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CHAPTER 30

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 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.

Papua New Guinea, formerly the Territory of Papua and the United Nations Trust Territory of New Guinea, became formally self-governing on 1 December 1973; for details see page 1069. At time of writing, the date for full independence had yet to be fixed. The usual section on Papua New Guinea has therefore been included in this chapter of the Year Book.

Information on all Territories 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 1. 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* (1.6) and the *Australian Capital Territory Statistical Summary* (1.7) 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, Papua New Guinea, issues a number of publications containing statistics relative to these two Territories, separate and combined.

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 1,346,200 square kilometres.

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 1910-1974* provides for an Administrator, appointed by the Governor-General, to administer the Territory on behalf of the Australian Government.

Until its amendment in 1974, the Act provided for a Legislative Council for the Northern Territory to make ordinances for the peace, order and good government of the Territory. Until the conclusion of its final sittings on 26 September 1974, the Council consisted of 6 official members and 11 elected members, with the President of the Council elected from among the elected members.

Following the amendment of the Act, and general elections held on 19 October 1974, the Legislative Council was replaced by a Legislative Assembly, consisting of 19 elected members, each representing an electoral district in the Territory. The Speaker of the Assembly—formerly the President of the Council—is elected from among the members of the Assembly, and all legislation is initiated by the members.

Ordinances passed by the Legislative Assembly are presented to the Administrator for assent. The Administrator is required by the Act to reserve ordinances relating to certain matters, including Crown Lands and the Aboriginal inhabitants of the Territory, for the Governor-General's pleasure; others he may assent to, withhold assent from, or return to the Legislative Assembly with recommended amendments. The Governor-General may, within six months, 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 of the Ordinance and assent to the remainder 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. Ordinances passed by the Legislative Assembly, whether assented to or withheld partially or in full from assent, are to be laid before each House of Parliament as soon as practicable.

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 Territory. Prior to the 1974 amendment of the Act, the Council consisted of the Administrator, and 2 official and 3 elected members of the Legislative Council. Since the amendment of the Act and the election of the Legislative Assembly, the Administrator's Council consists of the Administrator and 5 members of the Assembly.

The Territory elects one member to the House of Representatives.

The Corporation of the City of Darwin was established in 1957. The Corporation comprises a Mayor and ten aldermen (two for each ward) elected by adult franchise. Alice Springs was constituted a municipality on 25 June 1971 and the first election held on 26 June 1971. The Alice Springs Corporation consists of a Mayor and eight aldermen elected by adult franchise. Elsewhere in the Territory, municipal services are provided by the Administration. Town Management Boards are established in Katherine and Tennant Creek. Each of these boards consist of five members elected by adult franchise and four members appointed by the Administrator. The function of the Boards is to advise the Administrator on local matters.

Physical geography

The Territory is within the torrid zone, with the exception of a strip about 300 kilometres wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 30 metres. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The coastline of 6,200 kilometres 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 for general use, 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 system. 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.

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. Mosquitoes and sandflies are very troublesome in the "top end" particularly in the wet season. Most types of native fauna are protected and buffaloes exist in large herds on the northern coastal plains.

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 plains of the Alice Springs district carry chiefly an acacia scrub known as mulga, spinifex and other sparse grasses. The principal families represented in the interior are *Gramineae*, *Chenopodiaceae*, *Compositae* and *Mimosaceae*.

Population

See also the chapters Population and Vital Statistics.

The population of the Northern Territory at the census of 30 June 1971, was 48,627 males, 37,763 females, 86,390 persons. These figures include an Aboriginal population of 11,686 males, 11,567 females, 23,253 persons. A total of 4,004 Aborigines were enumerated in urban areas of the Territory, the remainder were enumerated in areas classified as rural. While some Aborigines choose to live on reserves, a large area of reserved land (about 244,000 square kilometres) has been maintained to provide economic resources from which the Aborigines may benefit either directly or from royalty payments.

Aboriginal Affairs

Policy

Policy statements in recent years have been moving away from specific definitions such as 'assimilation' to a more open-ended approach which does not presuppose any particular future for the Aboriginal people. The underlying principle of this approach has been described as 'self-determination', in line with the emphasis on Aboriginal involvement, in all stages of policy making.

In general, the Government aim is to remove legal, social and economic discrimination against Aborigines, and to provide opportunities to restore their lost power of self-determination in these areas.

Legal status

As Australian citizens Aborigines are entitled to equality before the law. The Department of Aboriginal Affairs and other Australian government departments and agencies, for the purpose of administering various programs designed to benefit Aborigines, define an 'Aboriginal' or 'Torres Strait Islander' as a person of Aboriginal or Islander descent who identifies as an Aboriginal or Islander and is accepted as such by the community with which he is associated.

Special schools for Aborigines

The special schools for Aborigines were combined with the community schools in February 1973.

Land

There are about 350 separate Aboriginal reserves in Australia, comprising about 541,300 square kilometres of which 244,000 is located in the Northern Territory.

Early in 1973 Mr Justice A. Woodward was appointed as sole Commissioner to enquire into Aboriginal land rights in the Northern Territory and to advise the Australian Government. The final report of the Commission was issued in May 1974 and the recommendations have been accepted in principle by the Government. The Report recommends that land be vested in Aboriginal communities in fee simple and makes recommendations on a number of related matters.

At present, royalties from the mineral and timber activities carried on within reserves are paid into the Aborigines Benefits Trust Fund, established in 1952. Loans or grants are made from the fund to any Aboriginal or group of Aborigines in the Northern Territory on the advice of a special advisory committee which includes a majority of Aboriginal representatives. Moneys in the fund may be used for a wide variety of purposes which would benefit the Aboriginal people. Ten per cent of the royalties paid by the mining companies at Gove and at Groote Eylandt are paid into special funds for the use of Aborigines at Yirrkala and at Groote Eylandt respectively.

Aboriginal communities are also being assisted to purchase land off reserves, and a number of properties have been bought with Government assistance. An Aboriginal land fund is being established, with provision for expenditure of up to \$5 million a year for ten years for this purpose.

Community services and affairs

Government policy in the administration of Aboriginal affairs is to work as far as possible through existing State and Australian Government departments and instrumentalities, and the Department of Aboriginal Affairs has primarily a policy planning and co-ordinating role. Responsibility for a variety of community services on Aboriginal reserves and in Aboriginal communities in the Northern Territory is being transferred from the Northern Territory Division of the Department to other appropriate authorities. The Departments of Education and Health recently assumed full responsibility for education and health respectively in Aboriginal communities in the Northern Territory, and the responsibility for a number of other functions such as town services on reserves and social welfare services is under review.

Special programs for Aborigines

To meet the needs of Aboriginal people throughout Australia the Australian Government has developed, on a national basis, a variety of programs in fields such as health, education, housing, employment and vocational training, special works, regional projects and economic enterprises. These are available to Aborigines in the Northern Territory, but the Australian Government, having direct responsibility for the administration of Aboriginal affairs in the Northern Territory, is able to take special initiatives there.

Attention is being given to changing the institutional character of Aboriginal reserve communities. Supervisory, managerial and technical staff will be replaced by community development advisers, consultants, and workers employed by the communities themselves. Programs are designed to encourage and strengthen the capacity of Aborigines to manage their own affairs, to increase their economic independence, and to reduce existing social and other handicaps facing them. The Government is also able to support and encourage Aboriginal initiative by responding directly to individual communities which wish to develop their own social or economic projects: grants may be made to communities to enable them to improve community facilities and amenities, and to help them to establish economic enterprises.

The Government policy is to provide Aboriginal primary school children in Aboriginal communities with education in their own languages as far as is practicable. Bilingual education programs were initiated in five schools in Northern Territory Aboriginal communities in 1973 as a first step in implementing the new policy.

Production

See also the chapters dealing with particular subjects.

Land tenure

Nearly 60 per cent of the total area of land in the Northern Territory is held under various forms of lease or licence which are described hereunder. The remainder comprises unoccupied and unreserved areas (22.98 per cent), reserved (19.75 per cent) and freehold (0.06 per cent).

The Australian Government has for some time been conducting a comprehensive review of pre-existing policies affecting land tenures and the interests of Aborigines in land holding. An enquiry into Aboriginal land rights was held by Mr Justice Woodward, who made a report to the Australian Government in April 1974. Legislation arising from the report is now being prepared.

A Commission of Inquiry into Urban Land Tenures was also established, under the chairmanship of Mr Justice Else-Mitchell, and in November 1973 a first report was made. Various government Departments have studied the Report, and further submissions have been made to the Commission. A second and final report is expected to be made early in 1975.

The various forms of lease or licence of lands are as follows:

Pastoral leases —granted for periods not exceeding 50 years.

Agricultural leases —granted in perpetuity over areas generally limited to a maximum of 40,470 hectares approximately.

Leases of town lands —granted in perpetuity.

Special purposes leases—granted for a term of years or in perpetuity, for purposes other than pastoral, agricultural or mining, or private residential purposes within a town.

Church lands leases —granted for church purposes at a nominal rent in perpetuity.

Miscellaneous leases —granted for any prescribed or approved purpose, for a term of years or in perpetuity.

Grazing licences —granted to graze stock on Crown Lands for periods not exceeding one year.

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

Miscellaneous licences —granted for periods not exceeding one year.

With the exception of leases within the Darwin Town Area or a municipality, which are granted at nominal rentals (10 cents per annum if and when demanded), the foregoing leases and licences are granted at specified rentals or rentals fixed by the Administrator and subject to reappraisal, and under various prescribed or specified conditions.

Pastoral and agricultural industries

Beef cattle production is the major rural industry in the Northern Territory. The beef industry has been characterised throughout its history by a slow rate of expansion, due largely to the poor quality of native pastures and unsatisfactory market outlets. Recent developments in pasture improvement, the opening in 1963 of export abattoirs at Katherine and Darwin and better disease control have encouraged producers to improve the quality of their cattle. This, coupled with better management techniques, improved pasture establishment and various incentives and research programs introduced by the Government to encourage the development of the pastoral industry, has resulted in a continuing increase in turnover figures and value of production.

In the past few years considerable capital has been attracted into land development. Two factors have been principally responsible. The first has been the demonstration by the Department of the Northern Territory and C.S.I.R.O. that Townsville stylo (T.S.) can be grown successfully as a pasture legume in the higher rainfall areas of the Territory. The economic feasibility of this practice has been firmly established by station experience and sustained by favourable beef prices. Improved pasture areas have grown considerably and there has been a greater use of phosphatic fertilisers in the last few years. The second development, the commercial production of grain sorghum, has so far occurred on only a few properties. It requires arable land and considerable capital input. Grain sorghum is still at an early stage of testing; nevertheless it promises to provide a more capital intensive primary industry.

Animal production has been augmented in recent years by the buffalo meat industry. Interest in domestication has been developed on the sub-coastal plains properties which will be necessary for further advancement of this industry. Through the development of more intensive cattle production utilising improved pastures, tropical legume seed production received considerable impetus. A seed certification scheme has been introduced by the Department of the Northern Territory to support this industry.

Increasing private investment in rural development is leading to greater pressures upon the Government for extension services and research. The work of C.S.I.R.O. and the Department of the Northern Territory research stations and experimental farms is providing the basis for continuing rural development. As new knowledge is being gathered it will be followed by testing on farm scale. The research institutions in existence in the Northern Territory are as follows.

Arid Zone Research Institute—Alice Springs. With the completion of the new research laboratory in 1967 more emphasis is being placed on arid zone research in the 'Centre' and the need to conserve valuable pastoral lands while achieving maximum productivity.

Beatrice Hill Animal Husbandry Research Station. It has two main roles, one as a regional station examining suitable pasture and animal production systems in the Coastal Plains/Darwin area and the second involving basic studies into breeding and breeds with wider implications. Its efforts have been largely devoted to the animal breeding investigations with some attention being paid to the development of improved pasture systems, including establishment, maintenance and the reaction to various grazing rates. Breeding trials are being conducted with Santa Gertrudis, Brahman and Africana, cross-breeds and Short-horns. Banteng cattle are being studied as a source of tropical blood for breeding cattle adaptable to Territory conditions and a small herd of cross-bred cattle has now been developed. Buffalo/Brahman comparison studies are also being undertaken.

Victoria River Experiment Station. This is the only Government Experiment Station in the range-lands of the Northern Territory. Work is being undertaken on genetic improvement of the local breed of Shorthorn cattle, evaluation of improved pastures, supplements, breed comparisons and range management studies.

Upper-Adelaide River Experiment Station. The station is mainly concerned with regional investigations of pasture and animal production for the Marrakai area including stocking rates on improved and native pastures, comparison studies of improved pastures and testing of new potential pastures, management of pastures on flood plains and feeding supplementation trials.

Berrimah Experiment Farm. The work of this farm has been mainly restricted to pasture and fodder crop investigations, plant introduction, sorghum breeding, fruit, vegetable and weed control trials and intensive animal studies.

Katherine Experiment Farm. This farm services the southern part of the Daly River Basin and has a larger component of cropping work than other stations. Work being conducted includes utilisation of Townsville stylo, pasture improvement and management, sorghum, peanut, guar, cowpea and bulrush millet trials and various aspects of cattle management.

Coastal Plains Research Station. The work on this station includes rice and pasture improvement, particularly in relation to suitable legumes for the sub-coastal plain.

Douglas-Daly Experiment Station. This station is concerned with developing animal production systems for the higher rainfall part of the Daly River Basin including evaluation of pastures under grazing, stocking rates, supplementary feeding, use of fertilisers, pasture establishment, and pasture/animal production trials.

