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## CHAPTER 29

### THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are: Norfolk Island; the Territory of Papua (formerly British New Guinea); the Territory of New Guinea (under Trusteeship Agreement with the United Nations); the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; and the Territory of Christmas Island. There is also the Territory of Ashmore and Cartier Islands, deemed to form part of the Northern Territory.

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 pages 5, 22, and 23 of Chapter I. More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* and the *Australian Capital Territory Statistical Summary* issued by this Bureau. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects. The Statistician, Territory of Papua and New Guinea, issues a number of publications containing statistics relative to these two Territories, separate and combined.

Responsibility for the general administration of the Territories of Norfolk Island, Papua, New Guinea, Cocos (Keeling) Islands and Christmas Island is vested with the Commonwealth Department of External Territories; for the Northern Territory (including Ashmore and Cartier Islands) and the Australian Capital Territory with the Department of the Interior; and for Antarctica and Heard and McDonald Islands with the Department of Supply. Matters excepted are defence and civil aviation, and, in the Northern Territory and the Australian Capital Territory, public health, justice, education (excluding Aborigines) and the provision of the basic physical services, which are the responsibility of the Department of Health, the Attorney-General's Department, the Department of Education and Science, and the Department of Works, respectively.

### THE NORTHERN TERRITORY

#### General description

##### Area

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911. The total area is 520,280 square miles.

##### Legislation and administration

On 1 January 1911 the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Year Book No. 15, page 940.

The *Northern Territory (Administration) Act 1910-1968* provides for an Administrator, appointed by the Governor-General, to administer the Territory on behalf of the Commonwealth.

It provides for a Legislative Council for the Northern Territory to make ordinances for the peace, order and good government of the Territory. This Council consists of six official members and eleven elected members. A President of the Council is elected from among these elected members. Money votes may be proposed in the Council only upon recommendation by message of the Administrator.

Ordinances are presented to the Administrator for assent. He is obliged to reserve ordinances relating to certain matters, including Crown lands and Aborigines, for the Governor-General's pleasure. Others he may assent to, withhold assent from, or return to the Legislative Council with recommended amendments. The Governor-General may disallow any ordinance assented to by the Administrator and, in respect of an ordinance reserved for his pleasure, he may assent, withhold assent, withhold assent to part, or recommend to the Administrator any amendments to the laws of the Territory that he considers desirable arising out of his consideration of the ordinance.

The Act also provides for an Administrator's Council to advise the Administrator on any matter referred to it, either by the Administrator, or in accordance with the provisions of any ordinance of the Northern Territory. The Council consists of the Administrator, and two official and three elected members of the Legislative Council.

The Territory elects one member to the House of Representatives.

The Corporation of the City of Darwin, established in 1957, consisting of a Mayor and eight Aldermen elected by adult franchise, provides municipal administration in Darwin. Elsewhere in the Territory municipal services are provided by the Administration. Town management boards representing local interests have been established in Alice Springs, Katherine and Tennant Creek to advise the Administration on local matters.

### Physiography

The Territory is within the torrid zone, with the exception of a strip about 180 miles wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite 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 only practicable deep-water port, however, is Darwin.

Inland the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth 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 for 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.

### Climate, fauna and flora

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 all the rainfall occurs in the summer months. Further particulars appear in Year Book No. 6, page 1116.

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 termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. A species of the ant builds anthills which sometimes attain great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Some types of native fauna are protected. Buffalo formerly existed in large herds, but their number has been reduced by indiscriminate shooting. Buffalo shooting is, however, now strictly controlled by ordinance.

The vegetation is north Australian in type but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine which is termite resistant, ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland particularly on the Barkly Tableland and parts of the Victoria River district there are better grazing grasses and some shrubs, while the wide belt of sandy plain, between the Barkly Tableland and the ranges in the Alice Springs area, carries mainly spinifex grass and low scrub. The Alice Springs ranges and uplands carry chiefly a dwarf acacia scrub known as mulga, spinifex and other sparse grasses. The principal orders represented in the interior are *Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Goodenoviaceae*, *Leguminosae* and *Utricaceae*.

## Population

See also the chapters Population and Vital Statistics.

The estimated population of the Northern Territory at 31 December 1968, including Aborigines, was 34,800 males, 29,100 females, 64,000 persons. The Aboriginal population at the census of 30 June 1966 totalled 10,651 males, 10,468 females, 21,119 persons. While few Aborigines now live outside settled areas and not all choose to live on reserves, a large area of reserved land totalling 94,196 square miles has been maintained to provide economic resources from which the Aborigines may benefit either directly or from royalty payments.

## Advancement of Aborigines

The Commonwealth and State governments have adopted a common policy of assimilation which seeks that all persons of Aboriginal descent will choose to attain a similar manner and standard of living to that of other Australians and live as members of a single Australian community, enjoying the same rights and privileges, accepting the same responsibilities and influenced by the same hopes and loyalties as other Australians.

### Legal status

Under the *Nationality and Citizenship Act* 1948–1966, all Aborigines are British subjects and Australian citizens. Since the commencement of the *Social Welfare Ordinance* 1964 in September 1964, Aborigines in the Northern Territory have been equal at law with all other residents, although some special benefits have been retained for them or have been introduced since then. The Ordinance enables assistance to be given to any person who is socially or economically in need.

## Production

See also the chapters dealing with particular subjects.

### Land tenure

Three-sevenths of the land in the Territory is reserved or unoccupied and unreserved, the remainder, apart from a very small proportion alienated, being held under various forms of lease or licence, which are described in Year Book No. 48, pages 111–12. The following changes should, however, be noted.

*Leases to Mission Organisations* are now granted under the *Special Purpose Leases Ordinance* 1953–1965 for fixed terms or in perpetuity.

*Miscellaneous Leases* are now granted in perpetuity for purposes such as a market garden, plantation, orchard, vineyard, poultry farm, piggery, or the like.

*Darwin Town Area Leases* are granted in perpetuity for business or residential purposes, or both, in the Darwin Town Area.

The chapter Rural Industry of this issue contains statistical information concerning areas occupied under various forms of tenure.

### Agriculture

Until the 1967–68 season, commercial agricultural production was confined to vegetables and small-scale fruit production for local consumption. The introduction of grain sorghum production on a commercial basis has thrown new emphasis on the development of agriculture. Townsville lucerne seed production has grown considerably and has become an important contributor to the income of many small landholders.

Information concerning scientific surveys (commenced in 1946), conducted by the Commonwealth Scientific and Industrial Research Organization to determine more accurately the potentialities of the Northern Territory, and the resulting establishment of an agricultural research station at Katherine and experimental farms at Katherine and Berrimah (near Darwin), is given in Year Book No. 51, page 101, and in earlier issues. Information is given also on the establishment of rice research stations and investigational work carried out, and on subsequent rice crop commercial scale operations. The appointment by the Minister for Territories in 1959 of an expert committee to carry out investigations relative to agricultural settlement in the Territory and subsequent developments are also referred to.

**NORTHERN TERRITORY: AREA AND PRODUCTION OF CROPS  
1963-64 TO 1967-68**

<i>Crop</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	
<b>AREA(a)</b>						
(acres)						
Fruit—Bananas . . . . .	43	28	20	29	(b)	
Pineapples . . . . .	23	19	12	17	(b)	
Other . . . . .	83	83	78	87	98	
<i>Total, fruit</i> . . . . .	<i>149</i>	<i>130</i>	<i>110</i>	<i>133</i>	<i>98</i>	
Peanuts . . . . .	(b)	(b)	16	(b)	12	
Sorghum for grain . . . . .	527	1,269	1,093	527	(c)	
Vegetables for human consumption . . . . .	133	150	144	218	199	
Other crops(d) . . . . .	1,680	2,687	2,699	2,747	5,691	
<i>Grand total(a)</i> . . . . .	<i>2,489</i>	<i>4,236</i>	<i>4,062</i>	<i>3,625</i>	<i>6,000</i>	
<b>PRODUCTION</b>						
Fruit—Bananas . . . . .	bushels	2,174	2,448	1,985	1,684	(e)
Pineapples . . . . .	,,	943	1,142	990	997	(e)
Peanuts . . . . .	cwt	(e)	(e)	76	(e)	32
Sorghum (grain) . . . . .	bushels	6,210	10,693	12,018	7,533	(e)

(a) Excludes rice; details are not available for publication. (b) Not available for publication, included in Other crops. (c) Not available for publication, excluded from totals. (d) Principally fodder crops. (e) Not available or publication.

**Pastoral industry**

The pastoral possibilities of certain parts of the Territory were recognised at an early date, and both cattle and sheep raising have been attempted. For various reasons sheep-raising has not been very successful, but the cattle industry has progressed steadily and is continuing to expand. There is substantial potential for further expansion in the higher rainfall area of the Territory through the introduction of improved pastures and the use of superphosphate.

**NORTHERN TERRITORY: LIVESTOCK, JUNE 1964 TO 1968**

<i>30 June—</i>	<i>Horses</i>	<i>Cattle</i>	<i>Sheep</i>	<i>Pigs</i>
1964 . . . . .	38,391	1,105,161	10,023	1,806
1965 . . . . .	35,997	1,067,327	9,099	2,182
1966 . . . . .	36,719	1,031,715	8,875	2,275
1967 . . . . .	37,638	1,097,114	8,319	2,791
1968 . . . . .	38,000	1,130,000	9,000	2,000

**Mining**

During 1967, the value of output of the mining and quarrying industry in the Territory, excluding uranium mining, particulars of which are not available for publication, was \$19,316,000. The main minerals produced were copper, manganese, iron ore and gold. This represented an increase of 45 per cent on the previous year.

The bulk of the copper and gold produced in the Territory is obtained from underground mines in the Tennant Creek district. A new small rich gold-mine at Juno came into production in 1967. At Warrego, a low grade copper/gold ore body is being developed and production is scheduled to commence at the end of 1969.

Manganese ore is being produced by open cut methods from extensive deposits at Groote Eylandt in the Gulf of Carpentaria. Production capacity at Groote Eylandt was progressively increased during 1967 with the object of reaching an annual capacity of 400,000 tons. This production supplied

all Australian requirements of manganese ore and large tonnages were exported to Japan, Europe and the U.S.A. Preliminary figures for 1968 show that the value of output of manganese ore exceeded that of copper. A further major expansion of manganese ore production is planned.

Production of iron ore at Frances Creek commenced in 1966 and at Mount Bundey in 1967. The output from both of these mines is being exported to Japan. Ore shipments in 1968 from Frances Creek and Mount Bundey were running at an annual rate of 550,000 tons and 200,000 tons respectively.

At Gove, considerable construction activity is in progress as part of a large scale development of extensive bauxite deposits. Under an agreement between the Commonwealth and Nabalco Pty Ltd signed in February 1968 and ratified by ordinance passed by the Northern Territory Legislative Council on 16 May 1968, Nabalco undertook to build an alumina plant with an annual capacity of not less than 500,000 tons by 31 December 1971 in the Northern Territory. In May 1969, under the terms of a supplemental agreement, the equity capital of the project is to be held as to 70 per cent by Swiss Aluminium Australia Pty Ltd, and as to 30 per cent by Gove Aluminium Ltd (a consortium of seven Australian companies). Further, the alumina plant is to have an eventual capacity of 1 million tons per annum and is to be built in two stages, of which the first is scheduled for completion by the end of 1971 with a capacity of 500,000 tons per annum. Under this agreement, exports of bauxite will amount to 40 million tons over twenty years.

In September 1968 the Commonwealth Government accepted a joint proposal from two private companies to carry out further exploration and development work on the Woodcutters lead-zinc prospect.

Further investigations have been carried out into possible methods of treating the extensive lead-zinc deposits located in the McArthur River district. Conventional methods are not considered to be suitable for the treatment of these ores.

The search for oil and natural gas in the Territory is continuing. Expenditure on petroleum exploration activity in the Northern Territory for 1968, excluding direct Commonwealth expenditure, totalled \$7.7 million. The main areas of interest are the Amadeus Basin of Central Australia and the offshore areas of the Bonaparte Gulf Basin and the Ashmore and Cartier Islands area. Natural gas was discovered in the Amadeus Basin in 1964. Combined reserves at Mereenie and Palm Valley near Alice Springs are estimated at 1,500,000 million cubic feet. Petroleum exploration is being carried out in the Northern Territory in permit areas covering some 286,000 square miles, of which over one-third is off-shore.

#### NORTHERN TERRITORY: MINING AND QUARRYING OPERATIONS, 1964 TO 1967

(Excluding uranium mining)

	1964	1965	1966	1967
Number of mines and quarries . . . . .	84	67	80	74
Average number of persons employed during whole year (including working proprietors) . . . . .	585	688	814	1,006
Salaries and wages paid(a)(b) . . . . . \$'000	2,138	2,867	3,361	4,609
Total fuel, materials, etc., used . . . . . "	1,727	2,571	2,212	2,901
Value of additions and replacements to fixed assets(a) . . . . . "	2,866	5,677	7,282	5,195
Value of output (at mine or quarry) . . . . . "	7,233	8,308	13,283	19,316
Value of production(c) . . . . . "	5,506	5,736	11,070	16,416

(a) Excludes mines employing less than four persons. (b) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (c) Value of output less cost of power, fuel and light and other materials and stores used; depreciation and maintenance costs have not been deducted.

#### Forestry

A programme of forest improvement and development to preserve existing forest areas and increase timber resources is undertaken by the Forestry Branch of the Northern Territory Administration, which was formed in 1967 to take over normal State-type forestry functions previously performed by the Forestry and Timber Bureau. Basic forestry research is carried out by the Bureau at a Regional Research Station established at Berrimah. The Territory forestry programme includes the establishment of softwood plantations (mainly native cypress pine) at the rate of 1,000 acres per year and makes provision for the employment and training of Aborigines in forestry work. Local production of log timber, mainly cypress pine, amounted to 1,159,578 super feet in 1967-68 but this was insufficient to meet local needs and some 4,122,200 super feet of sawn timber was imported from the States and overseas. During 1967-68 interested companies were issued with feasibility study licences to permit them to conduct pre-investment feasibility studies into the possibility of establishing wood chip industries in the Northern Territory.

**Pearl fisheries**

In 1884 mother-of-pearl shell was discovered in Darwin harbour. Since then the areas fished have extended to the various banks to seaward and along the Northern Territory coast. Because of competition from plastic materials pearling has declined in recent years, but it is hoped that the commercial production of cultured pearls will succeed in replacing the old pearling industry.

**NORTHERN TERRITORY: FISHING AND PEARLING(a), 1963-64 TO 1967-68**

	1963-64	1964-65	1965-66	1966-67	1967-68
<b>General fisheries—</b>					
Number of boats engaged . . . . .	30	28	43	60	53
Number of men employed . . . . .	54	69	120	133	123
Estimated live weight of fish catch '000lb	269	316	376	601	607
Gross value of fish . . . . \$'000	45	55	57	73	92
<b>Pearl-shell fisheries(b)—</b>					
Number of boats engaged . . . . .	2	2	3	3	3
Number of men employed . . . . .	23	22	37	36	36
Total take of pearl-shell . . . tons	4.9	5.4	8.9	16.6	4.8
Gross value of pearl-shell . . . \$'000	2	2	4	7	1

(a) Excludes operations of Japanese pearling fleet. (b) Season ended January.

In April 1968 seven companies were approved by the Minister for the Interior and the Minister for Primary Industry to participate in the development of prawn fishing and processing in respect of waters adjacent to the Northern Territory. Three of the companies were joint ventures involving the use of foreign vessels and foreign crews for a limited period. Conditions of the Ministers' approval include the establishment of shore prawn processing plants in the Territory, the replacement of foreign vessels and crews with Australian-built vessels and Australian crews, the location at Darwin of all the processing plants of the joint ventures, and protection, during a limited establishment period, against the development of shore processing plants on parts of the coast other than at Darwin. Provision has also been made for participation in the industry by Aborigines.

**Secondary industries**

The secondary industries that have so far been established in the Territory have been largely the service industries normally associated with a developing area, such as electrical repairs, printing, motor and marine engineering, plumbing, welding, joinery, sheet metal work, and blue metal crushing. Major industrial investments by private interests in recent years include two breweries, a bitumen plant, and a factory for the manufacture of milk products, ice cream and aerated waters.

**NORTHERN TERRITORY: FACTORIES, 1963-64 TO 1967-68**

	1963-64	1964-65	1965-66	1966-67	1967-68
Number of factories(a) . . . . .	139	174	185	187	188
<b>Average number employed(b)—</b>					
Males . . . . .	978	1,098	1,182	1,308	1,380
Females . . . . .	97	112	112	115	139
Persons employed . . . . .	1,075	1,210	1,294	1,423	1,519
<b>Salaries and wages paid(c)—</b>					
Males . . . . . \$'000	2,628	3,298	3,666	4,146	4,721
Females . . . . . ,,	142	185	192	203	263
Total salaries and wages paid . . ,,	2,770	3,483	3,859	4,349	4,983
Value of power, fuel, light, etc. used(d) ,,	735	865	856	946	1,159
Value of materials used(e) . . . ,,	3,384	4,550	5,497	7,214	7,995
Value of production(f) . . . . ,,	4,938	6,654	7,103	7,847	9,680
Value of output(g) . . . . . ,,	9,057	12,068	13,456	16,007	18,831
Value of land and buildings(h) . . ,,	4,586	5,668	6,101	6,482	8,150
Value of plant and machinery(h) . . ,,	6,046	6,103	5,954	6,825	6,696

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used. (b) The aggregate of the average number of persons employed in each factory. Includes working proprietors. Figures represent average employment over the whole year. (c) Excludes drawings by working proprietors. (d) Includes water and lubricating oil. (e) Includes also containers, etc., tools replaced and repairs to plant. (f) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book value at end of year, including estimated value of rented premises and machinery.

## Trade, transport and communication

## Trade

No comprehensive record is kept of the trade between the States and the Territory. The following table shows the values of the principal commodities imported into and exported from the Northern Territory from or to overseas countries during the years 1963-64 to 1967-68.

**NORTHERN TERRITORY: PRINCIPAL OVERSEAS  
IMPORTS AND EXPORTS, 1963-64 TO 1967-68**  
(\$'000)

Commodity	1963-64	1964-65	1965-66	1966-67	1967-68
<b>IMPORTS</b>					
Petroleum and shale spirit—					
Aviation spirit . . . . .	232	143	158	277	216
Other (motor spirit) . . . . .	389	339	456	542	587
Aviation turbine fuel . . . . .	670	1,022	955	615	1,099
Other oil(a) . . . . .	310	487	838	781	1,112
Sulphur . . . . .	141	71	..	70	486
Portland cement . . . . .	174	322	410	311	370
Timber (undressed hardwood) . . . . .	151	214	334	183	206
Iron and steel manufactures . . . . .			832	3	1,195
Machinery and transport equipment . . . . .	(b)	(b)	922	3,914	2,376
Other articles . . . . .	870	1,526	691	690	1,760
<b>Total imports</b> . . . . .	<b>2,937</b>	<b>4,124</b>	<b>5,596</b>	<b>7,386</b>	<b>9,407</b>
<b>EXPORTS(c)</b>					
Meats . . . . .	1,546	2,323	3,348	3,422	4,864
Hides and skins, raw . . . . .	237	123	61	227	135
Iron ore and concentrates . . . . .	..	..	..	..	3,053
Non-ferrous ores and concentrates . . . . .	..	9	173	2,682	4,474
Copper ores and concentrates . . . . .	78	805	2,044	1,512	775
Pearls . . . . .	180	170	179	34	39
Other articles . . . . .	433	379	593	1,091	4,515
<b>Total exports</b> . . . . .	<b>2,474</b>	<b>3,809</b>	<b>6,398</b>	<b>8,968</b>	<b>17,855</b>

(a) Includes kerosene, gas oil, diesel oil, residual oil, etc. (b) Included in other articles. (c) Includes domestic exports and re-exports.

## Shipping

Shipping services to Darwin are provided from the eastern States by ships of the Australian National Line and from Western Australia by the Western Australian State Shipping Service. Oil tankers carrying supplies of aircraft fuel and other petroleum products, overseas cargo ships carrying iron ore to Japan and other miscellaneous vessels also visit Darwin. A vessel operated from Brisbane serves settlements on the Gulf of Carpentaria, and some mission-owned boats carry cargo from Darwin to mission stations and government settlements along the coast.

## Air services

At 30 June 1967 there were 128 aerodromes in the Territory, nine of which are maintained by the Commonwealth Department of Civil Aviation. The overseas passenger services using the Darwin international airport are Lufthansa (Sydney to Frankfurt); Qantas/B.O.A.C. (Sydney to London); B.O.A.C. (Sydney to Hong Kong); Union de Transports Aeriens (Paris to Los Angeles via Noumea); and T.A.A. on behalf of Transportes Aereos de Timor (Darwin to Baucau). Regular inland services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett Airlines (from Adelaide, Melbourne, Sydney and Brisbane), and MacRobertson-Miller Airways Ltd (from Perth and Derby). MacRobertson-Miller Airways Ltd and Connellan Airways Ltd operate a network of air services throughout the Territory, the latter company's base being at Alice Springs. The Royal Flying Doctor Service also operates aircraft, while charter services can be secured at Darwin and Alice Springs.



### Railways

The Commonwealth Railways Commissioner operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of 822 miles, of which about 200 are in the Northern Territory. The line is standard gauge from Port Augusta to Maree, a distance of 217 miles, and 3ft 6 in from Maree to Alice Springs. The Commissioner also operates the North Australia Railway between Darwin and Birdum on a 3 ft 6 in gauge over a distance of 317 miles. The two inland terminals, Alice Springs and Birdum, are about 630 miles apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 6 miles north of Birdum, is the point of trans-shipment for passengers and goods and is, at present, the effective terminal. A road-rail freight service operates between Adelaide and Darwin via Alice Springs.

