—										
Ordinary—										
Policies .. '000	(a)	414	184	730	871	1,340	2,553	2,893		
Sum assured .. £m.			108	181	285	463	1,212	1,553		
Industrial—										
Policies .. '000			(a)	236	467	973	1,550	2,780	3,843	3,881
Sum assured .. £m.	5	10			30	67	127	254	286	
Total—										
Policies .. '000	(a)	650			951	1,703	2,421	4,120	6,396	6,774
Sum assured .. £m.			113	119	211	352	590	1,466	1,830	
Social Statistics—										
Commonwealth Social Services—										
Age and Invalid .. '000(c)	..	..	90	144	256	336	420	472
Pensions .. £m.	..	..	2.2	5.4	11.1	19.3	59.8	81.3
Child Endowment, Claims in force .. '000(c)										
.. £m.	..	..	..	..	..	488	1,205	1,280
..	..	..	..	..	..	11.3	46.6	50.8
Total Commonwealth Health and Social Services (i) £m.										
..	..	..	2.2	6.1	11.5	30.9	137.6	176.6
War Pensions .. '000(c)										
.. £m.	..	..	..	225	274	220	525	564
..	..	..	..	7.0	7.4	7.5	31.8	36.8
Service Pensions .. '000(c)										
.. £m.	..	..	..	..	..	14	17	21
..	..	..	..	..	..	0.6	1.8	2.7
State Social Services(f)—										
Education(d)—										
Government Schools—										
Schools .. '000	6.2	7.0	8.0	9.4	10.1	9.5	7.6	7.6		
Staff ..	12.6	14.5	17.0	26.1	33.8	32.1	36.7	40.2		
Students ..	561	638	639	819	937	887	1,013	1,150		
Non-government Schools—										
Schools .. '000	2.0	2.5	1.9	1.7	1.8	1.9	1.9	2.0		
Staff ..	6.0	8.3	7.8	8.8	10.0	11.4	13.3	13.8		
Students ..	125	149	161	199	221	257	326	366		
Universities(k)—										
Number ..	..	..	5	6	6	8	9	9
Staff(l) ..	(a) 4	(a) 4	249	482	703	1,416	3,082	3,091		
Students .. '000	1.6	1.8	3.4	8.0	9.8	13.9	31.7	28.8		
Public Hospitals—										
Number ..	(d)	(d)	(d)	(d)	(d)	..	..	..
Staff—Medical .. '000	(a)	285	355	404	513	566	675	695		
Nursing ..	(a)	..	1.1	1.5	3.2	3.9	6.9	7.3		
In-patients, cases treated ..	(a)	..	5.1	6.8	9.3	15.4	24.6	25.7		
.. m n 54	(n) 91	..	134	215	371	595	896	952		
Police and Prisons(d)—										
Police .. '000	5.3	5.8	6.4	6.9	8.6	9.7	12.3	12.7		
Prisons ..	(a)	(a)	104	91	85	70	69	71		
Prisoners .. '000	(a)	4.3	3.1	2.9	4.2	3.2	4.4	4.9		
Prices(d)—										
"C" Series Retail Price Index..	..	..	1,000	1,680	1,448	1,673	3,124	3,820

(a) Not available. (b) Loan Expenditure in works, services, etc. (c) At 30th June.
 (d) Year ended previous December. (e) At end of June. (f) Figures for 1891 are averages of weekly balances for the December quarter; the remainder are for the June quarter. All cheque-paying banks to 1931-32. Private Trading Banks thereafter. (g) 1891 at 31st December, thereafter at 30th June. (h) Existing business in Australia. (i) Excludes war and service pensions.
 (j) Includes Northern Territory and Australian Capital Territory. (k) Excludes Australian National University. (l) Teaching and research staff. Includes part-time. (m) Year 1891-92 for Victoria. (n) South Australia includes Adelaide Hospital only.

APPENDIX.

(Some recent information which has come to hand since the various chapters were sent to press is given hereunder in summarized form. For further or more detailed information, as also the latest available statistics, reference should be made to other publications issued by this Bureau (*see* pages 1063-5), notably the *Monthly Review of Business Statistics* and the *Quarterly Summary of Australian Statistics*.)

CHAPTER II.—PHYSIOGRAPHY.

§ 2. Climate and Meteorology of Australia.

Rainfall : Australian Capital Cities, p. 21.—Rainfall recorded in Australian capital cities during 1954 (1953 in parentheses) was as follows :—Canberra, 18.81 ins. (19.40 ins.) ; Perth, 28.05 ins. (37.14 ins.) ; Adelaide, 16.73 ins. (20.00 ins.) ; Brisbane, 61.36 ins. (43.60 ins.) ; Sydney, 41.29 ins. (40.86 ins.) ; Melbourne, 33.53 ins. (28.38 ins.) ; Hobart, 27.20 ins. (28.06 ins.).

CHAPTER III.—GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

Number and Salary of Members of the Legislatures, p. 46.—From 1st July, 1955 the annual salary of members of the Queensland Legislature was increased to £2,008.

From 28th May, 1955 the number of members of the Victorian Legislative Assembly was increased to 66.

§ 2. Parliaments and Elections.

State Elections, pp. 50-51.—(a) *Upper Houses.* Particulars of voting at the latest contested elections for the Legislative Council in Tasmania in 1954 are as follows :—Number of electors on the roll, 19,355 ; number of votes recorded, 16,405 ; percentage of enrolled voters who voted, 84.75.

(b) *Lower Houses.* The following table shows particulars of the voting at the most recent elections for the Lower Houses in the States of Victoria and Tasmania.

STATE LOWER HOUSE ELECTIONS.

State.	Year of Latest Election.	Electors Enrolled—Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Females.	Total.	Males.	Females.	Total.	Males.	Fe-males.	Total.
Victoria	1955	691,034	731,554	1,422,588	639,535	679,402	1,318,937	93.93	94.11	94.01
Tasmania	1955	85,491	87,674	173,165	81,279	81,458	162,637	94.96	92.91	93.92

State Parliaments, pp. 51-54.—The dates of dissolutions and openings, respectively, of State Parliaments which have occurred since those recorded on pp. 51-54 are as follows (the number of the Parliament concerned being shown in parentheses):—Victoria, 22nd April, 1955 (thirty-ninth), 15th June, 1955 (fortieth) ; Tasmania, 14th January, 1955 (thirtieth), 13th April, 1955 (thirty-first).

§ 3. Administration and Legislation.

State Ministers, pp. 58-60.—The composition of the Ministry in each State at 30th June, 1955, was as shown on pp. 58-60, with the following exception:—

VICTORIA (from 7th June, 1955).

Premier, Treasurer and Minister for Conservation—

THE HON. H. E. BOLTE.

Chief Secretary and Attorney-General—

THE HON. A. G. RYLAND.

Minister of Transport and a Vice-President of the Board of Land and Works—

THE HON. A. G. WARNER, M.L.C.

Minister of Agriculture and a Vice-President of the Board of Land and Works—

THE HON. G. L. CHANDLER, M.L.C.

Minister of Education and Minister of Immigration—

COL. THE HON. W. W. LEGGATT.

Commissioner of Public Works and a Vice-President of the Board of Land and Works—

THE HON. SIR THOMAS MALTBY.

Minister of Health—

THE HON. E. P. CAMERON, M.L.C.

Minister of Water Supply and Minister of Mines—

THE HON. W. J. MIBUS.

Minister of Forests and Minister of State Development and Decentralization—

THE HON. R. K. WHATELY.

Minister of Labour and Industry and Minister of Electrical Undertakings—

THE HON. J. S. BLOOMFIELD.

Minister of Housing—

THE HON. H. R. PETTY.

Commissioner of Crown Lands and Survey, Minister of Soldier Settlement and President of the Board of Land and Works—

THE HON. K. H. TURNBULL.

Ministers Without Portfolio—

THE HON. G. O. REID.

THE HON. G. S. MCARTHUR, M.L.C.

The foregoing list shows the complete ministry as reconstituted following the Legislative Assembly elections in Victoria on 28th May, 1955. The following particulars refer to changes involving certain Ministers only:—

COMMONWEALTH.

Following the death of Senator the Hon. George McLeay, Senator the Hon. S. D. Paltridge was appointed as Minister for Shipping and Transport.

QUEENSLAND.

Following the death of the Hon. E. J. Riordan the Hon. C. G. McCathie was appointed as Secretary for Mines and Immigration.

SOUTH AUSTRALIA.

Following the death of the Hon. R. J. Rudall, M.L.C., and the resignation of the Hon. Sir George F. Jenkins, K.B.E., the Hon. C. D. Rowe, M.L.C., and the Hon. A. W. Christian were respectively appointed as Attorney-General and Minister for Industry and Employment and as Minister of Agriculture and Minister of Forests.

§ 5. Cost of Parliamentary Government, p. 64.

The cost of Parliamentary Government, Commonwealth and individual States, for the year 1953-54 was as follows:—

Commonwealth, £2,072,757 (4s. 8d. per head); New South Wales, £645,505 (3s. 10d.); Victoria, £419,261 (3s. 6d.); Queensland, £452,527 (7s.); South Australia, £290,110 (7s. 4d.); Western Australia, £298,426 (9s. 6d.); Tasmania, £175,525 (11s. 4d.); and total, £4,354,111 (9s. 9d.).

The amounts expended under the major headings for all Governments during 1953-54 were:—Governor-General or Governor, £392,301; Ministry, £275,865; Parliament, £2,827,600; Electoral, £831,088.

CHAPTER IV.—LAND TENURE AND SETTLEMENT.

§ 9. Settlement of Returned Service Personnel: 1939-45 War.

War Service Land Settlement Scheme, pp. 82-5.—At 30th June, 1954 an area of 15,139,020 acres had been submitted by the several States for land settlement. Of this, 12,826,427 acres had been approved by the Commonwealth as suitable for soldier settlement and 11,202,283 acres had actually been acquired by the States. The acreages and holdings allotted to ex-servicemen by the States at 30th June, 1954 were as follows:—New South Wales, 6,313,096 (2,144); Victoria, 845,541 (2,138); Queensland, 218,696 (471); South Australia, 277,097 (603); Western Australia, 1,082,903 (695); Tasmania, 112,213 (184); total 8,849,546 (6,235).

The total expenditure of the War Service Land Settlement Division to 30th June, 1954, £50,055,299, includes War Service Land Settlement, £39,207,467; agricultural loans, £6,201,644; agricultural allowances, £2,272,090; administrative expenses, £960,026; rural training, £1,414,072. Aggregate expenditure in the States and Territories to 30th June, 1954 was as follows:—New South Wales, £4,872,494; Victoria, £3,585,065; Queensland, £1,534,650; South Australia, £13,037,347; Western Australia, £20,289,510; Tasmania, £6,719,143; Northern Territory, £10,748; New Guinea, £6,342.

After deducting repayments of expenditure to 30th June, 1954, £6,209,654 and miscellaneous receipts, £4,892,420, the net expenditure to 30th June, 1954 was £38,953,225.

§ 11. Alienation and Occupation of Crown Lands.

Summary, p. 94.—The alienation and occupation of Crown lands in Australia at 31st December, 1954, were as follows:—

Private Lands—152,805,000, acres (8.0 per cent.) alienated; 33,233,000 acres (1.8 per cent.) in process of alienation.

Crown Lands—1,016,924,000 acres (53.4 per cent.) leased or licensed; 700,770,000 acres (36.8 per cent.) other Crown lands.

CHAPTER VI.—TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 2. Oversea Shipping and § 5. Interstate Shipping.

Summary of Movements, pp. 136, 145.—The following table summarizes the entrances of overseas and interstate shipping in the several States during the year 1953-54:—

OVERSEA AND INTERSTATE SHIPPING: ENTRANCES OF VESSELS, 1953-54.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Total.
Oversea—								
Direct								
No.	679	331	301	221	470	38	14	2,054
'000 net tons	2,673	1,495	1,010	901	2,651	127	25	8,832
Via other States								
No.	522	629	254	335	32	57	..	1,829
'000 net tons	2,937	3,488	1,364	1,906	171	312	..	10,176
Interstate(a)								
No.	1,595	1,586	559	928	491	965	30	6,154
'000 net tons	4,470	4,030	1,409	3,301	2,428	1,068	41	16,747

(a) Includes overseas vessels on interstate voyages.

Total overseas shipping entrances into Australia during 1953-54 numbered 2,054 with an aggregate capacity of 8,881,807 net tons. Of these 1,647 for 7,736,036 net tons were entrances with cargo. Total overseas clearances numbered 2,073 for 8,850,734 net tons, and clearances with cargo 1,507 for 6,179,139 net tons.

§ 6. Shipping Cargo.

Oversea and Interstate Cargo, p. 146.—The table hereunder shows particulars of oversea and interstate cargo discharged at and shipped from each State during the year 1953-54.

CARGO DISCHARGED AND SHIPPED, 1953-54.

('000 Tons.)

State or Territory.	Discharged.				Shipped.			
	Oversea.		Interstate.		Oversea.		Interstate.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
New South Wales..	2,603	1,148	3,991	414	1,631	375	3,685	433
Victoria.. ..	2,871	943	2,216	344	856	493	462	423
Queensland ..	825	212	348	352	1,171	123	436	120
South Australia ..	942	291	1,707	187	1,499	106	3,443	227
Western Australia	1,036	181	290	257	503	134	653	97
Tasmania ..	199	37	477	236	103	124	423	239
Northern Territory	44	..	30	..	2	..	3	..
Total ..	8,520	2,812	9,059	1,790	5,765	1,355	9,105	1,539

B. GOVERNMENT RAILWAYS.

Summary of Operations, p. 153.—The following table gives a summary of the operations of all Government railways open for general traffic during the year 1953-54 :—

GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1953-54.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
Mileage open (route) at 30th June, 1954 .. miles	6,101	4,482	6,560	2,564	4,111	614	2,201	26,633
Gross revenue .. £'000.	74,569	35,707	30,223	12,718	11,111	2,133	3,402	169,863
Working expenses .. £'000.	68,197	35,951	29,103	14,934	14,298	2,804	2,897	168,184
Net revenue .. £'000.	6,372	244	1,120	2,216	3,187	671	505	1,679
Interest .. £'000.	6,523	2,303	2,211	1,162	1,134	254	404	(a) 14,073
Train-miles run .. '000	37,506	18,303	19,241	7,359	7,204	1,898	1,953	93,464
Passenger-journeys .. '000	278,904	166,106	35,879	17,605	8,678	3,285	224	510,681
Goods, etc., carried '000 tons	(b) 20,140	9,200	8,081	4,891	3,206	968	762	47,248

(a) Includes £82,375, Commonwealth share of interest, Grafton-South Brisbane Line. estimated.

(b) Partly estimated.

NOTE.—Minus sign (—) denotes loss.

C. TRAMWAYS.

Summary of Operations, p. 164.—The following is a summary of the operations of all electric tramways in Australia during the year 1953-54 :—Route-mileage open for traffic at 30th June was 520 ; gross revenue, £15,780,201 ; working expenses, £18,181,456 ; net deficit, £2,401,255 ; interest, £644,465 ; car-miles run, 63,762,097 ; passenger-journeys, 629,556,933.

D. MOTOR OMNIBUS SERVICES.

Government and Municipal Services, p. 166.—The following is a summary of the operations of government and municipal motor omnibus services in Australia during 1953-54 :—Length of route, 4,619 miles ; gross revenue, £8,853,424 ; working expenses, £11,386,797 ; omnibus-miles run, 57,318,301 ; passenger-journeys, 343,510,297 (excluding figures for the Australian Capital Territory, which are not available).

Private Services, p. 167.—The following is a summary of the operations of motor omnibus services under the control of private operators during 1953-54 in the States of New South Wales, Victoria, South Australia and Western Australia respectively :—Gross revenue, £2,426,346 ; £1,884,900 (estimated) ; £658,126 ; £1,660,628 ; omnibus-miles run, 20,194,540 ; 17,605,900 (estimated) ; 5,844,989 ; 12,550,344 ; passenger-journeys, 88,638,650 ; 83,771,200 (estimated) ; 13,372,645 ; 34,211,163.

F. MOTOR VEHICLES.

Motor Vehicle Registrations, pp. 169-70.—Motor vehicles registered at 30th June, 1954 and new motor vehicles registered during 1953-54 were as follows :—

MOTOR VEHICLES : REGISTRATIONS, 1953-54.

(Includes Commonwealth-owned vehicles other than those of the Department of the Army and the Department of Air.)