Other research sites. Research and trials are also being conducted at selected sites on maize, soybeans, sorghum, peanuts, *Stylosanthes* spp. and weed control.

NORTHERN TERRITORY: AREA AND PRODUCTION OF CROPS

<i>Crop</i>	1968-69	1969-70	1970-71	1971-72	1972-73
AREA(a) (hectares)					
Fruit—Bananas	(b)	(b)	(b)	31	21
Pineapples	(b)	(b)	(b)	9	6
Other	36	29	49	48	43
<i>Total fruit</i>	36	29	49	88	70
Peanuts	(b)	(b)	23	40	13
Sorghum for grain	(b)	(b)	1,309	5,638	11,032
Vegetables for human consumption	103	112	102	160	170
Other crops	6,464	6,457	(c)856	(c)1,434	(c)823
<i>Grand total(a)</i>	6,603	6,598	2,339	7,360	12,108

PRODUCTION

Fruit—Bananas tonnes	(d)	(d)	170	228	242
Pineapples "	(d)	(d)	(d)	12	16
Peanuts "	(d)	(d)	15	44	..
Sorghum (grain) "	(d)	(d)	1,525	13,806	17,041

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

NORTHERN TERRITORY: LIVESTOCK

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31 March—	Horses	Cattle	Sheep	Pigs
1969	(a)39	1,190	(a)10	2
1970	41	1,179	8	4
1971	41	1,145	9	3
1972	(b)	1,166	7	5
1973	(b)	1,237	3	7

(a) At 30 June. (b) Not collected.

Mining

The mining industry is the major contributor to the income of the Northern Territory. Mineral output was valued at \$80 million in 1972-73 and at \$126 million in 1973-74. The main minerals being produced are bauxite, manganese, gold, copper, bismuth and iron ore.

The principal centres of production are Gove Peninsular, Groote Eylandt, Tennant Creek and Frances Creek. Exploration for new ore bodies continues at a high level.

A bauxite mining and treatment project based on extensive bauxite deposits has been developed at Gove at a cost of \$310 million. Under an agreement with the Australian Government, ratified by a Special Ordinance in 1968, Nabalco Pty Ltd undertook to develop the deposits. A supplementary Agreement signed in 1969 set the minimum Australian equity in the project at 30 per cent.

A joint venture now operates the project in which the respective rights are held, 70 per cent by Swiss Aluminium Australia Pty. Ltd. and 30 per cent by Gove Alumina Limited (a consortium of seven Australian companies). The first stage of an alumina plant to process the bauxite was opened on 1 July 1972. The capacity was expanded from 500,000 to 1 million tonnes in early 1973. The agreement provides that Gove Alumina Limited can export a total of 40 million tonnes of untreated bauxite over 20 years; exports commenced in 1971.

Manganese ore is being produced from extensive deposits at Groote Eylandt in the Gulf of Carpentaria. Production capacity has been increased since the commencement of operations and is expected to reach 3 million tonnes in 1975-76. Groote Eylandt supplied all Australia's requirements of metallurgical grade manganese ore and large tonnages are exported to Japan, Europe and the U.S.A. Total shipments of ore in 1973-74 amounted to 1,671,000 tonnes.

Frances Creek is the only iron ore mine in the Territory and all ore produced is exported through Darwin to Japan. Total ore production in 1973-74 was 717,000 tonnes valued at \$4.3 million.

Most of the copper and gold produced in the Territory is obtained from the underground mines of Peko Wallsend Ltd. at Tennant Creek. Production from these mines in 1973-74 was 15,021 tonnes of copper, 5,160,000 grams of gold, 3,493 kilograms of silver and 707 tonnes of bismuth, valued at \$41 million. Four mines are currently in production and a flash smelter commenced operation in December 1973.

Large deposits of uranium ore have been discovered in the Alligator Rivers region about 240 kilometres east of Darwin. The most important discoveries are Ranger, Nabarlek, Jabiluka and Koongarra. The Ranger deposit will be exploited by a joint venture between the Government and Ranger Uranium Mines Limited. The Government is examining the feasibility of a regional centre to serve the mining industry as well as forestry, pastoral and tourist industries in the region. The Alligator Rivers region is considered to be a uranium province of world importance.

Investigations are continuing into possible methods of treating the extensive lead-zinc deposits located in the McArthur River district. Conventional metallurgical processes are not considered suitable for the treatment of these ores. A pilot plant is being established at McArthur River to further investigate a treatment method. Other mineral deposits of possible economic significance exist in the Rum Jungle, Jinka Plains, Jervois Range and Hatches Creek areas.

The following table shows preliminary results of the Mining Censuses taken in respect of the years ended 30 June 1970, 1971 and 1972.

NORTHERN TERRITORY: MINING ESTABLISHMENTS

		1969-70	1970-71	1971-72 ^p
Establishments operating end of June	No.	25	24	26
Persons employed(a)	No.	1,417	1,495	1,587
Wages and salaries	\$m	7.5	8.7	10.1
Turnover	\$m	38.4	41.3	47.7
Opening stocks at 30 June	\$m	4.7	5.3	6.2
Closing stocks at 30 June	\$m	5.2	6.1	8.9
Purchases, transfers in and selected expenses	\$m	13.2	20.0	14.7
Value added(b)	\$m	25.7	22.2	35.8
Fixed capital expenditure(c)	\$m	13.7	31.8	21.7

(a) At end of June. Includes working proprietors.
less purchases, transfers in and selected expenses.

(b) Turnover plus increase (or less decrease) in the value of stocks,
(c) Outlay on fixed tangible assets less disposals.

Petroleum and natural gas

Offshore operations represented the main activity in petroleum exploration during 1973-74. At 30 June 1974 there were 6 oil permits covering 152,810 square kilometres, 2 oil licences covering 593 square kilometres and 20 Exploration Permits covering 3,228 blocks (approximately 266,770 square kilometres). Two oil leases covering 280 square kilometres are under application.

Drilling of the Petrel structure in the Bonaparte Gulf resulted in a promising discovery of natural gas. During 1974, 8 offshore wells were completed and a further 2 spudded but not completed. The Puffin No. 2 had shows of both oil and gas, while the Troubadour Well had gas shows.

No wells were drilled onshore during 1974. However, exploration to date of the Mereenie oil and gas field has indicated reserves (*in situ*) of about 48 million cubic metres of oil and up to 28,000 cubic metres of recoverable reserves of gas. The recovery of the oil presents some difficulties but the feasibility of establishing a small refinery at Alice Springs is being examined by the exploration companies and the Government.

The existence of a substantial natural gas reservoir at Palm Valley about 113 kilometres west of Alice Springs has been known since the mid sixties. Exploration is continuing to determine the total gas reserves in the area.

Forestry

Forestry activities in the Northern Territory commenced in 1959 when the Forestry and Timber Bureau established a northern regional station in Darwin. In the same year the Legislative Council of the Northern Territory passed a Forestry Ordinance to regulate the harvesting of forest produce and the management of forests. Activities during the first 10 years were largely devoted to assessing the native forest resource, establishing species trials to determine what species were suitable for plantation establishment and examining the silviculture of native forests. Some forest development work was carried out under the terms of two Cabinet approvals. This work mainly took place within Aboriginal reserves in order to provide employment for Aborigines and included plantation establishment, the protection of native forests from fire to encourage regeneration and the training of Aborigines in sawmilling.

In 1970 a new five year forest development program was commenced which expanded forestry activities both within Aboriginal reserves and in forest reserves and potential forest reserves. It has been estimated that 75 per cent of the potentially productive forest land in the Northern Territory occurs within Aboriginal reserves.

The program provides for the extension of fire protection and forest management activities within cypress pine and other native forest in Arnhem Land and on Melville Island. A major objective of the program is to provide fire protection and forest management to 40,000 hectares of mixed cypress pine forest within Arnhem Land. The program also provides for the setting aside of forest areas to be managed for multiple use purposes including timber production, recreation and the protection of soil and water sheds. The annual establishment of 400 hectares of coniferous plantation is included in the present program. Forest assessment activities are to be continued and fire control activities are to be expanded within forestry, pastoral and agricultural areas as well as tree planting activities for conservation in the arid zone.

The consumption of sawn timber in the Northern Territory during 1973-74 was estimated at 25,000 cubic metres. It is not possible to obtain accurate statistics because of the substantial, but unknown quantity of sawn timber which enters the Northern Territory by road. Local production during 1973-74 was 900 cubic metres. Aboriginal sawmilling industries are being encouraged and it is estimated that within 10 years their annual production will be in the order of 10,000 cubic metres. By the year 2000, the Northern Territory will have an estimated annual sawn timber requirement of 80,000 cubic metres which could be met locally from native forests and plantations if an expanded plantation program is commenced in the near future.

Three pressure treatment plants are in operation treating round posts, rails and poles for use by rural industries and production is expected to reach 1,000 cubic metres by 1975.

Resource investigations have shown there are three areas within the Northern Territory with significant pulpwood resources which may be suitable for exploitation. These areas are within the present Aboriginal reserves. There has been some interest by Japanese paper industries in the past and it is likely that this will increase in the next decade due to the rapidly increasing Japanese demand for paper and paper products.

The tropical *Eucalyptus* forests in the Northern Territory are comparatively low in timber productivity per unit area. Forest policy within the Northern Territory provides for multiple use management where feasible in order to optimise other forest values including soil and water conservation, forest recreation, grazing and the conservation of flora and fauna. The financial yields from forest areas can be increased through this form of management.

The total revenue derived from the forest is related to the levels at which royalties and fees are set. In principle, direct forest revenues should be adequate for the establishment, management and protection of the forest area. The forests provide renewable resources on which industries can be based and which will develop substantially greater income than direct revenues from the forest.

Fishing

Following preliminary surveys which indicated the existence of valuable prawn resources off the Northern Territory coast, prawning operations were approved in 1968 in waters adjacent to the Territory. Three prawning companies are now operating, all of which are joint Australian-Japanese ventures. Two prawn processing plants are in operation in Darwin while another operates on Groote Eylandt. Boats and equipment valued at \$15 million were based in the Northern Territory in 1973-74. During 1973-74, 3.9m kilograms live weight of prawns were caught by Northern Territory prawning

ventures. The Territory exported 1.3m kilograms (processed weight) valued at \$4.16 million representing 18.7 per cent of Australian prawn exports. The other main fishery in the Territory is that based on barramundi in estuaries and inshore areas. This species also provides good sport fishing in inland areas. Commercial catches of barramundi totalled 179,000 kilograms (filleted weight) for the calendar year 1973.

NORTHERN TERRITORY: PRINCIPAL FISHERIES

		1968-69	1969-70	1970-71	1971-72	1972-73
Prawns—						
Estimated gross weight of prawn catch	tonnes	1,077	3,938	4,108	2,629	2,584
Gross value of prawns	\$'000	831	3,646	3,083	2,562	4,005
Fish—						
Estimated live weight of fish catch	tonnes	264	125	253	391	619
Gross value of fish	\$'000	96	51	139	191	380
All fisheries—						
Number of boats engaged		110	82	127	130	163
Number of men employed		537	437	542	532	561

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. A number of food processing activities such as small-goods manufacture, soft drink, prawn processing and breweries have been established. Industrial investments by private interests in recent years include plants to manufacture bitumen, clay bricks, concrete bricks, reinforcing steel, concrete products, fencing materials, building components and agricultural equipment.

The following table shows preliminary results of the Manufacturing Censuses taken in respect of the years 1971-72 and 1972-73.

NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS

		1971-72	1972-73
Establishments at 30 June	No.	80	99
Persons employed(a)	No.	1,194	2,224
Wages and salaries	\$m	5.8	13.9
Turnover	\$m	28.8	42.8
Opening stocks at 30 June	\$m	3.5	8.5
Closing Stocks 30 June.	\$m	3.5	16.5
Purchases, transfers in and selected expenses	\$m	17.5	23.1
Value added(b)	\$m	11.3	27.6

(a) Average over whole year. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Tourism

Tourism has become one of the Territory's major industries in recent years. There were about 120,000 visitors to the Northern Territory in 1973-74. The estimated value of the industry in 1973-74 was \$30 million.

A firm of consultants has reported on the tourism potential of Central Australia, and in particular the Ayers Rock-Mount Olga National Park. These findings have been published in the reports Tourism Plan for Central Australia and Ayers Rock-Mount Olga National Park Development Plan. The Government has established an advisory group representing Government departments, Aborigines and tourist interests to advise on the implementation of recommendations arising from the reports. To date environmental studies have been undertaken and \$150,000 has been set aside for urgent minor environmental repairs.

National Parks and Reserves

About 43,000 square kilometres have been set aside as wildlife sanctuaries under the Wildlife Conservation and Control Ordinance. They are controlled by the Chief Inspector of Wildlife who is an officer of the Department of the Northern Territory. Wildlife protected areas total 236,000 square kilometres, the bulk of which consists of Aboriginal reserves.

The Northern Territory Reserves Board administers some 37 national parks and reserves covering an area of over 2400 square kilometres. The Board is responsible under the National Parks and Gardens Ordinance for the care, control and management of these reserves, and its functions include the preservation and protection of natural and historical features and the encouragement of public use and enjoyment of land set aside in such reserves.

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.