### Roads

The Stuart Highway, 954 miles long, connects Alice Springs with Darwin and runs via Larrimah and Tennant Creek. The Barkly Highway, 403 miles long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 16 miles north of Tennant Creek. These highways are used for carrying various freights, including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa. The routes are used also for overland tourists and travellers from the southern States to Darwin. With the further development of the pastoral and mining industries in the Territory, road trains are now being used on both highways for the export of cattle and ore. Both roads have good water bores and communications. There are now approximately 12,000 miles of roads in the Territory of which 1,798 miles are sealed.

Work on a programme for reconstruction and development of beef cattle roads was commenced in 1961-62. To June 1968 \$30.2 million has been authorised for this work, and actual expenditure to 30 June 1968 was \$14.2 million. The transport of cattle by road is expected to increase the number, quality and value of cattle turned off.

### Posts, telegraph, telephones and wireless

Postal communication is maintained by road, rail and air transport between Darwin and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service provide a regular service between Fremantle and Darwin. 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 overland telegraph line, covering a length of 2,230 miles, runs from Adelaide to Darwin, and links Darwin in telegraphic communication with other parts of the world. Long-distance telephone communication is established between Darwin and the capital cities of Australia, and overseas telephone communication through Sydney or Perth is also available.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine, and there is a commercial station at Darwin. The majority of homesteads on pastoral leases are equipped with radio transceivers 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), Broken Hill (New South Wales), and Cloncurry (Queensland), and are used for transmission of radio-telegrams and other communications.

## Education

*See also* the chapter Education, Cultural Activities and Research.

### Special Aboriginal schools

While the Department of Education and Science is now responsible for education in the Northern Territory, special schools and pre-schools for Aboriginal children remain the responsibility of the Welfare Branch of the Administration. These special schools and pre-schools are intended as an interim measure only, policy being that all Aboriginal children should eventually receive their education in the community schools. Following expert enquiries, however, it was decided that schools should be established having a syllabus and school texts which take account of the social and cultural background of the Aborigines. In these schools there is a shift of emphasis from theoretical to practical subjects, but where progress warrants it, the child transfers to the ordinary curriculum leading to the general community schools. A transitional school system has also been established, and one of its main objectives is to provide a bridge between the special schools and the community high schools.

Fifty-six special schools for Aboriginal children had been established by the middle of 1968. Forty-two of these were conducted by the Administration, ten by missions and four by the managements of pastoral properties. Government subsidies were provided to the missions and pastoral managements concerned. Nineteen pre-school centres had also been established. Fourteen of these were conducted by the Administration and five by the missions.

### Community schools

Since February 1968 the Commonwealth Minister of Education and Science has been responsible for community education in the Northern Territory. His Department is represented in Darwin by an officer holding the rank of Director. Community schools are operated by the Commonwealth under an agreement with the South Australian Department of Education which provides teachers and curricula and is represented in Darwin by a Director, Northern Territory Schools. At 30 June 1968 there were twenty-six government schools in the Territory, with 8,091 pupils, and five non-government schools, with 1,214 pupils, providing instruction according to the South Australian curriculum. High schools have been established with classes to matriculation level at Darwin and to leaving certificate level at Alice Springs.

All children who live more than ten miles from an established school receive an allowance of up to \$310 (\$250 plus \$120 on a graduated scale according to family income) per annum plus fare concessions if they board away from home in order to attend school. Limited numbers of special Northern Territory secondary and tertiary scholarships supplement the normal Commonwealth scholarship provisions. The secondary scholarship provides a benefit of \$100 per annum; the tertiary awards cover the costs of tuition and other compulsory fees. There are also book allowances ranging from \$16 to \$20 per annum for secondary students. Approximately 300 children receive correspondence education under the South Australian Correspondence School system. Where a governess is employed or where domestic help is engaged to enable a mother to supervise correspondence lessons, an allowance of up to \$100 is payable for each correspondence school pupil up to the age of twelve. The radio session 'School of the Air' supplements normal correspondence instruction for certain children in isolated areas.

Fourteen pre-school centres are in operation in the Territory, with an enrolment of 947 pupils. A number of scholarships are offered each year for training as pre-school teachers.

### 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 College, these courses covering the work prescribed for the various trades in South Australia and New South Wales.

## Assistance to Aborigines

Reserves for Aborigines comprise a total area of 94,196 square miles. While few Aborigines now live outside settled areas and not all choose to live on reserves, this large area of reserved land has been maintained to provide economic resources from which the Aborigines may benefit, either through the grant of legal title and other rights or from royalty payments. Royalties from mining operations on Aboriginal reserves are levied at double the normal rate and are paid into the Aborigines Benefits Trust Fund which was established in 1952. The fund was later extended to include royalties from timber taken from reserves.

An intensive welfare programme to prepare Aborigines for the demands of modern living is being carried out, and nineteen Government settlements and fourteen mission stations have been established where Aborigines are assisted to adopt a settled way of life. Health services (including infant clinics), education, housing, vocational training and employment are provided, and Aborigines are encouraged to take part in the social activities of the community.

Financial and technical assistance is available to Aborigines who wish to develop their own commercial or industrial enterprises. Financial assistance is available through the Aborigines Benefits Trust Fund controlled by the Minister for the Interior and the Capital Fund for Aboriginal Enterprises controlled by the Minister in Charge of Aboriginal Affairs. Policy is to ensure that any assisted enterprise has sound economic prospects and that all Aborigines with a possible interest in the venture are considered.

## Finance

Details of receipts and expenditure of the Territory for the years 1963-64 to 1967-68 are shown in the table following. In this table the receipts and expenditure of the Northern Territory have been classified into a National Accounts form. The table covers transactions relating to the Northern Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Northern Territory Government Settlements Canteens, Northern Territory Housing Commission, Northern

Territory Housing Loans, and Northern Territory Transport. Details of the financial transactions of the Darwin City Council are also incorporated in the table. Revenue derived by the Commonwealth from income taxes, customs duties, etc. levied in the Northern Territory and expenditure by the Commonwealth in the Northern Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

NORTHERN TERRITORY: RECEIPTS AND EXPENDITURE, 1963-64 TO 1967-68

(\$'000)

	1963-64	1964-65	1965-66	1966-67	1967-68
<b>RECEIPTS</b>					
Taxation—					
Stamp duties . . . . .	42	42	53	55	74
Motor registration . . . . .	188	213	237	273	321
Other . . . . .	362	435	480	656	320
Interest, rent, etc. . . . .	694	758	856	963	1,228
Public enterprises income . . . . .	452	426	801	1,243	1,080
Net sale of local and semi-governmental securities . . . . .	418	392	227	—6	—239
Other receipts—					
Net charge to Commonwealth budget . . . . .	29,426	32,538	38,978	50,590	53,170
Other(a) . . . . .	42	—36	—267	—114	921
<b>Total receipts . . . . .</b>	<b>31,624</b>	<b>34,768</b>	<b>41,367</b>	<b>53,659</b>	<b>56,875</b>
<b>EXPENDITURE</b>					
Net current expenditure on goods and services—					
Law, order and public safety . . . . .	412	460	524	576	677
Education . . . . .	972	1,223	1,472	1,641	1,954
Public health and welfare . . . . .	5,994	6,802	6,618	8,021	9,909
Other . . . . .	7,574	8,406	10,683	12,473	13,342
Capital expenditure on new assets and stocks—					
Roads . . . . .	3,720	2,950	4,514	4,727	9,357
Housing . . . . .	2,130	3,850	5,161	5,341	4,118
Other . . . . .	9,680	10,016	11,780	20,374	16,617
Net purchase of existing assets(b) . . . . .	—122	—114	—328	—1,323	—1,571
Cash benefits . . . . .	228	271	300	316	369
Subsidies . . . . .	264	260	360	242	261
Interest paid . . . . .	80	112	118	124	466
Net advances—					
Housing . . . . .	546	110	—141	782	937
Other . . . . .	146	422	301	357	438
Grants towards Private Capital Expenditure . . . . .	..	..	5	7	..
<b>Total expenditure . . . . .</b>	<b>31,624</b>	<b>34,768</b>	<b>41,367</b>	<b>53,659</b>	<b>56,875</b>

(a) Includes movements in cash, investments, etc. (b) Minus sign (—) denotes excess of receipts (from sales) over expenditure on, or purchases of, existing assets, including housing.

THE AUSTRALIAN CAPITAL TERRITORY

General description

The Commonwealth Constitution provides that the Seat of Government of the Commonwealth shall be in the State of New South Wales but distant not less than 100 miles from Sydney. After a number of alternative sites were considered, an area of 911 square miles lying approximately 200 miles south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 28 square miles at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of the Interior, whose functions include housing, police, and municipal services. Education, public health, justice and the provision of basic physical services, including water supply, sewerage and roads, are the responsibility of the Departments of Education and Science, Health, Attorney-General's, and Works. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

The Australian Capital Territory Advisory Council was established in 1930. It has eight elected members and a representative from each of the Departments of Interior, Works, and Health, and the National Capital Development Commission. The Council advises the Minister for the Interior on matters affecting the Australian Capital Territory. Ordinances are submitted in draft form to the Council for advice and comment before being implemented.

At the census of 30 June 1966 the population of the Australian Capital Territory was 96,013, made up of 92,308 in the Canberra metropolitan area and 3,705 in rural areas (including Jervis Bay). The estimated population of the Territory at 31 December 1968 was 60,600 males and 56,600 females, 117,200 persons. *See also* the chapters Population and Vital Statistics.

### National Capital Development Commission

The *National Capital Development Commission Act 1957-60* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1967-68 was the tenth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Department of Works and private consultants. Details of the expenditure by the Commission in each year from 1963-64 to 1967-68 are included in the table on page 1155. Total expenditure in 1967-68 was \$45.9 million, comprising national works \$3.6m, Commonwealth offices \$7.0m, Territory works \$23.4m, land development \$7.5m, city works \$2.5m, and others \$1.9m.

The following major works were completed during 1968 by the Commission and its agents: Corin Dam, Bendora Gravity Main, National Library, Russell Building No. 9, Phillip Offices Stage 1, Dickson Traffic Centre, Aranda (Canberra) High School, Dickson High School extensions, Aranda Primary School, Mawson Primary School, Cook Primary School, Parkes Place Development Stage 1, Woden Town Centre—Services, Woden Parkway Stage 2 and Belconnen Way.

Works under construction at the beginning of 1969 included the following projects: The Treasury Stage 3, Russell Building No. 14, Phillip Offices Stage 2, Australian War Memorial extensions, Dickson District Library, Melrose High School, Lyneham High School extensions, Farrer Primary School, Garran Opportunity 'F' School, Page Primary School, Scullin Primary School, Hindmarsh Drive Stage 2, Adelaide Avenue Duplication, Commonwealth Avenue/Parkes Way Interchange, Sturt Avenue Duplication and Belconnen Water Pollution Control Centre.

### Works and services

#### Housing

Until the period following the 1939-45 War most houses and flats in Canberra were built and rented by the Department of the Interior. More recently, an increasing number of houses and flats have been built by private enterprise, and as a result the proportion of houses and flats in Canberra occupied by tenants of the Department of the Interior has fallen from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961 and 38.8 per cent in 1966. Although the bulk of rented accommodation is provided by public authorities and will continue thus in the foreseeable future, there has been a considerable increase in the proportion of home ownership in Canberra, since 1954. The proportion of houses and flats owned or being purchased by instalments has risen from 19.5 per cent in 1954 to 29.0 per cent in 1961 and 45.6 per cent in 1966. In June 1966, 39.7 per cent of the total occupied dwellings in Canberra were owned by the Department of the Interior, and in June 1967, 37.7 per cent. Home building activity in the Woden Valley, south-west of the former city area, has continued to expand, and at June 1967 there were 4,682 occupied dwellings in this area. *See also* the chapter Housing and Building.

#### Municipal services

Canberra has been developed as a garden city. More than three million trees and many acres of lawns have been planted since 1927. The development of new areas of parkland and the maintenance of existing tree and lawn areas is the responsibility of the Parks and Gardens Branch of the Department of the Interior. Municipal services are also provided by the Department of the Interior.

At 30 June 1968, 27,982 meters were connected to the city water supply, drawn through nine service reservoirs from three storages on the Cotter River with a total capacity of nearly 20,000 million gallons. In 1967-68 some 4,797 million gallons of water were consumed in Canberra, and in addition the system supplied 367 million gallons to Queanbeyan in New South Wales. Treatment works at Weston Creek dispose of Canberra sewage. At 30 June 1968, 462 miles of sewers, 6½ miles of rising sewerage mains and 491 miles of storm water drains were laid.

#### Department of Works

Apart from the work it carries out for the National Capital Development Commission, the Department of Works acts as design and supervision agent for other Commonwealth departments and instrumentalities. Total expenditure during 1967-68 on all operations amounted to \$10.7 million (\$10.6 million in 1965-66), comprising: building works—housing \$168,163, other building \$3,852,826; engineering works \$1,404,177; repairs and maintenance—building \$2,334,573, engineering \$2,784,719, purchase of plant \$174,247. Major work completed during 1967-68, excluding those works on behalf of the National Capital Development Commission, included the Weetangerra (now Scullin) Telephone Exchange, C.S.I.R.O. L.R.R.S. Building Stage 2, Hospital alterations Stages 2 and 4, and the A.N.U. Research Clinic Hospital.

New major works under construction at the close of 1967-68 included Belconnen 'A' Post Office, Visitors Reception Centre at Tidbinbilla, Extensions and alterations to Tharwa School, the erection of C.M.F. Depot, City and the new Terminal Building at the Canberra Airport.

### Production

See also the chapters dealing with particular subjects.

#### Lands

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Territory and to the area of alienated and leased land, and the chapter Rural Industry of this issue contains statistical information on the subject. (See also § 1. Canberra: Fifty Years of Development, page 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910-1965, no Crown lands in the Territory may be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act. In general, leases of land in the city area are granted under the *City Area Leases Ordinance* 1936-1968. In special circumstances land may be leased for purposes other than business or residential under the *Leases (Special Purposes) Ordinance* 1925-1953 and for church purposes under the *Church Lands Leases Ordinance* 1924-1966. As considerable areas of Commonwealth owned land in the Territory are not immediately required in connection with the establishment of the City, they have been leased for agricultural or grazing purposes for terms consistent with the anticipated growth of Canberra under the *Leases Ordinance* 1918-1966. Some lands in the Territory, in areas generally remote from the City, remain in private ownership under Freehold Title.

The Commonwealth Territory at Jervis Bay, comprising about 28 square miles, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (H.M.A.S. *Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance* 1918-1966. Apart from picnic and camping areas, experimental planting, afforestation and soil conservation activities, the remainder of the area is being maintained in its natural state.

#### Forestry

Forestry operations in the Territory were begun on Mount Stromlo in 1915. Plantings up to 1925 were chiefly decorative, but since then a much wider programme has been undertaken. In 1926 a comprehensive review was made of the Territory's potential for forest development, and a programme for the development of commercial forests was approved. Most of the better native forest has since been placed under management, and, following survey and assessment work, forestry operations, including fire-control, have been extended to 100,000 acres of eucalypt forest in the lower Cotter Catchment Area.

Afforestation work has also been undertaken, and softwood plantations (mainly *Pinus radiata*) have been established at Uriarra, Stromlo-Green Hills, Pierce's Creek, Kowen, Tidbinbilla, Jervis Bay and Boboyan. Experimental plots have been established at Jervis Bay and in the Brindabella Ranges, and soil conservation plantings made at various locations throughout the Territory. The

total area of softwood plantations within the Australian Capital Territory at 30 June 1969 was 29,800 acres, of which 27,200 acres were *Pinus radiata*, the balance consisting chiefly of *Pinus ponderosa* and *Pinus nigra*, plus 720 acres at Jervis Bay, mainly *Pinus radiata* and *Pinus elliottii*.

Continued thinning operations have improved all Australian Capital Territory forests so that they now yield a wide variety of products. Board-logs and case timber form the bulk of production, but some poles, fencing timber, and pulpwood are now being produced. The yearly output from pine plantations has increased from 2,500 cubic feet in 1930-31 to 1.5 million cubic feet in 1968-69, valued at \$394,000 delivered at purchasing mills in Canberra. There was no hardwood log production in 1968-69. Up to 30 June 1969 a total of 23.3 million cubic feet of pine logs had been cut from plantations, while hardwood production from the Australian Capital Territory, including Jervis Bay, remained at 4.3 million cubic feet.

#### Agricultural, pastoral and secondary industries

During 1967-68 the production of the more important items of the agricultural and pastoral industry was: wheat 41,602 bushels; wool 2,238,000 lb; whole milk 1,998,000 gallons; meat (carcass weight), fresh 3,862 tons. The numbers of livestock depastured at 31 March 1968 were: horses 722; cattle 12,548; sheep 267,078.

As in the Northern Territory, the secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

#### AUSTRALIAN CAPITAL TERRITORY: FACTORIES, 1963-64 TO 1967-68

	1963-64	1964-65	1965-66	1966-67	1967-68
Number of factories(a) . . . . .	170	187	217	238	241
Average number of employed(b)—					
Males . . . . .	2,236	2,634	2,896	2,992	3,002
Females . . . . .	458	593	599	639	708
<i>Persons employed</i> . . . . .	2,694	3,227	3,495	3,631	3,710
Salaries and wages paid(c)—					
Males . . . . . \$'000	5,666	7,854	8,819	9,306	9,936
Females . . . . . "	607	848	1,047	1,177	1,315
<i>Total salaries and wages paid</i> . . . . . "	6,273	8,702	9,866	10,483	11,251
Value of power, fuel, etc., used(d) . . . . .	502	644	760	735	827
Value of materials used(e) . . . . .	8,428	11,440	13,349	14,918	16,119
Value of production(f) . . . . .	11,097	14,060	17,418	18,860	19,257
Value of output(g) . . . . .	20,026	26,145	31,528	34,514	36,203
Value of land and buildings(h) . . . . .	11,669	20,583	21,891	22,779	23,377
Value of plant and machinery(h) . . . . .	5,103	9,682	10,134	10,368	10,012

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used.  
 (b) Average over whole year; includes working proprietors. (c) Excludes amounts drawn by working proprietors.  
 (d) Includes water and lubricating oil. (e) Includes also containers, etc., tools replaced and repairs to plant.  
 (f) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book values at end of year including estimated value of rented premises and machinery.

### Transport and communication

Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 5 miles long. This line was opened for goods traffic on 25 May 1914 and for passenger traffic on 15 October 1923. Direct or linking services operate between Canberra and Sydney and Canberra and Melbourne. Two airlines provide many 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. The total length of roads in the Territory at 30 June 1968 was: bitumen and concrete, 535 miles; gravel, 213 miles; other formed roads, 78 miles; total, 826 miles. There are three radio broadcasting stations in the Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station, and two television stations, ABC Channel 3 of the national broadcasting system and CTC Channel 7, a commercial station.

## Social

*See also* the chapter Education, Cultural Activities and Research.

### Education

The *Education Ordinance 1937-1966* provides for the compulsory attendance at school of children between the ages of six and fifteen years. The Commonwealth Department of Education and Science is primarily responsible for the education of children in the Australian Capital Territory. By agreement, however, the New South Wales Department of Education arranges the teaching programme in accordance with its own curriculum and provides the teaching staff. It is reimbursed for expenses incurred.

At 30 June 1969 there were nine public secondary schools in Canberra providing courses proceeding to the Higher School Certificate. Thirty schools provided courses at infants and primary levels, three of these being in rural districts and one in the Jervis Bay area. There were also: a school for mentally handicapped children; a school for physically handicapped children, located at Canberra Community Hospital; classes for deaf children, located at Ainslie and Mawson primary schools; classes for O.A. children located at Ainslie, Mawson and Narrabundah primary schools; a therapy clinic for children with speech defects; and a clinic for educational guidance. A further four primary schools, one secondary school and a school for moderately handicapped children are scheduled to commence at the beginning of the 1970 school year.

At 30 June 1969 there were twenty private schools in Canberra. Of these, St Edmund's Christian Brothers' College, the Catholic Girls' High Schools at Braddon and Griffith, the Daramalan College, the Canberra Grammar School (Boys), and the Canberra Church of England Girls' Grammar School provide courses leading to the Higher School Certificate.

Forty pre-school centres, including one in the Jervis Bay area and a mobile unit which visits outlying areas of the A.C.T. provide pre-school facilities for approximately 2,700 children between the ages of three and five years. Pre-school education is also provided for deaf children and in 1970 the Commonwealth will provide for the pre-school education for moderately mentally handicapped children.

The Canberra Technical College, which follows generally the curriculum set by the New South Wales Department of Technical Education, provides trade, post-trade, certificate, and some hobby courses. At 30 September 1968 the Technical College provided instruction in one hundred courses in twenty-one different schools of study. Student enrolments at 30 September 1968 were 5,956.

The Canberra School of Music provides a Diploma Course and individual study in a range of instruments and voice. At the end of June 1969, enrolments totalled 580.

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. Provision for undergraduate studies and some post-graduate study is made by the School of General Studies.

A College of Advanced Education has been established in Canberra and permanent buildings are being erected.

### Health

The Canberra Community Hospital serves the population of Canberra and surrounding districts. At 30 June 1968 it had 576 beds, an honorary medical staff of 134, 20 salaried medical staff, and a nursing staff of 624. For further information *see* the chapter Public Health in this Year Book and in Year Book No. 53.