State or Territory.	Number of Motor Vehicles Registered at 30th June, 1954.(a)				Number of New Motor Vehicles Registered, 1953-54.(a)			
	Motor Cars.(b)	Com-mercial Vehicles.(c)	Motor Cycles.	Total.	Motor Cars.(b)	Com-mercial Vehicles.(c)	Motor Cycles.	Total.
New South Wales ..	398,397	213,709	42,451	654,557	43,597	21,426	2,964	67,987
Victoria ..	397,658	130,707	30,881	559,246	36,346	12,076	2,482	50,904
Queensland ..	145,933	115,907	22,367	284,207	16,154	10,665	1,636	28,455
South Australia ..	133,281	62,038	23,093	218,412	13,472	5,708	1,982	21,162
Western Australia ..	78,312	60,381	15,243	153,936	9,939	5,667	1,258	16,864
Tasmania ..	39,974	19,739	5,649	65,362	4,782	1,905	446	7,133
Northern Territory ..	1,164	2,228	431	3,823	123	241	56	420
Aust. Capital Territory ..	5,114	2,190	499	7,803	691	205	36	932
Total ..	1,199,833	606,899	140,614	1,947,346	125,104	57,893	10,860	193,857

(a) Excludes trailers, road tractors, etc., and dealers' plates. (b) Includes taxis and hire cars.
(c) Includes lorries, vans, buses and utilities. (d) Includes vehicles registered as primary producers' vehicles.

Drivers' and riders' licences in force at 30th June, 1954 numbered 2,148,119. This figure excludes licences in Queensland which are no longer issued on an annual basis.

Gross revenue derived during 1953-54 from vehicles' registration and motor tax amounted to £20,450,179, from licences, etc., to £1,634,955, and from miscellaneous receipts to £4,326,359—total, £26,411,493.

G. TRAFFIC ACCIDENTS.

Total Accidents Reported, p. 171.—The following table is a summary of the total number of accidents (known to the police) which occurred in public thoroughfares during 1953-54, the number involving casualties and the number of persons killed or injured in each State and the Commonwealth excluding the Northern Territory.

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES: ACCIDENTS RECORDED AND CASUALTIES, 1953-54.

State or Territory.	Total Accidents Reported. (a)	Accidents Involving Casualties.	Casualties.	
			Persons Killed.	Persons Injured.(b)
New South Wales	29,514	11,691	728	14,660
Victoria	16,314	10,537	569	13,351
Queensland	17,875	6,349	278	7,933
South Australia	10,320	2,742	153	3,420
Western Australia	8,979	3,079	175	3,935
Tasmania	3,957	982	67	1,156
Australian Capital Territory ..	265	143	6	174
Total	87,224	35,523	1,976	44,629

(a) Total accidents causing death or injury to persons or damage exceeding £10 to property.

(b) Persons injured to an extent requiring surgical or medical treatment.

H. AVIATION.

Statistical Summaries, pp. 179-80.—The following is a summary of civil aviation for Australia at 30th June, 1954:—Registered aircraft owners, 384; registered aircraft, 845; pilots' licences—private, 2,035, commercial, 552, student, 2,831, 1st class airline transport, 515, 2nd class, 34, 3rd class, 368, flight navigators', 166; during 1953-54:—Accidents—number involving casualties, 26; persons killed, 36; persons injured, 27.

Regular internal services' operations during 1953-54 showed the following results:—Hours flown, 251,019; miles flown, 41,014,000; paying passengers, 1,772,357; paying passenger-miles, 702,139,000. Freight—Short tons, 69,479; ton-miles, 32,650,000. Mail—Short tons, 2,316; ton-miles, 1,225,000.

The operations of overseas services by Australian-owned and partly-owned interests were as follows:—Unduplicated route-miles, 64,250; hours flown, 53,580; miles flown, 11,463,500; paying passengers, 102,965; paying passenger-miles, 290,603,000. Freight—Short tons, 2,295; ton-miles, 8,331,000. Mail—Short tons, 1,379; ton-miles, 7,718,000.

I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

§ 1. General to § 4. Telephones.

Summary of Operations, pp. 181-90.—The following table gives a summary of the operations of the Postmaster-General's Department during the year 1953-54:—

POSTMASTER-GENERAL'S DEPARTMENT: SUMMARY OF OPERATIONS, 1953-54.

State.	Gross Re- venue.	Ex- pendi- ture.	Total Postal Matter Dealt with. (a)	Money Orders Issued, value.	Postal Notes Issued, value.	Tele- grams Dis- patch- ed.	Telephones.			
							Lines Con- nected. (b)	Instru- ments Con- nected. (b)	Local Calls.	Trunk Line Calls.
	£'000.	£'000.	mill.	£'000.	£'000.	'000.	'000.	'000.	mill.	mill.
New South Wales(c)	26,485	35,863	637.8	27,174	4,393	8,459	393	563	435	27
Victoria ..	20,177	24,397	460.6	13,314	4,368	5,044	332	471	315	24
Queensland ..	9,231	13,077	201.2	6,926	942	4,099	141	189	122	14
South Australia(d)	5,838	8,396	125.9	3,750	1,005	2,063	93	128	79	8
Western Australia	4,181	5,873	110.0	3,108	534	2,209	60	83	58	5
Tasmania ..	1,855	3,104	68.1	1,903	223	662	31	42	23	4
Australia ..	67,797	99,478	1,603.6	56,175	11,465	22,536	1,050	1,476	1,032	82

(a) Comprises (In millions):—Letters, Cards, etc. 1,309.1; Newspapers and Packets 261.2; Parcels, 16.6; Registered Articles other than Parcels, 16.7.

(b) At 30th June. (c) Includes Australian Capital Territory. (d) Includes Northern Territory. (e) Includes £8,774,000, Central Office expenditure.

(f) Excludes international telegrams—dispatched, 1,283,000, received, 1,308,000.

§ 5. Cable and Radio Communication.

Radio-communication Stations Authorized, p. 192.—The following radio-communication stations were authorized in Australia and Papua-New Guinea at 30th June, 1954 :—Transmitting and receiving stations—aeronautical, 91 (12); coast, 49 (11); land, 2,359 (265); mobile (general), 6,633 (52) (including ship, 808; aircraft, 232; other mobile stations, 266); and miscellaneous, 83. In addition, there were 382 land and 73 mobile (general) stations for the purpose of receiving only. The figures in parentheses refer to Papua-New Guinea and are included in the totals preceding them.

§ 6. Broadcasting and Television.

Broadcast Licences Issued, pp. 192, 193, 198.—The following table shows the number of broadcast licences issued at 30th June, 1954.

BROADCAST LICENCES ISSUED, 30th JUNE, 1954.

State or Territory in which Issued.	Broadcasting.		Broadcast Listeners'.			Amateur.
	National Stations. (a)	Commercial Stations.	Metro-politan.	Country.	Total.	
New South Wales ..	13	36	401,624	361,963	763,587	1,010
Victoria ..	7	20	315,798	229,350	545,148	956
Queensland ..	14	20	119,762	167,921	287,683	318
South Australia ..	5	8	140,169	78,576	218,745	343
Western Australia ..	7	13	92,273	55,919	148,192	183
Tasmania ..	3	8	25,109	45,938	71,047	109
Northern Territory ..	2	..	..	1,320	1,320	6
Australian Capital Territory ..	2	1	..	5,891	5,891	16
Total ..	(b) 55	106	1,094,735	946,878	2,041,613	(c) 2,980

(a) Includes short-wave stations: New South Wales, 1; Victoria, 3; Queensland, 2; Western Australia, 2. (b) Includes 1 medium-wave and 1 short-wave station in Papua. (c) Includes 39 stations in Papua-New Guinea.

CHAPTER VII.—TRADE.

NOTE.—Values are expressed in £A. f.o.b., port of shipment.

§ 6. Total Oversea Trade.

Summary of Movements, pp. 214-5.—The following is a summary of the total overseas trade movements of Australia during the year 1954-55 :—Merchandise—Exports, £758,041,000, Imports, £840,972,000, Commodity balance, —£82,931,000; Bullion and Specie—Exports, £16,123,000, Imports, £2,770,000, Balance, +£13,353,000; Total balance, —£69,578,000.

§ 7. Direction of Oversea Trade.

Imports according to Country of Origin and Exports according to Country of Destination, pp. 215-6.—The following table shows particulars of the values of total imports and total exports of Australia, including bullion and specie, according to countries of origin or of destination, for the year 1954-55.

TOTAL OVERSEA TRADE, AUSTRALIA: COUNTRIES OF ORIGIN OR OF
DESTINATION, 1954-55.

(£'000.)

Country of Origin or of Destination.	Imports.	Exports.
Australia (Re-imported)	2,901	..
United Kingdom	378,669	285,506
Australian Territories—		
New Guinea	4,941	7,227
Papua	774	4,995
Borneo (British)	15,373	927
Canada	23,840	10,503
Ceylon	19,516	8,723
Hong Kong	2,369	17,315
India	26,057	19,428
Ireland, Republic of	262	3,292
Malaya, Federation of	12,797	8,410
New Zealand	8,042	37,794
Pacific Is. (British)—Fiji	1,220	3,917
Pakistan	2,253	2,947
Singapore	2,492	11,600
South Africa, Union of	4,349	2,869
South Rhodesia	4,470	1,289
West Africa—Gold Coast	3,838	216
Other British Countries	11,919	11,822
Total British Countries	526,082	438,780
Arabian States—		
Saudi Arabia	7,045	957
Bahrein Is.	15,319	439
Other	5,487	615
Austria	4,121	926
Belgian Congo	38	13
Belgium	10,669	31,252
Brazil	2,132	22
China	1,732	2,705
Czechoslovakia	2,331	5,078
Denmark	1,158	1,042
Egypt	311	1,878
Finland	3,459	161
France	14,689	64,056
Germany, Federal Republic of	30,838	31,823
Indonesia	22,529	3,702
Italy	11,740	35,915
Japan	18,422	58,572
Mexico	28	4,164
Netherlands	13,081	6,857
Norway	6,510	573
Poland	123	6,243
Spain	1,278	857
Sweden	13,516	3,241
Switzerland	10,582	2,203
Turkey	130	1,185
United States of America	102,157	52,440
Other Foreign Countries	18,235	18,465
Total Foreign Countries	317,660	335,384
Total All Countries	843,742	774,164

§ 11. Classified Summary of Australian Oversea Trade.

Imports and Exports in Statistical Classes, pp. 221-2.—The following table shows the values of total imports and total exports in statistical classes for the year 1954-55 :—

TOTAL OVERSEA TRADE, AUSTRALIA : CLASSES, 1954-55.

(£'000.)

Class.	Imports.	Exports.
I. Foodstuffs of Animal Origin	7,304	112,546
II. Foodstuffs of Vegetable Origin, Non-alcoholic Beverages	35,925	152,600
III. Spirituous and Alcoholic Liquors	2,028	1,716
IV. Tobacco, Cigars, Cigarettes and Snuff	17,316	348
V. Live Animals	693	1,031
VI. Animal Substances (mainly unmanufactured), not Food-stuffs	4,108	374,601
VII. Vegetable Substances and Fibres; Cork and Manufactures; Plastic Moulding Materials and Synthetic Fibres	19,416	1,831
VIII. Yarns and Manufactured Fibres, Textiles and Apparel—		
(a) Yarns and Manufactured Fibres	27,160	512
(b) Textiles	86,009	1,807
(c) Apparel	13,583	439
IX. Oils, Fats and Waxes	96,918	6,588
X. Pigments, Paints and Varnishes	5,900	922
XI. Rocks, Minerals and Hydrocarbons	8,408	17,055
XII. Metals, Metal Manufactures and Machinery—		
(a) Metals and Metal Manufactures	187,243	45,759
(b) Dynamo Electrical Machinery, Electrical Appliances and Equipment	28,719	2,327
(c) Machines and Machinery	108,057	11,019
XIII. Rubber and Leather and Manufactures thereof—		
(a) Rubber and Rubber Manufactures	17,032	795
(b) Leather and Leather Manufactures	793	2,401
XIV. Wood and Wicker	17,459	2,316
XV. Earthenware, Cement, China, Glass and Stoneware	15,517	1,161
XVI. Paper and Stationery—		
(a) Pulp, Paper and Board	35,894	413
(b) Paper Manufactures and Stationery	10,516	2,147
XVII. Sporting Material, Toys, Fancy Goods, Jewellery and Timepieces	10,442	570
XVIII. Optical, Surgical and Scientific Instruments and Appliances and Photographic Goods, n.e.i.	10,841	1,342
XIX. Chemicals, Medicinal and Pharmaceutical Products, Essential Oils and Fertilizers	27,889	4,505
XX. Miscellaneous	45,757	11,290
XXI. Gold and Silver; Bronze Specie	2,770	16,123
Total	843,742	774,164

The following table shows the total quantities of some of the principal commodities exported from Australia during 1954-55 :—

TOTAL OVERSEA TRADE, AUSTRALIA : PRINCIPAL EXPORTS, 1954-55.

Item.	Unit of Quantity.	Quantity.	Item.	Unit of Quantity.	Quantity.
Butter	'000 lb.	140,017	Fruits preserved in		
Cheese	"	49,544	Liquid	'000 lb.	215,843
Milk and Cream ..	"	107,975	Wheat.. ..	'000 tons(a)	1,691
Eggs—			Barley, Unprepared	"	421
In shell	'000 doz.	20,266	Oats,	"	51
Not in shell ..	'000 lb.	22,468	Flour (Wheaten)	"	585
Meats preserved by			Sugar (Cane) ..	"	737
Cold Process—			Sheep and Lamb		
Beef and Veal	"	276,398	Skins	'000	16,988
Lamb	"	94,982	Wool—		
Mutton	"	33,811	Greasy	'000 lb.	959,040
Pork	"	6,515	Scoured, etc. ..	"	101,555
Meats preserved in			Silver, Silver lead,		
Tins, etc.	"	1,260	Lead and Zinc		
Currants	"	18,755	Ores and Con-		
Raisins	"	134,252	centrates	'000 tons(a)	206
Apples, Fresh ..	'000 bus.	4,265	Pig Lead	"	140
Citrus Fruit	"	525			

(a) Ton = 2,240 lb.

§ 15. Australian Index of Export Prices.

Monthly Index (Fixed Weights), p. 230.—The following are the export price index numbers for the year 1954-55.

EXPORT PRICE INDEXES : AUSTRALIA.

SIMPLE AGGREGATIVE INDEX : FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section : Average of three years ended June, 1939 = 100.)

Period.	Wool.	Wheat.	But- ter.	Metals. (a)	Meats. (b)	Sugar.	Dried Fruits. (c)	Tal- low.	Hides. (d)	Gold. (e)	All Groups.	
											Ex- clud- ing Gold.	In- clud- ing Gold.
1954-1955—												
July	(f) 622	359	313	475	340	448	278	354	264	178	490	468
August	566	358	313	475	340	448	262	350	254	178	461	442
September ..	566	353	313	498	340	448	261	350	224	178	462	442
October	536	356	313	524	340	468	260	350	216	178	450	431
November ..	513	358	313	518	340	468	261	350	204	179	439	421
December ..	532	359	313	512	385	468	263	350	197	178	451	432
January	520	360	313	516	371	430	266	350	200	178	444	426
February ..	528	356	313	522	349	430	267	350	200	178	446	427
March	528	356	313	523	329	430	270	350	212	178	445	426
April	520	354	313	525	326	434	271	350	223	178	441	422
May	520	354	313	520	334	434	268	345	216	178	441	422
June	505	355	313	528	345	434	279	342	212	178	435	417
Year 1954-55..	538	357	313	511	345	445	267	349	218	178	450	431

(a) Non-ferrous—silver, copper, tin, zinc, lead. (b) Beef, lamb, mutton, pork. (c) Sultanas, lexias, currants. (d) Cattle hides, calfskins. (e) The price used in the index since 14th December, 1951 is the price of Australian gold on oversea premium markets. (f) Nominal. (g) Subject to revision.

§ 19. The Australian Balance of Payments.

NOTE.—Further details of the summarized estimates presented here will be found in *The Australian Balance of Payments, 1928-29 to 1951-52* and in the mimeographed publication *The Australian Balance of Payments 1952-53, 1953-54 and first half 1954-55*, obtainable from the Commonwealth Statistician.

Australia's Balance of Payments on Current and Capital Account, pp. 235-7.—The following table shows in summary form revised estimates for 1952-53 and 1953-54 and preliminary estimates for the first half of 1954-55 :—

AUSTRALIA : BALANCE OF PAYMENTS, SUMMARY. (£A. million.)