NORTHERN TERRITORY: PRINCIPAL OVERSEAS IMPORTS AND EXPORTS (S'000)

Commodity	1968-69	1969-70	1970-71	1971-72	1972-73
IMPORTS					
Petroleum and shale spirit—					
Aviation kerosene	1,513	1,093	1,119	212	87
Automotive spirit	577	706	1,051	1,108	1,399
Automotive distillate	589	1,103	930	1,437	1,185
Furnace fuel	659	567	837	1,847	2,233
Other(a)	743	1,077	1,226	1,912	1,645
Timber	383	548	404	546	771
Iron and steel manufactures	893	1,172	833	839	93
Machinery and transport equipment(b)	12,757	23,534	11,464	9,049	32,827
Other articles	3,686	10,029	5,806	8,916	9,350
Total imports	21,800	39,829	23,670	25,866	49,590
EXPORTS(c)					
Meats	4,999	4,896	5,331	5,744	7,375
Fresh prawns and shrimps	605	4,917	5,627	4,853	4,479
Hides and skins, raw	209	280	183	118	369
Iron ore	6,467	9,124	7,094	6,847	5,656
Other ores and concentrates	8,539	9,207	10,939	16,054	22,928
Other articles	8,115	21,301	7,285	15,627	54,891
Total exports	28,934	49,725	36,459	49,243	95,698

(a) Includes industrial and marine diesel fuel, oil for use as refinery stock, etc. (b) Includes value of oil search equipment (floating structures, etc.) which were brought to the Northern Territory for temporary operation and moved overseas after the planned exploration activities were completed. (c) Includes domestic exports and re-exports.

Railways

The Commonwealth Railways operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of 1226 kilometres of which about 322 kilometres are in the Northern Territory. The line is standard gauge from Port Augusta to Marree, a distance of 357 kilometres and narrow (1067 mm) gauge from Marree to Alice Springs. The Australian Government has approved in principle the construction of standard gauge line between Tarcoola and Alice Springs, to replace the Marree-Alice Springs section of the Central Australia Railway

and survey work has commenced. The Commonwealth Railways also operates the North Australia Railway between Darwin and Birdum on a narrow (1067 mm) gauge over a distance of 510 kilometres. The two inland terminals, Alice Springs and Birdum are about 1,014 kilometres apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 10 kilometres 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, 1535 kilometres long, connects Alice Springs with Darwin and runs via Katherine and Tennant Creek. The Barkly Highway, 648 kilometres long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 26 kilometres north of Tennant Creek. The sealing of the Victoria Highway from Katherine to the Western Australia border has been completed. This is a distance of 467 kilometres and joins a sealed road to Kununurra and Wyndham in Western Australia. These highways are used for carrying various freights, including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa as well as providing access to the meatworks in Wyndham. The routes are used also for overland tourists and travellers from the southern States to Darwin.

The Government is nearing the completion of a three year program of upgrading these highways. This is a continuing annual program of improvement and maintenance of the interstate links.

Development roads serving outback communities in remote areas have also received attention and at 30 June 1973 there were 20,160 kilometres of roads in the Northern Territory. These are made up of 4,538 kilometres sealed, 1,710 kilometres gravel, 4,207 kilometres formed and 9,696 kilometres unformed.

The sealing of 138 kilometres of the Arnhem Highway is expected to be completed by the end of 1974. This includes a bridge over the South Alligator River and will give access to the uranium areas of southern Arnhem Land.

Shipping

Shipping services to Darwin are provided from the eastern States by the Australian National Line and from the west by the Western Australian State Shipping Service. Increasing numbers of oil tankers and overseas general cargo vessels visit Darwin while iron ore carriers continue to load lump and fine ore for Japan. The prawning and fishing industry accounts for a significant portion of the shipping entries into the port. A high level of activity continues as a result of visits by oil rig service vessels.

John Burke Pty. Ltd. operates a shipping service from Brisbane to the Gulf of Carpentaria ports and serves Aboriginal communities as well as the mining centres of Gove and Groote Eylandt. Other shipping services to Groote Eylandt and Gove are in connection with the export of the mining production.

Powered barges also provide services from Darwin to Aboriginal communities and ports along the coast.

In 1970 the Australian National Line replaced vessels calling at Darwin with a new container/bulk ore vessel, the *Darwin Trader*, which carries general cargo to Darwin and backloads manganese ore from Groote Eylandt to Tasmania.

In 1971 the Western Australian State Shipping Service introduced two unit-load vessels and in the first half of 1973 a further two unit-load vessels; these vessels replace all the conventional cargo and passenger/cargo vessels previously in use. In early 1972, the Australian Government offered the Western Australian Government a capital grant of \$2.5 million to assist in the purchase of the fourth unit-load vessel.

Air services

At 30 June 1974, there were 128 aerodromes in the Territory, eight of which are maintained by the Australian Department of Transport, Air Transport Group. The overseas passenger services using Darwin International Airport are Qantas/British Airways (Sydney/Brisbane/Melbourne to London and to Hong Kong); Qantas (Port Moresby to Singapore); TAA on behalf of Transportes Aereos de Timor (Darwin to Bacau) and Merpati Nusantara (Darwin to Kupang). Regular internal services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett Airlines (from Adelaide, Sydney, Melbourne and Brisbane), and MacRobertson-Miller Airways Ltd (from Perth). Connair Pty Ltd operate a network of air services throughout the Territory, the company's base being at Alice Springs, in addition, MacRobertson-Miller Airways Ltd operate from Darwin to Gove and Alice Springs. The Northern

Territory Aerial Medical Service has aircraft based at Darwin, Gove and Alice Springs, whilst the Royal Flying Doctor Service operates from Alice Springs. Charter services are available at a number of centres including Darwin, Alice Springs, Katherine, Tennant Creek, Gove and Groote Eylandt.

Posts, telegraph, telephones, radio and television

Postal communication is maintained by road, rail and air transport between major Northern Territory towns and the capital cities of Australia. Large centres receive surface mails by two major road mail services operating via Alice Springs and Mount Isa. The more remote centres are served by the aerial services. Direct mails are despatched to several overseas countries but direct despatches are received only from England.

Trunk telephone links to Darwin extend from Townville via a broadband microwave radio relay system and from Adelaide via carrier systems superimposed on the overland telegraph lines. These systems also carry telegram and telex traffic and serve the towns along the routes. Subscriber trunk dialling facilities from Darwin and Nhulunbuy (Gove Peninsula), were made available during 1974.

High frequency radio telephone exchanges at Katherine and Alice Springs provide connections to the telephone network for some of the remote properties in the Northern Territory. The majority of homesteads on pastoral leases are equipped with radio transceivers operating through the Royal Flying Doctor base at Alice Springs or the A.P.O. Outpost Radio base in Darwin, which provide a message passing and emergency communications service.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine and there are commercial broadcasting stations located at Darwin and Alice Springs. Two television stations ABD Channel 6 of the national broadcasting system and NTD Channel 8, a commercial station, operate in Darwin and a national television station ABAD Channel 7 operates in Alice Springs.

EDUCATION

See also the chapter Education.

The Australian Department of Education is responsible for the education administration in the Northern Territory.

This responsibility includes the following:

- (i) Development of curricula for use in all Northern Territory schools; education research; in-service and pre-service education of teachers; development of a teaching resources centre.
- (ii) Special projects covering the range of educational facilities in the Northern Territory, including education programs for Aborigines, migrant education and services for handicapped children.
- (iii) Planning and controlling the capital works program of educational buildings in the Northern Territory.
- (iv) Administration of capital assistance to non-government schools.

Schools in the Northern Territory

There are some 140 schools and pre-schools in the Northern Territory. They cater for approximately 24,000 students. Of these, about 3000 attend private or mission schools. The phase-out of South Australia's education commitments planned for the period 1971-75 is well advanced, including the transfer of responsibility for recruiting and employing teachers.

The curricula and organisational pattern of Northern Territory schools are basically derived from the South Australian pattern, but they are changing. For instance, the secondary schools are developing their own certification and matriculation assessment procedures, an exercise which is complicated by the fact that there is no university or college of advanced education in the Territory.

There are two Schools of the Air in the Northern Territory, one at Alice Springs and one at Katherine. Plans are under way at both centres to relocate the schools in new buildings and to include in each a residential wing to allow students from remote areas to attend their home school for approximately one week each term. The Katherine School of the Air introduced this year an aerial teacher patrol, whereby a teacher possessing a commercial pilot's licence visits the students. In 1974 the Schools assumed responsibility from the South Australian Correspondence School, for correspondence lessons for children living in isolated areas of the Northern Territory.

Another recent development has been the interest in Indonesian and South-East Asian studies in secondary schools in the Northern Territory. A student exchange scheme is operating whereby students from Darwin high schools go to Bali and vice versa.

There is a trend in the Northern Territory towards the amalgamation of the pre-schools and primary schools. For some years the pre-school has operated within the primary school in Aboriginal communities and in recent buildings in the larger centres, the pre-school is built as part of the new school complex.

An intensive building operation is currently under way in the Northern Territory. The most recent complex will be the development of educational facilities for the new uranium townships in the East Alligator area. The educational facilities which are proposed for the Darwin-Newtown area differ from existing Australian education patterns in that they will provide for three stages of school education as against the traditional primary and secondary school arrangement.

One interesting development is the Batchelor Education Village, 100 kilometres south of Darwin. It is an educational complex consisting of a school of about 100 pupils, a camp school for visiting groups from other towns and centres, and a residential in-service conference centre for teachers.

Aboriginal education

The great majority of Northern Territory Aborigines live away from the town centres. Education for Aboriginal children is provided by various means, including mission schools, Government schools on missions, Government schools in or near Aboriginal settlements or in schools on pastoral properties.

In late 1973, as a result of a survey of educational buildings in Aboriginal communities (the Sebac Report) the Government initiated a major five-year program to upgrade buildings and facilities in these communities. However, a recent movement on the part of some Aboriginal family groups to move away from centralised locations to a more traditionally oriented life style has posed new problems as regards providing educational facilities for these decentralised settlements or 'out-stations' and a major project is under way to develop a new form of schooling compatible with the wishes of the communities. One means of providing physical facilities in this situation is the use of mobile 'caravan schools'.

The Government schools for Aboriginal children in out-of-town centres provide tuition at pre-school and primary school level, a number of them have some post-primary classes as well.

For Aboriginal children who wish to proceed to secondary school, there are three residential, transitional colleges. At Yirara, Kormilda and Dhupuma Colleges, Aboriginal students from bush locations are taught the skills of urban living concurrently with the preparation for entry to secondary school programs in the major town centres.

A development which has attracted wide interest and is likely to assume relatively large proportions is a bilingual education program whereby Aboriginal children are taught, in their early years of schooling, in their native tongue. Eleven languages have been analysed sufficiently to allow bilingual programs to be mounted. The extension of bilingual education to the majority of Aboriginal children is hampered by the fact that there are over 130 languages and dialects in use.

The School of Australian Linguistics works closely with the Bilingual Education Section of the Northern Territory Division of the Australian Department of Education.

Adult education is provided in Aboriginal townships and on missions. Most adult education activity takes the form of evening classes conducted by local instructors. Classes include song and dance, folklore, art and craft, English, civics, basic mathematics, hairdressing, mechanics, dress-making, domestic science and manual arts. The Department of Education has developed a variety of short term courses to assist Aboriginal people to overcome problems of social concern, including elections and voting procedures. Intensive courses are conducted in major centres with visiting speakers.

Darwin Community College

The Darwin Community College is presently the only institution which provides post-secondary education in the Northern Territory. The College was opened in 1974 and is an autonomous, multi-purpose institution providing courses in the technical, tertiary and further education fields. In the tertiary field, the College has established courses in social work and teacher education, and also provides tutorial assistance to external students enrolled at the University of Queensland. The College has also established a regional campus at Alice Springs.

Though the Darwin Community College's role is primarily to cater for the Northern Territory's needs, it does have a national significance in that it is the first multi-level institution of its kind in Australia.

Apprenticeship training

Since March 1974, the technical training of apprentices in the Northern Territory has been conducted in the form of block training in all but a few trades. Apprentices from all centres in the Territory attend Darwin Community College for a continuous period of approximately eight weeks each year in first and second years and four weeks in third year. In trades where the number of apprentices does not justify block training, the courses are conducted by correspondence.

The Northern Territory Apprentices Board is a statutory body which functions within the Department of Education. The Chairman and other staff are provided by the Department but other Board members represent employer and employee interests. Arrangements between the Board and the Darwin Community College are co-ordinated by the Department of Education.