### Justice

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. There is an Australian Capital Territory Police Force, which at 30 June 1969 numbered 288, including 5 policewomen. Of the total, 114 were engaged on general duties, including 1 at Jervis Bay and 2 caring for the Police Boys Club; the traffic branch comprised 66, including the specialist water police and accident investigation squads, 30 were engaged in criminal investigation, 21 in recruitment and training, 55 in planning and research and 2 in the special branch. *See also* the chapter Public Justice.

**Finance**

In the following table the receipts and expenditure of the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions relating to the Australian Capital Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Electricity Supply (1962-63), Australian Capital Territory Forestry, Australian Capital Territory Housing, and Australian Capital Territory Transport. In addition, details of the financial transactions of the following semi-governmental authorities are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks, National Capital Development Commission, and Canberra Theatre Trust. Revenue derived by the Commonwealth from income taxes, sales tax, etc., levied in the Australian Capital Territory and expenditure by the Commonwealth in the Australian Capital Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

**AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND EXPENDITURE  
1963-64 TO 1967-68  
(\$'000)**

	1963-64	1964-65	1965-66	1966-67	1967-68
<b>RECEIPTS</b>					
Taxation—					
Motor registration . . . . .	474	540	604	669	760
Liquor tax . . . . .	129	146	170	197	225
Other . . . . .	295	698	199	831	755
Interest, rent, etc. . . . .	868	1,256	1,631	1,963	2,035
Public enterprises income . . . . .	4,718	5,714	6,143	6,776	8,156
Net sale of semi-governmental securities . . . . .	768	608	225	533	708
Other receipts—					
Net charge to Commonwealth budget . . . . .	37,342	40,008	46,516	57,696	62,655
Other(a) . . . . .	-660	-514	151	2,122	1,114
<b>Total receipts . . . . .</b>	<b>43,934</b>	<b>48,456</b>	<b>55,638</b>	<b>70,787</b>	<b>76,407</b>
<b>EXPENDITURE</b>					
Net current expenditure on goods and services—					
Law, order and public safety . . . . .	422	528	700	926	1,049
Education . . . . .	3,060	4,044	4,451	5,254	6,207
Public health and welfare . . . . .	1,746	2,310	2,992	3,977	4,535
Other . . . . .	4,478	5,764	6,857	7,689	8,500
Capital expenditure on new assets and stocks—					
Education . . . . .	2,367	2,772	3,507	4,652	4,770
Cultural and recreational facilities . . . . .	2,423	2,910	2,755	3,574	4,214
Public health and welfare . . . . .	2,148	2,584	1,950	1,090	250
Water supply and sewerage . . . . .	920	2,822	3,395	11,625	10,393
Roads and bridges . . . . .	5,388	6,450	10,156	9,946	11,342
Power, fuel and light . . . . .	1,256	1,346	1,675	3,188	2,819
Housing . . . . .	6,602	7,724	8,814	6,637	7,235
Other . . . . .	14,074	11,830	10,281	8,839	11,837
Net purchase of existing assets(b) . . . . .	-11,714	-17,340	-12,326	-7,462	-7,801
Cash benefits . . . . .	38	50	134	139	144
Interest paid . . . . .	212	186	257	260	271
Net advances for housing . . . . .	10,514	14,400	9,801	10,281	10,641
Grants towards private capital expenditure . . . . .	..	76	237	170	..
<b>Total expenditure . . . . .</b>	<b>43,934</b>	<b>48,456</b>	<b>55,638</b>	<b>70,787</b>	<b>76,407</b>

(a) Includes movements in cash, investments, etc. (b) Minus sign (-) denotes excess of receipts (from sales) over expenditures on, or purchases of, existing assets, including housing.



## NORFOLK ISLAND

### General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°S., longitude 168° E. approximately. Its total area is approximately 14 square miles, the island being about 5 miles long and 3 miles wide. It is 1,035 miles from Sydney and 660 miles from Auckland. 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 45° and 81°F. with a mean of 68°F. The average annual rainfall is 56 inches.

After serving as a penal station from 1788 to 1813 and from 1825 to 1855, Norfolk Island in 1856 became the home of the remaining descendants of the *Bounty* mutineers. The estimated population at 30 June 1968 was 1,440.

### 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 Commonwealth Parliament as a Territory of Australia. It is controlled by the Minister for External Territories through an Administrator. The Norfolk Island Council is established pursuant to the *Norfolk Island Act* 1957-1966 and is constituted in accordance with the provisions of the *Norfolk Island Council Ordinance* 1960-1964. The Council may consider and tender advice to the Administrator on any matter affecting the peace, order and good government of Norfolk Island, and must be consulted on certain legislative and financial matters. The Council comprises the Administrator as *ex officio* chairman and voting member and eight members elected biennially.

### Economic activity

The major economic activities of the island are the tourist trade, primary production, and Government instrumentalities.

*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 presents trading difficulties, and production of bean seed, formerly the major export, has declined rapidly since 1962-63.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961, however, the station was closed down.

An active forestry programme is being carried out to increase the resources of Norfolk Island pine and to introduce suitable types of eucalypts.

*Tourists.* Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. There are at present, apart from flats and unlicensed guest houses, nine hotels and licensed guest houses, and further accommodation is being built to meet the steadily increasing number of visitors.

*Employment.* A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and duty-free stores. The Commonwealth Government provides services through staff from the Departments of Civil Aviation and Interior (Meteorological Branch) and teachers are seconded by the N.S.W. State Education Department. A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely for their income entirely on agricultural pursuits.

### Trade, transport and communication

Imports to Norfolk Island since the 1939-45 War have risen from \$65,000 in 1945-46 to \$2,221,000 in 1967-68. In 1967-68 the major proportion (\$1,291,810) came from Australia, while New Zealand and the Pacific Islands supplied \$358,000. Exports rose from \$18,500 in 1945-46 to \$420,000 in 1960-61, but had declined to \$235,200 by 1967-68, after whaling had ceased in 1962-63. Exports to Australia, the principal market, amounted to \$172,800, while exports to New Zealand and to Pacific Islands amounted to \$45,900. No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are the produce or manufacture of Norfolk Island, shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the island is maintained at approximately six-week intervals from Sydney via Norfolk Island to the New Hebrides and Solomon Islands, and thence back to Brisbane and Sydney. A service linking Sydney and Noumea includes a call at Norfolk Island on the outward voyage about every three weeks. Shipping between the island and New Zealand is infrequent.

A passenger and air freight service between Sydney and Norfolk Island is operated by Qantas Airways Ltd twice a week, and more frequently in peak periods. The service extends to New Zealand under charter to Air New Zealand Ltd.

There are approximately fifty miles of motor road on the island. As a substantial section of the population possesses private motor cars, and taxi-cab and bus services are available, transport is almost exclusively by motor vehicle.

A limited telephone service is operated during business hours with 24-hour connections to emergency services. The Overseas Telecommunications Commission provides a radio telegram service to Sydney. A local broadcasting service is operated by the Administration.

#### Education

Education is free and compulsory up to the age of fifteen years. The school, which is conducted by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from kindergarten to the School Certificate examination. The teachers are provided by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30 June 1968 was 276.

#### Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of this Court is exercised by one judge sitting in Court or, to the extent and in the cases provided by or under ordinance, sitting in Chambers. The jurisdiction of the Court of Petty Sessions is exercised by a Chief Magistrate or any three magistrates other than the Chief Magistrate.

#### Finance

The revenue of the Territory, together with an annual grant from the Commonwealth Government for 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 items of revenue and expenditure for the five years 1963-64 to 1967-68 were as follows.

#### NORFOLK ISLAND: REVENUE AND EXPENDITURE, 1963-64 TO 1967-68 (\$'000)

	1963-64	1964-65	1965-66	1966-67	1967-68
REVENUE					
Commonwealth subsidy . . . . .	67	67	66	66	66
Customs duties . . . . .	45	55	85	90	110
Sale of liquor . . . . .	30	34	41	53	56
Post office . . . . .	55	55	174	138	122
All other . . . . .	33	33	41	50	71
<b>Total revenue . . . . .</b>	<b>232</b>	<b>245</b>	<b>406</b>	<b>397</b>	<b>425</b>
EXPENDITURE					
Administrative . . . . .	46	55	72	73	89
Miscellaneous services . . . . .	20	21	22	27	20
Social expenditure . . . . .	50	68	70	97	126
Repairs and maintenance . . . . .	17	20	27	66	67
Capital works and services . . . . .	48	55	57	126	232
Postal services . . . . .	26	16	33	32	59
Other business undertakings . . . . .	12	6	9	7	7
<b>Total expenditure . . . . .</b>	<b>219</b>	<b>241</b>	<b>289</b>	<b>428</b>	<b>600</b>

## PAPUA AND NEW GUINEA

The information under this heading is applicable to both the Territory of Papua and the Trust Territory of New Guinea. For details of the respective Territories *see* pages 1178 (Papua) and 1185 (New Guinea) and following pages. The sections on pages 1158-63 have been prepared by the Director of the Commonwealth Bureau of Meteorology.

### General description

#### Geographical position

The Territory of Papua and New Guinea includes the Territory of Papua and the Trust Territory of New Guinea. The total area of approximately 180,000 square miles lies in the equatorial zone between latitudes 2° S. and 12° S. and longitudes 141° E. and 156° E. The Territory of Papua comprises south-east New Guinea and also the islands of the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups. The Trust Territory of New Guinea extends from 2° S. to 8° S. and includes north-east New Guinea (also called 'the mainland'), Bismarck Archipelago (New Britain, New Ireland, Lavongai, Admiralty Islands), and Solomon Islands (Bougainville, Buka).

#### Geographical features

There is a high backbone mountain chain extending generally along the centre of the main island with coastal plains which widen in some areas, particularly in the Fly River Basin. The mountains, which are rugged, rise to 15,000 feet above sea level in some areas; the larger islands mostly have mountain backbones, some rising to about 10,000 feet. In many parts the highlands extend to the coast.

### Weather and climate

The climate, particularly the rainfall, over so wide an area as Papua and New Guinea, with its numerous islands and varying elevations, presents many variations. Generally speaking, the climate is hot and humid, except in the highlands where days are mild and nights are cool. Mean temperatures vary little throughout the year, and there are no winter and summer seasons comparable to those of higher latitude.

The predominant seasonal feature of the Territory is the regular alternation between two major air-streams, the south-east trade winds and north-west monsoon. The 'southeast' season prevails approximately from May to October, and the 'northwest' season persists for a shorter period from about December to early April. Two short spells of calm weather occur between these two seasons.

#### Rainfall

There are great spatial variations in the amount of rainfall received over the Territory of Papua and New Guinea. The variations depend mainly upon the direction and speed of the air streams. These streams are moist, requiring only a small amount of lifting for condensation of water vapour to occur. Topography therefore has a dominating influence on the rainfall distribution.

#### Average annual rainfall

The table on page 1160 shows the average annual and monthly rainfalls for selected stations in the Territory. It may be seen that the spatial distribution of average annual rainfall varies greatly, being dependent mainly on topography in relation to prevailing winds. The annual averages vary from 39 inches at Port Moresby to 227 inches at Kikori at the head of the Gulf of Papua. There are few rainfall observing stations above 6,000 feet, so that rainfall above that height must generally be estimated. The map facing page 1184 shows the rainfall distribution over the region for the year 1967.

#### Seasonal distribution of rainfall

Places in Papua such as Port Moresby, where the south-east trade wind does not blow directly onshore, have a dry season during May-October. Places such as Kikori have heavier rainfall during May-October because of the onshore south-east winds. In the Territory of New Guinea, where conditions are more equatorial, rainfall occurs throughout the year, but is heaviest in the November-April period at most places.

#### Variability of rainfall

There are marked variations from year to year in annual rainfall totals throughout the Territory. At Port Moresby, for example, in forty-two years of record the annual rainfall has varied from 72 inches to 23 inches; at Daru in fifty-two years of record the annual rainfall has varied from 156 inches to 46 inches; and at Madang in thirty-eight years of record the variation has been from 180 inches to 92 inches. The table on page 1161 shows the annual rainfall at Port Moresby and Lae for the years 1946 to 1967 inclusive.

### Heavy rainfalls

Highest twenty-four hour rainfall registrations have included 21.60 inches at Pondo Plantation in New Britain and 17.60 inches at Cape Nelson on the east coast of the main island. Twenty-four hour falls greater than 15 inches have been recorded at a number of other stations in the Papua and New Guinea region. The highest twenty-four hour fall recorded in Australia was 36 inches at Crohamhurst, Queensland. All these registrations were for the restricted twenty-four hour period from 9 a.m. to 9 a.m. Higher falls, possibly approaching 30 inches, have probably occurred in the Territory in unrestricted periods of twenty-four consecutive hours.

### Temperature

Although the Territory has no summer and winter seasons, it has a wide range in temperature because of elevation differences. For each month the mean daily maximum temperature decreases by about 2° F. and the mean daily minimum temperature by about 4° F. for each 1,000 feet increase in elevation up to 5,000 feet.

A table on page 1161 shows temperature and humidity data for five lowland and two highland stations. Mount Hagen, elevation 5,500 feet, is the highest station for which temperature data are available. However, both day and night temperatures continue to decrease with elevation above this level.

### Average seasonal temperature distribution

In the lowland areas there is a difference in temperature pattern between the areas south of the highlands and those to the north. In the south there is a tendency for temperatures to be lower in the May–October period than in the November–April period (e.g. Samarai). In the north there is little difference throughout the year (e.g. Madang). In the highlands, temperatures are appreciably lower than in the lowlands and are slightly lower in the middle of the year than they are at the beginning of the year (e.g. Goroka). The nights are cold in the highlands throughout the year; the mean daily minimum at Mount Hagen for July is 53.6° F.

### Extreme temperatures

The highest air temperature recorded at Lae (in eighteen years of record) was 101.7° F. and the lowest was 66.3° F.; at Port Moresby (in twenty-two years of record) the highest was 97.3° F. and the lowest was 57.3° F.; at Mount Hagen (in thirteen years of record) the highest was 88.0° F. and the lowest 35.0° F. The mean daily range of temperature is about 15° F. at lowland stations and 20° F. at highland stations up to 5,000 feet elevation.

### Humidity

Humidity is high generally throughout the year. In the lowlands persistently high humidity in association with high temperatures is responsible for the human discomfort experienced. The average index of mean relative humidity for January and July is shown for selected stations in a table on page 1161. This index has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the mean temperature. Being thus related to the mean temperature, this value of relative humidity is a good approximation to the daily mean.

In the lowland areas the average index of mean relative humidity (*see* table on page 1161) is in the range 75–85 per cent throughout the year. There is little variation in the index from month to month at any station. This is in contrast with northern Australian localities where the south-east winds of the dry season result in low relative humidities. For example, Darwin's average index of mean relative humidity ranges from 81 per cent in February to 62 per cent in July.

In the highland areas up to 6,000 feet elevation the average index of mean relative humidity is within the range 70–80 per cent throughout the year. The lower temperatures experienced on the highlands relative to the lowlands result in conditions being generally more comfortable in the highlands.

### Evaporation

The only evaporation data available are records for Port Moresby. These show that the mean monthly tank evaporation varies from 5–6 inches per month in the early part of the year to 6–7 inches per month in the latter part of the year. The average annual tank evaporation at Port Moresby over an eleven-year period was 73.59 inches. It is probable that evaporation is less than this value in the higher humidity areas.

### Sunshine and cloud

Mean daily sunshine hours are recorded for each month at Port Moresby, and the figures show a variation from 6.2 hours per day in February and March to 8.4 hours per day in November. The mean daily amount of sunshine at Port Moresby for the year is 7.0 hours, which is significantly less than Darwin (8.4 hours) but comparable with Brisbane (7.5 hours).

At Port Moresby the mean cloud amount varies from 5.1 eighths per day in May and June to 6.9 eighths in February; at Lae the variation is from 6.1 eighths in May and June to 7.0 eighths in March. The mean daily cloud amounts for the year at Port Moresby and Lae are 5.8 and 6.5 eighths respectively, which are high in comparison with Darwin (3.1).

### Winds

As mentioned previously the south-east trade winds prevail from May to October and the north-west monsoonal winds prevail from December to March over most of the region. However, the broad-scale wind pattern may be completely masked by the effects of local topography and land and sea breezes. The mean 9 a.m. and 3 p.m. wind speeds and prevailing directions are shown in the tables on pages 1162-3 for Port Moresby and Lae.

At Port Moresby the mean winds are stronger during the period May-November than during December-April; for example, the 3 p.m. mean wind for August is 15.4 m.p.h. and for March is 7.6 m.p.h. The winds at 3 p.m. are much stronger than at 9 a.m.; for example, for the year the 3 p.m. mean wind is 11.5 m.p.h. and the 9 a.m. mean wind is 4.1 m.p.h. The prevailing direction of the wind is south-east during May-November and north-north-west to south-west during December-April.

At Lae the winds are mainly lighter than at Port Moresby. In the period May-October the winds at Lae are lighter than in the period November-April. The winds at 3 p.m. are greater than at 9 a.m. except in February. The prevailing direction is north-west at 9 a.m. and south-east at 3 p.m. throughout the year.

### Storms and cyclones

The Papua and New Guinea region is subject to thunderstorm activity, squall lines, and local storms throughout the year. Severe thunderstorms are frequent in the mountainous areas, but also occur in coastal lowlands. The main tropical cyclone belt lies to the south of the region, but occasionally a tropical cyclone affects the region, causing loss of life and property.

### Climatological tables

The averages and extremes for a number of elements recorded at Port Moresby and Lae are given in the tables on pages 1162-3. These tables generally follow the format given for Australian capital cities included in Chapter 2 of this Year Book, the observational data being for available years of record to 1966 inclusive unless otherwise stated. Some elements included in the Australian capital city tables have been omitted from the tables for Port Moresby and Lae because of the inadequacy of observational records.

### TERRITORY OF PAPUA AND NEW GUINEA: AVERAGE MONTHLY AND ANNUAL RAINFALL FOR SELECTED STATIONS(a)

(Inches)

Station (lat., long.)	Years of record	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Bwagaolia(b) (10° 41' 152° 51')	30	9.82	12.56	10.34	11.14	11.89	9.05	7.35	8.70	9.14	10.10	10.39	8.95	119.43
Daru(b) (9° 04' 143° 12')	52	10.93	10.05	12.74	13.00	8.84	3.91	3.70	2.08	1.64	2.28	4.54	7.93	81.64
Dogura(b) (10° 00' 149° 55')	38	8.69	8.30	8.63	6.03	3.73	3.79	3.10	2.60	3.09	2.75	3.59	4.49	58.79
Gobaragere(b) (9° 50' 47° 45')	33	7.43	6.98	7.85	8.56	4.30	3.49	1.66	2.17	2.37	3.07	5.12	6.88	59.88
Gusoeta(b) (8° 32' 151° 04')	33	15.58	16.45	15.69	14.23	13.04	12.67	12.51	12.33	11.51	9.69	11.37	10.88	155.95
Iukimuna(b) (9° 25' 147° 29')	30	12.92	11.07	14.21	15.30	10.15	7.08	4.88	7.18	7.93	11.27	13.00	13.18	128.17
Kairuku(b) (8° 51' 146° 32')	33	9.20	10.35	8.64	5.33	1.69	1.92	1.15	0.67	1.65	1.66	2.44	5.88	50.58
Kerema(b) (7° 57' 145° 46')	39	9.47	8.34	10.47	11.49	16.71	16.35	13.71	14.26	13.61	11.52	8.46	7.75	142.14
Kikori(b) (7° 25' 144° 15')	39	12.05	12.95	14.10	17.40	29.35	28.14	25.48	22.16	23.74	17.07	13.19	11.50	227.13
Kokoda(b) (8° 58' 147° 43')	31	12.30	14.09	14.30	14.14	9.93	7.06	7.55	9.58	10.17	12.20	16.70	14.16	142.18
Kokopo(c) (4° 20' 152° 15')	30	8.30	7.05	9.05	6.85	4.73	5.13	6.44	6.25	3.94	4.50	6.50	9.18	77.92
Kwikila(b) (9° 44' 147° 44')	35	6.49	5.14	6.46	6.56	3.45	2.28	1.76	1.79	2.24	1.75	2.64	4.19	44.75
Lindenhafen(c) (6° 15' 150° 30')	30	6.66	5.82	6.39	11.23	22.71	31.60	41.00	43.56	31.82	19.32	11.85	7.42	239.38
Madang(c) (5° 13' 145° 47')	38	12.98	12.07	14.96	17.11	14.71	9.70	7.41	5.04	5.91	10.16	14.77	14.59	139.41
Port Moresby(b) (9° 28' 147° 09')	42	6.92	7.56	6.73	4.08	2.56	1.23	1.07	0.63	1.01	1.35	1.87	4.17	39.18
Samarai(b) (10° 37' 150° 40')	39	6.58	7.06	9.77	10.47	11.80	12.44	8.48	8.19	11.06	8.50	7.89	5.40	107.64

(a) With thirty or more years of record to 1964. (b) Papua. (c) New Guinea.

RAINFALL: PORT MORESBY AND LAE, 1946 TO 1967

Year	Port Moresby (Papua)		Lae (New Guinea)	
	Amount	No. of days	Amount	No. of days
	in		in	
1946	61.79	137	(a)168.64	(a)248
1947	40.61	154	180.37	261
1948	45.82	138	179.26	267
1949	43.20	164	174.78	275
1950	47.67	137	158.51	251
1951	45.51	108	191.59	250
1952	54.88	150	165.58	274
1953	36.20	126	197.76	264
1954	46.49	118	173.70	277
1955	39.33	128	155.26	261
1956	56.60	141	122.39	233
1957	51.89	129	238.66	282
1958	46.02	107	190.02	250
1959	41.65	126	185.78	245
1960	34.17	116	167.50	260
1961	42.75	136	193.09	267
1962	43.98	133	182.84	261
1963	58.76	138	165.18	254
1964	55.02	151	163.10	244
1965	40.73	103	175.93	265
1966	41.25	116	206.19	291
1967	57.05	147	198.86	263

(a) Incomplete for July and August.