	1952-53.	1953-54.	1954-55— First Half (Pre- liminary).
CURRENT ACCOUNT.			
(Credit items +, Debit items —)			
Exports f.o.b.	+ 846.2	+ 811.7	+ 361.6
Imports f.o.b.	— 511.1	— 683.0	— 392.2
Trade Balance	+ 335.1	+ 128.7	— 30.6
Invisible Credits	+ 116.5	+ 121.9	+ 63.3
Invisible Debits	— 260.6	— 268.5	— 129.0
Invisible Balance	— 144.1	— 146.6	— 65.7
Balance on Current Account	+ 191.0	— 17.9	— 96.3
CAPITAL ACCOUNT.			
(Plus sign (+) indicates net increases in assets or net decreases in liabilities and minus sign (—) indicates net decreases in assets or net increases in liabilities)			
International Reserves	+ 188.7	+ 9.5	— 64.8
Public Authority Debt Domiciled Overseas	+ 2.2	+ 10.0	+ 7.9
International Monetary Fund and International Bank for Reconstruction and Development	— 31.3	— 10.8	— 6.6
Net Investment in Joint Organization (Wool)	+ 1.2	.. .. .	.. .. .
Miscellaneous, Identified Transactions	— 7.4	+ 4.2	— 6.0
Undistributed Income Accruing between Australian and Foreign Companies (Net)	— 15.7	— 27.2	— 9.0
Foreign Banks Holdings of Australian Currency	+ 7.4	+ 0.5	— 0.6
Private Capital Movements and Balancing Items	+ 45.9	— 4.1	— 17.2
Balance on Capital Account	+ 191.0	— 17.9	— 96.3

Australia's Balance of Payments on Current Account—Various Countries, p. 238.—Summarized estimates of Australia's regional balance of payments in 1952-53, 1953-54 and the first half of 1954-55 (preliminary estimate) are given in the following table.

AUSTRALIA : BALANCE OF PAYMENTS ON CURRENT ACCOUNT, VARIOUS COUNTRIES AND MONETARY AREAS.

(Minus sign (—) denotes debit ; other items are credits.)

(£A. million.)

	Gold Production.	Sterling Area.		Dollar Area.			Other Non-Sterling.		Total.
		United Kingdom.	Other.	United States of America.	Canada.	Other.	O.E.E.C.	Other. (a)	
1952-53—									
Exports f.o.b.	..	347.2	130.5	57.9	8.7	2.2	191.6	108.1	846.2
Imports f.o.b.	..	—215.1	—87.9	—85.5	—19.5	—2.2	—59.2	—41.7	—511.1
Invisibles (net)	16.4	—69.3	—30.5	—32.3	—5.6	—0.2	—7.4	—15.2	—144.1
Balance on Current Account ..	16.4	62.8	12.1	—59.9	—16.4	—0.2	125.0	51.2	191.0
		74.9		—76.5			176.2		
1953-54—									
Exports f.o.b.	..	295.8	125.7	55.7	11.0	4.6	208.3	110.6	811.7
Imports f.o.b.	..	—332.7	—110.3	—76.7	—18.7	—1.1	—90.8	—52.7	—683.0
Invisibles (net)	16.8	—71.9	—18.2	—41.0	—8.3	0.1	—11.7	—12.5	—146.6
Balance on Current Account ..	16.8	—108.8	—2.8	—62.0	—16.0	3.6	106.8	45.4	—17.9
		—111.6		—74.3			151.2		
1954-55— First Half (Preliminary)									
Exports f.o.b.	..	143.2	60.3	23.5	6.4	2.5	92.4	33.3	361.6
Imports f.o.b.	..	—175.4	—70.0	—46.4	—11.2	—0.4	—58.1	—30.7	—392.2
Invisibles (net)	8.6	—27.4	—11.5	—17.9	—2.9	0.3	—6.2	—8.7	—65.7
Balance on Current Account ..	8.6	—59.6	—21.2	—40.8	—7.7	2.4	28.1	—6.1	—96.3
		—88.5		—45.0			22.0		

(a) Includes international bodies.

Australia's Balance of Payments with the Dollar Area, p. 241.—The following table presents revised estimates, for 1952-53 and 1953-54, and preliminary estimates for the first half of 1954-55, of Australia's dollar balance of payments :—

AUSTRALIA : BALANCE OF PAYMENTS WITH THE DOLLAR AREA (UNITED STATES DOLLARS).

(Credit Items +, Debit Items —.)

(U.S. \$ million.)

	1952-53.	1953-54.	1954-55— First Half (Preliminary).
CURRENT ACCOUNT.			
Merchandise Trade.			
1. Merchandise exports f.o.b. to United States of America and Canada ..	+ 149	+ 150	+ 67
2. Merchandise imports f.o.b. from United States of America and Canada ..	— 235	— 214	— 129
3. Trade balance with United States of America and Canada ..	— 86	— 64	— 62
4. Trade balance with other American account countries ..	..	+ 8	+ 5
5. Trade balance with the Dollar Area ..	— 86	— 56	— 57

AUSTRALIA: BALANCE OF PAYMENTS WITH THE DOLLAR AREA
(UNITED STATES DOLLARS)—continued.
(U.S. \$ million.)

	1952-53.	1953-54.	1954-55— First Half (Preliminary).
Other Current Transactions.			
6. Freight on imports	- 34.0	- 22.8	- 13.9
7. Other transportation	- 2.0	- 2.2	- 0.7
8. Expenditure by Australian travellers	- 3.0	- 2.8	- 1.3
9. Expenses of Australian companies in North America	- 2.2	- 3.4	- 1.8
10. Film remittances	- 4.5	- 5.4	- 2.5
11. Profits and dividends remitted	- 7.2	- 30.6	- 10.9
12. Undistributed income accruing to companies incorporated in dollar area	- 28.2	- 38.3	(a) - 11.2
13. Public authority interest payments	- 8.0	- 7.6	- 3.2
14. Other miscellaneous debits	- 10.5	- 12.9	- 7.1
15. Miscellaneous credits	+ 14.3	+ 16.1	+ 6.8
16. Other items (net)	+ 46.3	+ 2.4	+ 4.4
17. Invisible balance with the Dollar Area	- 39	- 108	- 41
18. Balance on current account (5 + 17)	- 125	- 164	- 98
INVESTMENT ACCOUNT.			
19. Increase in debt of public authorities	- 3	- 32	- 15
20. Undistributed income (see item 12)	+ 28	+ 36	+ 11
21. Identified private capital inflow	- 24	+ 3	} + 10
22. Balancing Item	+ 61	+ 3	
23. Balance on Investment Account	+ 62	+ 15	+ 6
24. Dollar Surplus or Deficit (18 + 23)	- 63	- 149	- 92
DOLLAR FINANCING.			
25. Dollar purchases from I.M.F. (net)	+ 30	- 24	- 12
26. Dollar loans from I.B.R.D.	+ 40	+ 48	+ 27
27. Estimated dollar drawings from (+) or contributions to (-) Sterling Area Dollar Pool	+ 12	+ 97	+ 69
28. Movement in Australian dollar balances (increase -)	- 19	+ 28	+ 5
29. Total	+ 63	+ 149	(a) + 92

(a) Provisional estimate only.

CHAPTER VIII.—LABOUR, WAGES AND PRICES.**A. RETAIL PRICES AND PRICE INDEXES.****§ 4. Tabular Statements of Retail Price Index Numbers.**

The Interim Retail Price Index, p. 244.—The following table shows the interim retail price index numbers for the March and June quarters, 1955 for each capital city and for the six capital cities combined, showing separate series for each of the four main groups of items:—

INTERIM RETAIL PRICE INDEX NUMBERS: CAPITAL CITIES.

(Base of each Index: Year 1952-53 = 100.)

Period.	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (a)
GROUP I.—FOOD.							
Mar. Qtr. 1955 ..	104.6	104.8	105.2	106.5	109.0	107.3	105.3
June " " ..	105.1	106.2	106.0	108.2	111.2	108.7	106.4

For footnotes see next page.

INTERIM RETAIL PRICE INDEX NUMBERS: CAPITAL CITIES—*continued.*

Period.	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals (a)
GROUP II.—CLOTHING AND DRAPERY.							
Mar. Qtr. 1955 ..	102.2	102.2	102.8	103.0	101.6	103.2	102.3
June „ „ ..	102.7	103.5	103.7	103.8	102.3	103.6	103.2
GROUP III.—RENT(b) (4 AND 5 ROOMED HOUSES).							
Mar. Qtr., 1955 ..	109.6	102.3	105.5	105.0	149.5	109.5	109.7
June „ „ ..	109.7	102.3	105.7	109.3	153.1	109.5	110.5
GROUP IV.—OTHER ITEMS.(c)							
Mar. Qtr., 1955 ..	100.6	101.3	104.8	99.4	101.6	105.0	101.2
June „ „ ..	100.9	101.8	104.9	101.7	103.3	105.5	101.9
ALL GROUPS.							
Mar. Qtr., 1955 ..	103.3	102.9	104.4	103.5	109.3	105.8	103.8
June „ „ ..	103.7	103.9	105.1	105.4	111.1	106.6	104.7

(a) Weighted average. (b) The rent index numbers measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. See footnote (b) on page 253. (c) A group of items under the following headings—Electricity, Gas, and Firewood; Household Sundries; Services; Cinema Admission, Radio Licences, and Newspapers; Pares; and Tobacco and Cigarettes.

§ 5. The “C” Series Retail Price Index.

“C” Series Retail Price Index, Six Capital Cities, p. 253.—The following table shows “C” Series index numbers for the March and June quarters, 1955, for the six capital cities combined:—

“C” SERIES RETAIL PRICE INDEX NUMBERS: SIX CAPITAL CITIES COMBINED.

(Base of each Group: Weighted Average of Six Capital Cities, 1923–27 = 1,000.)

Period.	Food and Groceries.	Rent (4 and 5 Roomed Houses).(a)	Clothing.	Miscel- laneous.	Total “C” Series Index.
1955—March Quarter ..	2,730	1,213	3,218	2,046	2,349
June „ ..	2,770	1,222	3,240	2,070	2,375

(a) See footnote (b), page 253.

B. WHOLESALE PRICES AND PRICE INDEXES.

§ 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

Index Numbers, p. 255.—Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are shown below for the year 1954–55.

WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS.

(Base of each group : Average of three years ended June, 1939 = 100.)

Period.	Basic Materials.							Food-stuffs and Tobacco.	Basic Materials and Foodstuffs.		
	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Total.		Goods principally Imported.	Goods principally Home Produced.	Total All Groups
1934-55—											
July ..	384	217	569	313	183	358	327	308	266	337	316
August ..	384	216	520	313	205	358	325	308	267	336	316
September ..	385	216	527	313	232	365	327	308	271	336	317
October ..	385	211	505	313	240	365	325	303	269	332	313
November ..	393	211	491	314	240	365	327	303	277	331	315
December ..	393	212	507	315	225	365	328	307	277	333	317
January ..	396	215	501	315	237	365	330	a 305	a 279	a 332	a 316
February ..	399	215	505	315	257	373	333	a 313	a 281	a 340	a 322
March ..	400	214	507	315	264	381	336	a 319	a 282	a 345	a 326
April ..	401	214	496	315	271	387	337	a 314	a 283	a 342	a 324
May ..	403	214	497	315	294	389	339	a 318	a 283	a 346	a 328
June ..	402	214	a 485	315	306	398	a 340	a 324	a 287	a 350	a 331
Year 1934-55	394	214	a 510	314	246	372	a 331	a 311	a 277	a 338	a 320

(a) Subject to revision.

D. WAGES.

§ 2. Rates of Wage and Hours of Labour.

Weekly Rates of Wage, pp. 260-1.—The following table shows for each State and Australia the weighted average nominal weekly rates of wage payable, and the index numbers based thereon, for adult males and for adult females, at the end of each quarter during the period 31st March, 1954 to 30th June, 1955 :—

WEEKLY WAGE RATES OF ADULT MALES AND FEMALES.

(WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX NUMBERS OF WAGE RATES.)

Date.	N.S.W.		Vic.		Q'land.		S. Aust.		W. Aust.		Tas.		Aust. (a)	
ADULT MALES—RATES OF WAGE.														
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
31st March, 1954 ..	296	8	283	1	276	3	278	9	292	5	296	11	288	1
30th June, 1954 ..	296	9	282	7	276	10	278	9	292	5	296	11	288	3
30th September, 1954	296	9	282	2	278	3	278	9	292	5	296	11	288	2
31st December, 1954	298	4	284	3	278	7	282	2	293	3	299	2	290	0
31st March, 1955 ..	302	2	288	0	280	7	283	10	295	1	301	11	293	2
30th June, 1955 ..	302	7	290	6	280	8	284	3	299	0	302	2	294	4

(a) Weighted average for Australia.

WEEKLY WAGE RATES OF ADULT MALES AND FEMALES—*continued.*

(WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX NUMBERS OF WAGE RATES.)

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
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ADULT MALES—INDEX NUMBERS.

(Base : Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

31st March, 1954 ..	5,788	5,524	5,391	5,439	5,705	5,794	5,622
30th June, 1954 ..	5,790	5,514	5,421	5,439	5,705	5,794	5,624
30th September, 1954	5,790	5,505	5,430	5,439	5,705	5,794	5,623
31st December, 1954	5,820	5,547	5,435	5,506	5,722	5,837	5,658
31st March, 1955 ..	5,896	5,619	5,476	5,538	5,758	5,891	5,720
30th June, 1955 ..	5,904	5,668	5,476	5,546	5,835	5,896	5,734

ADULT FEMALES—RATES OF WAGE.

	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
31st March, 1954 ..	198	5	201	2	189	8	199	6	190	5	196	4	198	2
30th June, 1954 ..	198	6	200	10	189	8	199	6	190	5	196	4	198	1
30th September, 1954	198	8	200	9	189	8	199	6	190	5	196	7	198	1
31st December, 1955	198	8	200	2	190	0	199	4	190	5	196	7	198	11
31st March, 1955 ..	201	0	200	10	190	5	199	10	191	6	196	11	199	2
30th June, 1955 ..	201	0	203	3	191	0	199	11	191	6	197	0	200	2

ADULT FEMALES—INDEX NUMBERS.

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st March, 1954 ..	7,302	7,404	6,979	7,342	7,007	7,226	7,294
30th June, 1954 ..	7,305	7,392	6,979	7,342	7,007	7,226	7,290
30th September, 1954	7,311	7,388	6,979	7,342	7,007	7,236	7,290
31st December, 1954	7,311	7,366	6,993	7,335	7,007	7,236	7,320
31st March, 1955 ..	7,398	7,392	7,007	7,354	7,049	7,248	7,329
30th June, 1955 ..	7,398	7,480	7,028	7,359	7,049	7,250	7,367

(a) Weighted average for Australia.

§ 3. Average Weekly Wage Earnings.

Average Weekly Total Wages Paid and Average Earnings, p. 266.—Particulars of the average weekly total wages paid and the average earnings per employed male unit for the year 1954-55 are shown in the following table :—

AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS, 1954-55.

Particulars.	N.S.W.(a)	Vic.	Qld.	S.A.(b)	W.A.	Tas.	Aust.
Average Weekly Total Wages Paid .. £'000.	17,357	12,221	5,398	3,839	2,731	1,365	42,911
Average Weekly Earnings per Employed Male Unit £	16.96	17.06	14.51	16.09	15.55	15.60	16.42

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State, and because the average ratio of female to male earnings may vary between States, precise comparisons between average earnings in different States cannot be made on the basis of the figures above.

§ 4. Basic Wages in Australia.

Metal Trades Margins Case, 1953-54.—On 25th February, 1954, the Full Court of the Commonwealth Court of Conciliation and Arbitration (Kelly, *C.J.*, Kirby, Dunphy and Morgan, *J.J.*) gave judgment on claims by metal trades unions for increased margins for workers covered by the Metal Trades Award. The Court decided not to determine the matter but to adjourn further hearing of the case till 9th November, 1954. The employers had counter-claimed for reduced margins for partly-skilled and unskilled workers, at the same time, accepting that margins for tradesmen should remain unaltered.

The hearing before the Court was an outcome of references of claims of the metal trades unions by Conciliation Commissioner J. M. Galvin to the Full Court of the Commonwealth Court of Conciliation and Arbitration. The employees' claims were in the nature of a test case in order to determine the attitude of the Court to applications for increased margins.

The actual claims of the trade unions were for an increase in the marginal rate payable to a skilled tradesman in the metal trades from the existing rate of 52s. to 80s. per week (86s. for certain electrical trades), with proportionate increases for other occupations. The margins then current, with few exceptions, had been in existence since 1947.