Finance

Details of receipts and outlay of the Territory for the years 1968-69 to 1972-73 are shown in the table following. In this table the receipts and outlay of the Northern Territory have been classified into a National Accounts form. The table covers transactions relating to the Northern Territory in the Australian Government Consolidated Revenue Fund and the following trust funds: Aborigines Benefits, Northern Territory Government Settlements Canteens, Northern Territory Housing Commission, Northern Territory Housing Loans, Northern Territory Transport and Northern Territory expenditure from the Aboriginal Advancement Trust Account. Details of the financial transactions of the following Northern Territory semi-government authorities are also included: the Northern Territory Port Authority and the Northern Territory Housing Commission (from 1969-70). Details of the financial transactions of the Darwin City Council are also incorporated in the table. Revenue derived by the Australian Government from income taxes, customs duties, etc., levied in the Northern Territory and expenditure by the Australian Government 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 OUTLAY

(\$'000)

	1968-69	1969-70	1970-71	1971-72	1972-73
RECEIPTS					
Taxation—					
Rates on land	450	547	683	950	1,014
Stamp duties	86	94	176	158	184
Motor registration	518	586	646	784	816
Other taxes, fees, fines, etc.	599	773	955	1,230	1,302
Interest, rent, etc.	980	1,379	1,639	1,486	1,490
Public enterprises income	2,175	2,481	3,505	3,928	3,754
Net sale of local authority and public corporation securities	633	276	399	289	157
Other receipts(a)	—21	347	1,625	63	1,027
Net charge to Commonwealth budget	57,836	74,032	87,851	111,535	124,388
Total receipts	63,256	80,515	97,479	120,423	134,132
OUTLAY					
Final consumption expenditure					
Law, order and public safety	1,935	2,331	3,326	3,607	5,440
Education	4,639	5,628	7,812	9,491	12,874
Health	5,536	8,207	8,028	8,478	10,570
Social security and welfare	6,271	7,719	9,417	12,069	14,673
Other	11,659	12,508	13,416	17,116	18,794
Gross fixed capital expenditure on new assets and stocks—					
Education	1,709	5,588	5,126	7,671	12,035
Roads	11,053	11,269	11,908	11,636	14,627
Housing and community amenities	6,845	7,884	12,184	16,593	17,876
Health	1,167	1,868	2,089	9,457	5,272
Social security and welfare	739	478	455	348	623
Other	8,414	12,454	16,193	16,839	15,384
Net purchase of existing assets(b)	—358	—590	45	280	..
Interest paid	113	145	272	282	236
Cash benefits	156	174	204	201	202
Subsidies	337	648	460	620	505
Net advances—					
Housing and community amenities	2,164	3,086	4,608	3,749	1,162
Other	13	—101	—95	83	68
Grants for private capital purposes	864	1,219	2,031	1,903	3,791
Total outlay	63,256	80,515	97,479	120,423	134,132

(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 Constitution provides that the Seat of Government of the Commonwealth of Australia shall be in the State of New South Wales but distant not less than 100 miles (160 kilometres) from Sydney. After a number of alternative sites were considered, an area of 2,359 square kilometres lying approximately 320 kilometres south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 73 square kilometres 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 Capital Territory, whose functions include housing, public transport, and municipal services. Education, public health, justice, police, and the provision of basic physical services, including water supply, sewerage and roads, are the responsibility of the Departments of Education, Health, Attorney-General's, and Housing and Construction. 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 had eight elected members and a representative from each of the Departments of the Capital Territory, Housing and Construction, and Health, and the National Capital Development Commission, as well as an observer from the Department of Education. The Council advised the Minister for the Capital Territory on matters affecting the Australian Capital Territory. Ordinances were submitted in draft form to the Council for advice and comment before being implemented.

The Council was replaced in 1974 by the A.C.T. Legislative Assembly. This body consists of 18 elected members—9 from each of the electoral divisions of Canberra and Fraser. There are no nominated members in the Assembly. In the immediate future the role of the Assembly will be unchanged from that of the Council but it is expected that it will gradually receive some legislative responsibility and eventually develop as a self-government body for the A.C.T.

At the census of 30 June 1971 the population of the Australian Capital Territory was 144,063, made up of 140,864 in the urban Canberra (excluding Queanbeyan) area and 3,199 in rural areas (including Jervis Bay). The estimated population of the Territory at 30 June 1973 was 86,200 males and 82,200 females, 168,400 persons. *See also* the chapters Population and Vital Statistics.

National Capital Development Commission

The *National Capital Development Commission Act 1957–1960* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of Australia. The year 1972–73 was the fifteenth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Department of Housing and Construction and private consultants. Details of expenditure by the Commission in recent years are included in the table on page 1050. Total expenditure in 1972–73 was \$74.4 million comprising: land development and services \$15.8 million; water, sewerage and stormwater, services and headworks \$6.7 million; housing, flats and other accommodation \$10.8 million; educational facilities \$6.5 million; roads, bridges and traffic control \$6.5 million; city works and associated facilities \$5.8 million; Australian Government offices \$15.9 million; national works \$1.4 million; others \$5.0 million.

The following major works were completed during the 1972–73 financial year by the Commission: Coulter Drive—from Belconnen Way to Ross Smith Crescent, Scullin; Weston Park development stage 3; Cotter Reserve development stage 2; Hindmarsh Drive duplication—Phillip to O'Malley; Campbell Park Offices phase 1; Belconnen High School stage 2; Primary Schools at Duffy, Holt, Melba and Weetangera; Campbell High School library; Civil Defence depot at Woden; Yarra Glen roundabout; Civic pedestrian plaza; Weston Creek—Coppins Crossing sludge main; Gungahlin 900 mm trunk sewer main; Narrabundah High School gymnasium and extensions; Upper Red Hill pumping station; Fyshwick eastern extensions—roads and hydraulic services; augmentation of trunk main from Mount Stromlo to Belconnen; land servicing in Evatt, Melba and Flynn; realignment and lining of Sullivan's Creek—Lyneham.

Major works under construction at the commencement of the 1973–74 financial year; roads and services to Kambah, Chapman, Hawker, Charnwood, Flynn, Macgregor, Stirling, Crace and Spence; Tuggeranong interceptor sewer; Molonglo Valley interceptor sewer; Lower Molonglo Water Quality Control Centre—equipment; Botany Building in the Botanic Gardens; food school at the

Canberra Technical College; Mount Stromlo Reservoir; Belconnen Reservoir No. 5; Weston Creek group centre—roads and services; Kippax group centre—roads and services; Holder High School; Ginninderra High School; Canberra School of Music; Primary Schools at Macgregor, Flynn and Evatt; Horticultural Centre—Weston; Lake Ginninderra embankment and associated works; Hindmarsh Drive duplication; Ginninderra Drive; Tuggeranong Parkway; Australian National Gallery; Australian National Library extensions; Cameron Offices; Trade Group Offices; Parliament House extensions.

Works and services

Housing

Until the period following the 1939–45 War most houses and flats in the Australian Capital Territory were built and rented by the then 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 the Australian Capital Territory occupied by tenants of the Department of the Capital Territory (formerly 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, 38.8 per cent in 1966 and 28.1 per cent in 1971. Although the bulk of rented accommodation is provided by public authorities, and this situation will continue thus in the foreseeable future, there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory 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, 45.6 per cent in 1966 and 51.8 per cent in 1971. Home building activity in the Woden Valley and Weston Creek, south-west of the former city area and Belconnen, north-west of the former city area, has continued to expand, and at June 1971 there were 11,280 occupied dwellings in the Woden Valley and Weston Creek area, and 5,145 occupied dwellings in the Belconnen area. *See also* the chapter Housing and Building.

Municipal services

Since its establishment, Canberra has been developed as a garden city. The development of new areas of parkland and the maintenance of existing tree and lawn areas is the responsibility of the City Parks Administration of the Department of the Capital Territory. During the four years ended 30 June 1973, some 1.7 million trees and shrubs have been propagated by the Department for 'planting out' in the city. The area of parks, gardens and sports grounds under maintenance at 30 June 1973 was about 4,500 hectares. Municipal services are also provided by the Department of the Capital Territory.

The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Department of Housing and Construction.

At 30 June 1973, 44,941 meters were connected to the city water supply, drawn through 24 reservoir installations, 3 of which comprises a pair of reservoirs, from 3 storages on the Cotter River with a total capacity of nearly 91,218 megalitres. In 1972–73, some 41,919 megalitres of water were consumed in Canberra serving a population of 185,000, and in addition the system supplied 2,591 megalitres to Queanbeyan, New South Wales, to an estimated population of 11,900. Treatment works at Weston Creek, Belconnen and Fyshwick dispose of Canberra's sewage. At 30 June 1973, 1,425 kilometres of sewers, 14 kilometres of rising sewerage mains and 1,492 kilometres of storm-water drains and a total length of 1,518 kilometres of water lines were laid.

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 subjects. (*See also* § 1. Canberra: Fifty Years of Development, page 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910–1972, 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* 1936–1974. In special circumstances land may be leased for purposes other than business or residential under the *Leases (Special Purposes) Ordinance* 1925–1970 and for

church purposes under the *Church Lands Leases Ordinance* 1924-1966. As considerable areas of Government 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 under the *Leases Ordinance* 1918-1966 for terms consistent with the expected growth of Canberra. Some lands in the Territory, in areas generally remote from the City, remain in private ownership under freehold title. A program of progressive acquisition of this land is being implemented.

The Australian Territory at Jervis Bay, comprising about 73 square kilometres, 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, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. 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 Australian Capital Territory began in 1915 with the planting of pines on the denuded slopes of Mount Stromlo to arrest soil erosion and improve the visual quality of the landscape. In 1926 a program for development of commercial forests was approved following a comprehensive review of the Territory's potential for forest development. Major reviews of this program were made in 1932, 1954 and 1967, always however retaining the basic policy of systematic conservation and development. Much of the better native forest has been placed under management and forestry operations including fire protection treatment have been extended to some 44,500 hectares of natural forest in the Cotter Catchment and adjacent areas. The more productive stands in these areas were harvested extensively to provide timber for Canberra's post-war expansion and were subsequently treated to promote regeneration and protect the quality of water harvested.

The policy of forest management in the Australian Capital Territory has been formulated to cater not only for commercial timber production but also to provide recreation facilities and an attractive visual environment for the national capital and to protect the water supply. These policies can be broadly summarised as follows.

- (a) Manage and develop hardwood forest areas in the Australian Capital Territory and Jervis Bay for production of timber and arrange sales of all forest produce.
- (b) Initiate and maintain a variety of growth and environmental experiments to produce information for management decisions.
- (c) Develop and implement viable multiple use policies for forest areas with particular emphasis on recreation potential and facilities, quality of water harvest in catchments and conservation of the environment.

The forest authority is charged with the management of some 60,700 hectares of land in the Australian Capital Territory. Of this some 44,500 hectares carry native forest or woodland. As at 31 December 1973 the total area of coniferous plantations in the Australian Capital Territory and Jervis Bay was 13,800 hectares. Of 322 hectares at Jervis Bay the majority consists of *Pinus radiata* (Monterey Pine) and *Pinus elliottii* (Slash Pine). The plantations in the Australian Capital Territory consist mainly of *Pinus radiata* and *Pinus ponderosa* (Yellow Pine). Total area of *Pinus radiata* was 12,780 hectares.

In 1973-74 there was no significant commercial production of hardwood timber from the Australian Capital Territory and Jervis Bay. Currently hardwood logging is restricted to incidental production from silvicultural operations. However, the volume of softwood cut increased to 80,200 cubic metres (69,700 cubic metres in 1972-73). The total value of this unprocessed timber unloaded at the mill (milldoor value) was \$1,544,000. This returned \$840,000 in royalties (value of unprocessed timber at stump).

In 1972, Australia's first plantation-based integrated timber-converting complex commenced production, processing timber cut in Australian Capital Territory plantations. It produces structural plywood, sawn, dressed and kiln dried lumber and wood chips. Consumption of logs by this complex is scheduled to reach 118,900 cubic metres per annum by 1975.

Agricultural, pastoral and secondary industries

During 1972-73 the production of the more important items of the agricultural and pastoral industry was: wheat 359 tonnes; wool 555,000 kg; whole milk 2,672,000 litres; meat (carcass weight), fresh 7,835 tonnes. The numbers of livestock depastured at 31 March 1973 were: cattle 19,456; sheep 142,968; pigs 112.

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.

The following table shows preliminary results of the Manufacturing Censuses taken in respect of the years ended 30 June 1972 and 1973.

**AUSTRALIAN CAPITAL TERRITORY
MANUFACTURING ESTABLISHMENTS**

		1971-72	1972-73
Establishments operating during year	No.	135	132
Persons employed(a)	No.	3,333	3,316
Wages and salaries	\$m	14.7	16.5
Turnover	\$m	50.1	60.5
Opening stocks at 30 June	\$m	3.7	4.9
Closing stocks at 30 June	\$m	4.5	5.6
Purchases, transfers in and selected expenses	\$m	24.5	31.4
Value added(b)	\$m	26.4	29.9

(a) Average over whole year. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

Transport and communication

Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 8 kilometres 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 1973 was: bitumen and concrete, 1,283 kilometres; gravel, 385 kilometres; other formed roads, 42 kilometres; total, 1,710 kilometres. 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 chapters Education; Public Health; and Law, Order and Public Safety.

Schools

The Education Ordinance 1937-1971 provides for the compulsory attendance at school of children between the ages of six and fifteen years. At the beginning of 1974 the Australian Department of Education assumed complete responsibility for the operation of Australian Capital Territory government schools taking over the areas of staff and curriculum previously carried out by the New South Wales Department of Education. The actual running of the schools is being controlled by an Interim Australian Capital Territory Schools Authority, representative of teachers, parents and the community, with the Department retaining legal responsibility until the Authority attains permanent status. There were approximately 2,000 teachers in the Australian Capital Territory in 1974, an increase of some 400 teachers over 1973. About 200 of the total number of teachers are members of the New South Wales teaching service.

At 1 August 1974 there were 14 government secondary schools in the Australian Capital Territory providing courses to the Higher School Certificate level. Pupils enrolled numbered 11,676. Forty-six schools provided courses at infants and primary levels, 3 of these being in rural districts and 1 in the Jervis Bay area. The number of pupils enrolled in primary grades of government schools at 1 August 1974 was 20,975.

A school for physically handicapped children is located at Turner Infants School. Special units for deaf children are situated at Ainslie and Mawson Primary Schools and at Telopea Park High School. Classes for mildly intellectually handicapped children are provided at Ainslie, Mawson, Narrabundah, Scullin and Waramanga Primary Schools, Lyneham High School and the Woden School. Three special schools and 2 pre-schools serve the needs of moderately and some severely intellectually handicapped children. Aphasic children are catered for in 2 special classes at Forrest Primary School, and 2 reading centres operate at Yarralumla and North Ainslie Primary Schools. Special English classes are available at 5 primary schools and 5 high schools. Educational guidance services are provided by the Education Clinic and through counselling staff.