TERRITORY OF PAPUA AND NEW GUINEA: TEMPERATURE AND RELATIVE HUMIDITY FOR SELECTED STATIONS

Station	Lat.	Long.	Altitude (ft)	Years of record	Relative humidity							
					Temperature °Fahr.				Relative humidity			
					Mean max. Jan.	Mean max. July	Mean min. Jan.	Mean min. July	Av. index of mean Jan. (a)	Av. index of mean July (a)	Mean 3 p.m. Jan.	Mean 3 p.m. July
Daru(b)	9° 04'	143° 12'	26	1940-1966	89.0	82.6	75.2	73.0	84	83	..	..
Goroka(c)	6° 04'	145° 24'	5,200	1952-1966	78.5	76.7	59.0	56.2	75	72	56	52
Kikori(b)	7° 25'	144° 15'	30	1917-1965	90.5	81.4	73.5	71.9	83	91	..	..
Madang(c)	5° 13'	145° 47'	14	1951-1966	86.4	85.2	73.7	72.9	85	87	76	75
Mount Hagen(c)	5° 51'	144° 09'	5,500	1953-1965	76.2	73.8	55.9	53.6	79	80	(d)65	(d)69
Samarai(b)	10° 37'	150° 40'	50	1956-1966	88.3	80.6	76.5	73.3	81	85	74	81
Wewak(c)	3° 35'	143° 40'	15	1956-1966	86.8	86.4	73.4	72.7	83	85	75	74

(a) See text, page 1159, for explanation of this index. (b) Papua. (c) New Guinea. (d) 1955-65.

CLIMATOLOGICAL DATA: PORT MORESBY (PAPUA)  
 (Jackson's Strip, Lat. 9° 26' S., Long. 147° 13' E., Height above M.S.L. 92 ft)  
 BAROMETER, WIND, EVAPORATION AND CLOUD

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind			Prevailing direction		Mean amount evaporation (in)	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)
		Average miles per hour		Highest gust speed (mph)	9 a.m.	3 p.m.		
		9 a.m.	3 p.m.					
No. of years of observations	21	5	5	15	5	5	11	17
January	1,007.1	3.4	8.3	55	NNW	SW	6.17	6.7
February	1,007.0	3.9	9.3	52	N	SW	5.14	6.9
March	1,007.4	2.6	7.6	49	N	W	5.47	6.7
April	1,008.0	1.7	7.7	40	NNW	SSE	4.92	6.2
May	1,008.5	3.3	10.8	43	SE	SSE	5.43	5.1
June	1,009.7	5.7	13.0	46	SE	SSE	5.46	5.3
July	1,009.9	6.7	14.5	46	SE	SE	5.85	5.3
August	1,009.9	5.8	15.4	47	SE	SSE	6.43	5.5
September	1,009.9	5.3	14.5	46	SE	SSE	6.67	5.5
October	1,009.1	5.3	15.0	46	SSE	SSE	7.52	5.3
November	1,008.0	2.8	12.2	38	SE	SSE	7.53	5.5
December	1,007.0	2.3	9.6	54	NNW	SW	7.00	6.1
Year { Totals	..	..	..	..	..	..	73.59	..
Year { Averages	1,008.5	4.1	11.5	..	SE	SSE	..	5.8
Year { Extremes	..	..	..	55	..	..	..	..

(a) Scale 0-8.

TEMPERATURE AND SUNSHINE

Month	Mean temperature (° Fahr.)			Extreme shade temperature (° Fahr.)		Extreme temperature (° Fahr.) Lowest on grass	Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest		
No. of years of observations	22	22	22	22	22	11	11
January	89.9	73.3	81.6	97.2 11/64	68.8 27/49	65.3 21/66	6.5
February	89.0	73.2	81.1	97.0 12/47	65.8 17/57	65.4 17/57	6.2
March	89.0	72.9	80.9	95.8 26/46	65.0 23/61	58.0 31/66	6.2
April	88.0	72.7	80.4	93.6 5/46	62.3 11/46	56.6 1/66	6.9
May	87.9	72.6	80.3	92.9 2/64	58.1 28/53	59.0 18/66	7.5
June	86.5	71.4	78.9	93.0 25/58	58.0 23/54	54.0 29/65	6.9
July	86.0	70.7	78.3	92.0 11/64	57.3 8/46	50.8 30/65	6.7
August	86.4	71.3	78.9	92.8 12/58	58.6 14/61	54.0 14/61	6.8
September	87.4	72.2	79.8	94.6 17/65	58.0 10/61	53.0 10/61	6.9
October	89.5	72.9	81.2	95.9 4/65	61.3 11/55	52.2 5/65	7.5
November	90.4	72.8	81.6	97.3 11/65	63.2 7/63	55.0 4/63	8.4
December	90.3	73.4	81.9	96.0 (a)	67.2 1/63	63.0 6/66	7.2
Year { Averages	88.4	72.5	80.4	..	..	..	7.0
Year { Extremes	..	..	..	97.3	57.3	50.8	..
				11/11/65	8/7/46	30/7/65	..

(a) 4/1945 and 26/1959.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Mean relative humidity % at 9 a.m.	Rainfall (inches)				Fog mean no. days	
			Mean mthly	No. of days of rain	Greatest monthly	Least monthly		
								Greatest in one day
No. of years of observations	21	21	22	22	22	22	21	
January	28.0	77	5.96	16	12.69 1963	1.02 1950	2.70 12/46	3.4
February	28.5	81	8.17	18	17.08 1957	2.37 1947	5.54 14/49	3.9
March	28.3	80	7.17	18	17.42 1951	1.11 1950	4.42 16/51	7.3
April	28.8	82	7.12	15	28.65 1946	0.36 1966	12.89 12/46	7.7
May	28.2	79	2.10	8	7.35 1952	0.08 1958	3.02 18/60	7.0
June	26.5	78	1.72	7	12.33 1963	0.00 1957	8.06 5/63	3.7
July	25.2	77	0.75	6	2.75 1949	0.01 1958	1.33 1/52	2.5
August	24.9	74	1.20	7	5.43 1953	0.02 1959	1.94 22/53	2.1
September	25.5	73	1.53	7	13.53 1958	0.00 (a)	5.90 5/58	2.1
October	26.3	69	1.50	7	7.12 1948	0.06 1951	2.13 31/64	2.5
November	26.6	68	2.91	8	9.22 1952	0.00 1965	3.56 29/54	2.6
December	27.7	73	6.26	14	10.57 1954	1.02 1948	4.83 29/65	3.0
Year { Totals	..	..	46.39	131	..	..	..	47.8
Year { Averages	27.0	76	..	..	28.65	0.00 (b)	12.89	..
Year { Extremes	..	..	..	..	4/1946	..	12/4/46	..

(a) 1948 and 1950. (b) June 1957, September 1948 and 1950, and November 1965.

**CLIMATOLOGICAL DATA: LAE (NEW GUINEA)**  
 (Meteorological Office: Lat. 6° 44' S., Long. 147° 00' E., Height above M.S.L. 25 ft)  
**BAROMETER, WIND AND CLOUD**

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind					Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)
		Average miles per hour		Highest gust speed (mph)	Prevailing direction		
		9 a.m.	3 p.m.		9 a.m.	3 p.m.	
No. of years of observations	21	5	5	11	5	5	18
January	1,006.9	7.7	8.3	51	NW	SE	6.8
February	1,006.7	8.1	7.6	43	NW	SE	6.8
March	1,007.2	6.8	7.3	40	NW	SE	7.0
April	1,008.3	4.6	7.2	40	NW	SE	6.5
May	1,009.5	2.8	6.5	36	NW	SE	6.1
June	1,010.5	2.7	6.2	41	NW	SE	6.1
July	1,011.0	2.0	6.6	36	NW	SE	6.5
August	1,011.0	2.2	6.8	40	N	SE	6.5
September	1,010.9	2.3	7.9	38	NW	SE	6.3
October	1,010.0	2.9	7.9	40	NW	SE	6.0
November	1,008.4	4.6	8.7	45	NW	SE	6.3
December	1,007.3	6.0	8.4	41	NW	SE	6.7
Year { Totals	1,009.0	4.4	7.5	..	..	..	6.5
{ Averages	..	..	..	..	NW	SE	..
{ Extremes	..	..	..	51	..	..	..

(a) Scale 0-8.

**TEMPERATURE**

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)	
	Mean max.	Mean min.	Mean	Highest	Lowest
	No. of years of observations	18	18	18	18
January	88.0	74.7	81.3	100.8 20/59	69.2 7/60
February	88.2	74.7	81.5	99.1 14/57	70.0 24/62
March	87.4	74.6	81.0	101.7 6/56	71.1 16/56
April	86.1	73.9	80.0	93.0 4/56	70.4 22/66
May	85.1	73.2	79.1	91.8 24/52	67.0 30/53
June	83.4	72.2	77.8	92.2 8/58	67.0 20/53
July	81.9	71.5	76.7	89.9 16/64	66.7 31/65
August	82.1	71.6	76.9	90.4 28/64	67.0 27/55
September	83.6	71.9	77.7	90.0 12. 13/50	66.3 13/61
October	85.4	72.6	79.0	95.3 31/49	66.4 4/65
November	86.7	73.4	80.1	94.0 30/61	69.6 13/65
December	87.2	74.2	80.7	96.1 24/59	68.5 19/64
Year { Averages	85.4	73.2	79.3	..	..
{ Extremes	..	..	..	101.7	66.3
				6/3/56	13/9/61

**HUMIDITY, RAINFALL AND FOG**

Month	Vapour pressure mean 9 a.m. (m.bars)	Rainfall (inches)				Fog mean no. days	
		Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		
							Greatest in one day
No. of years of observations	21	22	22	22	22	21	
January	28.8	11.23	20	20.54 1964	4.21 1958	7.84 9/59	0.1
February	28.4	9.09	19	15.06 1953	2.09 1957	5.26 8/53	0.1
March	28.7	13.00	21	20.63 1952	6.19 1961	6.38 10/52	0.1
April	29.2	15.73	22	23.71 1955	11.28 1956	7.84 15/53	0.0
May	28.9	15.27	22	33.08 1957	2.65 1956	6.52 17/61	0.1
June	27.9	15.96	22	30.32 1965	4.51 1964	8.90 4/51	0.0
July	27.2	20.12	24	41.66 1953	5.63 1956	11.76 16/53	0.1
August	27.3	20.49	25	33.99 1957	6.32 1951	10.18 14/47	0.0
September	27.5	17.85	23	29.12 1950	7.58 1960	6.16 10/51	0.0
October	27.9	13.76	21	26.20 1957	4.82 1956	5.77 20/63	0.1
November	28.5	12.90	21	22.73 1948	5.04 1956	7.26 2/45	0.0
December	28.9	12.90	21	23.81 1957	6.06 1951	7.58 6/58	0.0
Year { Totals	..	178.30	261	..	..	..	0.6
{ Averages	28.3	..	..	..	..	..	..
{ Extremes	..	..	..	41.66	2.09	11.76	..
				7/1953	2/1957	16/7/53	..



### Population

Censuses of the non-indigenous population of the Territory of Papua and New Guinea have been taken in conjunction with censuses of the Commonwealth of Australia. For the indigenous population of the Territory of Papua and New Guinea, estimates of size, geographic location, and the broad age distribution of the population were available from the results of the Department of District Administration census (formerly known as the Tax Census). This was conducted over most of the Territory, but was continuous rather than conducted at a common date for all areas covered. No regular pattern of operations was adopted, although once the census had been taken in an area it was in general repeated fairly frequently. Although these estimates were of great value, the limitations of the information on population characteristics and the lack of simultaneous collection for all areas made them insufficient for many purposes. The 1966 census covered both indigenous and non-indigenous populations, and thus superseded the traditional census of non-indigenes.

Figures for the non-indigenous population as enumerated at censuses held in conjunction with Commonwealth censuses and estimates of the indigenous population based on the Department of District Administration censuses are set out below.

#### TERRITORY OF PAPUA AND NEW GUINEA: POPULATION AT CENSUSES, 1921 TO 1966

Year	Indigenous				Non-indigenous			
	Enumerated		Persons	Persons estimated	Total persons	Males	Females	Persons
PAPUA								
1921 . .	59,825	52,687	112,512	..	..	1,408	670	2,078
1933 . .	..	..	170,836	..	..	1,232	941	2,173
1941 . .	..	..	..	..	..	..	..	..
1947 . .	..	..	..	..	..	2,057	1,182	3,239
1950 . .	117,455	104,474	221,929	146,630	368,559	..	..	..
1954 . .	151,464	134,732	286,196	202,200	488,396	3,867	2,446	6,313
1961 . .	236,676	209,632	446,308	67,340	513,648	5,490	4,304	9,794
1966 . .	310,153	281,806	591,959	..	591,959	8,307	6,070	14,377
NEW GUINEA								
1921 . .	(a)100,445	(a) 66,276	(a)166,721	..	..	2,502	671	3,173
1933 . .	218,218	182,911	401,129	..	..	3,709	1,507	5,216
1941 . .	324,830	318,988	(b)684,284	300,000	984,284	..	..	..
1947 . .	..	..	..	..	..	4,369	1,831	6,200
1950 . .	415,939	354,116	770,055	301,050	1,071,105	..	..	..
1954 . .	538,113	472,480	1,010,593	184,714	1,195,307	7,201	4,241	11,442
1961 . .	721,806	647,277	1,369,083	64,300	1,433,383	9,158	6,378	15,536
1966 . .	810,153	748,205	1,558,358	..	1,558,358	11,746	8,546	20,292

(a) 1920; figures for 1921 not available. (b) Includes 34,087 indentured labourers, 1,127 native constabulary, 4,823 attending approved mission schools, and 429 patients at Anelaua Leprosarium and Taskul Observation Colony (New Ireland), for which particulars of sex are not available.

The total indigenous population of Papua and New Guinea at the 1966 census was 2,150,317 persons, and the total non-indigenous, 34,669 persons. Estimated totals for 30 June 1968 are 2,276,632 and 40,363 persons respectively. See pages 1179 and 1185 for further details.

#### Population Census, 1966

The census was conducted over the period June–July 1966 and covered both indigenous and non-indigenous populations. For census purposes the indigenous population comprised the aboriginal peoples of the Territory of Papua and New Guinea, Australia, New Zealand, and the other islands

of Polynesia, Melanesia, and Micronesia, and all persons descended from these aboriginal peoples to the extent of more than one half. The non-indigenous population comprised all persons not covered by the definition of the indigenous population given above. The Census completely enumerated virtually all the non-indigenous population, together with all the indigenous population located in areas outside rural villages. The rural village population was estimated by means of a representative sample of approximately 10 per cent of rural villages. Consequently the figures published for the population of rural villages are estimates of total figures based on a representative sample, while those published for other areas are totals based on complete enumeration. Totals for a District or Territory as a whole are the sums of these estimated and actual figures.

A short description of the development operations undertaken before the 1966 census and of the actual census operations is given in Year Book No. 53, pages 141-2. A description of Methods and definitions used can be found in *Population Census, 1966—Preliminary Bulletin No. 20: Summary of Population* issued by the Bureau of Statistics, Konedobu, Papua.

#### Selected characteristics

The following tables and text present statistics relating to some selected characteristics as derived from the 1966 census. Details of all characteristics published can be found in Bulletin No. 20 (*see* preceding paragraph). In the tables, minor discrepancies between totals and sums of components are due to the rounding of estimates calculated from sample data.

#### POPULATION, BY ADMINISTRATIVE DISTRICTS(a) TERRITORY OF PAPUA AND NEW GUINEA, CENSUS, JUNE-JULY 1966

(Persons)

District(a)	Indigenous	Non-indigenous	Total	Approximate area square miles	Persons per square mile
Western . . . . .	61,424	436	61,860	40,000	1.55
Gulf . . . . .	55,077	233	55,310	15,000	3.69
Central . . . . .	134,693	11,638	146,331	12,000	12.19
Milne Bay . . . . .	99,161	996	100,157	7,800	12.84
Northern . . . . .	57,967	608	58,575	9,000	6.51
Southern Highlands . . . . .	183,635	466	184,101	6,200	22.69
<i>Total, Papua</i> . . . . .	<i>591,959</i>	<i>14,377</i>	<i>606,336</i>	<i>90,000</i>	<i>6.74</i>
Eastern Highlands . . . . .	201,978	2,054	204,032	5,000	40.81
Chimbu . . . . .	166,923	322	167,245	2,800	59.73
Western Highlands . . . . .	289,452	1,690	291,142	9,200	31.64
West Sepik . . . . .	99,141	466	99,608	19,700	5.06
East Sepik . . . . .	156,406	1,525	157,931	10,500	15.04
Madang . . . . .	149,986	2,061	152,047	10,800	14.08
Morobe . . . . .	204,370	4,696	209,066	12,700	16.46
West New Britain . . . . .	43,886	306	44,192	7,100	6.22
East New Britain . . . . .	104,887	5,043	109,930	7,000	15.70
New Ireland . . . . .	49,334	964	50,298	3,800	13.24
Bougainville . . . . .	71,761	718	72,479	4,100	17.68
Manus . . . . .	20,232	447	20,679	800	25.85
<i>Total, New Guinea</i> . . . . .	<i>1,558,358</i>	<i>20,292</i>	<i>1,578,650</i>	<i>93,500</i>	<i>16.88</i>
<b>Total, Papua and New Guinea</b>	<b>2,150,317</b>	<b>34,669</b>	<b>2,184,986</b>	<b>183,500</b>	<b>11.91</b>

(a) For location of districts *see* map on plate 55.

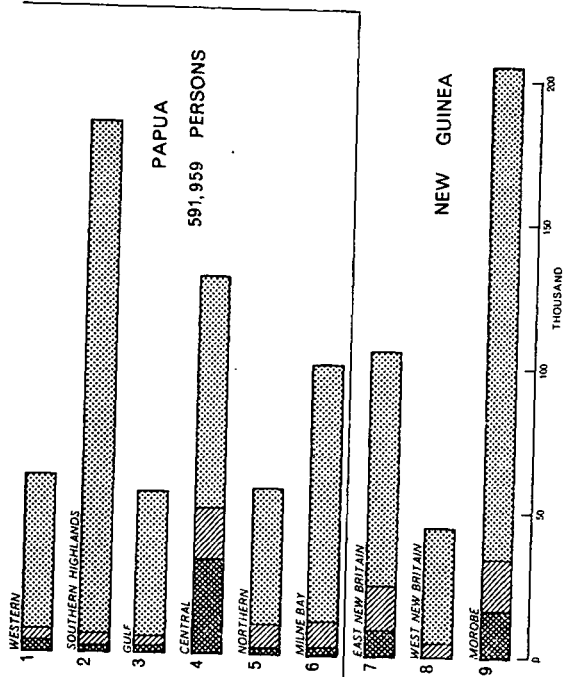
The chart on plate 55 shows the indigenous populations of districts classified by the categories urban, rural (village and non-village).

The population (indigenous and non-indigenous) of the major towns at the census, June-July 1966, was as follows: Port Moresby, 41,848; Lae, 16,546; Rabaul, 10,561; Wewak, 8,945; Madang, 8,837; Goroka, 4,826; Daru, 3,663; Mount Hagen, 3,315; Bulolo, 2,724; Lorengau, 2,446; Samarai, 2,201; Kavieng, 2,142.

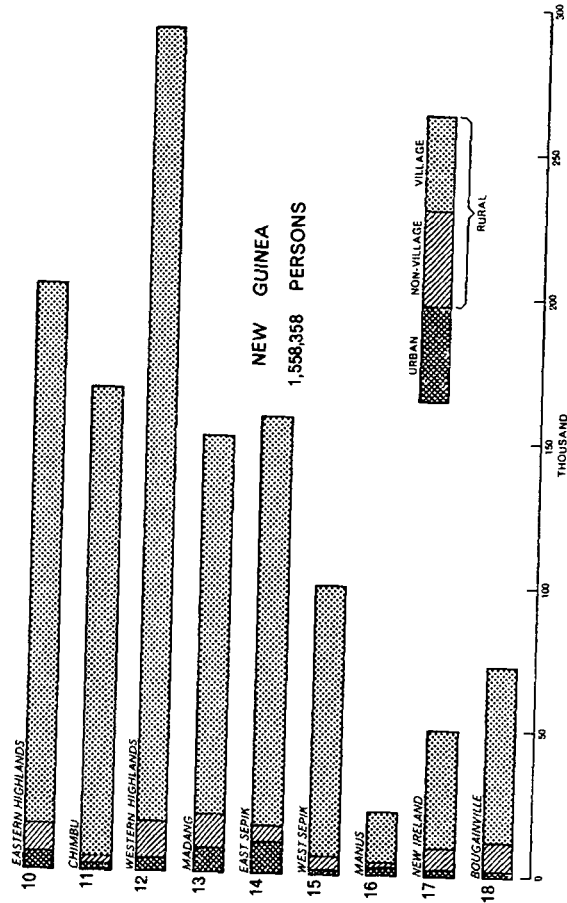
# INDIGENOUS POPULATION OF PAPUA AND NEW GUINEA

CENSUS JUNE-JULY 1966

INDIGENOUS POPULATION: (i) Aboriginal peoples of Papua and New Guinea, Australia, New Zealand and other islands of Polynesia, Melanesia and Micronesia, and (ii) all persons descended from such peoples to the extent of more than one half.



URBAN AREAS: Centres with populations of 500 or more, excluding separately located synagogues, hospitals, missions, etc.