The Court rejected the main submission of the unions that margins should be reviewed because the relative marginal rate payable for skilled work above that for unskilled work had diminished owing to the decreased purchasing power of money since 1947. Other principles put forward by the unions, but rejected, were that the margins should bear a definite relationship to the basic wage, and that margins should be adjusted in accordance with variations in the purchasing power of money.

The judgment stated that the reason skilled workers had lost ground since the war in comparison with unskilled workers was due to the fact that all wage earners, irrespective of their skill and contribution to the economy, had obtained certain benefits. These include:—the increase in the real value of the basic wage; the extension of paid annual leave; the reduction of the standard working week to 40 hours; the increases obtained in "penalty" rates for week-end work; the increases in marginal rates; and the flat-rate over-award payments made to all workers at the instigation of the unions.

The Court stated that there was considerable unbalance in the economy with a drift of population to secondary industries from the more remunerative primary industries. Any increase in the wage rates payable in the metal trades industry would make correction of this unbalance more difficult.

The Court expressed concern at the level of costs in secondary industry especially in comparison with those in other countries and indicated that any increase in marginal rates would aggravate the competitive position of Australian industry.

The skilled worker had a *prima facie* case for a review of margins payable under the metal trades award, but the Court thought that the position of the economy was so uncertain that it had decided to adjourn further hearing of the matter till 9th November, 1954.

The Court pointed out that the judgment was not to be taken as being determinative of other claims for marginal increases which may be made, except in so far that these claims are based alone on the variation in the purchasing power of money. It was important to note also that claims of higher paid workers for increased salaries or wage rates may be justified on the principle that these workers had not received benefits which other workers had obtained since the war.

Upon the request of the applicant organizations the Court decided that the further hearing of these claims should be brought forward and the hearing commenced on 5th October, 1954.

In a judgment delivered on 5th November, 1954 the Court granted marginal increases to skilled tradesmen under the Metal Trades Award. The increases were based on a formula of two and one-half times the margin prescribed for the same occupation in the 1937 Metal Trades Award. If the application of this formula resulted in a decrease in the margin presently being paid, no alteration was to be made.

State Basic Wage Rates, p. 284.—The table below shows the "basic" weekly wage rates of State industrial tribunals, operative in February, 1955 and May, 1955.

STATE BASIC WAGE—WEEKLY RATES.

State.	February, 1955.			May, 1955.		
	Date of Operation. (a)	Males.	Females.	Date of Operation. (a)	Males.	Females.
		s. d.	s. d.		s. d.	s. d.
New South Wales—(b)						
Metropolitan and Country excluding Broken Hill ..	Aug., 1953	243 0	182 0	Aug., 1953	243 0	182 0
Broken Hill	Aug., 1953	247 0	185 0	Aug., 1953	247 0	185 0
Victoria(c)	Feb., 1955	235 0	176 0	May, 1955	237 0	177 6
Queensland—						
Southern Division (Eastern District)—including Brisbane(d)	1.2.54	225 0	151 0	1.2.54	225 0	151 0
South Australia(e)	Aug., 1953	231 0	173 0	Aug., 1953	231 0	173 0
Western Australia—(f)						
Metropolitan Area	27.7.53	246 6	160 3	27.7.53	246 6	160 3
South-West Land Division ..	27.7.53	246 0	159 11	27.7.53	246 0	159 11
Goldfields and other areas ..	27.7.53	249 4	162 1	27.7.53	249 4	162 1
Tasmania(g)	Aug., 1953	242 0	181 6	Aug., 1953	242 0	181 6

(a) Where dates are not quoted wage rates operate from beginning of first pay-period commencing in month shown.

(b) Automatic adjustment discontinued from 23rd October, 1953, following decision of the Commonwealth Court of Conciliation and Arbitration on 12th September, 1953 (*see* page 276).

(c) No basic wage declared but rates shown (Melbourne) are those commonly adopted by Wages Boards. The Victorian Factories and Shops (Wages Boards) Act, 1953 (proclaimed 25th November, 1953), requires Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers.

(d) Between February, 1954 and May, 1955 the Queensland Industrial Court declined to make any adjustment to the basic wage rates consequent upon quarterly movement in the "C" Series of retail price index numbers.

(e) The "living wage" declared for the metropolitan area is also adopted in country areas except at Whyalla where a loading of 5s. is generally payable. The "living wage" is subject to quarterly variation according to the amount of the general automatic quarterly adjustment in the Commonwealth basic wage (discontinued on 12th September, 1953) for Adelaide.

(f) The Western Australian Arbitration Court from July, 1953 to May, 1955 declined to adjust the basic wage rates in accordance with movements in the cost of living statements supplied by the Government Statistician.

(g) None declared but rates shown (Hobart) are those commonly adopted by Wages Boards.

E. EMPLOYMENT AND UNEMPLOYMENT.

§ 1. Employment.

Total Occupied Persons, p. 285.—Figures for the 1954 Census corresponding to those on page 286 are not yet available. However, particulars of the occupational status of the population in each State will be found on page 1130.

Wage and Salary Earners in Civilian Employment, pp. 288-9.—The following are particulars of wage and salary earners in civilian employment, excluding rural wage earners, females in domestic work in private homes, persons on the paid strength of the Defence Forces and National Service trainees in camp, for the month of June, 1955.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, JUNE, 1955.

(Excluding Rural Wage Earners, Female Domestics in Private Homes, Persons on Paid Strength of Defence Forces and National Service Trainees in Camp.)

('000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Males	779.2	556.7	272.0	178.7	136.4	64.0	2,000.5
Females	292.5	227.0	89.3	60.2	43.9	21.7	738.5
Persons	1,071.7	783.7	361.3	238.9	180.3	85.7	2,739.0

Particulars.	Governmental. (b)	Private Employers.	Mining and Quarrying.	Factories. (c)	Transport and Communication.	Retail Trade.	Other Commerce and Finance.
Males	599.1	1,401.4	58.3	714.5	308.7	129.2	207.1
Females	122.8	615.7	1.1	225.3	38.4	121.6	83.1
Persons	721.9	2,017.1	59.4	939.8	347.1	250.8	290.2

(a) Includes Australian Capital Territory and Northern Territory. (b) Includes all employees of Governmental Authorities (Commonwealth, State, Local and Semi-Governmental) on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia. (c) Subject to revision.

Government Employees, p. 290.—The number of Government employees in Australia in June, 1955 was as follows:—

Commonwealth Government—males, 160,800; females, 44,300; persons, 205,100; State Government and Semi-Government Bodies—males, 373,300; females, 72,700; persons, 446,000; Local Government Authorities—males, 65,000; females, 5,800; persons, 70,800; Total—males, 599,100; females, 122,800; persons, 721,900.

§ 4. Industrial Disputes.

Summary of Disputes (involving Stoppage of Work), p. 294.—The following table shows particulars of industrial disputes in each State and Territory during 1954:—

INDUSTRIAL DISPUTES : SUMMARY, 1954.

State or Territory.	Number.	Workers Involved.			Working Days Lost.	Estimated Loss in Wages.
		Directly.	Indirectly. (a)	Total.		
New South Wales(b)	1,063	217,081	5,205	222,286	501,573	£ 1,654,814
Victoria	76	42,476	2,337	44,813	135,611	460,213
Queensland	278	77,006	6,675	83,681	183,855	611,331
South Australia	23	7,291	45	7,336	31,207	108,100
Western Australia	15	5,398	96	5,494	21,651	75,387
Tasmania (b)	31	5,951	136	6,087	25,915	105,042
Northern Territory	2	239	..	239	1,452	5,682
Australian Capital Territory	2	138	..	138	375	1,242
Australia(b)	1,490	355,580	14,494	370,074	901,639	3,021,211

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (b) Includes disputes not settled at the end of 1953.

CHAPTER IX.—POPULATION.

§ 3. Growth and Distribution of Population.

Growth of Population, pp. 305-6.—The following table shows the estimated population of each State and Territory at 31st December, 1954 and 30th June, 1955 :—

ESTIMATED POPULATION,
(EXCLUDING FULL-BLOOD ABORIGINALS.)

—	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31ST DECEMBER, 1954.									
Males	1,738,475	1,246,461	679,211	409,933	334,867	162,795	9,967	16,502	4,598,211
Females	1,724,027	1,234,412	643,675	398,375	314,493	156,747	6,156	14,642	4,492,527
Persons	3,462,502	2,480,873	1,322,886	808,308	649,360	319,542	16,123	31,144	9,090,738
30TH JUNE, 1955.									
Males	1,753,132	1,269,736	690,371	415,661	339,152	161,139	10,888	17,176	4,657,255
Females	1,737,388	1,253,278	654,335	403,953	319,331	153,571	6,675	15,248	4,543,779
Persons	3,490,520	2,523,014	1,344,706	819,614	658,483	314,710	17,563	32,424	9,201,034

§ 4. Mean Population.

Mean Population, p. 311.—Mean populations for the calendar year ended 31st December, 1954 and for the financial year ended 30th June, 1955 are as follows :—

MEAN POPULATION.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Year ended—									
31st Dec., 1954	3,428,710	2,453,461	1,313,187	796,426	640,086	311,159	16,197	30,340	8,989,566
30th June, 1955	3,459,712	2,488,101	1,325,466	807,562	648,873	313,017	16,519	31,249	9,090,499

§ 5. Elements of Increase.

Natural Increase, p. 312, Increase by Net Migration, p. 314 and Total Increase, p. 320.—The following table shows particulars of natural increase, increase by net migration and total increase during the year 1954 :—

POPULATION : NATURAL INCREASE, INCREASE BY NET MIGRATION AND TOTAL INCREASE, 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS).									
Persons	40,681	32,106	19,832	11,048	10,564	5,074	407	739	120,451
Rate(a)	11.87	13.09	15.10	13.88	16.50	16.31	25.13	24.36	13.40

POPULATION : NATURAL INCREASE, INCREASE BY NET MIGRATION AND
TOTAL INCREASE, 1954—*continued*.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
INCREASE BY NET MIGRATION.									
Persons ..	15,977	31,764	3,544	9,968	7,228	— 1,448	201	973	68,207
TOTAL INCREASE. (b)									
Persons ..	53,168	64,819	24,343	22,580	17,668	3,047	504	1,601	187,730

(a) Excess of births over deaths per 1,000 of mean population. (b) Total increase means natural increase plus net migration together with adjustments for differences disclosed by the preliminary results of the Census of 30th June, 1954.

NOTE.—Minus sign (—) denotes excess of departures over arrivals.

§ 7. General Characteristics.

Age Distribution, page 325.—The following table shows the population of the several States and Territories of Australia at the Census of 30th June, 1954 according to broad age groups. The figures therein are subject to slight revision. At a later date information on five-year groups and single ages will be available.

POPULATION : AGE DISTRIBUTION, STATES, CENSUS, 30TH JUNE, 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

(Subject to Revision.)

Age Group (Years).	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
0—4—									
Males ..	180,933	132,206	75,369	45,068	38,092	18,883	1,093	2,076	493,720
Females ..	173,355	126,150	72,216	43,161	36,856	18,138	981	1,969	472,856
Persons ..	354,288	258,356	147,585	88,229	74,978	37,021	2,074	4,045	966,576
5—15—									
Males ..	330,289	230,946	136,049	78,196	66,286	33,194	1,299	3,026	879,285
Females ..	317,332	221,186	130,033	74,440	63,195	31,956	1,299	2,814	842,255
Persons ..	647,621	452,132	266,082	152,636	129,481	65,150	2,598	5,840	1,721,540
16—20—									
Males ..	114,276	77,514	45,749	23,679	22,227	10,812	511	1,052	295,820
Females ..	109,242	73,509	43,935	22,371	21,312	10,389	380	816	281,954
Persons ..	223,518	151,023	89,684	46,050	43,539	21,201	891	1,868	577,774
21—65—									
Males ..	978,665	709,626	374,580	228,376	185,271	84,390	7,122	9,679	2,577,709
Females ..	957,656	690,770	347,899	217,079	165,059	79,794	3,417	8,068	2,469,742
Persons ..	1,936,321	1,400,396	722,479	445,455	350,330	164,184	10,539	17,747	5,047,451
66 and over—									
Males ..	116,697	80,805	44,502	28,584	18,482	9,850	263	396	299,579
Females ..	145,084	109,630	47,924	36,140	22,961	11,346	104	419	373,668
Persons ..	261,781	190,435	92,426	64,724	41,443	21,196	367	815	673,247
Total—									
Males ..	1,720,860	1,231,097	676,249	403,903	330,358	157,129	10,288	16,229	4,546,113
Females ..	1,702,662	1,221,245	642,007	393,191	309,413	151,623	6,181	14,086	4,440,415
Persons ..	3,423,522	2,452,342	1,318,256	797,094	639,771	308,752	16,469	30,315	8,986,528

Occupational Status, page 328.—Particulars of the occupational status of the population of each State and Territory at the Census of 30th June, 1954 are shown below. The figures are subject to slight revision.

POPULATION : OCCUPATIONAL STATUS, STATES, CENSUS, 30TH JUNE, 1954.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

(Subject to Revision.)

Occupational Status.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
In Work Force—									
At Work—									
Employer—									
Males	80,698	59,367	36,683	18,921	16,861	6,882	515	447	220,374
Females	10,588	8,980	4,985	2,441	2,243	788	60	53	30,144
Persons	91,286	68,347	41,668	21,362	19,104	7,670	581	500	250,518
Self-Employed—									
Males	121,600	103,090	59,068	35,241	26,146	12,604	595	428	358,772
Females	18,386	16,321	7,405	4,521	3,367	1,320	64	50	51,443
Persons	139,986	119,411	66,473	39,762	29,513	13,933	659	478	410,215
Employee (on wage or salary)									
Males	848,760	608,220	311,785	195,480	158,181	72,321	6,400	9,659	2,210,806
Females	286,434	224,312	91,950	59,040	45,787	21,340	1,281	2,926	733,061
Persons	1,135,194	832,532	403,735	254,520	203,968	93,661	7,681	12,579	2,943,870
Other and Not Stated—									
Males	9,160	6,565	5,251	1,905	1,775	956	50	13	25,675
Females	6,111	4,895	2,836	1,415	1,221	496	41	32	17,047
Persons	15,271	11,460	8,087	3,320	2,996	1,452	91	45	42,722
Not at Work (a)—									
Males	18,228	9,562	7,385	2,020	2,077	1,214	120	62	40,668
Females	6,536	2,068	2,578	765	741	279	31	13	13,911
Persons	24,764	12,530	9,963	2,785	2,818	1,493	151	75	54,579
Not in Work Force—									
Males	642,414	444,293	256,077	150,336	125,318	63,152	2,608	5,620	1,689,818
Females	1,374,614	963,769	532,253	325,009	256,054	127,391	4,698	11,018	3,594,806
Persons	2,017,028	1,408,062	788,330	475,345	381,372	190,543	7,306	16,638	5,284,624
Total Population—									
Males	1,720,860	1,231,097	676,249	403,903	330,358	157,129	10,288	16,229	4,546,113
Females	1,702,660	1,221,245	642,067	393,191	309,413	151,623	6,181	14,086	4,440,415
Persons	3,423,529	2,452,342	1,318,256	797,094	639,771	308,752	16,469	30,315	8,986,528

(a) Includes those who stated that they were usually engaged in work but were not actively seeking a job at the time of the Census by reason of sickness, accident, etc., or because they were on strike, changing jobs or temporarily laid off, etc. It includes also persons able and willing to work but unable to secure employment, as well as casual and seasonal workers not actually in a job at the time of the Census. The numbers shown as "Not at Work" therefore, do not represent the number of unemployed available for work and unable to obtain it. Particulars of unemployment in this sense will be available when full analysis is made of reasons stated by persons "Not at Work."

§ 9. Oversea Migration.

Classes of Arrivals and Departures, p. 335.—Arrivals and departures during 1954 were:—Permanent new arrivals, 104,014; Australian residents returning from abroad, 44,944; temporary visitors arriving, 49,067; total arrivals, 198,025; Australian residents departing permanently, 35,449; Australian residents departing temporarily, 45,701; temporary visitors departing, 48,668; total departures, 129,818.

CHAPTER X.—VITAL STATISTICS.

§ 1. Marriages, § 2. Fertility and Reproduction, and § 3. Mortality.