The 62 pre-schools including 2 in the Jervis Bay area and a mobile unit which visits outlying areas of the Australian Capital Territory provide pre-school facilities for approximately 4,000 children between the ages of 3 and 5 years. New pre-schools were opened in 1974 at Macgregor, Flynn and Evatt. Additional facilities provided at Waramanga, Rivett, Weetangera, Page and Weston enabled these pre-schools to enrol up to 120 children. Four new primary and pre-schools will be opened in 1975 at Charnwood, Chapman, Village Creek and Mount Neighbour. Holder High School will open in 1975.

At February 1974 there were 23 non-government schools in Canberra including 8 secondary schools which provide courses leading to the Higher School Certificate. At the same date 6,766 pupils were enrolled in the primary grades of non-government schools and 5,031 pupils were enrolled in the secondary forms of non-government schools.

Other educational institutions

The Canberra Technical College which is run jointly by the Australian Department of Education and the New South Wales Department of Technical Education follows generally the pattern of technical education in New South Wales. It provides trade, post-trade, certificate, and craft and leisure-type courses at the main campus, and several annexes. In 1974 the Technical College provided instruction in over 150 courses in 21 different schools of study. Student enrolments in April 1974 were in excess of 10,000.

The Canberra School of Music provides a diploma course and individual study in a range of instruments and voice. At September 1974 enrolments totalled 516. A new school to accommodate between 1,000 and 1,200 students is at present under construction.

The Canberra College of Advanced Education was established following a decision by the Australian Government in October 1966 to accept the recommendations of a committee of inquiry into the need for a college of advanced education in the Australian Capital Territory. The College is organised into schools. In 1974 courses were offered in the School of Administrative Studies, the School of Applied Science, the School of Liberal Studies, the School of Teacher Education, the School of Information Sciences and the School of Environmental Design. A Master of Education course was offered in 1974; a Master of Applied Science course will be offered in 1976.

The Australian National University consists of a School of General Studies and an Institute of Advanced Studies.

The School of General Studies is composed of Faculties of Arts, Asian Studies, Economics, Law and Science. It carries out both undergraduate and post-graduate training and research.

The Institute of Advanced Studies is a centre for research and training in research. It includes the John Curtin School of Medical Research and Research Schools of Physical Sciences, Social Sciences, Pacific Studies, Chemistry, Biological Sciences and Earth Sciences.

The University has established the following centres: Centre for Resource and Environmental Studies, Humanities Research Centre, North Australia Research Unit (based in Darwin) and Survey Research Centre.

Centre for Continuing Education

The Australian National University runs a Centre for Continuing Education which is intended to foster the 'learning society' by enriching the contacts between the university and the community to their mutual advantage. The Centre offers a wide range of courses in the natural and social sciences and the humanities. The Canberra Evening College provides courses leading to the Higher School Certificate, the School Certificate and the Public Service qualifying examinations. The College also offers a wide variety of craft and cultural courses. In addition to Certificate Trade and Post-trade courses the Canberra Technical College offers classes in various forms of arts and crafts, including home crafts, shorthand and typing and several unit courses in Home Science.

Adult migrant education

Free day and evening classes in English are held for adult migrants at primary and secondary schools, health centres, private hotels and other locations. Home tutor kits are available for instruction in private homes. These classes aim principally to assist migrants with general communication and their assimilation into the community.

Accelerated courses in English are available on a full-time basis for migrants selected by the Department of Labor and Immigration as requiring a higher degree of English proficiency in their employment.

Apprenticeship training

At 30 June 1974, 1,473 apprentices were in training in the 72 declared apprenticeship trades in the Australian Capital Territory. Apprentices were employed by 664 approved employers of which 188 were new employers. During 1973-74, there were 920 new applications for apprenticeship. 590 new indentures were registered, representing an increase of 7.3 per cent in new indentures on 1972-73 totals. In this period 244 apprenticeships were completed and 202 cancelled. Trade courses at the Canberra Technical College are supplemented, where required, by remedial classes in mathematics and English.

Health

Canberra Hospital and Woden Valley Hospital serve the population of Canberra and the surrounding region. At 30 June 1973, Canberra Hospital had 699 beds, a visiting medical staff of 218, a salaried medical staff of 43 and a nursing staff of 922. Woden Valley Hospital, the second public hospital in Canberra, opened on 1 May 1973 with ward accommodation for 36 patients and a total of 174 staff employed. The hospital will become fully operational in stages, eventually having 600 beds. By June 1973 it had 72 beds available.

Three health centres opened in Canberra in the second half of 1973. A centre at Melba opened in July, one at Scullin opened in August and an interim health centre opened at Narrabundah in October the latter in temporary premises pending the construction of suitable accommodation.

The health centres offer primary care, provided by a team which includes general practitioners, nurses, social workers and a physiotherapist.

Law, order and public safety

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. The Territory is policed by the Australian Capital Territory Police Force which at 21 August 1974, had an authorised numerical strength of 587 officers and men of various ranks. The distribution is Commissioner (1), Deputy Commissioner (1), Superintendent (1), Senior Inspector (1), Inspector First Class (6), Inspector Second Class (11), Sergeant First Class (17), Sergeant Second Class (10), Sergeant Third Class (62), Senior Constable (11), Constable First Class (77) and Constable (389). The Force is divided into two General Duties Divisions, a Criminal Investigation Division, a Management Services Division and a Recruitment and Training Division. These in turn are divided into a number of Sections and Squads including Scientific, Breath Analysis, Fraud, Licensing, Legal, Water Police, Accident Investigation, Women Police, Embassy and Parliament House Security, Jervis Bay, Police Boys' Club, Rural Patrol, Search and Rescue, Diving, Armed Offenders, Drugs, Emergency Mobile Communication Centre, Safety Education, Process Serving, Mobile Traffic, Motor Cyclists, Driver Training, Amphometer, Adjudication, Motor Squad, Fingerprints, Special Patrol and Gazette. At present the Force operates from Police Stations at Civic Centre (Headquarters), Woden Town Centre and Jervis Bay with Water Police Headquarters at Yarralumla Bay. A Station will be established at Belconnen Town Centre in 1975.

Finance

In the following table identifiable receipts and outlay relating to the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions of the Australian Government in respect of the Australian Capital Territory in the Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspense. In addition, details of the financial transactions of the following public corporations are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks, National Capital Development Commission, the Canberra Theatre Trust, and the Canberra College of Advanced Education. Revenue derived by the Australian Government from income taxes, sales tax, etc.

levied in the Australian Capital Territory and outlay on items of a national character such as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND OUTLAY
(**\$'000**)

	1968-69	1969-70	1970-71	1971-72	1972-73
RECEIPTS					
Taxation—					
Rates on land	619	749	1,383	4,362	5,166
Liquor	259	287	340	387	458
Motor registration	748	830	937	1,090	1,236
Stamp duties(a)	382	1,969	2,475	2,561	3,589
Other taxes, fees, fines, etc.	282	243	278	323	689
Interest, rent, etc.	6,190	7,479	7,208	7,689	11,904
Income from public enterprises	1,673	2,026	1,883	2,106	1,616
Net sale of public corporation securities	260	588	588	432	—38
Other receipts	444	774	2,342	730	2,045
Net charge to Australian Government budget	64,713	70,370	84,153	94,608	90,964
Total receipts	75,571	85,315	101,587	114,289	117,628
OUTLAY					
Final consumption expenditure—					
Law, order and public safety	2,684	3,158	4,186	5,696	6,967
Education	7,731	9,366	13,082	15,870	21,038
Health, social security and welfare	3,959	4,643	6,538	7,730	8,840
Other	9,796	14,087	18,940	17,360	27,263
Gross fixed capital expenditure on new assets and stocks—					
Education	5,400	8,063	8,681	9,952	9,802
Recreation and related cultural services	3,037	4,341	1,953	1,171	1,309
Health, social security and welfare	513	1,424	5,404	9,198	8,419
Protection of the environment	1,351	1,408	1,064	2,545	4,889
Roads	6,798	6,386	7,894	5,511	7,775
Community and regional development	12,033	11,010	13,016	16,946	19,312
Electricity, gas and water	3,912	3,971	3,647	3,945	3,415
Housing	5,407	1,250	—1,058	—6,151	—8,392
Other	8,657	7,872	13,776	12,370	17,145
Net purchase of existing assets	—7,218	—7,692	—15,465	—15,500	—38,430
Interest paid	426	446	498	558	578
Cash benefits	62	67	62	60	64
Net advances for housing	10,265	14,459	18,435	26,053	26,601
Grants for private capital purposes	757	1,055	936	976	1,032
Total outlay	75,571	85,315	101,587	114,289	117,628

(a) Estimated for years prior to 1969-70.

NORFOLK ISLAND

General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 03' S., longitude 167° 57' E. approximately. Its total area is approximately 36 square kilometres, the island being about 8 kilometres long and 5 kilometres wide. It is 1,677 kilometres from Sydney and 1,069 kilometres from Auckland. The length of the coast line is 32 kilometres, 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 average daily maximum temperature varying between 18°C and 26°C. The average annual rainfall is 1,372 millimetres. The resident population is about 1,500.

The island served as a penal station from 1788 to 1813 and from 1825 to 1855. In 1856, 194 descendants of the *Bounty* mutineers were transferred there from Pitcairn Island.

Administration

In 1856 the island was created a distinct and separate settlement under the jurisdiction of the Governor of New South Wales. In 1897 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, became a Territory of Australia. It is controlled by the Minister for the Capital Territory through an Administrator. The Norfolk Island Council was established pursuant to the *Norfolk Island Act* 1957-1973 and is constituted in accordance with the provisions of the *Norfolk Island Council Ordinance* 1960-1970. 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 activity of the island is tourism. Primary production is not fully adequate for local needs and foodstuffs are imported from New Zealand and Australia, mainly for the tourist trade.

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 there is only very limited production of export crops.

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 program 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, 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 Australian Government provides services through staff from the Departments of Transport and Science (Bureau of Meteorology) 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 \$4.7 million in 1972-73. The major proportion (\$1.9 million) in 1972-73 came from Australia and the Pacific Islands while New Zealand supplied \$1.3 million. Exports in 1972-73 amounted to \$0.4 million. Exports to Australia and the Pacific Islands, the principal market, amounted to \$0.3 million, while exports to New Zealand amounted to \$95,000. No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are produced or manufactured in Norfolk Island and shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

Two shipping services to the island operate at approximately four week intervals from Sydney via Lord Howe Island and Norfolk Island to Noumea and Vila, thence to Sydney. A link with New Zealand is maintained by a service operating from Auckland at approximately 26-day intervals and calling at Norfolk, Noumea, Brisbane, Lyttleton and Auckland.

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

There are approximately 80 kilometres of motor road on the island. A substantial section of the population possesses private motor cars. Hire cars, taxis and scooters are available.

The island has an automatic telephone service and a radio telephone link with Sydney. A local broadcasting service is operated by the Administration.

Education

Education is free and compulsory between the ages of 6 and 15 years. The school, which is conducted for the Administration by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from kindergarten to the School Certificate (Fourth Form) examination. The number of scholars enrolled at 3 May 1974 was 313.

Bursaries are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or undertake high school courses not available on the Island. Trainee scholarships are available for pupils who have left school and wish to undertake apprenticeship or similar training away from the Island.

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 the Chief Magistrate or any three magistrates other than the Chief Magistrate.

Finance

Since Norfolk Island became a territory of the Australian Government in 1913 the revenue of the territory has been supplemented by annual grants from the Australian Government as internal revenue alone has not been sufficient to meet the cost of public works and services. The principal items of revenue and expenditure in recent years were as follows.

NORFOLK ISLAND: REVENUE AND EXPENDITURE (\$'000)

	1969-70	1970-71	1971-72	1972-73	1973-74
REVENUE					
Government grant	66	66	66	120	120
Customs duty	116	146	158	180	319
Liquor profit	68	69	82	107	121
Company fees	43	51	89	164	145
Sale of stamps	219	234	226	107	175
Vehicle registration and licence fees	16	19	22	23	42
Government advance (repayable) . . . . .	..	..	..	90	..
All other	71	86	106	83	115
Total revenue	599	671	749	874	1,037
EXPENDITURE					
Administration	137	166	183	204	233
Education services	86	99	44	126	165
Health and welfare services	53	64	79	91	85
Repairs and maintenance	87	136	176	132	149
Postal services	57	122	75	58	108
Capital works and services	120	142	154	197	63
Miscellaneous services	28	31	30	30	32
Total expenditure	568	760	741	838	835

PAPUA NEW GUINEA

As indicated on page 1037, the date for full independence for Papua New Guinea has not been fixed. Pending this event the usual section on Papua New Guinea has been included in this chapter.

Greater detail on the subjects dealt with in this section is available in the Papua New Guinea Administration Annual Report. The sections on pages 1060–66 have been prepared by the Director of the Australian Bureau of Meteorology.

General description

Papua New Guinea comprises the Australian Territory of Papua and the United Nations Trust Territory of New Guinea. The total area of 461,515 square kilometres lies in the equatorial zone between the equator and 12°S latitude and longitudes 141°E and 160°E.

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 total area is 222,913 square kilometres of which 215,728 square kilometres are on the mainland and 7,184 square kilometres on the islands of the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups.