RURAL AREAS: (i) Non-village areas — Administration and local government centres with populations of less than 500 (but including isolated Administration schools of all sizes); missions (including mission schools, hospitals, pharmacies, etc.); plantations, etc.  
 (ii) Rural villages — villages recorded as such by Department of District Administration except those in urban areas.



**POPULATION, BY SCHOOL EDUCATION**  
**TERRITORY OF PAPUA AND NEW GUINEA, CENSUS, JUNE-JULY 1966**  
(Persons)

<i>School education</i>	<i>Indigenous</i>			<i>Non-indigenous</i>		
	<i>Papua</i>	<i>New Guinea</i>	<i>Total</i>	<i>Papua</i>	<i>New Guinea</i>	<i>Total</i>
Secondary education . . . . .	6,274	8,273	14,546	9,047	12,183	21,230
Primary education—						
Primary 'A' schools(a) . . . . .	405	459	864	2,460	4,083	6,543
Primary 'T' schools(b) . . . . .	98,473	186,172	284,641	484	279	763
Primary school (English not taught)	89,447	216,740	306,191	23	149	172
<i>Total primary education . . . . .</i>	<i>188,325</i>	<i>403,371</i>	<i>591,698</i>	<i>2,967</i>	<i>4,511</i>	<i>7,478</i>
Attended school, grade not known . . . . .	2,193	6,222	8,416	225	467	692
Never attended school . . . . .	395,090	1,140,319	1,535,409	1,981	3,082	5,063
Not stated . . . . .	77	172	249	157	49	206
<b>Total . . . . .</b>	<b>591,959</b>	<b>1,558,358</b>	<b>2,150,317</b>	<b>14,377</b>	<b>20,292</b>	<b>34,669</b>

(a) Schools where lessons are taught in English and the primary school syllabus of New South Wales is followed.  
(b) Schools where lessons are taught in simplified English and a specially designed syllabus is followed.

NOTE. The above table includes persons of all ages. The category 'never attended school' therefore includes a large number of persons too young to attend school.

At the census the *literacy* of persons aged ten years and over was determined on the basis of whether a person could read and write very simple sentences in any of the following languages, or a combination of them, English, Pidgin, Police Motu, any indigenous or foreign language. The indigenous population ten years and over totalled 1,458,054. The numbers of persons who were literate in one or more of the three main languages of administration were as follows: English 166,386, Pidgin 178,271, Police Motu 49,310. Persons who were literate in more than one language are included in each category which applies, for example 28,240 persons were literate in both English and Pidgin and are therefore included in both totals. Of the total population aged ten years and over, 1,126,995 (72 per cent) were illiterate.

The *work force* of Papua and New Guinea was divided into three main categories as follows:

- (i) Wholly or mainly money-raising.
- (ii) Mainly subsistence but with some money-raising.
- (iii) Wholly subsistence.

The questions on the interview questionnaire concerned with subsistence occupation and employment status were as follows.

'Subsistence occupation—

- (a) What is the person's subsistence occupation?

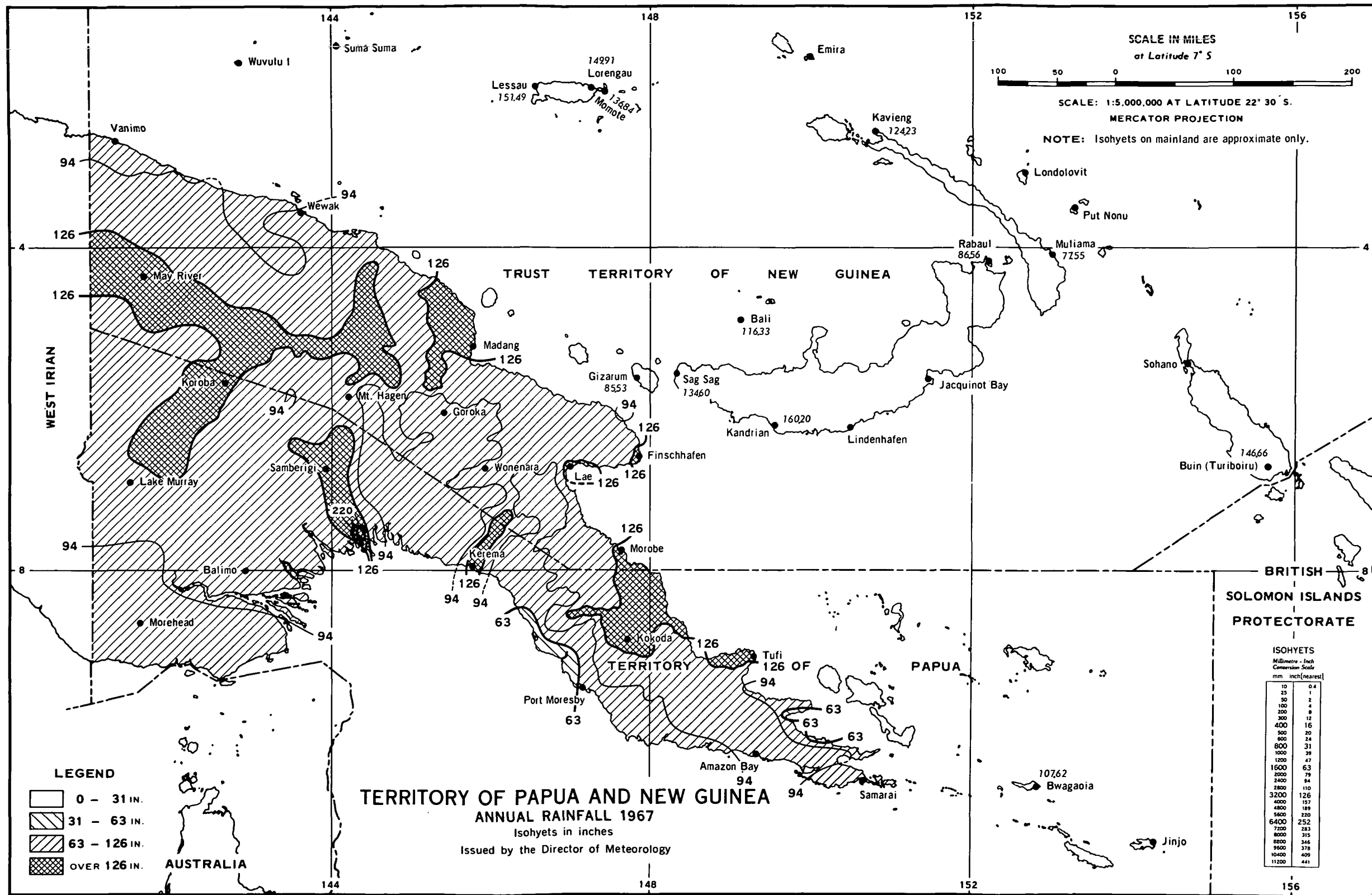
Write one of the following: Food gardener, 'G'. Fisherman, 'F'. Other subsistence, give details. Sago processor, 'P'. Hunter, 'H'. No subsistence, 'N'.

- (b) Does the person spend more time at subsistence work (write 's') or working at a money-raising occupation (write 'm')? If no occupation of any kind write 'NA'.
- (c) Does the person do this subsistence work on his own account (write 'o') or as a family helper (write 'h')? If no subsistence occupation write 'NA'.

'Employment status—

- (a) Did the person have a paid job or money-raising occupation of any kind excluding subsistence work, last week (even though he may have been absent from it)? Answer YES or NO.
- (b) Did the person do any money-raising work at all last week? Answer YES or NO. Persons working in a family business or plantation should answer YES.
- (c) Was the person temporarily laid off by his employer without pay for the *whole* of last week? Answer YES or NO.
- (d) Was the person actively looking for a paid job last week? Answer YES or NO.  
'Actively looking for work' means (i) being registered with an employment agency or Labour Office, or (ii) approaching or trying to find possible employers.
- (e) Was he looking for his first paid job? Answer YES or NO.'

It should be noted that by definition persons who were less than ten years of age were excluded from the work force.





Persons who indicated 'YES' to any one of the employment status questions (a) to (e) were classified as in the money-raising work force. This approach conforms closely to the recommendations of the Eighth International Conference of Labour Statisticians held in Geneva in 1954.

It should be noted that during the field interviewing the money-raising ability of persons was taken into account in the decision to include them in either the money-raising or wholly subsistence work force. For example where it could be ascertained that a person with a subsistence occupation had the capacity and inclination to make money, i.e. he had in the past and expected in the near future to make money from the crop of his coffee garden, vegetable garden, etc., (although he may not have made any money during the reference week) he was included in the money-raising work force. As a result the total for the money-raising work force (particularly the mainly subsistence with some money-raising category) tends to be somewhat higher than would be obtained from a pure 'last week' approach.

These persons were then classified to one of the above-mentioned work force categories by reference to subsistence occupation question (b). If a person spent more time at subsistence work ('s') he was classified as in the 'mainly subsistence but with some money-raising' work force category. On the other hand if he spent more time working at a money-raising occupation ('M') or ('NA') to subsistence occupation question (b) he was classified as in the 'wholly money-raising or mainly money-raising with some subsistence' work force category.

Persons not in the money-raising work force who indicated in subsistence occupation questions (a) to (c) that they were actively engaged in subsistence work, e.g. (a) ('G')—Food Gardener (b) ('s')—more time at subsistence work and (c) ('H')—Family Helper, were classified to the 'wholly subsistence' work force category. *All other persons were classified as not in the work force.*

POPULATION IN THE WORK FORCE, BY OCCUPATIONAL STATUS: TERRITORY OF PAPUA AND NEW GUINEA, CENSUS, JUNE-JULY 1966

Occupational status	Papua			New Guinea			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>INDIGENOUS</b>									
Wholly or mainly money-raising—									
Employed—									
Employer . . . . .	483	22	505	2,425	326	2,751	2,908	348	3,256
Self-employed . . . . .	6,249	1,019	7,268	40,469	8,494	48,963	46,718	9,513	56,231
Employee . . . . .	39,328	2,877	42,205	89,950	8,062	98,012	129,278	10,939	140,217
Helper, unpaid . . . . .	1,870	3,082	4,952	8,246	18,776	27,022	10,116	21,858	31,974
Total employed . . . . .	47,930	7,000	54,930	141,090	35,658	176,748	189,020	42,658	231,678
Unemployed (including seeking first job) . . . . .	407	71	478	1,347	139	1,486	1,754	210	1,964
Total wholly or mainly money-raising . . . . .	48,337	7,071	55,408	142,437	35,797	178,234	190,774	42,868	233,642
Mainly subsistence with some money-raising . . . . .	36,488	37,839	74,327	170,233	197,549	367,782	206,721	235,388	442,109
Total indigenous money-raising work force . . . . .	84,825	44,910	129,735	312,670	233,346	546,016	397,495	278,256	675,751
Wholly subsistence . . . . .	91,434	113,312	204,746	159,743	216,256	375,999	251,177	329,568	580,745
Total indigenous work force . . . . .	176,259	158,222	334,481	472,413	449,602	922,015	648,672	607,824	1,256,496
<b>NON-INDIGENOUS</b>									
Wholly or mainly money-raising—									
Employed—									
Employer . . . . .	331	89	420	699	164	863	1,030	253	1,283
Self-employed . . . . .	93	44	137	160	94	254	253	138	391
Employee . . . . .	5,463	2,283	7,746	7,466	2,762	10,228	12,929	5,045	17,974
Helper, unpaid . . . . .	102	116	218	152	257	409	254	373	627
Total employed . . . . .	5,989	2,532	8,521	8,477	3,277	11,754	14,466	5,809	20,275
Unemployed (including seeking first job) . . . . .	15	16	31	29	25	54	44	41	85
Total wholly or mainly money-raising work force . . . . .	6,004	2,548	8,552	8,506	3,302	11,808	14,510	5,850	20,360
Mainly subsistence with some money-raising . . . . .	8	3	11	18	16	34	26	19	45
Total non-indigenous money-raising work force . . . . .	6,012	2,551	8,563	8,524	3,318	11,842	14,536	5,869	20,405
Wholly subsistence . . . . .	10	18	28	11	13	24	21	31	52
Total non-indigenous work force . . . . .	6,022	2,569	8,591	8,535	3,331	11,866	14,557	5,900	20,457



### Administration

The *Papua-New Guinea Provisional Administration Act 1945-1946*, which provided for the transfer back of control from the military authorities to civil authorities after the 1939-45 War, was repealed by the *Papua and New Guinea Act 1949*, which came into force on 1 July 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provided for an Administrative Union of the Territory of Papua and the Territory of New Guinea with one Administrator, a Legislative Council and an Executive Council, one Supreme Court, and one Public Service.

For an outline of the development of the Legislative and Executive (later Administrator's) Councils between 1949 and 1963, see Year Book No. 51, page 117.

In May 1963 the Commonwealth Government passed an amendment to the Papua and New Guinea Act, making provision for a House of Assembly of sixty-four members to replace the Legislative Council. The house then consisted of ten official members appointed by the Governor-General on the advice of the Administrator, forty-four members elected by the people of the Territory on a common roll in forty-four open electorates, and ten non-indigenous persons elected on a common roll in ten special electorates comprising one or more open electorates. The first elections for the House of Assembly were held in February-March 1964, and the inaugural meeting of the new House was convened on 8 June 1964.

The 1963 Act also increased the membership of the Administrator's Council from seven to eleven, seven of whom must be elected members of the House of Assembly.

In October 1966 the Commonwealth Parliament passed a further amendment to the Papua and New Guinea Act, providing for an increase in the membership of the House of Assembly to ninety-four, sixty-nine members representing open electorates, fifteen from regional electorates and ten official members.

The second general election for the House of Assembly was held from 17 February-16 March 1968, and the Second House was convened on 4 June 1968. The Ministerial Nomination Committee in conjunction with the Administrator chose fifteen elected members who were appointed to seven Ministerial Member and eight Assistant Ministerial Member positions.

The *Papua and New Guinea Act 1968* provides for the Administrator's Council to become the Administrator's Executive Council, deciding major matters of Territory policy. In June 1968 it had its first meetings. It consists of the Administrator, the seven Ministerial Members, three official Members, and a twelfth Councillor who is an elected M.H.A. but a non-office holder.

Local government was introduced in 1949 by the Native Village Councils Ordinance which was replaced by the *Local Government Ordinance 1963*. The Administrator may establish by proclamation local government councils with authority in defined areas. Provision is also made for the establishment of multi-racial local councils.

### Judiciary

The courts which exercise jurisdiction within the Territory are: the Supreme Court of the Territory of Papua and New Guinea, District Courts (Papua and New Guinea), Local Courts and Children's Courts (Papua and New Guinea), and Warden's Courts.

The Supreme Court is the highest judicial authority in the Territory and has unlimited criminal and civil jurisdiction. District Courts have criminal jurisdiction over the less serious offences which are punishable on summary conviction, but have no jurisdiction to try treason crimes, misdemeanours and other indictable offences. They also exercise a limited civil jurisdiction. The Local Courts exercise a substantially similar jurisdiction but at a more subordinate level. The Administrator has power to establish, in respect of each gold-field or mineral field, warden's courts with jurisdiction over civil cases respecting mining or mining lands held under the *Mining Ordinance 1937-1966* of Papua and *Mining Ordinance 1928-1966* of New Guinea and offences against the mining laws of the Territory.

In addition, there is the Land Titles Commission set up under the *Land Titles Commission Ordinance 1962-1967* to inquire into and determine rights in land, particularly native land. The Commission has the particular function under the *New Guinea Land Titles Restoration Ordinance 1951-1966* to inquire into and determine claims to interest in land where the official records have been lost or destroyed as a result of the Japanese invasion of New Guinea. For the purposes of the latter Ordinance the jurisdiction of the Commission is exercised by the Chief Commissioner or a Commissioner appointed under the *Land Titles Commission Ordinance* who is a qualified legal practitioner.

## Agriculture and animal industry

### Soils

Although many parts of Papua and New Guinea are covered by skeletal soils unsuitable for agriculture, there are extensive areas in all districts where fertile soils occur suitable for growing a variety of crops. Much of the agriculture of the Territory up to the present has been on soils on the coastal plains, which, apart from the swamp soils, consist mainly of alluvium and podsolised alluvium. So far these have been mostly under coconut plantations, although other crops such as rubber, coffee and cocoa are also grown. The coastal swamp soils, of which there are extensive areas in the delta plains of the Sepik and Fly rivers and intermittently around the coasts and along the lower reaches of other rivers, 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 valley occupied by the Ramu and Markham Rivers.

### Land tenure

The *Land Ordinance* 1962 of the Territory of Papua and New Guinea, which came into operation in 1963, replaced much land legislation previously in force separately in the two Territories. This simplification in legislation was a major step towards applying uniform principles to land tenure throughout the whole of the Territory of Papua and New Guinea. All land in the Territory other than native land or land subject to any estates, rights, titles, or interests in force from time to time is Administration land.

There is considerable variation throughout the Territory in the nature of customary ownership of land. In most areas some rights remain in the landholding group, and individuals within the group have limited rights of use, either for life or for a shorter period. Thus the normal system by which the rights of ownership in land use are acquired is by birth to a landholding group. Transfer of rights between individuals by sale and purchase appears to have been unusual in the past, but this practice is now an established custom in some localities and appears to be increasing. Inheritance may be based on either patrilineal or matrilineal descent, or both. In parts of the Territory, however, there is a tendency for the whole inheritance system to change, particularly in communities where it is based on matrilineal descent. Following a close study of the problems in relation to land holdings by indigenes, the Government has laid down the following broad principles of policy.

The ultimate and long-term objective in Papua and New Guinea is to introduce throughout the Territory a single system of land holding regulated by the central Administration by statute, administered by the Department of Lands of the central Administration and providing for secure individual registered titles after the pattern of the Australian system.

Only the Administration working through the Department of Lands, Surveys and Mines and through the Registrar of Titles may issue and register land titles.

Land subject to native custom remains subject only to native custom until it is taken out of custom either by acquisition by the Administration or by a process, provided for by the *Land (Tenure Conversion) Ordinance* 1963-1967, of conversion of title to an individual registered title.

Upon either acquisition or conversion of title, compensation is provided in respect of extinction of rights under native custom.

Land held under native custom may not be acquired outside of native custom by other than the Administration. Land may not be acquired by the Administration except for prescribed public purposes unless the native owners are willing to sell and the Administration is convinced, through its Department of District Administration, that the land is not required by them, and conversion of title from native custom to individual registered title may take place only if all those interested in the land under native custom consent to conversion and the method of conversion.

The services of Commissioners under the *Land Titles Commission Ordinance* 1962-1967 are used, as a first priority, on investigations into claims by the Administration that land is ownerless and may therefore be declared administration land, on investigation into the ownership under native custom of land proposed to be acquired by the Administration, on settlement of disputes about the ownership of land held under native custom, and on investigations into the rights held under native custom in land proposed to be converted to individual registered title. The Commissioners, as opportunity offers, continue investigations into the holding of land under native custom; the results of such investigations are recorded for use in connection with future acquisitions or conversions of title.

The legislation and administrative steps necessary to put the remainder of this policy into effect are well advanced.

### Suitable crops

Most tropical crops can be grown in Papua and New Guinea. Those of commercial importance at present are coconuts, cocoa, rubber, coffee, tea, peanuts, pyrethrum and passion fruit. Major developments in the production of oil-palm are under way. This crop is expected to be of future economic significance.

### Non-indigenous rural production

In 1967-68 there were 1,240 holdings in use by non-indigenous persons, 341 being in Papua and 899 in New Guinea. The total area of these holdings was 1,026,882 acres, 279,835 in Papua and 753,047 in New Guinea. The following tables summarise the information available for principal activities.

**TERRITORY OF PAPUA AND NEW GUINEA**  
**NUMBER OF HOLDINGS, AREA, PRODUCTION AND NEW PLANTINGS**  
**1964 TO 1968**

(Source: *Production Bulletin*, Part I: *Rural Industries*, Bureau of Statistics, Papua)

Year ended 31 March—	Holdings	Area under crop(a)		Production	New plantings	
		acres	'000		acres	'000
<b>Coconuts—</b>						
1964 . . . . .	687	267,578	12,076	83,667	2,771	242
1965 . . . . .	670	262,039	11,995	85,034	4,013	272
1966 . . . . .	667	264,391	12,006	90,209	5,512	377
1967 . . . . .	683	269,127	12,704	81,159	5,208	460
1968(c) . . . . .	681	270,176	12,809	86,736	4,902	586
<b>Cacao—</b>						
1964 . . . . .	429	112,404	18,360	11,285	6,349	1,809
1965 . . . . .	435	116,981	19,792	14,326	7,058	1,835
1966 . . . . .	439	122,226	20,696	14,427	8,354	1,870
1967 . . . . .	447	126,147	21,830	15,059	4,981	1,366
1968(c) . . . . .	447	129,706	21,400	18,092	5,446	1,749
<b>Coffee—</b>						
1964 . . . . .	247	10,851	6,865	3,032	890	800
1965 . . . . .	261	12,228	7,860	3,374	1,345	1,162
1966 . . . . .	257	13,415	8,779	3,874	1,323	1,254
1967 . . . . .	248	14,365	9,912	4,911	1,090	1,212
1968(c) . . . . .	249	14,817	10,004	4,705	810	937
<b>Rubber—</b>						
1964 . . . . .	73	33,797	3,703	4,941	1,419	314
1965 . . . . .	70	33,317	3,768	5,183	1,238	249
1966 . . . . .	81	35,417	3,998	5,333	1,847	344
1967 . . . . .	86	37,043	4,177	5,437	1,260	305
1968(c) . . . . .	89	35,878	4,126	5,711	484	167

(a) Includes mature and immature areas. (b) Includes replacements. (c) 30 June.