Numbers and Rates, pp. 350, 355, 359, 360, 370-1 and 375.—The following table shows totals and rates for marriages, live births, deaths and infant deaths for 1954 :—

MARRIAGES, BIRTHS, DEATHS AND INFANT DEATHS, 1954.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Marriages	Number 27,503	19,404	10,027	6,190	5,204	2,512	143	246	71,229
	Rate(a) 8.02	7.91	7.64	7.77	8.13	8.07	8.83	8.11	7.92
Live Births	Number 73,125	54,660	31,176	18,227	15,928	7,776	513	857	202,256
	Rate(a) 21.33	22.28	23.74	22.89	24.88	24.97	31.67	28.25	22.50
Deaths	Number 32,444	22,554	11,344	7,179	5,364	2,696	106	118	81,805
	Rate(a) 9.46	9.19	8.64	9.01	8.38	8.66	6.54	3.89	9.10
Infant Deaths	Number 1,850	1,055	695	388	359	186	9	4	4,546
	Rate(b) 25.30	19.30	22.29	21.29	22.54	23.94	17.54	4.67	22.48

(a) Number per 1,000 of mean population.

(b) Number of deaths of children aged under one year per 1,000 live births registered.

§ 1. Marriages.

Age and Conjugal Condition at Marriage, p. 356.—A summary of the previous conjugal condition of bridegrooms and brides in 1954 in relation to age at marriage is as follows :—

AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES : AUSTRALIA, 1954.

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20	2,327	..	..	2,327	15,585	3	7	15,595
20-24..	29,489	15	63	29,567	31,574	85	262	31,921
25-29..	19,742	82	519	20,343	9,302	242	1,103	10,647
30-34..	6,431	184	892	7,507	3,126	379	1,148	4,603
35-39..	2,457	224	907	3,588	1,393	453	971	2,817
40-44..	1,334	310	837	2,481	821	474	707	2,002
45-49..	766	380	587	1,733	463	510	418	1,391
50-54..	403	517	366	1,286	253	448	214	915
55-59..	199	448	171	818	158	326	76	560
60-64..	113	462	119	694	76	286	32	394
65 and over	95	722	68	885	54	300	30	384
Total ..	63,356	3,344	4,529	71,229	62,805	3,456	4,968	71,229

In 1954 the proportional distribution (per cent.) of bridegrooms and brides according to previous conjugal condition was :—

Bridegrooms : Bachelors, 88.95; Widowers, 4.69; Divorced, 6.36.

Brides : Spinsters, 88.17; Widows, 4.85; Divorced, 6.98.

The average age in 1954 of bridegrooms was 28.82 years and of brides 25.59 years.

Celebration of Marriages, pp. 357-8.—The number of marriages in 1954 celebrated by ministers of religion in the various denominations or by civil officers was as follows.

MARRIAGES IN EACH DENOMINATION, 1954.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Pro-portion of Total.
Church of England	9,870	5,256	2,561	1,329	1,532	918	31	99	21,596	%
Roman Catholic ..	6,484	4,595	2,583	1,087	1,097	457	36	73	16,412	30.32
Methodist ..	2,670	2,397	1,586	1,058	713	385	29	9	9,647	23.04
Presbyterian ..	3,264	3,541	1,955	318	440	153	10	21	9,702	13.54
Congregational ..	328	271	94	241	113	53	..	1	1,101	13.62
Baptist ..	355	312	204	165	64	76	..	..	1,176	1.34
Lutheran ..	111	209	245	367	28	4	..	7	971	1.65
Church of Christ ..	60	337	64	133	68	15	..	..	677	0.95
Salvation Army ..	111	97	93	47	21	12	8	1	390	0.55
Greek Orthodox ..	200	140	52	43	58	3	..	..	496	0.70
Seventh-Day Ad-ventist ..	68	28	27	3	11	10	..	..	147	0.21
Other Christian ..	161	171	181	65	98	25	2	..	703	0.99
Hebrew ..	148	165	6	..	17	..	..	..	336	0.47
Total ..	23,830	17,719	9,651	5,456	4,260	2,111	116	211	63,354	88.94
Civil Officers ..	3,673	1,685	376	734	944	401	27	35	7,875	11.06
Grand Total	27,503	19,404	10,027	6,190	5,204	2,512	143	246	71,229	100.00

PROPORTION OF TOTAL.

(Per Cent.)

Denominational ..	86.65	91.32	96.25	88.14	81.86	84.04	81.12	85.77	88.94
Civil ..	13.35	8.68	3.75	11.86	18.14	15.96	18.88	14.23	11.06

Summarized tables of Australian marriage statistics for 1954 will be found in the *Monthly Australian Demographic Review*, No. 54: Part 2, July, 1955.

§ 2. Fertility and Reproduction.

Gross and Net Reproduction Rates for Females, pp. 362-3.—In 1954 the gross reproduction rate was 1.558 and the net reproduction rate (based on 1946-48 mortality experience) was 1.478.

Fertility of Marriages, p. 363.—For the year 1954 the number of nuptial confinements per marriage on the basis explained on p. 363 was 2.66. This figure must be read in conjunction with the text on that page.

Age, Duration of Marriage and Issue of Mothers, p. 367.—The average number of children born to mothers in the various age groups in 1954 was:—Under 20 years, 1.22; 20-24 years, 1.70; 25-29 years, 2.36; 30-34 years, 3.05; 35-39 years, 3.78; 40-44 years, 4.56; and 45-49 years, 5.60. The average for mothers of all ages was 2.48.

A classification of mothers by age group and previous issue is given for 1954 in the following table:—

NUPTIAL CONFINEMENTS : AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1954.

Previous Issue.	Age of Mother (Years).							Total Married Mothers.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
0	7,730	27,978	16,799	6,435	2,422	629	36	61,029
1	1,622	17,767	22,083	10,330	3,382	745	49	55,978
2	181	6,180	14,246	10,606	4,290	939	32	36,474
3	12	1,745	6,016	6,779	3,575	986	47	19,160
4 .. ..	..	363	2,239	3,160	2,250	805	34	8,851
5 .. ..	..	70	793	1,492	1,421	548	31	4,355
6 .. ..	..	13	289	757	844	357	32	2,292
7 .. ..	..	2	89	392	514	252	29	1,278
8 .. ..	..	1	26	171	270	171	27	666
9 .. ..	..	..	5	82	167	139	11	404
10 and over ..	..	..	3	57	216	219	36	531
Total Married Mothers ..	9,545	54,119	62,588	40,261	19,351	5,790	364	192,018

Nuptial First Births, pp. 368-9.—The number and proportion of first births in 1954 according to duration of marriage of the mother was:—

FIRST BIRTHS : DURATION OF MARRIAGE, AUSTRALIA, 1954.

Duration of Marriage.				Number of First Births.	Proportion of Total First Births.
					%
Under 8 months	..	..	..	10,689	17.23
8 months	..	..	..	1,974	3.18
9 "	..	..	..	4,366	7.04
10 "	..	..	..	3,761	6.06
11 "	..	..	..	3,144	5.07
Total under 1 year				23,934	38.58
1-2 years	..	..	..	17,755	28.62
2-3 "	..	..	..	8,031	12.95
3-4 "	..	..	..	4,436	7.15
4-5 "	..	..	..	2,708	4.37
5-10 "	..	..	..	4,324	6.97
10-15 "	..	..	..	707	1.14
15 years and over	..	..	..	134	0.22
Total				62,029	100.00

A comprehensive summary of the Australian birth statistics for 1954 will be found in the *Monthly Australian Demographic Review*, No. 58, October, 1955.

§ 3. Mortality.

Age Distribution, p. 379.—A summary of the ages at death for Australia for the year 1954 is given in the following table:—

AGE AT DEATH : AUSTRALIA, 1954.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week	1,667	1,217	2,884	Total 5-9 years	300	216	516
1 week and under 2 weeks	116	88	204	" 10-14 "	218	135	353
2 weeks " " 3 "	63	30	93	" 15-19 "	437	162	599
3 " " " 28 days	67	27	94	" 20-24 "	572	173	745
Total under 28 days	1,913	1,362	3,275	" 25-29 "	628	305	933
28 days and under 3 months	202	168	370	" 30-34 "	659	395	1,054
3 months and under 6 "	219	185	404	" 35-39 "	757	591	1,348
6 " " " 12 "	274	223	497	" 40-44 "	1,200	813	2,013
Total under 1 year	2,608	1,928	4,546	" 45-49 "	1,695	1,080	2,775
1 year	292	241	533	" 50-54 "	2,509	1,509	4,018
2 years	182	117	299	" 55-59 "	3,385	1,949	5,334
3 "	134	71	205	" 60-64 "	4,740	2,933	7,673
4 " "	91	59	150	" 65-69 "	5,863	3,859	9,722
Total under 5 years	3,307	2,426	5,733	" 70-74 "	6,233	4,780	11,013
				" 75-79 "	5,593	5,119	10,712
				" 80-84 "	4,125	4,774	8,899
				" 85-89 "	2,551	3,190	5,741
				" 90-94 "	843	1,326	2,169
				" 95-99 "	138	260	398
				" 100 and over "	11	15	26
				Age not stated	18	8	26
				Total, All Ages	45,787	36,018	81,805

CHAPTER XI.—EDUCATION.

§ 8. Universities.

Commonwealth Grants, pp. 418-9.—The States Grants (Universities) Act No. 28 of 1955 (assented to 15th June, 1955) repealed the 1953 Act. Notwithstanding the repeal, a condition subject to which an amount of financial assistance was paid to a State under the 1953 Act continues to have effect in relation to that payment. The main provisions are summarized below :—

Section 4 (1).—If the sum of the fees and State grants received by a University during the year 1955 exceeds the amount specified in column 2 of the table below, the grant to the State for that year is—

(a) an amount equal to one-third of the excess, and

(b) the amount shown in column 3 of the table.

Section 4 (2).—The maximum amount payable under Section 4 (1.) (a) above is shown in column 4.

Section 5.—The State will, in the year in which payment is received, pay to the University concerned an amount equal to the grants received and will ensure that—

(a) the grant under Section 4 (1.) (a) is applied for expenditure, not being capital expenditure, on university purposes ;

(b) of the grant under Section 4 (1.) (b), the amount shown in column 5 is applied towards the teaching and administrative costs of the residential colleges of the University and the remainder for expenditure, not being capital expenditure, on university purposes.

COMMONWEALTH GRANTS TO THE STATES FOR UNIVERSITY PURPOSES.

(£.)

University.	Amount of Fees and State Grants.	Amount of Financial Assistance under Section 4 (1.) (b).	Maximum Amount Payable under Section 4 (1.) (a).	Amount for Teaching and Administrative Costs of Residential Colleges.
(1)	(2)	(3)	(4)	(5)
New South Wales—				
University of Sydney	783,369	271,623	222,000	10,500
New South Wales University of Technology	605,805	83,204	92,500	3,675
University of New England	64,164	13,229	14,800	350
Victoria—				
University of Melbourne	655,159	222,249	192,400	9,100
Queensland—				
University of Queensland	309,269	94,528	101,750	4,375
South Australia—				
University of Adelaide	272,394	95,173	101,750	4,375
Western Australia—				
University of Western Australia	183,531	63,714	70,300	2,537
Tasmania—				
University of Tasmania	106,319	33,410	33,300	788
	2,980,010	877,130	828,800	35,700

CHAPTER XII.—PUBLIC JUSTICE.

2. Lower (Magistrates') Courts, § 3. Higher Courts (Judges' Courts), § 4. Civil Courts, § 5. Police and Prisons.

Convictions, Bankruptcies, Police, Prisons, pp. 442, 443, 445, 450, 452-3.—The following table is a summary of the more important statistics of this chapter for the latest year for which the information is available.

PUBLIC JUSTICE : SUMMARY, 1953.

Particulars.	N.S.W.	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Convictions for Serious Crime, Magistrates' Courts .. No.	17,612	6,905	3,226 (a)	1,744	3,632	1,185	195	53	34,552
Convictions for Drunkenness .. No.	72,647	19,226	21,199 (a)	5,509	6,210	763	699	378	126,631
Convictions at Higher Courts—									
Offences against the Person .. No.	(a) 467	185	186	99	80	58	24	5	1,104
Offences against Property .. No.	(a) 935	670	293	199	144	127	20	5	2,393
Other Offences .. No.	(a) 47	63	23	32	17	18	7	..	207
Total ..	(a) 1,449	918	502	330	241	203	51	10	3,704
Bankruptcies (a) .. No.	330	175	145	82	74	39	..	(b)	845
Liabilities £	1,221,353	597,090	437,119	229,984	330,051	96,869	..	(ii)	2,912,466
Assets £	968,456	285,854	341,806	117,622	352,093	52,820	..	(b)	2,148,651
Police .. No.	4,661	3,047	2,403 (a)	1,107 (a)	936 (a)	438	56	57	12,705
Prisons ..	(a) 15	10	7	16 (a)	19 (a)	2	2	..	71
Prisoners in Gaol ..	(a) 2,155	1,173	617	401 (a)	366 (a)	152	47	..	4,905

(a) Year 1953-54.

(b) Included in New South Wales.

CHAPTER XIII.—PUBLIC HEALTH AND RELATED INSTITUTIONS.

A. PUBLIC HEALTH.

§ 4. Control of Infectious and Contagious Diseases, page 468.

DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY OF AUSTRALIA AND NUMBER OF CASES REPORTED DURING YEAR ENDED 31ST DECEMBER, 1954.

Disease.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Acute rheumatism ..	208	128	128	..	60	..	2	..	526
Amoebiasis ..	..	2	1	3	14	1	..	..	23
Ankylostomiasis ..	295	1	16	1	2	..	63	..	378
Brucellosis ..	9	25	5	1	8	..	..	..	49
Chorea ..	20	28	..	..	6	..	..	..	54
Dengue ..	..	..	..	..	2	..	..	..	2
Diarrhoea, infantile ..	252	625	461	4	29	3	13	14	1,401
Diphtheria ..	366	107	82	5	119	4	4	17	704
Dysentery, bacillary ..	..	62	125	17	42	33	5	..	284
Encephalitis ..	33	29	5	26	..	..	2	4	99
Filariasis ..	..	..	1	..	..	..	..	..	1
Homologous serum jaundice ..	..	3	..	..	..	..	..	..	3
Hydatid ..	..	19	..	..	..	9	..	..	28
Infective hepatitis ..	1,610	1,235	..	..	165	2	15	46	3,073
Lead poisoning ..	..	36	27	..	2	..	..	..	65
Leprosy ..	..	1	6	..	47	..	23	..	77
Leptospirosis ..	8	1	79	..	..	..	..	..	88
Malaria ..	..	25	25	..	20	1	3	..	83
Meningococcal infection ..	198	119	52	22	48	21	4	3	497
Ophthalmia ..	..	..	..	..	52	..	..	..	52
Ornithosis ..	3	1	..	3	..	..	..	..	7
Paratyphoid fever ..	7	2	..	..	1	1	..	1	14
Pollionvelitis ..	555	569	131	176	436	10	..	26	1,906
Puerperal fever ..	17	3	26	2	2	..	..	1	51
Rubella ..	..	657	6	..	627	..	2	7	1,299
Salmonella infection ..	..	..	..	..	32	..	..	..	32
Scarlet fever ..	703	1,340	274	224	91	28	..	3	2,663
Tetanus ..	..	12	27	..	4	..	3	..	46
Trachoma ..	..	..	..	..	3,686	..	61	..	3,747
Tuberculosis ..	2,150	1,143	717	308	378	185	58	4	4,952
Typhoid fever ..	24	13	8	7	12	3	..	..	67
Typhus—flea, mite or tick borne	3	..	34	7	10	..	..	..	63

* Not notifiable.

NOTE.—No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified.

B. INSTITUTIONS.

§ 2. Public Hospitals (other than Mental Hospitals).

Number, Staff, etc., pp. 477-8.—The following table gives a summary of details relating to public hospitals in each State for the year 1952-53 :—

PUBLIC HOSPITALS : SUMMARY, 1952-53.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
Hospitals .. No.	261	110	138	62	96	22	4	1	694
Medical staff .. "	3,768	1,706	684	518	313	216	13	28	7,246
Nursing staff .. "	10,061	6,088	4,721	1,913	2,082	890	95	90	25,940
Beds and cots .. "	19,105	10,894	9,852	3,527	4,220	1,940	313	225	50,076
In-patients treated during year (Cases) .. No.	394,509	187,930	184,189	61,681	70,646	31,688	4,910	4,303	939,856
Inmates at end of year ..	14,382	7,610	7,084	2,410	1,890	1,124	185	140	34,825
Average daily No. resident ..	14,020	7,622	6,555	2,360	2,474	1,167	215	139	34,552
Out-patients treated '000	1,085	432	767	112 (b)	109	84	46	8	2,643

£'000.