The Trust Territory of New Guinea extends almost from the equator to latitude 8°S, a distance of almost 950 kilometres, and from longitude 141°E to 160°E, a distance of about 1,900 kilometres. The total area is 238,602 square kilometres, of which 178,887 square kilometres are on the mainland and 59,715 square kilometres on the islands, including the two northernmost islands of the Solomon Islands, Buka and Bougainville, and the Bismark Archipelago.

Climate

The climate, particularly the rainfall, over so wide an area as Papua 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 to warm 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 is the regular alternation between two major air-streams, the south-east trade winds and north-west monsoon. The 'south-east' season prevails approximately from May to October, and the 'north-west' 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 Papua 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 1062 shows the average annual and monthly rainfall for selected stations. 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 1,200 mm at Port Moresby (township) to 5,870 mm at Kikori at the head of the Gulf of Papua. There are few rainfall observing stations above 2,000 metres, so that rainfall above that height must generally be estimated. The map on page 1066 shows the rainfall distribution over the region for the year 1972.

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 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. At Port Moresby (township), for example, in forty-two years of record the annual rainfall has varied from 1,830 mm to 580 mm; at Daru in fifty-four years of record the annual rainfall has varied from 3,960 mm to 1,170 mm; and at Madang in forty years of record the variation has been from 4,570 mm to 2,340 mm. The table on page 1063 shows the annual rainfall at Port Moresby and Lae for the years 1946 to 1972 inclusive.

Heavy rainfalls

Highest twenty-four hour rainfall registrations have included 549 mm at Pondo Plantation in New Britain and 447 mm at Cape Nelson on the east coast of the main island. Twenty-four hour falls greater than 400 mm have been recorded at a number of other stations in the Papua New Guinea region. The highest twenty-four hour fall recorded in Australia was 907 mm at Crohamhurst, Queensland. All these registrations were for the restricted twenty-four hours period from 9 a.m. to 9 a.m. Higher falls, possibly approaching 700 mm, have probably occurred in Papua New Guinea in unrestricted periods of twenty-four consecutive hours.

Temperature

Although the region generally 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 1°C and the mean daily minimum temperature by about 2°C for each 300 metres increase in elevation up to 1,500 metres.

A table on page 1063 shows temperature and humidity data for five lowland and two highland stations. Mount Hagen, elevation 1,630 metres, 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 12.6°C.

Extreme temperatures

The highest air temperature recorded at Lae (in twenty-two years of record) was 38.7°C and the lowest was 19.1°C. At Port Moresby (in thirty-two years of record) the highest was 36.3°C and the lowest was 14.1°C. The mean daily range of temperature is about 8°C at lowland stations and 11°C at highland stations up to 1,500 metres 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 relative humidity for January and July is shown for selected stations in a table on page 1063.

In the lowland areas the average monthly 9 a.m. relative humidity (*see* table on page 1063) is in the range 75–95 per cent throughout the year. There is little variation 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 relative humidity at 9 a.m. ranges from 81 per cent in February to 62 per cent in July.

In the highland areas up to 2,000 metres elevation the average monthly 9 a.m. relative humidity is within the range 80–90 per cent throughout the year. The lower temperatures experienced on the highlands result in conditions being generally more comfortable in those areas.

Evaporation

The only evaporation data available are records for Port Moresby. These show that the mean monthly tank evaporation varies from 140–170 mm per month in the early part of the year to 170–200 mm per month in the latter part of the year. The average annual tank evaporation at Port Moresby over a fifteen-year period was 1,988 mm. 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 6.1 hours per day in February to 8.4 hours per day in November. The mean daily amount of sunshine at Port Moresby for the year is 6.9 hours, which is significantly less than Darwin (8.5 hours) but comparable with Brisbane (7.5 hours).

At Port Moresby the mean cloud amount varies from 5.0 eighths per day in June to 6.8 eighths in February; at Lae the variation is from 5.9 eighths in May to 6.8 eighths in February and March. The mean daily cloud amounts for the year at Port Moresby and Lae are 5.7 and 6.3 eighths respectively, which are high in comparison with Darwin (3.2).

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 1064-5 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 21.1 km/h and for March is 12.9 km/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 16.5 km/h and the 9 a.m. mean wind is 5.9 km/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 and March. 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 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.

Climatic data

The averages and extremes for a number of elements recorded at Port Moresby and Lae are given in the tables on pages 1064-5. 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 1972 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.

PAPUA NEW GUINEA: AVERAGE MONTHLY AND ANNUAL RAINFALL FOR
SELECTED STATIONS(a)
(Millimetres)

Station (lat. long.)	Years of record	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Bwagaia(b) (10° 42' 152° 50')	42	259	316	276	295	306	257	178	222	237	251	250	227	3074
Daru(b) (9° 04' 143° 12')	70	278	260	325	324	226	108	94	52	43	56	110	205	2081
Dogura(b) (10° 00' 149° 55')	45	233	219	222	155	92	93	78	65	78	82	87	120	1524
Gobaragere(b) (9° 50' 147° 45')	39	195	174	196	211	108	78	46	51	61	78	129	166	1493
Kairuku(b) (8° 51' 146° 32')	47	242	275	278	133	49	46	28	13	40	40	54	133	1281
Kerema(b) (7° 57' 145° 46')	50	231	231	266	285	433	385	347	329	337	299	207	208	3558
Kikori(b) (7° 24' 144° 15')	52	316	336	367	434	748	734	656	560	617	477	326	299	5870
Kokoda(b) (8° 58' 147° 43')	49	339	332	359	327	258	187	181	220	272	322	407	359	3563
Kokopo(c) (4° 20' 152° 15')	39	214	188	220	168	120	120	166	146	110	116	161	226	1955
Kwikila(b) (9° 44' 147° 44')	47	158	133	176	152	82	53	46	43	58	52	66	109	1128
Lae(c) (6° 43' 147° 00')	34	270	235	328	404	420	414	495	511	467	390	338	329	4601
Lindenhafen(c) (6° 16' 150° 28')	36	164	143	174	290	637	845	976	1081	745	432	281	191	5959
Losuia(b) (8° 32' 151° 04')	50	432	420	385	342	334	308	312	270	277	259	239	276	3854
Madang(c) (5° 13' 145° 47')	22	366	290	334	444	369	210	174	132	150	314	388	380	3551
Port Moresby(b)(d) (9° 26' 147° 13')	26	170	221	198	161	52	42	20	32	41	40	69	157	1203

(a) With twenty or more years of record to 1971. (b) Papua. (c) New Guinea. (d) See page 1064.

RAINFALL: PORT MORESBY AND LAE

Year	Port Moresby (Papua)		Lae (New Guinea)	
	Amount	No. of days	Amount	No. of days
	mm		mm	
1946	1,569	137	(a)4,283	(a)248
1947	1,031	154	4,581	261
1948	1,164	138	4,553	267
1949	1,097	164	4,439	275
1950	1,211	137	4,026	251
1951	1,156	108	4,866	250
1952	1,394	150	4,206	274
1953	919	126	5,023	264
1954	1,181	118	4,412	277
1955	999	128	3,944	261
1956	1,438	141	3,109	233
1957	1,318	129	6,062	282
1958	1,169	107	4,827	250
1959	1,058	126	4,719	245
1960	868	116	4,255	260
1961	1,086	136	4,904	267
1962	1,117	133	4,644	261
1963	1,492	138	4,196	254
1964	1,397	151	4,143	244
1965	1,035	103	4,469	265
1966	1,048	116	5,237	291
1967	1,449	147	5,051	263
1968	1,129	116	4,716	265
1969	1,130	125	5,600	262
1970	1,460	154	5,348	277
1971	1,158	162	4,076	230
1972	1,015	117	4,008	254

(a) Incomplete for July and August.

PAPUA NEW GUINEA: TEMPERATURE AND RELATIVE HUMIDITY FOR
SELECTED STATIONS

Station	Lat.	Long.	Altitude metres	Years of record	Temperature °C.				Relative humidity			
					Mean max. Jan.	Mean max. July	Mean min. Jan.	Mean min. July	Mean 9 a.m. Jan.	Mean 9 a.m. July	Mean 3 p.m. Jan.	Mean 3 p.m. July
Daru(a)	9° 04'	143° 12'	5	14	31.8	28.4	23.4	22.5	87	78	72	75
Goroka(b)	6° 04'	145° 23'	1,575	15	25.9	24.8	15.2	13.8	84	83	56	51
Kikori(a)	7° 24'	144° 15'	74	5	32.1	26.9	21.9	21.0	91	95	72	86
Madang(b)	5° 13'	145° 47'	4	21	30.2	29.6	23.2	22.8	87	82	75	75
Mount Hagen(b)	5° 52'	144° 14'	1,639	8	24.3	22.7	13.3	12.6	83	88	66	66
Samarai(a)	10° 37'	150° 40'	41	13	31.4	27.0	24.6	22.8	79	82	76	82
Wewak(b)	3° 34'	143° 38'	5	12	30.2	30.2	23.0	22.8	83	82	76	75

(a) Papua. (b) New Guinea.

CLIMATOLOGICAL DATA: PORT MORESBY

(Jackson's Strip, Lat. 9° 26' S., Long. 147° 13' E., Height above M.S.L. 28 metres)

BAROMETER, WIND, EVAPORATION AND CLOUD

Month	Mean of 9 a.m. and 3 p.m. atmos- pheric pressure reduced to mean sea level (mb)	Wind (height of anamometer 10 metres)					Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)	
		Average km/h		Highest gust speed (km/h)	Prevailing direction			
		9 a.m.	3 p.m.		9 a.m.	3 p.m.		
No. of years of observa- tions	23	25	25	25	25	25	15	25
January	1,007.0	5.8	13.4	90	N	W	167	6.6
February	1,007.1	5.9	13.1	100	NNW	W	143	6.8
March	1,007.4	5.4	12.9	79	NNW	W	152	6.5
April	1,008.1	3.2	12.2	64	N	S	139	6.1
May	1,008.5	4.6	15.7	69	SE	SSE	147	5.1
June	1,009.7	7.2	18.4	74	SE	SSE	140	5.0
July	1,009.9	8.8	20.6	74	SE	SE	161	5.2
August	1,009.9	8.6	21.1	76	SE	SSE	172	5.3
September	1,010.0	8.3	22.5	74	SE	SSE	180	5.3
October	1,009.1	5.8	18.9	74	SE	SSE	201	5.4
November	1,008.1	4.2	15.8	64	SE	SE	201	5.3
December	1,007.0	4.3	13.8	87	N	SW	185	5.9
Year { Total	1,008.5	5.9	16.5	..	SE	SSE	1,988	..
Averages	1,008.5	5.9	16.5	..	SE	SSE	..	5.7
Extremes . . . . .	..	..	..	100	..	..	..	..

(a) Scale 0-8.

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°C.)			Extreme shade temperature (°C.)		Extreme temperature (°C.)		Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Lowest on grass		
No. of years of observations	32	32	32	32	32	13	13	
January	31.8	23.1	27.5	36.2 11/64	20.4 27/49	18.5 21/66	6.2	
February	31.5	23.0	27.3	36.1 12/47	18.8 17/57	16.8 3/68	6.1	
March	31.4	22.9	27.2	35.4 26/46	18.3 23/61	14.4 31/66	6.2	
April	30.9	22.7	26.8	34.2 5/46	16.8 11/46	13.7 1/66	7.0	
May	30.7	22.8	26.7	33.8 2/64	14.5 28/53	15.0 18/66	7.4	
June	30.0	22.2	26.1	33.9 25/58	14.4 23/54	12.2 29/65	7.0	
July	29.7	21.7	25.7	33.3 11/64	14.1 8/46	10.4 30/65	6.6	
August	29.9	21.9	25.9	33.8 12/58	14.8 14/61	10.2 31/67	6.8	
September	30.4	22.4	26.4	34.8 17/65	14.4 10/61	8.9 1/67	6.8	
October	31.4	22.8	27.1	35.5 4/65	16.3 11/55	11.2 5/65	7.4	
November	32.1	22.8	27.4	36.3 11/65	16.7 10/67	12.8 4/63	8.4	
December	32.2	23.1	27.6	36.3 16/67	19.6 1/63	17.2 16/67	7.3	
Year { Averages	31.0	22.6	26.8	36.3 ..	14.1 ..	8.9 ..	6.9	
Extremes . . . . .	..	..	..	16/12/67	8/7/46	1/9/67	..

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Mean relative humid- ity % at 9 a.m.	Rainfall (millimetres)						Fog mean No. days
			Mean mthly	Mean No. days of rain	Greatest monthly	Least		Greatest in one day	
						monthly	monthly		
No. of years of observations	23	23	26	24	26	26	26	26	24
January	28.1	77	170	17	465 1967	26 1950	106 26/67	3.3	
February	28.5	81	221	19	434 1957	60 1947	141 14/49	3.8	
March	28.4	80	198	18	442 1951	28 1950	112 16/51	7.2	
April	28.6	81	161	15	728 1946	9 1966	327 12/46	7.7	
May	28.2	79	52	8	187 1952	2 1958	77 18/60	6.9	
June	26.4	78	42	6	313 1963	0 1957	205 5/63	3.7	
July	25.2	77	20	6	70 1949	0 1958	34 1/52	2.5	
August	25.0	75	32	7	138 1953	1 1959	49 22/53	2.4	
September	25.4	73	41	7	333 1958	0 (a)	150 5/58	1.9	
October	26.2	69	40	7	181 1948	2 1951	54 31/64	2.4	
November	26.4	68	69	8	234 1952	0 1965	98 29/54	3.3	
December	27.6	73	157	13	268 1954	25 1967	123 29/65	2.9	
Year { Totals	1,203	131	48.0
Averages	27.0	76	..	11
Extremes	728	0 (b)	327
					4/1946		12/4/46		

(a) 1948 and 1950.