TERRITORY OF PAPUA AND NEW GUINEA: AREA UNDER PRINCIPAL CROPS  
AND CROP PRODUCTION, YEAR ENDED 30 JUNE 1968(Source: *Production Bulletin, Part I: Rural Industries*, Bureau of Statistics, Papua)

Crop	Recorded area in acres			Unit	Recorded production			Average yield per productive acre		
	Papua	New Guinea	Total		Papua	New Guinea	Total	Papua	New Guinea	Total
<b>Permanent crops—</b>										
<b>Copra—</b>										
Plantation	33,526	236,650	270,176	ton	9,123	77,613	86,736	0.30	0.39	0.37
Trade(a)	..	..	..	..	371	4,553	4,924	..	..	..
<b>Cacao—</b>										
Plantation	10,837	118,869	129,706	ton (beans)	1,218	16,874	18,092	0.14	0.19	0.18
Trade(a)	..	..	..	..	14	1,102	1,116	..	..	..
<b>Coffee—</b>										
Plantation	918	13,899	14,817	..	70	4,634	4,705	0.08	0.33	0.32
Trade(a)	..	..	..	..	10	559	569	..	..	..
Rubber	34,506	1,372	35,878	ton (dry)	5,711	..	5,711	0.22	..	0.22
Tea	5	3,741	3,746	lb (dry)	..	151,667	151,667	..	235.5	235.5
<b>Grain crops—</b>										
Maize	33	92	125	bus	458	2,297	2,755	13.88	24.97	22.04
Rice	232	61	293	ton (paddy)	88	72	160	0.38	1.18	0.55
Sorghum	117	961	1,078	bus	2,164	14,984	17,148	18.50	15.59	15.91
<b>Crops for green fodder—</b>										
Maize	29	40	69	..	..	..	..	..	..	..
Sorghum	20	412	432	..	..	..	..	..	..	..
Other	117	1,100	1,217	..	..	..	..	..	..	..
<b>Industrial crops—</b>										
Peanuts	19	4,149	4,168	cwt (kernel)	47	15,199	15,246	2.47	3.66	3.66
<b>Vegetable crops—</b>										
<b>For sale—</b>										
Beans (green)	15	23	38	cwt	327	620	947	21.80	26.96	24.92
Tomatoes	12	26	38	..	432	873	1,305	36.00	33.58	34.34
Potatoes, English	4	9	13	..	80	263	343	20.00	29.22	26.38
Potatoes, sweet	56	297	353	..	1,869	21,628	23,497	33.37	72.82	66.56
Pumpkins	24	22	46	..	1,094	930	2,024	45.58	42.27	44.00
Other	92	107	199	..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>For consumption on holding—</b>										
Potatoes, sweet	743	3,713	4,456	cwt	35,021	218,027	253,228	47.13	58.77	56.83
All other	472	1,638	2,110	..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All other crops	288	1,282	1,570	..	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total</b>	<b>82,065</b>	<b>388,463</b>	<b>470,528</b>							

(a) Includes all produce acquired by purchase during the year from sources outside the holding. (b) Not available for publication. (c) Included in All other crops. Total area planted to tea was 2,402 acres.

**Livestock**

Total non-indigenous stockholding was estimated as 22,000 in 1967-68. Indigenous involvement in the cattle industry is being encouraged. An estimated 4,600 head of cattle were owned by indigenes in 1967-68. Dairy farming is carried out on a small scale near major towns.

A number of British breeds of cattle are represented, but for best results the use of Zebu crossbred types of cattle is desirable. For dairying the Jersey seems to be the best breed and adapts quite well to tropical conditions.

Central abattoirs controlled by the Administration have been set up at Lae and Port Moresby and there are smaller private slaughterhouses at other centres.

The following table shows the numbers of the various kinds of livestock on non-indigenously occupied holdings in Papua and New Guinea at 30 June 1968.

**TERRITORY OF PAPUA AND NEW GUINEA: LIVESTOCK NUMBERS**  
**30 JUNE 1968**

(Source: *Production Bulletin*, Part I: *Rural Industries*, Bureau of Statistics, Papua)

<i>Kind of stock</i>	<i>Papua</i>	<i>New Guinea</i>	<i>Total</i>
Horses . . . . .	401	842	1,243
Cattle—			
For dairying—			
Cows—in milk . . . . .	488	1,327	1,815
dry . . . . .	336	979	1,315
Heifers, one year and over . . . . .	163	770	933
Heifer calves, under one year . . . . .	195	696	891
Bulls, one year and over . . . . .	59	254	313
Bulls under one year . . . . .	34	161	195
Total dairying cattle . . . . .	1,275	4,187	5,462
For beef—			
Cows and heifers, one year and over . . . . .	5,314	20,639	25,953
Calves, under one year . . . . .	1,218	3,928	5,146
Bulls, one year and over . . . . .	336	1,016	1,352
Bulls, under one year . . . . .	167	333	500
Other, one year and over . . . . .	2,904	11,303	14,207
Total beef cattle . . . . .	9,939	37,219	47,158
Total, all cattle . . . . .	11,214	41,406	52,620
Sheep . . . . .	45	345	390
Pigs—			
Boars . . . . .	100	271	371
Breeding sows . . . . .	371	907	1,278
Suckers, weaners, and slips . . . . .	953	2,070	3,023
Other . . . . .	93	387	480
Total pigs . . . . .	1,517	3,635	5,152
Goats . . . . .	521	668	1,189
Poultry(a)—			
Fowls . . . . .	63,624	42,577	106,201
Ducks . . . . .	1,470	1,364	2,834
Turkeys . . . . .	230	173	403
Geese . . . . .	10	46	56
Total poultry . . . . .	65,334	44,160	109,494

(a) Only recorded where poultry products are marketed or flocks exceed 100 birds.

### Fishing

Over 1,400 different species of fish are to be found in the coastal and inland waters of Papua and New Guinea and many are important food fish. Those of greatest commercial significance are barramundi, tuna, skipjack, crayfish and prawns. Efforts are being made to encourage indigenous fishermen to regard fishing as a source of cash income and not merely as a means of subsistence. This involves the Administration in research and extension work and requires the improvement of refrigeration, transportation and marketing facilities throughout the Territory. In the Highlands there is increasing interest in fish culture in freshwater ponds.

### Native agriculture

Most of the indigenous inhabitants of Papua and New Guinea are agriculturalists 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 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. In recent years the indigenes have taken up the production of introduced crops such as peanuts, rice, cucurbits, tobacco and maize for their own consumption, and cocoa, coffee and pyrethrum for export. Some small-scale rubber growing is now being undertaken. In coastal areas large quantities of copra are produced. In 1966-67 estimated indigenous production was: copra 35,000 tons, coffee 10,600 tons, cocoa 5,000 tons. In many localities the indigenes follow a farming system known as bush fallowing rotation, which is described in Year Book No. 48 and earlier issues.

The growing of food is done both by the men and the 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 the felling of forests is done by the men, and carrying the harvested food home to the village is done by the women. Other work, however, such as cultivating, planting and weeding may be done by either men or women according to the customs of the particular village or area.

The advancement of native agriculture for local food supply and improved land use in village gardens as well as for economic production of crops for sale have a high priority in Government policy for the Territory. In recent years the Administration has intensified the programme of agriculture extension work among the indigenes.

#### Survey of indigenous agriculture and ancillary surveys, 1961-62

A survey of the agriculture of indigenes of Papua and New Guinea was carried out in 1961-62 by the Territory Bureau of Statistics in conjunction with the Commonwealth Bureau of Census and Statistics and the Territory Department of Agriculture, Stock and Fisheries. A comprehensive report on the surveys was published by the Territory Statistician in 1963, and reference should be made to this for further information. A summary of the principal results of the survey appears on pages 1104-10 of Year Book No. 52.

#### Co-operative societies

Co-operatives are under the supervision and guidance of the Division of Co-operative Extension within the Department of Trade and Industry. A Territory-wide Federation of Co-operative Unions and a Co-operative Wholesale Society were established recently. A new co-operative college to be built at Laloki, near Port Moresby, will replace the existing Co-operative Educational Centre.

For the year ended 31 March 1968 primary societies numbered 316, with a membership of 109,175, a total capital of \$2,329,405, and a turnover of \$5,378,418. Secondary organisations numbered 14, with 239 member societies, a total capital of \$666,840, and a turnover of \$1,147,106.

### Indigenous labour

The 1966 population census shows that there were 235,000 persons wholly or mainly engaged in the money-raising work force, 200,000 of these being employed in the private sector.

Minimum wages and conditions of employment for indigenous workers are prescribed under the *Native Employment Ordinance* 1958-1967. An employer is required to pay a minimum cash wage to every worker employed by him, and provide the worker, and his family in appropriate cases, with food, clothing, cooking and eating utensils, towels, soap and other articles, medical attention, and, where necessary, accommodation. The estimated minimum cost of providing these entitlements, excluding accommodation, is estimated at \$143.00 a year per worker. The value of accommodation varies, but it would be in most cases about \$30.00 a year.

The legal minimum cash portion of the wage for unskilled rural workers is \$52 a year for the first year of employment, \$58.50 in the second year and \$65.00 for subsequent years.

In urban areas industrial agreements negotiated between employers and workers' organisations determine the rates of wages payable to workers. Provision is made by legislation for the employer-employee agreements reached to be registered by the Industrial Registrar, and they are then deemed to be judicial awards between the parties, and to have the force of law. Under this system minimum wage rates have been determined for the principal urban centres, and cover an increasing number of workers. In Lae, Rabaul and Madang, the current minimum rate payable as a total cash wage, for unskilled adults or married juniors is \$6.75 per week; in Port Moresby and Wewak \$6.50; other towns \$6.00.

Other provisions of the awards relate to: Annual leave and sick leave (two weeks' leave on full pay and six days' sick leave per annum); the employment of qualified tradesmen (weekly rates of pay \$14.00 to \$16.00 for second class tradesmen and \$18.00 to \$20.00 for first class tradesmen); rates of pay and conditions of employment of stevedoring workers and ships' crews; tradesmen who have not completed a formal approved apprenticeship (weekly rates of pay \$15.00 to \$17.00); and rates of pay and conditions of employment of workers in the timber and sawmilling industries.

There has been a continued expansion of the trade union movement since industrial legislation for the Territory was introduced in March 1963. In December 1968 nineteen associations with a membership of 16,163 had been registered as industrial organisations of workers under the Industrial Organisations Ordinance.

Provision is made in other legislation for the establishment and maintenance of modern standards of industrial safety and for the payment of compensation for injury or disease arising out of, or in the course of, employment.

An apprenticeship scheme was inaugurated in 1955 and reorganised in 1968. An Apprenticeship Board, comprising representatives of private enterprise and government, advises the Administration on apprenticeship matters. By March 1969, 609 apprentices had received trade certificates and 1,186 were under agreement.

### Housing

Village housing is still constructed to traditional patterns using local materials including bush timber, bamboo, grass, pit-pit and palm leaves. Town housing is generally constructed from comparatively expensive imported material including fibrous asbestos cement, aluminium and galvanised iron.

The rapid growth of town populations has created a housing shortage. Major programmes are directed towards reducing this backlog. Administration expenditure on housing for local officers was programmed at \$2,650,000 in 1968-69.

The Housing Commission completed its first year of operations in 1968-69 building some 300 houses at an average cost of about \$2,000. It has commenced construction of proto-type \$1,300 units and also offered blocks for builders wishing to demonstrate new building materials.

### Secondary industries

The major manufacturing industries are generally those processing primary products, mainly for export. Examples of these are plywood, coconut oil, copra by-products, desiccated coconut and pyrethrum.

Nevertheless industries catering for the rapidly expanding local market remain numerically predominant. These include the brewing of beer, furniture making and assembly of electrical appliances; the production of cigarettes and twist tobacco, concrete products, drums, industrial gases, chemicals, fibreglass products, nails and other wire products, packaging and paper products, paints, metal louvre frames, terrazzo and other building materials; and printing and ship-building.

A wide variety of services has also been established such as engineering workshops, plumbing establishments, motor repairs and electrical services.

#### TERRITORY OF PAPUA AND NEW GUINEA: SUMMARY OF FACTORY OPERATIONS, 1966-67 AND 1967-68p

(Source: *Production Bulletin*, Part II: *Secondary Industries*, Bureau of Statistics, Papua)

	Papua		New Guinea		Total	
	1966-67	1967-68	1966-67	1967-68	1966-67	1967-68
Number of factories(a) . . . . .	178	193	301	355	479	548
Average number employed(b) . . . . .	4,316	4,231	6,678	7,201	10,994	11,432
Salaries and wages paid(c) . . . . \$'000	4,378	4,860	5,767	7,396	10,146	12,256
Value of power, fuel, light, etc., used(d) . . . . .	578	526	1,083	1,177	1,661	1,703
Value of materials used(e) . . . . .	8,618	8,728	20,257	25,422	28,875	34,150
Value of production(f) . . . . .	9,228	10,712	15,860	19,255	25,088	29,968
Value of output(g) . . . . .	18,424	19,967	37,200	45,854	55,624	65,821
Value of land and buildings(h) . . . . .	6,705	7,855	7,449	9,309	14,153	17,164
Value of plant and machinery(h) . . . . .	5,987	12,370	7,702	8,323	13,689	20,693

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used. (b) Average weekly employment including working proprietors. (c) Excludes drawings by working proprietors. (d) Includes water and lubricating oil. (e) Includes value of containers, packing, etc., tools replaced, and repairs to plant. (f) Value added in process of manufacture (i.e. value of output less value of materials and power, fuel, etc. used). (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book value at end of year, including estimated value of rented premises and machinery.

**TERRITORY OF PAPUA AND NEW GUINEA: FACTORY OPERATIONS  
BY CLASS OF INDUSTRY, 1967-68 p**

(Source: *Production Bulletin*, Part II: *Secondary Industries*, Bureau of Statistics, Papua)

	<i>Class of industry</i>					<i>Total</i>
	<i>Industrial metals, machines and conveyances</i>	<i>Food, drink and tobacco</i>	<i>Sawmills, plywood and joinery</i>	<i>Other industries</i>		
Number of factories . . . . .	256	83	143	66	548	
Number of employees—						
Non-indigenous . . . . .	n.a.	n.a.	n.a.	n.a.	2,084	
Indigenous . . . . .	n.a.	n.a.	n.a.	n.a.	9,348	
<i>Total employees</i> . . . . .	<i>3,794</i>	<i>2,342</i>	<i>3,796</i>	<i>1,500</i>	<i>11,432</i>	
Salaries and wages paid . . . \$'000	5,793	1,618	2,984	1,860	12,256	
Value of power, fuel and light, etc. . . . .	286	438	307	672	1,703	
Value of materials used . . . . .	7,787	10,653	5,907	9,803	34,150	
Value of production . . . . .	9,995	6,645	7,138	6,190	29,968	
Value of output . . . . .	18,068	17,736	13,351	16,666	65,821	

See footnotes to previous table.

NOTE. Electricity generation is included in 'Other industries'.

## Finance

### Revenue and expenditure

Information on the financial operations of each Territory will be found on pages 1183-4 and 1189-90.

### Taxation

The main forms of taxation are income tax and import duties. *Income Tax* was imposed on 1 August 1959 to operate from 1 July 1959. In the case of individuals two different methods of calculating tax payable are used. Tax on taxable incomes has applied since 1 July 1959 and is calculated on a similar basis to that in Australia. The scale of taxation is about 50 per cent of the tax payable on the same taxable income in Australia. Deductions for dependants the taxpayer is maintaining are considerably higher than those allowed in Australia. Tax on chargeable income was introduced to apply from 1 January 1967 and has supplanted a previous *Personal Tax* of \$4.00 payable by all males eighteen years and over. Chargeable income consists of gross income less expenses directly incurred in earning the income. No deductions are allowable for dependants or any other private expenditure such as medical or education expenses. The tax is a flat rate of 2.025 cents in the \$1 applying on income above \$416 with a maximum of \$20.50. The two methods of calculating tax payable are supplementary, the method applied to any particular taxpayer being the one resulting in the greater amount of tax payable. Companies are taxed on a similar basis to that in Australia, and deductions allowable are generally comparable to those in Australia. From 1 July 1959 to 30 June 1967 the rates on public and private companies differed, public companies being taxed at a flat rate of 20 cents in the \$1 and private companies at 12.5 cents in the \$1 for the first \$10,000 and 17.5 cents in the \$1 for the remainder. From 1 July 1967 a flat rate of 22.5 cents in the \$1 applies to all companies, and from the same date private companies are no longer required to distribute a portion of their income in dividends each year. To encourage industry in the Territory certain companies manufacturing products new to the Territory may be granted complete tax exemption for the first five years of operation under the *Industrial Development (Incentive to Pioneer Industries) Ordinance* 1965. Additionally to income taxes Native Local Government Councils (which are formed voluntarily by the indigenes) are empowered to levy local taxes for the purpose of providing for local services carried out by the councils. These taxes are set off against the taxpayers' personal taxation.

The present *Customs Tariff* provides high revenue rates on imports of ale, spirits, tobacco and cigarettes, timepieces, cigarette papers, fancy goods, and jewellery, but allows entry of most necessities affecting living and building costs duty free or at a low rate of duty. Under the *Customs Tariff*, plant, machinery and chemicals to be used mainly for industrial and developmental purposes are generally



duty-free. A by-law covers goods imported by passengers. No preferential rates are specified in the schedule. Export duties imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold were repealed in July 1959.

Provision is made in the *Australian Customs Tariff (Papua and New Guinea Preference) 1936* for the free entry into Australia of certain agricultural goods produced in and imported direct from the Territory (see chapter Overseas Transactions). In addition, goods produced or manufactured in the Territory and imported directly into Australia are exempted from primage duty.

### Banking

The banking system in the Territory of Papua and New Guinea is based on Australia's, and provides full trading and savings bank facilities. Four Australian trading banks have branches in the main centres. They are: the Commonwealth Trading Bank of Australia, the Bank of New South Wales, the Australia and New Zealand Bank and the National Bank of Australasia Ltd. Affiliates or subsidiaries of banking institutions operate savings banks in the Territory. Rates of interest for bank deposits and advances are the same as those applying in Australia. A branch of the Reserve Bank of Australia in Port Moresby carries out central bank functions and acts as banker for the Administration and Commonwealth Government Departments in the Territory. The Territory uses the same currency as Australia.

The Banking (Foreign Exchange) Regulations of the Commonwealth of Australia apply to the Territory of Papua and New Guinea. The Regulations are administered by the Reserve Bank of Australia in a way that is consistent with the policy of encouraging overseas investment in Australia and the Territory. All remittances abroad require exchange control approval, though in practice no restrictions are imposed on current transactions and the trading banks have been authorised to deal with the great majority of these transactions as agents of the Reserve Bank.

The Papua and New Guinea Development Bank which opened in July 1967, has as its prime objective the provision of funds to assist individuals and enterprises in developing the Territory. The Bank was established to provide finance where it was not otherwise available on reasonable terms and conditions. Both indigenes and non-indigenes can qualify for advances. When considering applications the Bank is concerned mostly with the borrower's prospects for success rather than his security.

Average weekly deposits of cheque-paying banks in the Territory of Papua and New Guinea for the year 1967-68 were \$34,758,000 and loans, advances, etc., \$18,393,000. Average weekly debits to customers' accounts amounted to \$14,075,000. Savings banks depositors' balances at 30 June 1968 amounted to \$32,896,000, comprising indigenous \$12,252,000 and non-indigenous \$20,644,000, having increased since June 1958 from \$2,311,000 and \$6,352,000 respectively.

## TERRITORY OF PAPUA

### General description

#### Area, etc.

Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Tagula 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 930 miles; towards either end the breadth from north to south is about 320 miles, but about the centre it is considerably narrower. The Territory includes 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 86,100 square miles, of which 83,325 are on the mainland and 2,775 on the islands. A description of the physical characteristics of the Territory appears in earlier issues of the Year Book (see No. 18, page 633) and in the Administration Annual Reports.

#### Administration

Particulars of the early administration of Papua are given in Year Book No. 19, page 576. The Territory was placed under the authority of the Commonwealth on 1 September 1906 by proclamation issued in pursuance of Letters Patent of 18 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 under the control of the Commonwealth, but not included within it, and is divided into seven administrative districts, Southern Highlands Chimbu (part), Western, Gulf, Central, Milne Bay, and Northern.

## Population

### Indigenous population

Within the major division, Melanesian, into which most indigenous inhabitants of the Territory are classified, a distinction may be made between a Melanesian type and a Papuan type, the former representative of the eastern mainland and the island archipelagos to the east and south-east, and the latter representative of the western third and the interior of the Territory. Some negrito traits have been noted in a few of the inland mountain groups. The indigenous population of the Territory of Papua as recorded in the 1966 census is shown on page 1165. The estimated indigenous population for 30 June 1968 was 598,825 persons, comprising Central, 117,471; Gulf, 64,708; Milne Bay, 102,513; Northern, 56,934; Southern Highlands, 192,260; and Western, 64,939.

### Non-indigenous population

Preliminary results of the numbers of non-indigenous population from the 1966 census are given on page 1164. The estimated non-indigenous population for 30 June 1967 was 8,290 males, 6,436 females, 14,726 persons.

## Land tenure

The basic principles applying to land tenure in Papua are the same as those applying to the whole of the Territory of Papua and New Guinea described on pages 1171-1172. At 30 June 1968, of the total area of Papua, 55,102,000 acres, only 1,928,718 acres had been alienated. The distribution of alienated land at 30 June 1968 according to tenure was as follows: held by private non-indigenous inhabitants, freehold, 24,280 acres; land tenure conversions, freehold, 4,448 acres; leasehold, 388,295 acres; native reserves, 67,255 acres; other Administration land, including land reserved for public purposes, 1,444,440 acres.