Revenue—									
Government aid ..	(c)	8,664	6,915	2,336	3,011	1,161	..	211	} 41,076
Commonwealth hospital benefits, etc. ..	14879	929	1,824	544	360	180	32	21	
Public subscriptions ..	132	1,065	..	120	..	..	..	..	1,416
Fees ..	3,877	1,976	486	426	771	150	..	27	7,713
Total ..	19,168	12,905	9,286	3,721	4,270	1,499	32	260	51,141
Expenditure—									
Salaries and wages ..	11,972	5,615	4,343	1,973	1,966	953	228	101	27,151
Buildings, upkeep, etc. ..	559	357	149	212	135	24	82	16	1,534
Capital ..	..	3,246	1,542	439	882	..	19	70	6,198
Total ..	18,159	13,413	9,044	3,679	4,140	1,470	376	260	50,541

(a) Year ended 31st March, 1953.

(b) Estimated.

(c) Excludes loan receipts and expenditure.

§ 4. Mental Hospitals.

Number, Staff, etc., pp. 479-82.—The following table gives a summary of details relating to mental hospitals in each State for the year 1952-53.

MENTAL HOSPITALS : SUMMARY, 1952-53.

Particulars.	N.S.W.	Vic. (a)	Q'land. (b)	S. Aust.	W. Aust. (a)	Tas.	Total.
Hospitals .. No.	13	9	4	2	4	1	33
Medical staff ..	(c) 66	53	11	10	6	3	149
Nursing staff ..	1,923	1,571	790	388	270	190	5,132
Beds and cots ..	12,471	6,716	4,558	2,536	1,495	770	28,546
In-patients treated ..	15,124	8,883	5,530	2,923	1,828	1,028	35,316
Inmates at end of year ..	12,979	7,707	4,554	2,534	1,666	750	30,190
" , average daily number ..	11,497	6,791	4,263	2,429	1,541	738	27,259

£'000.

Revenue—							
Fees ..	209	..	12	31	28	13	293
Mental institution benefits ..	209	151	..	35	18	4	417
Other ..	(d) 91	16	4	36	8	1	156
Total ..	509	167	16	102	54	18	866
Expenditure—							
Salaries and wages ..	1,830	1,400	715	406	313	180	4,844
Upkeep, etc., buildings ..	130	250	6	70	12	6	474
Other ..	1,473	1,212	568	276	191	96	3,816
Capital Expenditure ..	518	776	76	130	80	..	1,580
Total ..	3,951	3,638	1,365	882	596	282	10,714

(a) Year 1952 except for revenue and expenditure, which relate to the year 1952-53. (b) Includes the Epileptic Home. (c) In addition there are 41 visiting specialists who are paid for their services. (d) Includes £33,000 Commonwealth Hospital Benefits.

CHAPTER XIV.—WELFARE SERVICES.

A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

§ 2. Commonwealth Expenditure on Social and Health Services.

States, 1953-54, p. 483.—The following table shows particulars of payments of social and health services in each State during 1953-54 :—

COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES, 1953-54.
(£'000.)

Social and Health Services.	N.S.W. (a)	Vic.	Q'land.	S.A.(b)	W. Aust.	Tas.	Total.
Age and Invalid Pensions ..	34,042	19,978	12,017	7,075	5,375	2,794	(c) 81,293
Funeral Benefits ..	114	83	39	24	19	9	288
Maternity Allowances ..	1,173	874	497	301	254	125	(d) 3,226
Child Endowment ..	19,138	13,165	8,003	4,577	3,883	1,989	(e) 50,761
Widows' Pensions ..	2,767	1,567	1,119	506	435	231	(f) 6,626
Unemployment and Sickness Benefits—							
Unemployment ..	1,247	508	582	50	76	42	2,505
Sickness ..	698	405	258	153	107	55	1,676
Special (g) ..	133	127	54	20	17	11	362
Commonwealth Rehabilitation Service ..	89	156	46	75	53	10	429
National Health Services—							
Hospital Benefits ..	3,464	1,974	1,284	680	657	271	8,330
Medical Benefits ..	645	291	147	162	158	31	1,434
Medical Benefits for Pensioners ..	992	490	259	200	136	38	2,115
Pharmaceutical Benefits ..	3,152	2,499	934	715	635	206	(h) 8,219
Pharmaceutical Benefits for Pensioners ..	504	200	136	88	63	20	1,011
Nutrition for Children ..	886	428	204	156	106	219	1,999
Miscellaneous ..	38	27	58	14	18	15	(i) 216
Mental Institution Benefits ..	210	157	63	37	18	10	495
Tuberculosis Campaign (j) ..	2,003	1,611	656	425	607	278	5,580
Total ..	71,295	44,540	26,356	15,258	12,617	6,354	176,595

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Includes payments overseas £12,000. (d) Includes payments overseas £2,000. (e) Includes payments overseas £6,000. (f) Includes payments overseas £1,000. (g) Includes payments to migrants. (h) Includes Head Office administration £78,000. (i) Includes Head Office administration £46,000. (j) Includes allowances and reimbursements to the States.

§ 3. Age and Invalid Pensions, § 4. Maternity Allowances, § 5. Child Endowment, § 6. Widows' Pensions, § 7. Unemployment and Sickness Benefits.

General, pp. 484-96.—The following table gives a summary of age and invalid and widows' pensions, maternity allowances, child endowment and unemployment and sickness benefits for the year 1953-54 :—

SOCIAL SERVICES : SUMMARY, 1953-54.

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
Age Pensioners—							
Males ..	62,230	29,799	20,471	11,180	9,950	4,425	138,055
Females ..	102,476	68,411	37,890	25,173	17,298	8,481	259,729
Persons ..	164,706	98,210	58,361	36,353	27,248	12,906	397,784
Invalid Pensioners—							
Males ..	21,215	8,977	6,031	2,256	2,192	1,325	41,996
Females ..	14,396	6,905	4,991	2,255	1,909	1,280	31,736
Persons ..	35,611	15,882	11,022	4,511	4,101	2,605	73,732
Maternity Allowances—							
Claims paid ..	72,380	54,219	30,889	18,749	15,803	7,726	(c) 199,814
Child Endowment—							
Family claims in force ..	501,272	339,022	183,726	117,644	93,117	45,246	d 1,280,439
Endowed children ..	1,031,898	699,220	407,970	245,973	202,098	101,540	d 2,689,577
Widows' Pensions—							
Pensions in force ..	16,675	9,827	6,943	3,157	2,753	1,371	40,726
Children for whom pensions paid ..	7,844	3,853	3,242	1,339	1,106	716	18,100

NOTE.—See next page for footnotes.

SOCIAL SERVICES: SUMMARY, 1953-54—continued.

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Total.
Unemployment and Sick- ness Benefits—							
Persons on benefit at end of year—							
Unemployment—							
Males	1,876	964	1,204	44	176	96	4,360
Females	934	239	453	35	49	13	1,723
Persons	2,810	1,203	1,657	79	225	109	6,083
Sickness—							
Males	2,374	1,521	883	504	333	176	5,791
Females	946	514	292	140	84	35	2,011
Persons	3,320	2,035	1,175	644	417	211	7,802
Special—(e)							
Males	274	109	83	42	25	10	543
Females	493	393	231	62	54	76	1,309
Persons	767	502	314	104	79	86	1,852
Total—(e)							
Males	4,524	2,594	2,170	590	534	282	10,604
Females	2,373	1,146	976	237	187	124	5,043
Persons	6,897	3,740	3,146	827	721	406	15,737
Admissions to benefits—							
Unemployment—							
Males	18,854	8,320	20,078	1,228	2,739	1,199	52,418
Females	4,599	1,270	3,136	297	282	131	9,715
Persons	23,453	9,590	23,214	1,525	3,021	1,330	62,133
Sickness—(e)							
Males	16,972	9,699	8,010	4,143	3,514	1,606	43,944
Females	5,671	3,144	1,939	868	696	274	12,592
Persons	22,643	12,843	9,949	5,011	4,210	1,880	56,536
Special—(e)							
Males	880	319	675	228	159	28	2,298
Females	481	503	186	72	43	48	1,333
Persons	1,370	822	861	300	202	76	3,631
Total—(e)							
Males	36,715	18,338	28,763	5,599	6,412	2,833	98,660
Females	10,751	4,917	5,261	1,237	1,021	453	23,640
Persons	47,466	23,255	34,024	6,836	7,433	3,286	122,300
Benefits Paid—							
Unemployment	£ 1,247,216	507,676	581,865	50,213	75,904	42,589	2,505,463
Sickness	£ 697,949	405,414	257,633	153,042	106,836	54,719	1,675,593
Special (f) ..	£ 132,797	127,041	54,458	19,659	16,939	11,504	362,398
Total (f) ..	2,077,962	1,040,131	893,956	222,914	199,679	108,812	4,543,454

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Includes 48 claims paid overseas. (d) Includes 412 claims and 878 children overseas. (e) Excludes migrants. (f) Includes payments to migrants.

B. OTHER SERVICES.

§ 1. Benevolent Homes, page 497.

BENEVOLENT HOMES: REVENUE AND EXPENDITURE, 1952-53.

(£.)

Particulars.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Revenue—							
Government Aid	746,065	539,521	334,883	110,919	147,580	96,613	1,975,581
Municipal Aid ..	..	998	..	..	..	..	998
Public Subscrip- tions, Legacies	..	61,540	12,079	..	594	..	74,213
Fees(c)	232,867	302,097	156,826	29,635	86,713	52,798	914,608
Other		13,595	35,194	4,038	..	845	
Total	978,932	917,751	538,982	144,592	234,887	150,256	2,965,400
Expenditure—							
Salaries and Wages	382,664	476,552	245,304	77,088	136,349	89,055	1,407,012
Upkeep and Re- pair of Build- ings	48,380	43,529	9,753	10,440	17,122	1,822	131,046
All Other	317,865	260,322	274,348	24,221	66,680	59,379	1,002,815
Capital(d) ..	230,023	250,196	7,961	32,843	14,736	..	535,759
Total	978,932	1,030,599	537,366	144,592	234,887	150,256	3,076,632

(a) These figures relate to the three State hospitals and homes only. (b) Year ended 31st March, 1953. (c) Includes Commonwealth Hospital Benefits and Age and Invalid Pension receipts. (d) Includes such items as purchase of land, cost of new buildings and additions to buildings.

The *Aged Persons Homes Act* No. 81, 1954 operated from 16th December, 1954. The purpose of the Act is to encourage and assist the provision of suitable homes for aged persons, ("Aged Person" means a man who has reached the age of 65 years or a woman who has reached 60 years and includes the wife or husband of an aged person residing or desiring to reside with the aged person) and in particular homes at which aged persons may reside in conditions approaching as nearly as possible normal domestic life, and, in the case of married people, with proper regard to the companionship of husband and wife.

Subject to this section, a society, association or other organization is eligible for assistance under this Act if—

- (a) it is carried on otherwise than for purposes of profit or gain to the individual members; and
- (b) it is a religious organization; an organization, the principal objects or purposes of which are charitable or benevolent; an organization of former members of the Defence Forces established in every State or a State branch of such an organization; or an organization approved by the Governor-General for the purpose of this Act.

A trustee or trustees under a trust established for charitable or benevolent purpose shall, if the Governor-General so approves, be deemed to be an organization referred to in the last preceding sub-section.

An organization conducted or controlled by, or by persons appointed by, the Government of the Commonwealth or of a State or a local governing body established under the law of a State, is not eligible for assistance under this Act.

Where the Director-General is satisfied that a building or buildings erected or to be erected, or purchased or to be purchased, by an organization is or are intended to be used permanently by or on behalf of the organization as a home or homes for the accommodation of aged persons, he may, in his discretion, approve that building or proposed building or those buildings or proposed buildings as a home for the purposes of this Act.

A building or proposed building shall not be approved under this section unless—

- (a) it was in course of erection by the organization on the 4th May, 1954;
- (b) its erection by the organization was commenced after the date specified in the last preceding paragraph or is to be commenced after the date of the approval; or
- (c) it was purchased by the organization after the date specified in paragraph (a) of this sub-section or is to be so purchased after the date of the approval.

The Director-General may, in his discretion, on behalf of the Commonwealth, make a grant of moneys in accordance with this Act to an organization as assistance towards meeting the capital cost of an approved home.

A grant under this section shall be made at such time, or by such instalments and at such times, as are determined by agreement between the Director-General and the organization or, in the absence of agreement, by the Director-General.

A payment under this Act shall not be made except to a corporation in which, or to trustees in whom, the approved home is or is to be vested.

Subject to this section the amount of a grant under the Act in respect of an approved home shall be an amount not exceeding—

- (a) one half of the capital cost of the home, as determined by the Director-General; or
- (b) the sum of the moneys expended, and the moneys presently available for expenditure, by the organization towards the capital cost of the home, being moneys which the Director-General is satisfied did not become available as a result of the borrowing of those moneys or any other moneys by the organization and were not received by the organization from the Government of the Commonwealth or of a State or from a local governing body or other authority established by a State Act, whichever is the less.

The Director-General shall not make, or agree to make, a grant under this Act to an organization in respect of an approved home unless he is satisfied that the sum of the moneys expended, and the moneys presently available for expenditure, by the organization towards the capital cost of the home together with the amount of the grant, will be not less than the capital cost of the home.

CHAPTER XVI.—PRIVATE FINANCE.

A. CURRENCY.

§ 2. Coinage.

Issues of Australian Coins, p. 548.—The net issues of Australian coins to 30th June, 1955, were :—silver, £34,249,000; bronze, £2,709,000; total, £36,958,000.

§ 3. Notes.

The Australian Note Issue, p. 550.—The average value of notes in circulation for the year 1954–55 was £358,556,000. This amount was distributed in denominations as follows :—10s., £10,175,000; £1, £69,646,000; £5, £176,383,000; £10, £101,443,000; £20, £6,000; £50, £49,000; £100, £55,000; and £1,000, £799,000. The amount held by the banks was £40,888,000 and by the public, £317,676,000.

B. BANKING.

§ 1. Cheque-Paying Banks.

Commonwealth Bank, pp. 559–61.—Particulars of the average liabilities and assets of the Central Banking Business and General Banking Division, etc., of the Commonwealth Bank for the year 1954–55 appear below :—

The average liabilities of the Central Banking Business (including Note Issue Department) of the Commonwealth Bank for the year ended June, 1955 amounted to £956,851,000. Capital and Reserve Funds amounted to £13,279,000; Notes on Issue to £357,023,000; Special Accounts of Trading Banks to £306,286,000; Other Deposits of Trading Banks to £36,795,000; Other Liabilities to £243,468,000.

Particulars of the average assets were as follows :—Gold and Balances held abroad, £415,896,000; Australian Coin, £2,380,000; Cheques and Bills of other Banks, £7,009,000; Government and Other Securities (including Treasury Bills), £459,839,000; Bills Receivable and Remittances in Transit, £3,488,000; and Other Assets, £68,239,000.

The average liabilities in Australia of the General Banking Division only, for the year ended June, 1955, were £190,915,000. Of this amount Deposits not bearing interest amounted to £130,909,000; Deposits bearing interest to £43,549,000; Balances due to other Banks to £309,000; Other Liabilities to £16,148,000.

The average assets in Australia, £194,231,000, included Cash and Cash Balances £10,456,000; Special Deposit Account with Central Bank, £36,061,000; Balances with other Banks, £270,000; Treasury Bills, £12,260,000; Other Australian Public Securities, £38,165,000; Other Securities, £1,606,000; Loans, Advances and Bills Discounted, £89,138,000; Other Assets, £5,675,000.

Private Trading Banks, pp. 561–3.—Average liabilities in Australia of the Private Trading Banks for the year ended June, 1955, were £1,330,544,000. Interminable Deposits or Deposit Stock amounted to £9,000; Deposits not bearing interest to £1,047,677,000; Deposits bearing interest to £262,986,000; Notes in Circulation to £158,000; Balances due to other Banks to £3,282,000; Other Liabilities to £16,432,000.

Average assets in Australia amounted to £1,357,102,000. These comprised Cash and Cash Balances, £66,908,000; Special Accounts with Commonwealth Bank, £269,117,000; Balances with other Banks, £18,436,000; Treasury Bills, £51,602,000; Other Australian Public Securities, £121,927,000; Other Securities, £3,425,000; Loans, Advances and Bills Discounted, £776,762,000; All Other Assets, £48,925,000.

Classification of Advances within Australia—Commonwealth Bank and Private Trading Banks, p. 564.—Advances within Australia at the end of December, 1954 dissected by industries were:—Business advances—Agriculture, Dairying and Grazing, £210,567,000; Manufacturing, £160,576,000; Transport, Storage and Communication, £16,561,000; Finance and Property, £90,106,000; Commerce, £146,658,000; Miscellaneous, £56,567,000; Not elsewhere specified, £11,384,000; Total Business advances, £692,419,000; Advances to Public Authorities, £12,648,000; Personal advances, £158,968,000; Total, £864,035,000.