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

CLIMATOLOGICAL DATA: LAE

(Meteorological Office: Lat. 6° 43' S., Long. 147° 00' E., Height above M.S.L. 8 metres)

BAROMETER, WIND AND CLOUD

Month	Mean of 9 a.m. and 3 p.m. atmospheric pressure reduced to mean sea level (mb)	Wind (height of anemometer 10 metres)					Mean amount of clouds, 9 a.m. 3 p.m., 9 p.m.(a)
		Average km/h		Highest gust speed (km/h)	Prevailing direction		
		9 a.m.	3 p.m.		9 a.m.	3 p.m.	
No. of years of observations	23	25	25	25	27	27	21
January	1,006.8	10.7	11.0	82	NW	SE	6.6
February	1,006.8	11.5	11.0	69	NW	SE	6.8
March	1,007.2	10.7	10.1	70	NW	SE	6.8
April	1,008.4	5.9	9.6	72	NW	SE	6.4
May	1,009.5	3.5	8.8	58	NW	SE	5.9
June	1,010.5	3.7	8.6	67	NW	SE	6.1
July	1,011.0	3.0	8.5	64	NW	SE	6.5
August	1,011.0	3.2	8.8	64	NW	SE	6.3
September	1,010.9	3.2	10.2	61	NW	SE	6.1
October	1,010.1	4.3	10.7	64	NW	SE	6.0
November	1,008.5	6.2	11.8	72	NW	SE	6.1
December	1,007.4	8.6	11.0	74	NW	SE	6.5
Year { Averages	1,009.0	6.2	9.4	..	NW	SE	6.3
Extremes	..	..	..	82	..	..	..

(a) Scale 0-8.

TEMPERATURE

Month	Mean temperature (°C.)			Extreme shade temperature (°C.)	
	Mean max.	Mean min.	Mean	Highest	Lowest
No. of years of observations	22	22	22	22	22
January	31.1	23.7	27.4	38.2 20/59	20.7 7/60
February	31.2	23.3	27.5	37.3 14/57	21.1 24/62
March	30.8	23.7	27.2	38.7 6/56	21.7 16/56
April	30.1	23.3	26.7	33.9 4/56	21.3 22/66
May	29.4	22.9	26.2	33.2 24/52	19.4 30/53
June	28.6	22.4	25.5	33.4 8/58	19.4 20/53
July	27.8	22.0	24.9	32.2 16/64	19.3 31/65
August	27.9	22.0	24.9	32.4 28/64	19.4 27/55
September	28.7	22.2	25.4	32.2 12/13/50	19.1 13/61
October	29.6	22.6	26.1	35.2 31/49	19.1 4/65
November	30.4	23.1	26.7	34.4 30/61	20.9 (a)
December	30.7	23.5	27.1	35.6 24/59	20.3 19/64
Year { Averages	29.7	22.9	26.3	..	..
Extremes	..	..	..	38.7 6/3/56	19.1 (b)

(a) 13/1965 and 11/1968.

(b) 13/9/61 and 4/10/65.

HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (mb)	Rainfall (millimetres)					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	23	34	25	34	34	25	23
January	28.0	270	21	522 1964	107 1958	199 9/59	0.1
February	28.5	235	19	403 1967	53 1957	134 8/53	0.1
March	28.3	328	21	524 1952	140 1968	162 10/52	0.1
April	28.7	404	22	602 1955	237 1968	199 15/53	0.0
May	28.3	420	22	840 1957	67 1956	166 17/61	0.1
June	26.5	414	22	770 1965	115 1964	226 4/51	0.0
July	25.4	495	25	1,018 1953	143 1956	299 16/53	0.1
August	25.0	511	24	823 1957	161 1951	259 14/47	0.0
September	25.6	467	23	882 1926	193 1960	156 10/51	0.0
October	26.5	390	21	695 1970	122 1956	147 20/63	0.1
November	26.7	338	21	577 1948	128 1956	184 2/45	0.0
December	27.7	329	21	605 1957	154 1951	228 16/68	0.0
Year { Totals	..	4,601	262	..	..	..	0.6
Averages	27.1	..	..	..	..	..	..
Extremes	..	..	..	1,018 7/1953	53 2/1957	299 16/7/53	..

Population

Censuses of the non-indigenous population of Papua New Guinea have been taken in conjunction with censuses of Australia. For the indigenous population of Papua New Guinea, estimates of size, geographic location, and the broad age distribution of the population were available from the results of the Division of District Administration census (formerly known as the Tax Census). This was conducted over most of the country, 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 population, and provided, for the first time, an almost complete picture of the population of Papua New Guinea.

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

PAPUA NEW GUINEA: POPULATION AT CENSUSES, 1921 TO 1971

Year	Indigenous					Non-indigenous		
	Enumerated		Persons estimated	Total persons				
	Males	Females				Males	Females	Persons
1921	(a)160,270	(a)118,963	(a)279,233	..	..	3,910	1,341	5,251
1933	..	..	571,965	..	..	4,941	2,448	7,389
1941	..	..	..	..	..	..	..	..
1947	..	..	..	..	..	6,426	3,013	9,439
1950	533,394	458,590	991,984	447,680	1,439,664	..	..	..
1954	689,577	607,212	1,296,789	386,914	1,683,703	11,068	6,687	17,755
1961	958,482	856,909	1,815,391	131,640	1,947,031	14,648	10,682	25,330
1966	1,120,306	1,030,011	2,150,317	..	2,150,317	20,053	14,616	34,669
1971	(b)1,262,728	(b)1,172,785	(b)2,435,513	..	2,435,513	31,240	23,288	54,528

(a) 1920; figures for New Guinea for 1921 not available. (b) Due to enumeration difficulties this figure includes the population of Rabaul urban villages estimated from non-census sources to be approximately 5,700 indigenous males and 5,600 indigenous females.

The total indigenous population of Papua New Guinea at the 1966 census was 2,150,317 persons, and the total non-indigenous, 34,669 persons. For details of selected characteristics of Population Census 1966 see Year Book No. 55, pages 1165-69.

Population Census, 1971

The census was conducted in July 1971 and covered both indigenous and non-indigenous populations. For census purposes respondents were asked to state whether they considered themselves to be indigenous, Europeans, Chinese or of some other race or mixture of these, without the guidelines provided in 1966 (however, it is doubtful that this will affect comparability between the two censuses).

Figures for the population (indigenous and non-indigenous) of the major towns at the census, July 1971, were as follows: Port Moresby, 76,507; Lae, 38,707; Rabaul, 26,619; Madang, 16,865; Wewak, 15,015; Goroka, 12,065; Mount Hagen, 10,621; Daru, 5,744; Popondetta, 4,494; Lorengau, 4,323 (including Lombrum); Bulolo, 4,001; Kavieng, 3,301; Alotau, 2,499; Mendi, 2,493.

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 the country as a whole are the sums of these estimated and actual figures.

Selected characteristics

The following tables and text present statistics relating to some selected characteristics as derived from the 1971 census. Details of all characteristics published can be found in Bulletins Nos 1 to 27 *Population Census—1971, Summary of Population Estimates, Population Characteristics*. In the tables, minor discrepancies between totals and sums of components are due to rounding of estimates calculated from sample data.

POPULATION, BY ADMINISTRATIVE DISTRICTS(a)
PAPUA AND NEW GUINEA CENSUS, JUNE–JULY 1971

(Persons)

<i>District</i>	<i>Indigenous (b)</i>	<i>Non-Indigenous (b)</i>	<i>Approximate area, square Total kilometres</i>	<i>Persons per square kilometre</i>	
Western	70,340	558	70,898	103,600	0.68
Gulf	58,273	291	58,564	38,900	1.51
Central	175,515	18,322	193,837	31,100	6.23
Milne Bay	108,528	932	109,460	20,200	5.42
Northern	65,918	596	66,514	23,300	2.85
Southern Highlands	192,047	807	192,854	16,100	11.98
Eastern Highlands	236,752	2,888	239,640	12,900	18.58
Chimbu	159,729	516	160,245	7,300	21.95
Western Highlands	343,272	2,760	346,032	23,800	14.54
West Sepik	93,479	499	93,978	51,000	1.84
East Sepik	180,149	1,744	181,893	27,200	6.69
Madang	168,212	2,741	170,953	28,000	6.11
Morobe	240,931	8,103	249,034	32,900	7.57
West New Britain	60,783	732	61,515	18,400	3.34
East New Britain	108,340(c)	5,512	113,852(c)	18,100	6.29
New Ireland	58,507	1,036	59,543	9,800	6.08
Bougainville	90,382	5,981	96,363	10,600	9.09
Manus	24,356	510	24,866	2,100	11.84
Total, Papua and New Guinea	2,435,513(c)	54,528	2,490,041(c)	475,300	5.24

(a) District boundaries at 30 June 1971. (b) Persons were classified indigenous or non-indigenous according to how they replied on the census forms. (c) Due to enumeration difficulties this figure includes the population of the Rabaul urban villages estimated from non-census sources to be approximately 5,700 indigenous males and 5,600 indigenous females

Constitutional development

The *Papua-New Guinea Provisional Administration Act 1945–1946*, which provided for the transfer of control from the military authorities to civil authorities after the 1939–45 War, was repealed by the *Papua and New Guinea Act 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 Australian 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 Australian 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. A House of Assembly 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 provided 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 consisted of the Administrator, the seven Ministerial Members, three official Members, and a twelfth member who was an elected M.H.A. but a non-office holder.

The result of constitutional instruments signed in August 1970 by the Governor-General and the Minister for External Territories was to transfer full authority in relation to specified matters to designated ministerial office holders. This effectively enhanced the role of the Administrator's Executive Council as the Administrator became bound to accept its advice in respect of these specified matters. Ministerial office holders are fully responsible for the functions of the specified departments, or parts thereof.

The third general election for the House of Assembly was held from 19 February to 11 March 1972, and the Third House was convened on 20 April 1972. Following recommendations made by the Select Committee on Constitutional Development appointed by the Second House, the number of elected members was increased to 100; 82 members representing open electorates, and 18 representing regional electorates. The number of official members was reduced to 4. The Ministry was increased to 17, all with the designation 'Minister', and later in 1972 the limit on the number of Ministers was removed. The Administrator's Executive Council consisted of the Administrator and 10 Ministers, one of whom was elected by his fellow Ministers to be Deputy Chairman of the Council. Mr M. Somare M.H.A. was elected to the Deputy Chairman's position and as the leader of the governing majority in the House of Assembly, soon became known as the Chief Minister.

A National Coalition Government was formed following the 1972 General Election, with Mr M. Somare (Pangu Pati) as leader and Dr J. Guise (Independent) as deputy leader. Mr J. Chan (Peoples Progress Party) and Mr T. Kavali (New Guinea National Party) lead the other two major party groups which form the Coalition. The National Coalition also had the support of several independent members and the three Mataungun Association members of the House.

In July/August 1972, discussions between the Minister for External Territories, Papua New Guinea Ministers and the Papua New Guinea Leader of the Opposition on further progress to self-government decided on powers which could be transferred at an early date, and initiated study into the transfer of others. It was agreed that Ministerial meetings would be held to discuss future progress as considered necessary.

Two major decisions by the Papua New Guinea House of Assembly in 1972, set the date for self-government and established a Constitutional Planning Committee to make recommendations for a self-governing constitution which would also serve an independent Papua New Guinea. The Australian Government accepted 1 December 1973 as the timing for self-government.

Further transfer of powers to Papua New Guinea Ministers took place during 1973 and on 1 December Papua New Guinea became formally self-governing. From that time the Papua New Guinea Government has exercised full control over its internal affairs, with the Australian Government retaining power in the reserved areas of foreign relations and trade, defence, the Supreme Court and the administration of lower courts, the Public Solicitor, prosecutions, electoral policy and House of Assembly matters.

The Australian Government has confirmed that it will only act in the reserved areas after consulting with and obtaining the advice of Papua New Guinea, and Papua New Guinea has agreed that it will consult Australia before taking action in matters where, although authority has been transferred, Australian legislation still applies to Papua New Guinea.

From the date of self-government the office of the Administrator was replaced by that of High Commissioner of Papua New Guinea. In all matters except those in the reserved areas the High Commissioner is required to accept the advice of the Executive Council, formerly the Administrator's Executive Council, which was at self-government renamed and restructured by the removal of Official Members.

The Australian Government has stated that the decision on the date for Papua New Guinea's independence will be arrived at in consultation between the Australian and Papua New Guinea Governments and subject to the endorsement of the House of Assembly as the elected representatives of the people. In July 1974 the House resolved that the date of independence should not be set until the enactment of a Papua New Guinea Constitution. The Constitutional Planning Committee's final report was tabled during the August/September 1974 sitting of the House.

Judiciary

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

The Supreme Court is the highest judicial authority and has unlimited criminal and civil jurisdiction. Appeals lie from decisions of a single judge to the Full Court of the Supreme Court and, subject to prescribed conditions, from decisions of the Full Court to the High Court of Australia. District Courts have criminal jurisdiction over all summary offences, i.e. generally, all offences punishable by less than 12 months' imprisonment, and conduct preliminary hearings in respect of indictable offences. They also exercise civil jurisdiction over claims for amounts up to \$2,000. Local Courts have criminal jurisdiction over summary offences and may impose penalties not greater than a fine of \$100 or six months' imprisonment, plus civil jurisdiction over matters involving up to \$200. Village Courts are proposed to be set up with village leaders as magistrates. It is expected that there will be some in operation by January 1975. They will have authority for matters involving up to \$100 and jurisdiction over most areas of law with the probable exception of land. Children's Courts have jurisdiction over all offences by persons under the age of 16 years, except the most serious offences, and in affiliation and other child welfare cases. Wardens' Courts exercise jurisdiction over offences against mining laws and civil cases concerning mining or mining lands.