Although a small amount of freehold land exists in Papua, present legislation does not provide for the granting of estates in freehold. Leases of various kinds may be granted by the Administration. The principal types of leases 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 ninety-nine years. Rent is based on the unimproved value of the land.

Leases of Crown land are granted by the Administrator following a land use examination, advertisement of leases available, and consideration of applications by the Land Board. 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. The Administration alone may purchase native-owned land, and then only if the owners are willing to sell and the Administration is satisfied that the owners do not require, and are not likely to require, the land.

The registration of titles, interests and dealings in alienated land is provided for under the *Real Property Ordinance* 1913-1962, modelled on the Torrens system of land registration.

## Production

### Primary production

The products of the Territory are obtained principally from its agricultural, forestry, mining, and fishing industries. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main native agricultural products are taro, yams, sweet potatoes, bananas, and pawpaws. Peanuts are becoming of increasing importance in native diet. Non-indigenous enterprise produces most of the commodities exported. Indigenous, however, produce copra for export, while native enterprise in other fields of agricultural production for export purposes, e.g. cocoa and coffee, is undertaken. The principal agricultural products of Papua for the export trade are copra and rubber. Native production of copra is increasing. The fishing industry is also of increasing importance. Gold, manganese, zinc-lead, and copper ores have been mined in commercial quantities in the past, but current production is limited.

For information on the agricultural and animal industries, which for the sake of convenience covers the Territories of Papua and New Guinea singly and combined, see pages 1171–1175. The following paragraphs relate to forestry, mining, fisheries, and water-power resources in Papua.

### Forestry

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 1186.

Mixed species of 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 utilisation on an economical basis is somewhat difficult. Mangroves occur in large areas fringing the Gulf of Papua. Forestry field work is carried out in Papua with a view to assessing the forest resources available and also to survey areas subsequently made available for cutting.

At 30 June 1968 twenty-two permits and thirty-six licences were current. The total areas of forest involved were 334,324 acres and 69,573 acres respectively. The total number of logging mills was twenty-one and the total sawn-timber produced during 1967–68 was 9.7 million super feet.

### Mining

Although 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, current mineral production is not of economic importance. Before the 1939–45 War gold was an important item in Papuan production, but it has since dwindled to insignificance. Large quantities of copper ore were mined and exported up to 1940. Extensive deposits of magnetite sands exist along the Gulf of Papua coastline, but these contain the undesirable impurity titanium, and ways of separating this from magnetite are under investigation. The *Mining Ordinance* 1937–1966 and the *Mining Development Ordinance* 1955–1960 control mining in Papua.

Indications of oil have been found at scattered locations over a large area, but commercial quantities have not been discovered. Natural gas has been found in several wells, but its commercial use is not yet economically feasible. At 30 June 1968 eighteen permits and licences were effective under the provisions of the *Petroleum (Prospecting and Mining) Ordinance* 1951–1965. Oil prospecting is confined mainly to the Gulf and Western Districts, including off-shore areas in the Gulf of Papua.

### Fisheries

The fishing industry in Papua is considered to have considerable potential. In 1967–68 the most important export from Papua and New Guinea was 888,410 lb of frozen crayfish tails and prawns from the north coast of Papua, valued at \$977,627. Exports of barramundi to Australia are also important. Two large international firms are surveying the potential for commercial prawn fishing ventures.

Two cultured pearl farms have recently commenced production of both round and half pearls of high quality.

### 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 at least 1,850 MW could be developed.

The Rouna No. 1 hydro station on the Laloki River near Port Moresby has a capacity of 5.5 MW. A second hydro station, Rouna No. 2, came into operation in 1967, with an initial installed capacity of 18 MW. Total planned capacity of this station is 30 MW.

## Trade, transport and communication

## Value of imports and exports

TERRITORY OF PAPUA: IMPORTS AND EXPORTS, 1963-64 TO 1967-68  
(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)

	1963-64	1964-65	1965-66	1966-67	1967-68
Total imports(a)	27,617	32,733	42,865	49,922	61,059
Exports—					
Domestic exports	5,318	6,075	6,113	5,417	6,503
Re-exports	1,857	2,970	2,827	3,421	4,842
Total exports	7,175	9,046	8,940	8,838	11,346

(a) Includes outside packages.

## Country of origin or destination

TERRITORY OF PAPUA: COUNTRY OF ORIGIN OF IMPORTS  
1963-64 TO 1967-68

(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)

Country of origin	1963-64	1964-65	1965-66	1966-67	1967-68
Australia	17,568	20,305	25,986	31,243	32,031
Canada	60	73	220	437	169
China (mainland)	156	250	312	529	319
Germany (Federal Republic of)	582	567	676	663	686
Hong Kong	966	1,011	1,132	1,348	1,086
Indonesia	862	493	31	90	2
Japan	1,575	1,977	3,112	4,167	4,218
Malaysia (including Singapore)	389	626	962	1,460	1,357
United Kingdom	1,648	2,186	3,027	2,711	2,617
United States of America	1,775	2,924	2,925	3,214	14,127
Other countries	2,035	2,321	4,481	4,060	4,447
Total	27,617	32,733	42,865	49,922	61,059

TERRITORY OF PAPUA: COUNTRY OF DESTINATION OF EXPORTS  
1963-64 TO 1967-68

(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)

Country of destination	1963-64	1964-65	1965-66	1966-67	1967-68
Australia	5,752	6,837	6,771	6,993	8,166
Japan	290	238	280	430	1,588
United Kingdom	650	1,220	1,172	926	1,130
Other countries	483	751	717	489	462
Total	7,175	9,046	8,940	8,838	11,346

**Principal commodities exported**

**TERRITORY OF PAPUA: PRINCIPAL DOMESTIC EXPORTS**  
**1963-64 TO 1967-68**  
 (\$'000)

(Source: *Overseas Trade Statistics, Bureau of Statistics, Papua*)

<i>Commodity</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
Rubber . . . . .	2,434	2,551	2,561	2,475	1,956
Copra . . . . .	1,968	2,805	2,550	2,083	2,800
Cocoa beans . . . . .	100	71	123	209	153
Gold . . . . .	1	2	2	1	2
Shell (marine) . . . . .	25	26	17	25	19
Crocodile skins . . . . .	529	392	623	344	274
Crayfish and prawns . . . . .	10	12	17	33	978
Other . . . . .	251	216	220	247	321
<b>Total . . . . .</b>	<b>5,318</b>	<b>6,075</b>	<b>6,113</b>	<b>5,417</b>	<b>6,503</b>

**Shipping**

In 1967-68 shipping entries (overseas and inter-Territory vessels) at Territory ports totalled 545, and 302,652 tons of cargo were discharged and 90,574 tons were loaded. Corresponding figures for 1966-67 were 563, 298,976 and 89,830 respectively.

Regular passenger and freight services operate between Australia, New Guinea and Papua. Vessels trading between Australia and the East also call at Territory ports, and there are services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

**Other forms of transport and communication**

Scheduled flights provide a network of air transport throughout Papua, and regular air services link the Territory with Australia and neighbouring Territories, and also with Manila and Hong Kong. There were 377 licensed aerodromes in the whole of Papua and New Guinea at 30 June 1968, and of these 12 were the responsibility of the Department of Civil Aviation, 125 of the Administration, and 240 were privately owned. Much of the internal traffic and freight is carried on a charter basis.

At 30 June 1968 there were 2,164 miles of roads in Papua of which 345 were adequately paved. Total motor vehicle registrations (excluding defence force vehicles) at 31 December 1967 were 8,228.

Telephone services operate in the main centres. The radio station at Port Moresby for both transmission and reception is shared by the Overseas Telecommunications Commission and the Administration. The former provides all external radio-telephone and telex circuits, while the latter operates internal telephone and telegraph services. Trunk line services are available at Port Moresby, Daru, Popondetta, Kerema, Samarai, and Tapini. Continuous telephone services are available at Port Moresby, Samarai, and Sogeri, and a limited service at Daru, Popondetta, Kerema, and Tapini. Port Moresby is connected by direct radio-telephone trunk circuits with Popondetta and Samarai and with Lae, Rabaul and Wewak in New Guinea. Radio telegraph services are provided from Port Moresby, Samarai, Kerema, and Daru to nearly 300 outstations. The Australian Broadcasting Commission broadcasts from medium wave station 9PA and short wave stations VLK and VLT located at Port Moresby. The Administration Department of Information and Extension Services operates transmitters at Alotan, Daru and Kerema and produces programmes in several local languages covering news, health features, general information and programmes of local and regional significance.

**Education and health****Education**

Education in the Territory is provided by the Administration and various Mission organisations. Schools for indigenes, also, have been established by Local Government Councils. The *Education Ordinance* 1952-63 enables the Administration to establish an education advisory board, district education committees and European and native schools, and to grant financial aid for educational purposes. European teachers are recruited from Australia and overseas, and indigenous teachers are trained in the Territory by the Administration and Missions. During the year ended 30 June 1968, 168 schools were maintained by the Administration for 32,276 children. The total number of pupils

in the various grades of mission schools was 39,426. To assist the educational work of the Missions the Administration provides expert advice, educational equipment and text-books. In addition, the sum of \$571,621 was distributed among the Missions as grants-in-aid during the year ended 30 June 1968.

### Health

The Department of Public Health of the Territory of Papua and New Guinea has the general oversight of all medical and dental services. The Department has the following seven functional divisions: medical services; preventive medicine; medical training; infant, child and maternal health; medical research; administration; and mental health. The services for the Territory of Papua are under the administrative control of a regional medical officer, with headquarters staff at Port Moresby.

The cases treated in hospitals are mainly pneumonia, gastro-enteritis, skin disease, malaria, accidents, diseases due to old age, and confinements. At 30 June 1968 the Administration had established 32 general hospitals, 2 hospitals for the treatment of Hansen's disease, 1 Hansenide-tuberculosis hospital, 2 tuberculosis hospitals, and 1 mental hospital; the Missions had established 25 general hospitals, 2 Hansenide hospitals, and 2 tuberculosis hospitals. There were 879 village aid posts or medical centres (112 Mission), 30 maternal and child welfare clinics (66 Mission), and 600 mobile clinic centres (1,523 Mission). School medical examinations, immunisation, ante-natal and post-natal care, and pre-school services are also provided. The Missions employ their own doctors and nurses in their medical establishments.

For some years suitably qualified indigenes attended the Central Medical School at Suva, Fiji, to be trained as Assistant Medical Officers. In 1959 the Administration began training indigenous medical officers at the Papuan Medical College which is associated with the Port Moresby General Hospital. The College, planned to accommodate 600 students eventually, is being built in stages. The course consists of a preliminary year and five years further study. Training for nurses and medical auxiliaries in many categories is also being provided.

### Finance

#### TERRITORY OF PAPUA: REVENUE AND EXPENDITURE, 1963-64 TO 1967-68 (S'000)

	1963-64	1964-65	1965-66	1966-67	1967-68
REVENUE					
Customs . . . . .	3,109	3,548	4,832	5,879	6,119
Licences . . . . .	136	156	192	237	278
Stamp duties . . . . .	81	145	158	250	239
Postal . . . . .	856	1,090	1,437	1,848	1,883
Land revenue . . . . .	152	151	318	345	364
Mining receipts . . . . .	7	10	12	14	21
Fees and fines . . . . .	36	56	85	117	131
Health revenue . . . . .	93	92	108	117	132
Forestry . . . . .	74	73	97	88	93
Agriculture . . . . .	96	76	91	113	191
Public utilities . . . . .	315	279	352	388	588
Direct taxation(a) . . . . .	3,646	4,917	5,705	8,255	9,144
Miscellaneous . . . . .	1,888	2,428	3,475	3,810	4,336
Territory loans . . . . .	..	..	(b)2,485	2,141	2,809
<i>Total internal revenue</i> . . . . .	<i>10,489</i>	<i>13,023</i>	<i>19,347</i>	<i>23,602</i>	<i>26,328</i>
Grant by Commonwealth of Australia . . . . .	20,022	22,125	23,821	19,804	23,140
<b>Total revenue</b> . . . . .	<b>30,511</b>	<b>35,148</b>	<b>43,168</b>	<b>43,406</b>	<b>49,468</b>

(a) Includes Personal Tax.

(b) Previously deducted from expenditure.

**TERRITORY OF PAPUA: REVENUE AND EXPENDITURE**  
 1963-64 TO 1967-68—*continued*  
 (\$'000)

	1963-64	1964-65	1965-66	1966-67	1967-68
<b>EXPENDITURE</b>					
Expenditure from revenue—					
Special appropriations . . . . .	556	874	1,333	1,396	(a)932
Departments—					
Administrator—					
Administrator . . . . .	627	380	446	538	434
Legislative and Administrator's Councils(b) . . . . .	43	97	123	145	141
Information and Extension Ser- vices . . . . .	175	200	296	290	344
Public Service Commissioner(c)	222	246	319	429	425
Treasury—					
Central Treasury . . . . .	1,501	1,641	1,705	3,983	2,053
Taxation Branch . . . . .	52	60	69	75	92
Motor Transport Branch . . . . .	512	564	702	846	928
Stores and Supply Branch(d) . . . . .	2,712	2,761	3,019	2,475	2,991
Government Printing Office . . . . .	76	88	110	100	105
Public Health . . . . .	2,775	2,997	3,308	3,385	3,286
District Administration(e) . . . . .	1,231	1,547	1,812	1,631	1,841
Agriculture, Stock and Fisheries . . . . .	1,062	1,334	1,564	1,407	1,580
Education . . . . .	3,007	3,852	4,554	4,638	5,444
Labour . . . . .	99	140	186	189	192
Police . . . . .	716	893	1,193	1,973	2,104
Law—					
Law(f) . . . . .	200	241	357	381	425
Corrective Institutions Branch . . . . .	116	137	191	385	415
Lands, Surveys and Mines . . . . .	515	645	617	729	755
Forests . . . . .	178	220	316	287	350
Posts and Telegraphs . . . . .	1,200	1,311	1,585	1,794	2,002
Trade and Industry(g) . . . . .	542	746	936	738	1,334
Public Works—					
Public works . . . . .	575	1,300	1,274	1,298	1,844
Maintenance . . . . .	3,141	3,573	3,569	3,815	3,803
Capital works and services(h) . . . . .	7,158	7,525	11,801	8,687	11,151
Purchase of capital assets . . . . .	1,520	1,618	1,883	1,673	(i)
General overheads . . . . .	..	..	..	..	694
Other institutions(j) . . . . .	..	..	..	..	2,877
Surplus . . . . .	..	..	..	..	211
<i>Expenditure from revenue</i> . . . . .	<i>30,511</i>	<i>34,988</i>	<i>43,268</i>	<i>43,286</i>	<i>48,754</i>
Expenditure chargeable to					
Loan Fund . . . . .	1,277	2,407	..	..	..
<b>Total expenditure</b> . . . . .	<b>31,787</b>	<b>37,395</b>	<b>43,268</b>	<b>43,286</b>	<b>48,754</b>

(a) Special appropriations have been reduced by taxation refunds and refunds of revenue.  
 (b) Includes the Administrator's Council which replaced the Executive Council during 1960-61 and the House of Assembly which replaced the Legislative Council during 1963-64. (c) Includes expenditure of the Administrative College. (d) Includes costs of general stores for all departments except Public Works. (e) Before 1964-65, Department of Native Affairs. (f) Up to 1963-64 the Land Titles Commission was included in the Department of Law. The two figures have been combined for 1964-65 and 1965-66. (g) Includes Trade and Industry, Customs and Migration, and Marine. (h) Additional expenditure on this item included under 'Expenditure chargeable to Loan Fund'. (i) 'Capital Purchases' has been distributed among the individual departments. (j) Grants and loans by individual departments have been brought together under 'Other institutions'.

**TRUST TERRITORY OF NEW GUINEA****General description****Area, etc.**

The Trust Territory of New Guinea extends almost from the equator to latitude 8° S., a distance of 400 nautical miles, and from longitude 141° E. to 160° E., a distance of 1,000 nautical miles. The land area is 92,160 square miles, that of the New Guinea mainland being 69,095 square miles and that of adjacent islands, including the two northernmost islands of the Solomon Islands, Buka and Bougainville, and the Bismarck Archipelago, 23,065 square miles. Information regarding physiography and climate will be found in Year Book No. 22, page 613, in the *Official Handbook of the Territory of New Guinea*, and the Administration Annual Reports.

**Administration**

The terms of the League of Nations mandate (1920) of the former German possession of New Guinea are given in Year Book No. 33 (*see* page 264). Particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration are given in Year Book No. 36 and earlier issues, and of events following the outbreak of the Pacific War in Year Book No. 37 and subsequent issues up to No. 48.

Following the 1939–45 War 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 13 December 1946. The terms of the Agreement are shown in Year Book No. 39, pages 355–7.

For administrative purposes the Territory is divided into the following twelve districts: East New Britain and West New Britain, comprising New Britain and the adjacent islands; Morobe, Madang, Eastern Highlands, Chimbu, Western Highlands, East Sepik and West 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 administered by a District Commissioner.

**Population****Indigenous population**

The indigenous people of the Territory may in general be grouped with the Melanesians who occupy the greater part of the Western Pacific. They may be divided into two main types—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* Year Book No. 16, page 670, and *Official Handbook of the Territory of New Guinea*, Part V.)

The indigenous population of the Territory at the Census of 30 June 1966 is shown on page 1165. At 30 June 1968 the estimated indigenous population was 1,677,807 persons, comprising Bougainville, 72,393; Eastern Highlands, 218,018; Chimbu, 180,570; Western Highlands, 317,686; Madang, 158,609; Manus, 23,126; Morobe, 230,026; East New Britain, 91,279; West New Britain, 50,120; New Ireland, 53,507; East Sepik, 162,274; and West Sepik, 120,199.

**Non-indigenous population**

The non-indigenous population of the Territory of New Guinea at the 1966 Census is shown on page 1164. At 30 June 1967 the estimated non-indigenous population of the Territory was 13,685 males, 9,671 females, 23,356 persons.

**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, and grants of estates are restricted to leasehold tenure. In New Guinea, however, 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 that dealings in land require the approval of the Administrator.

The area of the Territory of New Guinea is estimated at approximately 59,000,000 acres, of which at 30 June 1968 only 1,851,100 acres were alienated. The following was the distribution of alienated land according to tenure at 30 June 1968: held by private non-indigenous inhabitants—freehold, 516,558 acres, leasehold, 441,235 acres; native reserves, 26,810 acres; other Administration land, including land reserved for public purposes, 865,997 acres.

Under German law there was a system of registration of titles in a Ground Book, but registration did not necessarily confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in the *Lands Registration Ordinance* 1924–1962. The land registers were lost during the 1939–45 War, but provision for restoration of the lost titles is made in the *New Guinea Land Titles Restoration Ordinance* 1951–1966.

### Production

The products of the Territory are obtained principally from its agricultural, mining, fishing, and forestry industries. A copra crushing mill near Rabaul, established in 1952, commenced crushing at about 18,000 tons of copra per annum, and its capacity is now about 60,000 tons of copra per annum. Early in 1968 a factory capable of manufacturing 7,000 tons of dessicated coconut a year was established also near Rabaul. At Bulolo a company is producing high quality moisture-proof plywood in a factory with an approximate annual plywood production of 28 million square feet (on a  $\frac{3}{8}$  in basis). Native subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main native agricultural products are taro, yams, sweet potatoes, coconuts, bananas, papaws. Non-indigenous enterprise produces most of the commodities exported. Indigenes, however, produce copra for export, and in recent years have taken up the production of introduced crops such as peanuts, rice, cucurbits, and maize for their own consumption and cocoa, coffee and pyrethrum for export. The principal agricultural products of New Guinea for the export trade are copra and coconut oil, cocoa, and coffee, but exports of timber and timber products are substantial. The fishing industry is based upon the supply of fish to local markets, and the export of small quantities of shell. Gold is the principal mineral mined. Indigenes are taking an increasing interest in mining for alluvial gold on their own account, and production from this source is continually rising, in contrast to falling European production.

For information on the agricultural and animal industries, which for the sake of convenience covers the Territories of Papua and New Guinea singly and combined, see pages 1171–5. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea alone.

#### Timber

Various species of timber are found in the Territory, and one accessible pure stand is the valuable pine forests of the Bulolo Valley. This timber is used mainly for the production of plywood and veneer. The Territory forests also provide fitches, battery veneer, and egg-case parts. The Administration operates a training centre for forestry workers, nurseries and a herbarium, and has established a research institute at Hohola near Port Moresby.

The Government intends to make available a number of large-scale permit areas containing from 2,000 to 5,000 million super feet of timber to help overcome the problems of multiplicity of species and continuity of supply of particular species. In opening up these major permit areas consultants are being employed to investigate the forest resources, assess the market potential and recommend working places and forms of processing for each area. Present policy calls for the orderly development of the timber industry on sound forestry principles to ensure no waste of the resources and no over-exploitation. Timber growing on native lands cannot be acquired by private purchasers direct from the native people, but must be obtained through the Administration. Royalty is payable on all forest produce taken under permit or licence. Royalties are negotiable in many instances. Reafforestation of areas dedicated for forestry in perpetuity is carried out by the Administration.

At 30 June 1968, 68 permits and 20 licences were current, the total areas of forest involved being 846,635 acres and 76,985 acres respectively. The total number of logging mills was 50, and the total sawn timber produced during 1967–68 was 30.1 million super feet.