Clearing House Returns, p. 566.—The average weekly bank clearings in each capital city for the year ended June, 1955 were as follows:—Sydney, £102,891,000; Melbourne, £94,520,000; Brisbane, £21,840,000; Adelaide, £19,534,000; Perth, £13,547,000; Hobart, £3,639,000; Total, £255,971,000.

Debits to Customers' Accounts—All Cheque-paying Banks, p. 566.—The average weekly debits to customers' accounts in each State for the year 1954-55 for all cheque-paying banks (excluding debits to accounts of Australian Governments in capital cities) were as follows:—New South Wales, £187,471,000; Victoria, £176,165,000; Queensland, £55,873,000; South Australia, £36,287,000; Western Australia, £26,247,000; Tasmania, £10,716,000; Australian Capital Territory, £821,000; Total, £491,580,000.

§ 2. Savings Banks.

All Savings Banks, p. 569.—The amounts on deposit in the several States at 30th June, 1955 were:—New South Wales, £358,645,000; Victoria, £364,748,000; Queensland, £124,814,000; South Australia, £131,692,000; Western Australia, £53,629,000; Tasmania, £35,809,000; Northern Territory, £1,482,000; Australian Capital Territory, £2,575,000; Total, £1,073,394,000. Total excess of deposits over withdrawals during 1954-55 was £43,324,000, and interest added was £19,941,000.

The number of operative accounts in the several States at 30th June, 1955 was:—New South Wales, 2,336,000; Victoria, 2,154,000; Queensland, 869,000; South Australia, 767,000; Western Australia, 427,000; Tasmania, 279,000; Northern Territory, 10,000; Australian Capital Territory, 19,000; Total, 6,861,000.

D. INSURANCE.

§ 2. Life Assurance.

Life Assurance, pp. 581-6.—The following is a summary of the life assurance business transacted in Australia during 1954 (figures for 1953 in parentheses) compiled from monthly returns collected from the 22 companies registered under the Life Assurance Act 1945-1950, and excluding the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office which operate only within their respective States. Particulars shown are therefore not entirely comparable with those in Chapter XVI., which are derived from annual returns and include business of the State Government Offices.

Ordinary Department and Industrial Department, respectively :—New Policies issued in Australia—Number, 283,945 (288,026), 234,504 (259,704); Sum Assured, £271,148,000 (£244,860,000), £33,395,000 (£34,282,000); Policies Matured or Otherwise Discontinued in Australia—Number, 146,320 (133,141), 270,239 (257,805); Sum Assured, £86,828,000 (£74,380,000), £21,707,000 (£19,819,000). Particulars of annuities are excluded.

Premium receipts of Ordinary and Industrial Departments in Australia in 1954 amounted, respectively, to £58,696,000 (£53,004,000) and £14,417,000 (£14,006,000.) Claims, etc., paid amounted to £22,627,000 (£19,988,000) and £8,445,000 (£7,727,000), respectively. Particulars of annuities are included.

F. PROBATES AND LETTERS OF ADMINISTRATION.

States, p. 593.—Amended particulars of the number and value of estates of deceased persons in South Australia for the year 1952 are as follows :—Probates—Estates, 2,712, gross value, £14,392,983, net value, £13,326,293; Letters of Administration—Estates, 977, gross value, £1,692,603, net value, £1,516,899; Total—Estates, 3,689, gross value, £16,085,586, net value, £14,843,192.

CHAPTER XVII.—PUBLIC FINANCE.

A. COMMONWEALTH FINANCE.

Consolidated Revenue Fund, pp. 598 and 606.—The table below shows details of revenue and expenditure for the years 1953-54 and 1954-55 :—

COMMONWEALTH CONSOLIDATED REVENUE FUND: REVENUE AND EXPENDITURE. (£'000.)

Revenue.			Expenditure.		
Item.	Amount.		Item.	Amount.	
	1953-54.	1954-55.		1953-54.	1954-55.
Taxation—			Defence Services ..	162,148	153,790
Customs	94,757	101,254	War and Repatriation Services ..	120,362	120,325
Excise	125,460	143,149	Subsidies and Bounties ..	21,320	21,539
Sales Tax	95,689	100,449	Departmental ..	71,682	78,675
Land Tax	221	13	National Welfare Fund—		
Income Taxes (a) ..	528,181	532,916	Expenditure on Social		
Pay-roll Tax	40,384	41,455	Services ..	176,565	189,319
Estate Duty	9,825	9,614	Business Undertakings—		
Entertainments Tax ..	1,977	2	Postmaster - General's		
Other Taxes	3,956	8,768	Department ..	72,244	76,246
Total	900,450	937,613	Broadcasting Services ..	4,684	4,871
Business Undertakings—			Railways	3,529	3,622
Postmaster - General's			Total	80,457	84,739
Department	67,798	72,825	Territories	11,133	12,971
Broadcasting Services ..	3,867	3,875	Capital Works and Services—		
Railways	3,461	3,510	Defence Services ..	28,513	33,004
Total	75,126	80,210	Business Undertakings ..	29,649	29,213
Territories	2,195	2,419	Other	63,052	64,754
Other Revenue	45,019	47,199	Total	121,214	126,971
Grand Total	1,022,790	1,067,441	Payments to or for States ..	195,647	200,729
			Other Expenditure ..	6,091	8,232
			Grand Total	966,519	997,290

(a) Includes Wool Deduction.

NOTE.— Minus sign (—) denotes an excess of refunds.

C. COMMONWEALTH AND STATE FINANCE.

Revenue and Expenditure, p. 637.—The following table shows particulars of Commonwealth and State revenue and expenditure during the year 1953-54 and estimated revenue and expenditure for the year 1954-55.

COMMONWEALTH AND STATE REVENUE AND EXPENDITURE.(a)

(£'000.)

Government of—	Consolidated Revenue Fund.			Loan Fund— Net Expenditure on Works and Services.
	Revenue.	Expenditure.	Surplus (+) or Deficit (—)	
1953-54.				
New South Wales(b)	186,642	186,514	+ 128	56,727
Victoria	106,748	106,037	+ 711	42,510
Queensland	69,696	69,353	+ 343	18,451
South Australia	48,376	46,566	+ 1,810	22,061
Western Australia	43,596	43,699	— 103	14,194
Tasmania	13,285	13,270	+ 15	13,437
Six States	468,343	465,439	+ 2,904	167,380
Commonwealth	1,022,790	966,519	+ 56,271	41,386
Grand Total—Unadjusted	1,491,133	1,431,958	+ 59,175	208,766
Adjusted	1,320,299	1,261,124	+ 59,175	208,766

1954-55: ESTIMATED.

New South Wales(b)	190,982	191,221	— 239	(c)
Victoria	112,356	112,321	+ 35	
Queensland	72,900	72,796	+ 104	
South Australia	47,849	49,782	— 1,933	
Western Australia	45,257	45,398	— 141	
Tasmania	14,480	14,804	— 324	(c)
Six States	483,824	486,322	— 2,498	
Commonwealth (d)	1,067,441	997,290	+ 70,151	33,182
Grand Total—Unadjusted	1,551,265	1,483,612	+ 67,653	(c)
Adjusted	1,375,815	1,308,162	+ 67,653	

(a) To avoid duplication in aggregating particulars for the Commonwealth and States the grand totals exclude payments by the Commonwealth to the States for compensation in respect of uniform taxation, interest on States' debts, special grants and special financial assistance, also pay-roll tax payments by States to the Commonwealth. The totals of revenue and expenditure of the States have also been adjusted. (b) Excludes Main Roads Department, Road Transport and Traffic Fund, and recoups of interest, etc., from undertakings outside the Budget. (c) Not available. (d) Actual receipts and expenditure.

D. COMMONWEALTH AND STATE PUBLIC DEBT.

§ 3. Commonwealth and State Public Debt Outstanding.

Public Debt and Annual Interest Payable, pp. 641-2.—The following table shows details of the public debt of the Commonwealth and States and the annual interest payable thereon at 31st December, 1954.

**COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE
AT 31st DECEMBER, 1954.**

Particulars.	Maturing in—				Total. £'000.
	Australia. £A'000.	London. £Stg.'000.	New York. £'000.(a)	Switzerland. £'000.(b)	

DEBT.

Commonwealth—					
War (1914-18) ..	135,138	7,534	..	..	142,672
War (1939-45) ..	1,460,095	5,775	..	..	1,465,870
Works and other purposes ..	218,195	49,061	45,456	6,126	318,838
Total ..	1,813,428	62,370	45,456	6,126	1,927,380
States ..	1,459,573	287,887	20,479	..	1,767,939
Grand Total ..	3,273,001	350,257	65,935	6,126	3,695,319

ANNUAL INTEREST PAYABLE.

Commonwealth ..	49,407	2,094	1,948	245	53,694
States ..	47,678	9,228	699	..	57,605
Grand Total ..	97,085	11,322	2,647	245	111,299

(a) £ payable in dollars which have been arbitrarily converted to £ at the rate of \$4.8665 to £1.
(b) Loan raised in Switzerland has been converted to £ at the rate of 1,000 Swiss francs to £102 18. 10d. as provided in Loan Agreement.

§ 4. Commonwealth Loan Raisings.

Loans Raised, pp. 649-52.—Particulars of loans raised by the Commonwealth between 1st July, 1953 and 30th June, 1955 are given in the following table.

COMMONWEALTH LOANS RAISED, 1953-55.(a)

Month of Raising.	Where Raised.	Amount Invited. £'000.	Amount Subscribed. £'000.	Rate of Interest. (b) %	Year of Maturity.	Purpose.
1953-54—		£'000.	£'000.	%		
September, 1953 ..	Australia	50,000	{ 11,312 55,005	{ 3 4½	{ 1955 1966	{ Advances to States for Housing, £6,349,000; State purposes, £59,468,000.
“ “ ..	Australia	32,926	{ 12,235 16,739	{ 3 4½	{ 1955 1966	{ Conversion, £28,974,000.
November, 1953 ..	London	(c) 10,796	(c) 10,796	4	1966-68	{ Conversion and redemption, £10,796,000.
March, 1954 ..	Australia	35,000	{ 8,603 43,467	{ 3 4½	{ 1957 1961	{ Advances to States for Housing, £70,000; State purposes, £52,000,000.
“ “ ..	Australia	15,188	{ 6,563 7,634	{ 3 4½	{ 1957 1961	{ Conversion, £14,197,000.
June, 1954 ..	Australia	80,000	{ 16,000 64,000	{ 3 4½	{ 1957 1967	{ War (1939-45) and Repatriation Services, £5,407,000; Advances to States for Housing, £30,475,000; State purposes, £44,118,000.

For footnotes see next page.

COMMONWEALTH LOANS RAISED, 1953-55(a)—continued.

Month of Raising.	Where Raised.	Amount Invited.	Amount Subscribed.	Rate of Interest. (b)	Year of Maturity.	Purpose.
		£'000.	£'000.	%		
1954-55—						
August, 1954	Australia	50,000	{ 7,853 43,502	{ 3 4½	{ 1957 1967	{ State purposes, £46,505,000; Conversion, £4,959,000.
November, 1954	Australia	125,000	{ 17,356 79,765	{ 3 4½	{ 1957 1968	{ State purposes, £37,159,000; Conversion, £59,962,000.
December, 1954	New York	5,137	5,137	3½	1969	Conversion.
March, 1955	Australia	40,000	{ 12,526 31,569	{ 3 4½	{ 1957 1968	{ State purposes, £44,095,000.
" "	Australia	198,942	{ 64,652 124,222	{ 3 4½	{ 1957 1968	{ Conversion. £188,894,000.
April, 1955	London	(c) 3,200	(c) 3,200	3½	1955	Conversion.
June, 1955	Australia	48,000	{ 10,000 38,000	{ 3 4½	{ 1957 1968	{ War (1939-45) and Repatriation Ser- vices. £3,458,000; Advances for housing, £29,201,000; State purposes, £15,347,000.

(a) During 1953-54 and 1954-55 \$48,144,000 and \$52,604,000 respectively were drawn against loans made available by the International Bank for Reconstruction and Development. In each year a loan of 60,000,000 Swiss francs was raised in Switzerland. (b) Australian loans bearing interest at 4½ per cent. were issued at par and those at 3 per cent. with the exception of loans raised in September, 1953, were issued at prices ranging from £99 5s. to £98 10s. London loans raised in 1953-54 and 1954-55 were issued at £99 10s. and par respectively. The New York loan was issued at £99. (c) Sterling.

CHAPTER XVIII.—MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

Quantity and Value of Production, pp. 666-7.—In the table hereunder particulars are given of the quantity and value of production in Australia of the principal minerals during the years 1953 and 1954:—

MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA.

METALLIC MINERALS.

Year.	Principal Contents of Metallic Minerals Produced.								Total Value of Output of Metal Mining.
	Copper.	Gold.	Iron.	Lead.	Silver.	Tin.	Zinc.	Sulphur.	
	Tons.	Fine oz.	Tons.	Tons.	'000 fine oz.	Tons.	Tons.	Tons.	
1953 ..	36,585	1,075,181	12,131,865	269,344	12,539	1,553	239,324	225,197	62,819
1954 (c) ..	40,857	1,117,742	12,274,330	284,862	13,827	2,075	252,659	254,403	(d)

NON-METALLIC AND FUEL MINERALS.

Year.	Quantities Produced.						Total Value of Output of Non-metal and Fuel Mining.
	Coal.		Gypsum.	Limestone. (e)	Mica.	Salt.	
	Black.	Brown.					
	'000 tons.	'000 tons.					
1953	18,411	8,257	329,992	3,077,560	72,226	310,000	61,572
1954 (c)	11,751	9,757	422,776	3,457,364	111,111	310,000	(d)

(a) Includes sulphur content of spent oxide roasted. (b) Estimated. (c) Subject to revision.
(d) Not yet available. (e) Excludes limestone used as a construction material.

The total value of output of all mining and quarrying in 1953 was £134,542,000.

CHAPTER XIX.—PASTORAL PRODUCTION.

Livestock, Meat and Wool Produced.—The following table shows, for each State, the numbers of live stock at 31st March, 1954, and 1955, and the amounts of meat and wool produced during 1953-54 and 1954-55 :—

LIVESTOCK, MEAT AND WOOL PRODUCED.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
HORSES ('000.), p. 711.									
1954 ..	280	141	273	52	49	17	(a) 37	1	850
1955 (b) ..	258	132	267	49	47	16	(a) 33	1	803
CATTLE ('000.), p. 712.									
1954 ..	3,554	2,370	7,086	491	830	295	(a) 966	10	15,602
1955 (b) ..	3,461	2,456	7,238	524	861	319	(a) 969	8	15,830
SHEEP ('000.), p. 719.									
1954 ..	59,639	21,438	18,194	11,838	13,087	2,465	(a) 31	252	126,944
1955 (b) ..	59,200	22,330	20,222	12,817	13,411	2,595	(a) 29	245	130,849
Pigs ('000), p. 819.									
1954 ..	372	232	385	61	101	46	(a) 1	..	1,198
1955 (b) ..	375	264	407	85	107	58	(a) 1	..	1,297
BEEF, INCLUDING VEAL ('000 TONS BONE-IN WEIGHT), p. 716.									
1953-54 ..	221	140	258	34	35	11	3	2	704
1954-55 (b) ..	219	137	269	33	38	13	3	2	714
MUTTON AND LAMB ('000 TONS BONE-IN WEIGHT), p. 720.									
1953-54 ..	125	136	20	45	27	11	..	1	365
1954-55 (b) ..	122	151	17	50	27	12	..	1	380
TOTAL MEAT (INCLUDING PIG-MEATS) IN TERMS OF FRESH ('000 TONS BONE-IN WEIGHT)									
1953-54 ..	375	293	299	86	69	25	3	3	1,153
1954-55 (b) ..	374	310	309	90	74	29	3	3	1,192
WOOL (AS IN THE GREASE) PRODUCED ('000 lb.), p. 723.									
Season—1953-54	544,934	223,481	174,414	145,509	134,442	20,116	290	2,276	1,245,462

(a) For year ended previous December.

(b) Preliminary, subject to revision.

CHAPTER XX.—AGRICULTURAL PRODUCTION.

§ 3. Distribution, Production and Value of Crops.

Principal Crops, pp. 740-3.—The following table shows the area, production and average yield per acre of wheat in each State for 1953-54 and 1954-55.

WHEAT FOR GRAIN : AREA, PRODUCTION AND AVERAGE YIELD.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES).								
1953-54 ..	3,357	2,389	580	1,528	2,885	10	2	10,751
1954-55 (a) ..	2,919	2,390	688	1,689	2,979	7	1	10,673

WHEAT FOR GRAIN: AREA, PRODUCTION AND AVERAGE YIELD—*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHEL).)								
1953-54	63 681	53,695	10,140	30,409	39,700	263	29	197,960
1954-55	37 718	40,484	16,478	31,463	34,300	158	5	168,606
AVERAGE YIELD PER ACRE (BUSHEL).)								
1953-54	19.0	22.5	17.6	19.7	13.8	27.2	18.5	18.4
1954-55	12.9	20.3	24.0	18.6	11.5	21.7	6.5	15.8

The area, production and average yield per acre of other principal crops in Australia during 1953-54 are set out hereunder:—

Area (acres): Oats, 2,137,000; Maize, 179,000; Hay, 1,935,000; Sugar-cane, 354,000; Total Crops, 21,013,000.

Production: Oats, 32,961,000 bushels; Maize, 5,079,000 bushels; Hay, 3,049,000 tons; Sugar-cane crushed, 9,014,000 tons; Cane sugar, 1,254,000 tons.

Average Yield per Acre: Oats, 15.4 bushels; Maize, 28.4 bushels; Hay, 1.6 tons; Sugar-cane, 26.5 tons; Cane sugar, 3.7 tons. (Sugar-cane and cane sugar yields are per acre of productive crop.)

CHAPTER XXI.—FARMYARD, DAIRY AND BEE PRODUCTS.

Principal Farmyard, Dairy and Bee Products.—Particulars of the total production of these products in each State during 1953-54 and 1954-55 are shown below:—

PRODUCTION OF PRINCIPAL FARMYARD, DAIRY AND BEE PRODUCTS.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
TOTAL WHOLE MILK PRODUCED ('000 GALS.), p. 812.								
1953-54	257,127	471,358	240,712	85,014	19,006	47,642	713	1,180,652
1954-55(a)	313,015	533,240	271,625	91,538	54,720	52,784	754	1,317,676
BUTTER(b) (TONS), p. 812.								
1953-54	31,354	61,306	42,154	7,862	6,281	7,533	5	159,585
1954-55(a)	40,289	80,269	46,215	8,752	7,313	8,624	5	191,467
CHEESE(b) (TONS), p. 814.								
1953-54	3,710	25,987	6,746	11,612	1,208	294	..	49,057
1954-55(a)	2,509	20,224	7,924	13,103	1,069	277	..	45,106
PORK (TONS, BONE-IN WEIGHT), p. 820.								
1953-54	12,049	7,332	7,216	2,253	2,032	1,399	146	(c) 33,396
1954-55(a)	17,096	10,558	8,370	3,356	3,947	1,036	144	(d) 45,462
BACON AND HAM (TONS, CURED WEIGHT), p. 821.								
1953-54	11,875	7,044	10,655	3,024	3,443	949	..	36,990
1954-55(a)	11,539	3,253	10,805	3,318	3,310	1,019	..	38,244

For footnotes see next page.

PRODUCTION OF PRINCIPAL FARMYARD, DAIRY AND BEE PRODUCTS—
continued.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
SHELL EGGS : PRODUCTION(e) RECORDED BY EGG BOARDS ('000 DOZ.), p. 822.								
1953-54	51,884	25,306	8,555	12,040	9,283	934	..	108,002
1954-55	55,057	26,377	8,312	12,359	8,909	889	..	111,903

HONEY ('000 lb.), p. 825.

1953-54	10,381	9,382	2,888	6,378	6,325	365	18	35,737
1954-55(a)	16,411	8,834	1,732	3,671	2,721	215	20	33,604

(a) Preliminary, subject to revision. (b) Includes an estimate of farm production.
(c) Includes Northern Territory, 69 tons. (d) Includes Northern Territory, 65 tons. (e) Receipts from consignors and sales by producer agents.

CHAPTER XXIV.—MANUFACTURING INDUSTRY.

Summary, p. 857.—The tables following give a summary of operations in manufacturing industries during 1952-53 and 1953-54.

FACTORIES : 1952-53, SUMMARY.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1. Factories No.	19,251	15,154	5,068	3,339	3,424	1,504	47,740
2. Persons employed(a)	380,213	310,759	93,123	80,483	45,188	23,495	933,261
3. Salaries and wages paid(b) £'000	265,910	210,878	57,591	56,546	28,344	15,976	635,245
4. Value of power, fuel light, etc., used £'000	53,630	25,626	9,624	11,806	6,175	2,476	109,337
5. " materials used £'000	627,954	476,489	187,572	133,818	63,943	38,029	1,527,805
6. " production(c) £'000	457,742	358,032	98,209	89,189	49,192	30,498	1,082,862
7. " output of factories £'000	1,139,326	860,147	295,405	234,813	119,310	71,003	2,720,004
8. " land and buildings £'000	176,576	135,324	34,720	31,904	20,960	14,962	474,446
9. " plant and machinery £'000	207,733	147,365	51,670	40,111	24,035	22,620	493,534

FACTORIES : 1953-54, SUMMARY.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1. Factories No.	20,199	15,533	5,199	3,577	3,523	1,545	49,576
2. Persons employed(a)	402,595	331,277	98,119	85,503	47,459	24,589	989,542
3. Salaries and wages paid(b) £'000	293,586	236,037	63,432	63,110	31,591	17,381	705,137
4. Value of power, fuel, light, etc., used £'000	58,447	29,080	10,655	12,500	6,972	2,804	120,458
5. " materials used £'000	721,311	448,111	207,383	152,590	72,468	42,042	1,743,905
6. " production(c) £'000	520,043	408,314	114,323	100,221	55,147	33,065	1,231,113
7. " output of factories £'000	1,299,801	985,505	332,361	265,311	134,587	77,911	3,095,476
8. " land and buildings £'000	196,724	158,389	40,003	36,579	24,739	26,997	483,431
9. " plant and machinery £'000	233,022	181,058	64,160	46,788	28,195	27,492	580,715

(a) Average over whole year; includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Value of production equals figures in line 7 less totals of figures in lines 4 and 5.

Value of Production in Classes of Industry, p. 878.—The following table shows, for the years 1952-53 and 1953-54 the value of production in Australia for the various classes of factories.

FACTORIES : VALUE OF PRODUCTION, AUSTRALIA, 1952-53 and 1953-54.
(£.)

Class of Industry.	Value of Production, 1952-53.	Value of Production, 1953-54.
I. Treatment of Non-metalliferous Mine and Quarry Products	23,286,986	26,566,622
II. Bricks, Pottery, Glass, etc.	22,169,594	26,229,841
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	67,835,182	82,317,393
IV. Industrial Metals, Machines, Implements and Conveyances	421,274,398	472,365,771
V. Precious, Metals, Jewellery and Plate	5,239,518	6,406,499
VI. Textiles and Textile Goods	64,832,793	78,557,890
VII. Skins and Leather	15,838,003	16,613,246
VIII. Clothing	82,786,579	93,562,630
IX. Food, Drink and Tobacco	164,332,656	177,880,375
X. Woodworking and Basketware	58,245,324	65,730,950
XI. Furniture, Bedding, etc.	19,314,637	21,367,281
XII. Paper, Stationery, Printing, Bookbinding, etc.	68,293,350	79,311,831
XIII. Rubber	16,627,325	21,101,414
XIV. Musical Instruments	1,378,091	1,845,432
XV. Miscellaneous Products	18,352,216	23,037,258
XVI. Heat, Light and Power	33,055,046	38,218,901
Total	1,082,861,698	1,231,113,334

Principal Factory Products, pp. 885-8.—The following table shows the production during 1953-54 and 1954-55 of a selection of the principal commodities manufactured in Australia :—

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES : AUSTRALIA.

Item.	Unit of Quantity.	1953- 54.(a)	1954- 55.(a)	Item.	Unit of Quantity.	1953- 54.(a)	1954- 55.(a)
Acid, Sulphuric (100%)	'000 tons	732	827	Lacquers	'000 gals.	1,307	1,479
Asbestos Cement Building Sheets	Mill. sq. yds.	25.0	27.7	Malt	'000 bus.	7,253	7,730
Beer	Mill. gals.	208.6	228.8	Margarine—			
Biscuits	Mill. lb.	150.5	149.7	Table	Mill. lb.	21.9	21.8
Blankets	'000 prs.	601	771	Other	"	49.9	49.7
Boots, Shoes and Sandals	Mill. prs.	19.9	19.1	Meat, Tinned	"	160.3	172.4
Bricks, Clay	Mill.	793	831	Motors, Electric	'000	971.5	1185.1
Cement, Portland	'000 tons	1,700	1,922	Newsprint	'000 tons	60.4	73.1
Cloth, Woollen	Mill. sq. yds.	32.6	28.4	Paints, Oil	'000 gals.	5,180	6,252
Confectionery—				Refrigerators, Domestic	'000	274.5	279.3
Chocolate	Mill. lb.	62.6	56.7	Soap	'000 cwt.	1,233	1,270
Other	"	76.9	80.8	Socks and Stockings—	'000		
Electricity	Mill. kWh	13,587	15,298	Men's and Boys'	doz. prs.	1,845	1,679
Enamels	'000 gals.	2,699	3,624	Women's and Girls'	"	2,793	3,053
Engines, Internal Combustion—				Children's	"	570	421
Petrol, Marine(c)	'000	1.4	1.3	Stoves, Cooking—			
Other(d)	"	27.5	21.6	Electric—Domestic	'000	37.2	47.2
Fibrous Plaster Sheets	Mill. sq. yds.	16.2	17.3	Cookers, Stovettes etc.	"	34.3	38.0
Flour, Wheat	'000 short tons	1,609	1,538	Gas	"	43.0	58.8
Fruit, Preserved(e)	Mill. lb.	338.6	318.2	Solid Fuel	"	50.4	50.5
Gas(f)	Mill. gals.	13.7	14.8	Sugar, Refined	'000 tons	449	479
Ice Cream	cub. ft.	42,100	43,322	Sulphate of Ammonia	"	70.8	77.8
Iron and Steel—				Superphosphate	"	1,771	1,961
Pig Iron	'000 tons	1,827	1,865	Tiles, Roofing—			
Ingot Steel	"	2,117	2,209	Cement	Mill.	41.6	52.2
Jam	Mill. lb.	85.7	78.7	Terracotta	"	63.6	63.4
				Timber, Sawn Native	Mill. sup. ft.	1,395	1,423
				Tobacco, Cigars and Cigarettes	Mill. lb.	41.8	44.8
				Vegetables, preserved(g)	"	40.3	46.9
				Wool, Scoured	"	139	136
				Yarn, Woollen and Worsted	"	45.2	43.6

(a) Subject to revision. (b) Includes waste beer. (c) Other than diesel type. (d) Excludes motor car, motor cycle, truck, tractor and aero engines. (e) Includes all types of preserved apples. (f) Made in gas-works only. (g) Includes preserved tomatoes.

CHAPTER XXVII.—DEFENCE.

Australian Participation in Korea, Malaya and the Middle East, p. 988—(i) *Korea.*
 (a) *Casualties.* The number of casualties sustained by the Australian forces in the Korean campaign is shown in the following table :—

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
Battle Casualties—				
Killed (including died of wounds) ..	1	252	25	278
Missing (all categories) ..	3	21	4	28
Prisoners-of-war ..	..	16	6	(a) 22
Wounded in action (including shell-shock) ..	6	1,062	..	1,068
Total Battle Casualties ..	10	1,351	35	1,396
Other Casualties—				
Accidental and other deaths ..	..	14	11	25
Accidental wounds and injuries ..	..	172	..	172
Total Casualties ..	10	1,537	46	1,593

(a) Includes 21 prisoners-of-war repatriated since the armistice and one who died while a prisoner-of-war.

(b) *Prisoner-of-War Exchange Agreement.* As a result of talks between United Nations and Chinese delegates at Panmunjom during April, 1953, the Chinese agreed to release 600 United Nations sick and wounded prisoners-of-war in exchange for 5,100 North Korean and 700 Chinese prisoners. The exchange programme commenced on 23rd April, 1953, and 100 United Nations personnel were exchanged daily. The only Australians released were four captured on 25th January, 1953, and one captured on 14th January, 1953. All were released at Panmunjom on 23rd April, 1953. Under the terms of the Armistice Agreement signed at Panmunjom at 1000 hours on 27th July, 1953, all prisoners-of-war who insisted on repatriation were to be handed over within 60 days to the side to which they belonged at the time of capture. Fifteen Australian Army personnel and six R.A.A.F. personnel were released as a result of the agreement.

(c) *Awards.* The following table shows the number of operational awards granted for services in the Korean campaign :—

Award.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
British—				
Commander Order of British Empire (C.B.E.) ..	1	2	..	3
Distinguished Service Order (D.S.O.) ..	2	6	3	11
Officer Order of British Empire (O.B.E.) ..	..	13	1	14
Member Order of British Empire (M.B.E.) ..	2	18	3	23
Distinguished Service Cross (D.S.C.) ..	11	..	..	11
Distinguished Service Cross, Bar ..	3	..	..	3
Military Cross (M.C.) ..	..	26	..	26
Military Cross, Bar ..	..	1	..	1
Distinguished Flying Cross (D.F.C.) ..	..	..	45	45
Distinguished Flying Cross, Bar ..	..	..	6	6
Air Force Cross (A.F.C.) ..	..	..	12	12
Air Force Cross, Bar ..	..	..	1	1

NUMBER OF OPERATIONAL AWARDS IN KOREAN CAMPAIGN—*continued*.

Award.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
British—				
Medal for Distinguished Conduct in the Field (D.C.M.) .. ..	..	4	..	4
Medal for Distinguished Conduct in the Field, Bar .. ..	..	1	..	1
George Medal (G.M.) .. ..	..	1	..	1
Distinguished Service Medal	3	..	..	3
Military Medal .. ..	..	44	..	44
Military Medal, Bar .. ..	..	1	..	1
Distinguished Flying Medal (D.F.M.) .. ..	..	..	18	18
British Empire Medal (B.E.M.)	4	4	..	8
Mention in Despatches	36	102	154	292
Commendation for Meritorious Service in the Air .. ..	..	..	15	15
Total British	62	223	258	543
Foreign—				
United States—				
Silver Star .. ..	..	5	..	5
Bronze Star	1	6	1	8
Legion of Merit	1	4	1	6
Distinguished Flying Cross .. ..	..	2	17	19
Air Medal .. ..	..	2	107	109
Korean Order of Military Merit .. ..	..	1	..	1
Total Foreign	2	20	126	148
Grand Total	64	243	384	691

In addition the following unit citations were awarded :—

Army. For its part in the Battle of Kapyong on 23rd–24th April, 1951, the 3rd Battalion, Royal Australian Regiment, was awarded the Distinguished Unit Citation by the President of the United States of America.

Air Force. The Government of the Republic of Korea awarded a Presidential Unit Citation to No. 77 (Interceptor/Fighter) Squadron.

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NOTE.—This index is preceded by a list of special articles, etc., in previous issues of the Official Year Book. A list of maps and graphs contained in this issue will be found on pp. ix and x. Area, population, etc., of particular localities are indexed under the locality concerned. Subject matter extending continuously over more than one page is indexed according to the first page only. *Where more than one reference to a subject is given, the chief reference, wherever it has been possible to determine it, is indicated by italic type. Two references to a subject so indicated signify major, and approximately equal, importance.*

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SPECIAL PUBLICATIONS —					
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Detailed Tables†	1945	April, 1947
Report of Proceedings of the Conference of British Commonwealth Statisticians, 1951‡	1951	Mar., 1952
Survey of Motor Vehicles, 1947-48—					
Bulletins—Nos. 1 to 7†	1947-48	1950
The Australian Balance of Payments, 1928-29 to 1951-52	3, 1951-52	July, 1954	3 6	3 11	4 3
The Australian Mineral Industry (Quarterly Review and Statistics)¶	Vol. 8, No. 2	Nov., 1955	3 0	3 0	3 0

† Available from Commonwealth Statistician only. — § List of publications available in respect of the Censuses of 1911, 1921, 1933 and 1947, may be obtained on application to the Commonwealth Statistician. — || Per Part. ¶ Prepared jointly by the Bureau of Mineral Resources and the Commonwealth Bureau of Census and Statistics. Available from the Department of National Development in each capital city.

S. R. CARVER, Acting Commonwealth Statistician.