#### Mining

The production of gold and associated silver is the most important mining activity in New Guinea, although other minerals, such as osmiridium, platinum, copper, iron ore, sulphur, and brown coal, have been discovered. The production of gold in New Guinea since the 1939–45 War has been on a

much smaller scale than before the war, decreasing from \$1,410,000 in 1959-60 to \$823,749 in 1967-68. The discovery of extensive low-grade copper deposits on Bougainville has given impetus to the copper industry in the Territory.

The laws in operation governing mining are the *Mining Ordinance* 1928-1966, the *Mines and Works Regulation Ordinance* 1935-1962 and the *Mining Development Ordinance* 1955-1960 and the regulations made thereunder.

The *Petroleum (Prospecting and Mining) Ordinance* 1951-1967 deals with the issue of permits and the granting of licences and leases for oil exploration. There were three prospecting permits for oil current at June 1967.

#### Water power

An approach was made during 1966-67 to the International Bank for Reconstruction and Development with regard to a loan for the Upper Ramu Hydro-electric Scheme, a 72 MW project planned for supplying Lae, Madang, Goroka, Mount Hagen, and intervening areas. Further investigations recommended by the Bank are being carried out.

### Trade, transport and communication

#### Value of imports and exports

##### TERRITORY OF NEW GUINEA: IMPORTS AND EXPORTS 1963-64 TO 1967-68

(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)

	1963-64	1964-65	1965-66	1966-67	1967-68
<i>Total imports(a)</i>	43,119	54,113	67,566	76,109	84,244
Exports—					
Domestic exports	31,342	37,237	37,431	40,262	52,382
Re-exports	2,372	2,858	3,458	4,120	6,523
<i>Total exports</i>	33,714	40,095	40,889	44,382	58,905

(a) Includes outside packages.

#### Countries of origin or destination

##### TERRITORY OF NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS(a), 1963-64 TO 1967-68

(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)

Country of origin	1963-64	1964-65	1965-66	1966-67	1967-68
Australia	24,029	29,355	36,466	40,002	46,048
China (mainland)	587	991	1,288	1,728	1,396
Germany (Federal Republic of)	1,433	1,909	1,644	2,024	2,053
Hong Kong	2,625	2,657	2,913	2,958	3,498
India	303	250	449	313	207
Indonesia	427	184	98	81	6
Japan	3,749	5,427	6,884	8,906	10,229
Malaysia (including Singapore)	885	852	2,376	1,991	2,426
Netherlands	343	390	346	4,049	551
United Kingdom	2,752	4,404	5,617	4,430	4,596
United States of America	2,782	3,436	4,583	4,590	5,486
Other countries	3,204	4,258	4,902	5,037	7,748
<i>Total</i>	43,119	54,113	67,566	76,109	84,244

(a) Includes outside packages.

**TERRITORY OF NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS, 1963-64 TO 1967-68**

(\$'000)

*(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)*

<i>Country of destination</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
Australia . . . . .	14,936	16,758	16,274	17,864	21,122
Germany (Federal Republic of) . . . . .	1,616	2,690	2,255	3,017	4,607
Japan . . . . .	1,569	1,547	1,700	2,364	3,065
Netherlands . . . . .	2,218	1,625	1,436	1,071	2,175
United Kingdom . . . . .	10,976	13,849	15,405	13,617	19,149
Other countries . . . . .	2,399	3,626	3,819	6,449	8,787
<b>Total . . . . .</b>	<b>33,714</b>	<b>40,095</b>	<b>40,889</b>	<b>44,382</b>	<b>58,905</b>

**Principal commodities exported**

**TERRITORY OF NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS  
1963-64 TO 1967-68**

(\$'000)

*(Source: Overseas Trade Statistics, Bureau of Statistics, Papua)*

<i>Commodity</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
Copra . . . . .	8,050	9,604	11,749	7,911	11,143
Other coconut products . . . . .	5,190	7,404	6,589	5,840	7,405
Cocoa beans . . . . .	6,743	6,977	4,311	9,336	11,641
Coffee beans . . . . .	5,326	7,276	8,712	10,095	14,306
Peanuts . . . . .	573	461	527	526	430
Crocodile skins . . . . .	377	464	377	392	235
Gold . . . . .	1,320	1,076	945	913	823
Shell (marine) . . . . .	79	47	31	77	66
Timber . . . . .	1,329	1,415	1,683	2,255	2,648
Plywood . . . . .	1,948	2,021	1,903	2,040	2,264
Veneer . . . . .	68	74	84	127	165
Pyrethrum extract . . . . .	n.a.	n.a.	89	390	417
Other . . . . .	339	418	431	360	839
<b>Total . . . . .</b>	<b>31,342</b>	<b>37,237</b>	<b>37,431</b>	<b>40,262</b>	<b>52,382</b>

**Shipping**

Regular passenger and freight services operate between Australia, Papua and the Territory of New Guinea. Vessels trading between the East and Australia and the Pacific Islands call at Territory ports, and there are monthly services from continental and United Kingdom 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 Ordinance 1951-1960* and the Coastal Shipping, Ports and Harbours Regulations. Main ports of call for overseas vessels are Lae, Madang, Wewak (mainland), Rabaul (New Britain), and Kavieng (New Ireland). In 1967-68 shipping entries at Territory ports totalled 1,070, and 495,677 tons of cargo were discharged and 333,950 tons loaded. Corresponding figures for 1966-67 were 1,054, 473,087, 303,108 respectively. There are no inland waterways, and the natural river system is not generally suitable for vessels except those of small tonnage.

**Other forms of transport and communication**

There are no railways in New Guinea, but a road construction programme is being undertaken progressively to assist the economic development of the Territory. Road transport services operate in the main towns and on the trunk roads linking Rabaul and Kokopo; Lae, Bulolo and Wau; Kavieng and Namatanai; and on the network in the Eastern and Western Highland Districts centred on Goroka and Mount Hagen. The total mileage of roads in the Territory of New Guinea at 30 June 1968 was 5,215, of which 1,888 were adequately paved. Total motor vehicle registrations (excluding defence force vehicles) at 31 December 1967 were 12,468.

Scheduled flights provide a network of air transport throughout New Guinea, and regular air services link the Territory with Australia and neighbouring territories and also with Manila and Hong Kong. There were 377 licensed aerodromes in the whole of Papua and New Guinea at 30 June 1968, and of these 12 were the responsibility of the Department of Civil Aviation, 125 of the Administration, and 240 privately owned.

Telephone services are operated in the main centres by the Administration, and radio telephone trunk circuits link Port Moresby with Lae, Rabaul, Wewak, and Madang. The latter is connected via the SEACOM cable operated by the Overseas Telecommunications Commission with Australia

and south-east Asia. Nine zone or group centres for radio telegraph communications with about 811 out-stations have been established at Lae, Rabaul, Kavieng, Lorengau, Madang, Mount Hagen, Wewak, Sohano, and Goroka.

The Australian Broadcasting Commission broadcasts from medium wave station 9RB Rabaul. The Administration Department of Information and Extension Services operates transmitters at Goroka, Kieta, Mount Hagen, Rabaul and Wewak. The stations broadcast a balanced programme of news, information, health features and entertainment designed particularly for the people in the district in which each is located.

### Education and health

#### Education

Education in the Territory is provided by the Administration and various Mission organisations. Schools for indigenes have also been established by Local Government Councils. The *Education Ordinance* 1952-1963 enables the Administrator to establish an education advisory board, district education committees and schools for all sections of the community, and to grant financial aid for educational purposes. Teachers are recruited from Australia and overseas, and indigenous teachers are trained in the Territory by the Administration and the Missions. During the year ended 30 June 1968, 358 schools were maintained by the Administration for 56,298 children. In addition, there is a correspondence school. The total number of pupils in the various grades of mission schools, excluding exempt schools, was 100,721. To assist the educational work of the Missions the Administration provides expert advice, educational equipment and text-books. In addition, the sum of \$1,528,000 was distributed among the Missions as grants-in-aid during the year ended 30 June 1968.

#### Health

The cases treated in hospital are mainly pneumonia, gastro-enteritis, skin diseases, malaria, accidents, diseases due to old age, and confinements. At 30 June 1968 there were 74 Administration hospitals, including 3 Hansenide colonies, 1 tuberculosis hospital, and 2 Hansenide and tuberculosis hospitals. The Missions have established an additional 73 hospitals, including 3 Hansenide colonies and 1 Hansenide and tuberculosis hospital. There were 1,005 village aid posts or medical centres (116 conducted by Missions) and 2,291 maternity and child welfare centres (1,661 provided by Missions). The Missions staff their own medical establishments but receive financial assistance and much of their medical stores and supplies from the Administration.

### Finance

#### TRUST TERRITORY OF NEW GUINEA: REVENUE AND EXPENDITURE 1963-64 TO 1967-68 (\$'000)

	1963-64	1964-65	1965-66	1966-67	1967-68
REVENUE					
Customs . . . . .	4,412	5,332	6,951	9,037	10,436
Licences . . . . .	231	275	331	397	461
Stamp duties . . . . .	114	99	191	172	269
Postal . . . . .	705	963	1,111	1,353	1,661
Land revenue . . . . .	195	205	335	443	384
Mining receipts . . . . .	25	26	29	25	26
Fees and fines . . . . .	55	74	101	131	152
Health revenue . . . . .	128	141	154	183	185
Forestry . . . . .	315	389	453	484	547
Agriculture . . . . .	299	338	494	673	896
Direct taxation(a) . . . . .	2,971	3,876	4,478	5,647	6,760
Public utilities . . . . .	207	153	204	240	316
Miscellaneous . . . . .	2,608	3,034	3,627	3,942	4,289
Territory loans(b) . . . . .	..	..	3,671	4,053	5,588
<i>Total internal revenue</i> . . . . .	<i>12,265</i>	<i>14,906</i>	<i>22,130</i>	<i>26,783</i>	<i>31,970</i>
Grant by Commonwealth of Australia . . . . .	30,477	33,873	38,179	49,979	54,454
<b>Total revenue</b> . . . . .	<b>42,741</b>	<b>48,780</b>	<b>60,309</b>	<b>76,762</b>	<b>86,424</b>

(a) Includes Personal Tax. (b) Previously deducted from expenditure.

TRUST TERRITORY OF NEW GUINEA: REVENUE AND EXPENDITURE  
1963-64 TO 1967-68—continued  
(\$'000)

	1963-64	1964-65	1965-66	1966-67	1967-68
EXPENDITURE					
Expenditure from revenue—					
Special appropriations . . . . .	923	1,420	1,969	2,641	(a)1,853
Departments—					
Administrator—					
Administrator . . . . .	942	606	423	767	895
Legislative and Administra- tor's Councils(b) . . . . .	71	157	182	274	280
Information and Extension Ser- vices . . . . .	285	332	354	457	657
Public Service Commissioner(c)	369	400	471	811	845
Treasury—					
Central Treasury . . . . .	2,124	2,297	2,302	6,563	2,066
Taxation Branch . . . . .	87	97	102	142	183
Motor Transport Branch . . . . .	1,147	1,304	1,550	1,678	1,863
Stores and Supply Branch(d) . . . . .	4,502	4,516	4,949	4,685	5,667
Government Printing Office . . . . .	126	142	163	189	208
Public Health . . . . .	4,702	5,079	6,119	6,890	7,839
District Administration(e)	2,108	2,511	2,940	4,077	4,171
Department of Agriculture, Stock and Fisheries . . . . .	1,916	2,372	2,771	3,782	4,847
Education . . . . .	4,911	5,945	6,902	8,337	9,618
Labour . . . . .	235	286	286	406	441
Police . . . . .	1,253	1,454	1,769	3,267	4,040
Law—					
Law(f) . . . . .	417	472	660	808	976
Corrective Institutions Branch	185	221	318	600	730
Lands, Surveys and Mines . . . . .	869	967	1,241	1,487	2,422
Forests . . . . .	674	773	828	1,141	2,019
Posts and Telegraphs . . . . .	1,537	1,782	1,943	2,455	2,748
Trade and Industry(g) . . . . .	674	785	809	1,226	1,268
Public Works . . . . .	954	2,248	2,078	2,416	3,897
Maintenance . . . . .	3,727	4,428	5,157	5,893	6,778
Capital works and services(h) . . . . .	5,919	6,107	11,422	12,534	11,352
Purchase of capital assets . . . . .	2,085	2,077	2,601	3,234	(i)
General overheads . . . . .	..	..	..	..	1,597
Other institutions(j) . . . . .	..	..	..	..	5,746
Expenditure from revenue . . . . .	42,741	48,780	60,309	76,762	85,004
Expenditure chargeable to Loan Fund—					
Capital works and services . . . . .	2,119	3,911	..	..	..
Total expenditure . . . . .	44,861	52,691	60,309	76,762	85,004

(a) Special appropriations have been reduced by taxation refunds and refunds of revenue. (b) Includes the Administrator's Council, which replaced the Executive Council during 1960-61, and the House of Assembly, which replaced the Legislative Council during 1963-64. (c) Includes the Administrative College. (d) Includes costs of general stores for all departments except Public Works. (e) Before 1964-65, Department of Native Affairs. (f) Up to 1963-64 the Land Titles Commission was included in the Department of Law. The two figures have been combined for 1964-65 and 1965-66. (g) Includes Trade and Industry, Customs and Migration, and Marine. (h) Additional expenditure on this item included under Expenditure chargeable to Loan Fund. (i) 'Capital Purchases' has been distributed among the individual departments. (j) Grants and loans by individual departments have been brought together under 'Other institutions'.

### HEARD ISLAND AND McDONALD ISLANDS

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

In December 1947 an Australian scientific station was established on Heard Island, and meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the island from time to time. Heard Island is about twenty-seven miles long and thirteen miles wide. The McDonald Islands are twenty-six miles to the west of Heard Island. They are small, rocky and precipitous.

### AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adélie situated south of 60° S. latitude and lying between 160° E. longitude and 45° E. longitude. The Order came into force with a Proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act* 1933. The boundaries of Terre Adélie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60° S. latitude lying between 136° E. longitude and 142° E. longitude. The *Australian Antarctic Territory Act* 1954 declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory.

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on MacRobertson Land at latitude 67° 36' S. and longitude 62° 53' E. The station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Meteorological and other scientific research is conducted at Mawson, which is the centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68° 35' S. and longitude 77° 59' E. The station was named Davis in honour of the late Captain John King Davis of Melbourne, who commanded a number of famous Antarctic ships. The station was temporarily closed down in January 1965 and reopened in February 1969. In February 1959 the Australian Government accepted from the United States Government custody of Wilkes Station, which was established by the United States on 16 January 1957 on Vincennes Bay, at latitude 66° 15' S. and longitude 110° 33' E. The station was named in honour of Lieut Charles Wilkes, who commanded the 1838-40 United States expedition to the area. A new station of advanced design, built about 1½ miles south of Wilkes, was opened in February 1969 and named Casey in honour of Lord Casey, who has had a long association with Antarctic Expeditions. Wilkes ceased operations early in April 1969. ANARE have also operated a station, since the 1947-48 Antarctic season, at Macquarie Island, approximately 850 miles south-east of Hobart. Macquarie Island is a dependency of the State of Tasmania.

On 1 December 1959 Australia signed the Antarctic Treaty with Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the U.S.S.R., the United Kingdom, and the United States of America. Poland, Czechoslovakia and Denmark have subsequently acceded to the Treaty. The Treaty reserves the Antarctic area south of 60° S. latitude for peaceful purposes, provides for international co-operation in scientific investigation and research, and preserves, for the duration of the Treaty, the *status quo* with regard to territorial sovereignty, rights and claims. The Treaty entered into force on 23 June 1961. Since then the Antarctic Treaty powers have held five consultative meetings under the Treaty, the first at Canberra in July 1961, the second at Buenos Aires in July 1962, the third at Brussels in June 1964, the fourth at Santiago in 1966, and the fifth in Paris in 1968. The sixth is to be held in Tokyo in 1970.

### COCOS (KEELING) ISLANDS

#### General description

The Cocos (Keeling) Islands, two separate atolls comprising some twenty-seven small coral islands with a total area of about 5½ square miles, are situated in the Indian Ocean in latitude 12° 5' S. and longitude 96° 53' E. They lie some 1,720 miles north-west of Perth and 2,290 miles almost due west of Darwin, while Johannesburg is some 3,800 miles further distant to the south-west and Colombo is 1,400 miles to the north-west of the group.

The main islands of the Territory are West Island, the largest, about six miles from north to south, on which are the aerodrome and most of the European community; Home Island, the headquarters of the Clunies-Ross Estate; Direction Island; and Horsburgh Island. North Keeling Island, which forms part of the Territory, lies about fifteen miles to the north of the groups and has no inhabitants.

Main settlements are on West Island and Home Island. The group of atolls is low-lying, flat and thickly covered by coconut palms, and surrounds a lagoon which has a harbour in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about three-quarters of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable to those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 70° and 89° F., and the average rainfall is about 67 inches. There are occasional violent storms. The estimated population at 30 June 1968 was 622 (323 males and 299 females).

#### History and administration

Summarised particulars of the discovery of the islands and their history up to 1946, when they became a dependency of the Colony of Singapore, are given in Year Book No. 51, page 140, and in earlier issues. On 23 November 1955 the Cocos Islands ceased to form part of the Colony of Singapore and were placed under the authority of the Commonwealth of Australia. The transfer was effected by an Order in Council made by Her Majesty Queen Elizabeth the Second under the Imperial Act entitled the Cocos Islands Act 1955 and by the *Cocos (Keeling) Islands Act 1955* of the Commonwealth whereby the islands were declared to be accepted by the Commonwealth as a Territory under the authority of the Commonwealth, to be known as the Territory of Cocos (Keeling) Islands.

Responsibility for the administration of the Territory rests with the Minister for External Territories. The first Official Representative was appointed on 23 November 1955 to take charge of the local administration of the Territory. Under the *Official Representative Ordinance 1955-1961* of the Territory, the Official Representative is given such powers and functions in relation to the Territory as are delegated to him by the Minister under the *Cocos (Keeling) Islands Act 1955-1966* or are otherwise conferred on him under that Act or by or under any other law of the Territory. The laws of the Colony of Singapore which were in force in the islands immediately before the date of the transfer were, with certain exceptions, continued in force by the *Cocos (Keeling) Islands Act 1955-1966*. They may be amended or repealed by Ordinances made under the provisions of that Act which empower the Governor-General to make Ordinances for the peace, order and good government of the Territory.

#### Transport and communication

There is an international airport at West Island under the control of the Commonwealth Department of Civil Aviation. A three-weekly air service is provided between Perth and the Cocos Islands by Ansett and T.A.A. alternatively. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals. A radio teletype link with Perth airport is maintained by the Department of Civil Aviation. Local postal and telephone services exist, and a non-commercial broadcasting station operates.

### CHRISTMAS ISLAND

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10° 25' S., longitude 105° 40' E. It is approximately 224 miles south from Java Head at the south entrance to Sunda Strait, 815 miles from Singapore and 1,630 miles from Fremantle. Christmas Island covers an area of about fifty-two square miles. It consists of a central plateau of about 600 to 800 feet with several prominent rises up to 1,170 feet. The plateau descends to the sea in a series of steep slopes alternating with terraces, the last dropping in a cliff of 200 to 300 feet to a shore terrace, terminating in a sea cliff of 10 to 150 feet, which is continuous round the island except in a few places, the chief of which is Flying Fish Cove, where the principal settlement is located and which is also the only known anchorage.

The climate is healthy and pleasant, and the prevailing winds come from the south-east to east-south-east from May to December, but from then to April (the wet season) they occasionally shift round to between north and west. The average yearly rainfall is about 80 inches with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 80° and does not vary greatly throughout the year.

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. Because of the nature of the land there appears little prospect of establishing any other economic activity.

At 30 June 1968 the estimated population was 3,524 (2,385 males and 1,139 females).

### Education

At 30 June 1967 there were two school systems on the Island—the Christmas Island school system which serves the majority of the children, and a European school which serves a small number of children. The Christmas Island school system follows the Singapore curriculum, and has a staff of 29 teachers mostly recruited from Singapore (including four locally recruited teachers-in-training receiving in-service practical instruction at the primary school), and 817 pupils (579 primary and 238 secondary). The European school follows the Western Australian primary school syllabus, with two teachers seconded from the Western Australian Department of Education, and fifty-five pupils.

### History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony from 1 January 1958, pending transfer to Australia, are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to the Commonwealth of Australia by the *Christmas Island Act 1958* and is now administered as a Territory under the authority of the Commonwealth. Responsibility for the administration and government of the Territory rests with the Minister for External Territories, and day to day affairs on the island are administered by an Administrator under delegation from the Minister. The laws which were in force on the island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia.

### Phosphate deposits

The only commercial activity carried out is the mining of phosphate. The British Phosphate Commissioners act as managing agents for the Christmas Island Phosphate Commission. There are three principal phosphate deposits on the islands, of which the largest is that now being worked at South Point. This field is situated on the 600 feet to 800 feet level and is approximately 12 miles from the drying and shipping plant at Flying Fish Cove. During 1967–68 approximately 1,058,228 tons of phosphate were exported to Australia and New Zealand. In addition some 69,558 tons of phosphate dust were exported to Malaysia, Singapore and Australia.

### Transport and communication

Transport to and from the island is maintained by vessels operated under charter by the Christmas Island Phosphate Commission. One vessel makes regular trips between Christmas Island and Singapore, and other vessels carry phosphate to Australian ports and New Zealand.

A post office and internal telephone system are operated by the Administration. The latter comprises four automatic exchanges and three small subscriber-attended exchanges. A radio station is also operated by the British Phosphate Commissioners for messages via Perth and Singapore and for communication with ships at sea. A limited broadcasting station commenced operating during 1966–67.