In addition, there is the Land Titles Commission set up under the *Land Titles Commission Act* 1962-1972 to inquire into and determine rights in land, particularly native land. The Commission has a specific function under the *New Guinea Land Titles Restoration Act* 1951-1968 to inquire into and determine claims to interest in land where the official records were lost or destroyed as a result of the Japanese invasion of New Guinea. The future and function of the Land Titles Commission has been examined as part of a Commission of Enquiry into Land matters, and legislation implementing the Commission's recommendations is expected to be introduced into the House of Assembly in 1974.

Agriculture and animal industry

Soils

Although many parts of Papua 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. Soils on the coastal plains consist mainly of alluvium and podsolised alluvium. 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 Act* 1962-1969 of Papua 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 Papua New Guinea. All land in Papua New Guinea other than native land or land subject to any estates, rights, titles or interests in force from time to time is Government land.

There is considerable variation throughout Papua New Guinea 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 or 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 Papua New Guinea, 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 New Guinea is to introduce a single system of land holding regulated by the Government by statute, administered by the Department of Lands, Surveys and Mines of the Government and providing for secure individual registered titles after the pattern of the Australian system.

Only the Government 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 Government or by a process, provided for by the *Land (Tenure Conversion) Act 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 Government except for prescribed public purposes unless the native owners are willing to sell and the Government is convinced, through its Division of District Administration, Department of the Chief Minister and Development 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 Act 1962-1972* are used, as a first priority, on investigations into claims by the Government 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 Government, 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.

At 30 June 1974 the distribution of alienated land in Papua New Guinea according to tenure was as follows.

Held by private non-indigenous inhabitants—freehold land, 160,858 hectares, leasehold land, 301,978 hectares, land tenure conversion (freehold), 6,330 hectares.

Native reserves, 12,580 hectares.

Other Government land including land reserved for public purposes, 823,535 hectares.

Primary industries

General

The products of Papua New Guinea are obtained principally from its agricultural, forestry, mining, and fishing industries. Indigenous subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main indigenous agricultural products are taro, yams, sweet potatoes, bananas, and pawpaws. Peanuts are becoming of increasing importance in the indigenous diet. Non-indigenous enterprise produces most of the commodities exported. Indigenous in recent years have taken up the production of introduced crops such as peanuts, rice, cucurbits, and maize for their own consumption and produce copra, coffee, cocoa, tea, passion-fruit, pyrethrum and palm oil for export.

The principal agricultural products for the export trade are coffee, copra and coconut oil, cocoa and timber. The export of tea and rubber has increased. Palm oil is becoming a substantial export.

Non-indigenous crop production

In 1972-73 there were 1,223 holdings in use by non-indigenous persons. The total area of these holdings was 411,422 hectares. The following tables summarise the information available for principal activities.

**PAPUA NEW GUINEA: NUMBER OF HOLDINGS—NON-INDIGENOUS
AREA, PRODUCTION AND NEW PLANTINGS**

(Source: Rural Industries Bulletin, 1972-73, Papua New Guinea Bureau of Statistics)

Year ended 30 June—	Holdings	Area under crop(a)	Trees(a)	Production	New plantings	
					Area	Trees(b)
Coconuts—		hectares	'000	tonnes	hectares	'000
1969(c)	685	109,926	12,809	98,561	1,644	586
1970	678	110,012	12,972	93,437	1,520	382
1971	677	109,112	12,854	89,355	1,150	304
1972	659	107,638	11,803	80,278	1,142	239
1973	612	108,284	13,665	77,385	604	141
Cacao—						
1969(c)	443	53,920	21,400	20,056	2,062	1,749
1970	441	53,422	22,180	18,523	1,550	1,690
1971	437	54,675	21,714	19,481	2,000	1,330
1972	435	56,342	22,043	18,732	1,127	1,245
1973	437	60,615	21,942	15,544	962	381
Coffee—						
1969(c)	237	5,943	10,004	6,853	269	937
1970	229	6,085	9,798	6,921	324	828
1971	227	6,279	10,466	8,307	429	983
1972	222	6,207	11,490	8,292	273	760
1973	235	7,050	13,805	12,212	294	893
Rubber—						
1969(c)	83	13,745	4,126	6,470	191	167
1970	79	13,743	3,901	5,741	227	134
1971	75	13,243	3,810	6,355	49	121
1972	59	12,807	3,245	5,422	122	138
1973	72	14,666	6,202	5,641	16	8

(a) Includes mature and immature areas. (b) Includes replacements. (c) 31 March.

**PAPUA NEW GUINEA: AREA UNDER PRINCIPAL CROPS AND CROP PRODUCTION
YEARS ENDED 30 JUNE—NON-INDIGENOUS**

(Source: Rural Industries Bulletin, 1970-71, 1971-72, 1972-73, Papua New Guinea Bureau of Statistics)

Crop	Recorded area in hectares			Recorded production (tonnes)			Average yield per mature hectare		
	1971	1972	1973	1971	1972	1973	1971	1972	1973
Permanent crops—									
Copra—									
Plantation	109,112	107,638	108,284	89,355	80,278	77,385	0.95	0.87	0.82
Trade(a) . . . . .	..	..	..	2,859	2,600	2,756	..	..	..
Coconuts, for use as such	..	..	..	5,259	10,777	7,043	..	..	..
Cacao—									
Plantation	54,675	56,342	60,615	19,481	18,732	15,544	0.46	0.42	0.35
Trade(a) . . . . .	..	..	..	914	50	484	..	..	..
Coffee—									
Plantation	6,279	6,207	7,050	8,307	8,292	12,212	1.68	1.62	2.09
Trade(a) . . . . .	..	..	..	957	53	774	..	..	..
Oil palms	1,988	2,524	2,693	51	9,437	8,793	..	7.36	4.58
Rubber	13,243	12,807	14,666	6,355	5,422	5,641	0.58	0.51	0.44
Tea	2,984	3,383	3,036	1,261	2,071	2,887	0.97	0.61	1.07
Grain crops—									
Maize	122	68	91	13	60	39	0.11	0.88	0.43
Rice	87	75	26	85	52	48	0.97	0.69	1.85
Sorghum	899	856	606	2,193	1,520	1,613	2.44	1.78	2.66
Crops for green fodder—									
Maize	15	7	11	..	..	..	..	..	..
Sorghum	223	303	372	..	..	..	..	..	..
Other	421	93	21	..	..	..	..	..	..
Industrial crops—									
Peanuts	317	303	140	206	156	109	0.65	0.51	0.78
Vegetable crops—									
Grown for sale—									
Beans (green)	11	12	2	18	20	9	1.64	1.67	4.50
Tomatoes	17	14	38	41	53	90	2.41	3.79	2.37
Potatoes, English	87	23	15	62	243	448	1.40	10.56	29.87
Potatoes, sweet	223	129	267	3,178	1,006	867	14.25	7.80	3.25
Pumpkins	18	19	24	105	80	73	5.89	4.21	3.04
Other	157	123	120	..	..	..	..	..	..
For consumption on hold- ing—									
Potatoes, sweet	1,694	1,694	1,462	12,595	13,039	12,931	7.43	7.70	8.84
All other	1,446	615	567	..	..	..	..	..	..
All other crops	1,988	524	2,278	..	..	..	..	..	..
Total	196,016	193,759	199,691	..	..	..	..	..	..

(a) Production from crops purchased from indigenous growers.

Indigenous agriculture

Most of the indigenous inhabitants of Papua 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, tea, palm oil, passion fruit and pyrethrum for export. Some small-scale rubber growing is now being undertaken. In coastal areas large quantities of copra are produced. In 1971-72 estimated indigenous production was: copra, 47,500 tonnes; coffee, 20,722 tonnes; cocoa, 8,541 tonnes. In many localities the indigenes follow a farming system known as bush fallowing rotation.

The growing of food is done by both 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 indigenous 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 Papua New Guinea. In recent years the Administration has intensified the program of agriculture extension work among the indigenes. Indigenous cattle projects are increasing rapidly, and the greater part of the country's coffee crop is produced by the indigenous sector.

**PAPUA NEW GUINEA: AREA OF PRINCIPAL CROPS AND
CROP PRODUCTION, YEAR ENDED 30 JUNE**

(Source: Rural Industries Bulletin, 1972-73; Papua New Guinea Bureau of Statistics.)

	Area under crop (hectares)			Production (tonnes)		
	Non-indigenous	Indigenous	Total	Non-indigenous	Indigenous	Total
Coconuts—						
1969 . . .	109,926	141,136	251,062	98,561	48,444	147,005
1970 . . .	110,012	135,742	245,754	93,437	47,460	140,897
1971 . . .	109,112	137,469	246,581	89,355	51,595	140,950
1972 . . .	107,639	n.a.	n.a.	80,278	47,500	127,778
1973 . . .	108,284	n.a.	n.a.	77,385	51,872	129,257
Cocoa—						
1969 . . .	53,920	17,922	71,842	20,056	6,451	26,507
1970 . . .	53,422	18,909	27,331	18,523	6,406	24,929
1971 . . .	54,675	19,475	74,150	19,481	8,907	28,388
1972 . . .	56,342	n.a.	n.a.	18,732	8,541	27,273
1973 . . .	60,615	n.a.	n.a.	15,544	6,816	22,360
Coffee—						
1969 . . .	5,943	20,100	26,043	6,853	16,527	23,380
1970 . . .	6,085	23,947	30,032	6,921	23,010	29,931
1971 . . .	6,279	22,201	28,480	8,307	21,049	29,356
1972 . . .	6,207	n.a.	n.a.	8,292	20,722	29,014
1973 . . .	7,050	n.a.	n.a.	12,212	n.a.	n.a.
Pyrethrum—						
1969 . . .	..	1,661	1,661	..	161	161
1970 . . .	..	1,325	1,325	..	202	202
1971 . . .	..	1,184	1,184	..	162	162
1972 . . .	..	n.a.	n.a.	..	n.a.	n.a.
1973 . . .	..	n.a.	n.a.	..	n.a.	n.a.
Rubber—						
1969 . . .	13,745	1,709	15,454	6,470	29	6,499
1970 . . .	13,743	2,223	15,966	5,741	31	5,772
1971 . . .	13,243	1,960	15,203	6,355	76	6,431
1972 . . .	12,807	n.a.	n.a.	5,422	n.a.	n.a.
1973 . . .	14,666	n.a.	n.a.	5,641	n.a.	n.a.
Tea—						
1969 . . .	2,133	211	2,344	376	45	421
1970 . . .	2,695	265	2,960	984	90	1,074
1971 . . .	2,984	370	3,354	1,261	290	1,551
1972 . . .	3,383	n.a.	n.a.	2,071	n.a.	n.a.
1973 . . .	3,036	n.a.	n.a.	2,887	n.a.	n.a.

Livestock

Total cattle on non-indigenous holdings at June 1973 was 79,599. Indigenous involvement in the cattle industry is being encouraged. An estimated 11,817 head of cattle were owned by indigenes in 1971. 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 cross-bred types of cattle is desirable. For dairying the Jersey seems to be the best breed and adapts quite well to tropical conditions.

A central abattoir controlled by the Administration has been set up at Lae and Government slaughterhouses at Port Moresby, Goroka and Mount Hagen. 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 New Guinea at 30 June for the years 1971 to 1973.

PAPUA NEW GUINEA: LIVESTOCK NUMBERS ON NON-INDIGENOUS HOLDINGS

(Source: Rural Industries Bulletin, 1972-73, Papua New Guinea Bureau of Statistics.)

Kind of stock	30 June		
	1971	1972	1973
Horses	957	669	964
Cattle—			
For dairying—			
Cows—in milk	1,345	1,379	1,442
dry	1,065	1,205	1,548
Heifers, one year and over	779	865	1,009
Heifer calves, under one year	748	898	1,134
Bulls, one year and over	195	210	254
Bulls, under one year	119	125	138
Total dairying cattle	4,251	4,682	5,525
For beef—			
Cows and heifers, one year and over	36,114	39,405	40,727
Calves, under one year	9,094	8,608	9,796
Bulls, one year and over	1,876	2,102	2,273
Bulls, under one year	1,470	1,708	1,346
Other, one year and over	20,120	20,447	19,932
Total beef cattle	68,674	72,270	74,074
Total all cattle	72,925	76,952	79,599
Sheep	382	101	449
Pigs—			
Boars	295	266	305
Breeding sows	1,458	1,572	1,632
Suckers, weaners, and slips	4,218	3,212	3,652
Other	1,325	1,730	2,022
Total pigs	7,296	6,780	7,611
Goats	641	313	465
Poultry(a)—			
Fowls	172,514	152,998	179,642
Ducks	6,304	4,153	3,360
Turkeys	337	793	149
Geese	40	565	42
Total poultry	179,195	158,509	183,193

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

Survey of indigenous agriculture and ancillary surveys, 1961-62

A survey of the agriculture of indigenes of Papua New Guinea was carried out in 1961-62 by the Papua New Guinea Bureau of Statistics in conjunction with the Australian Bureau of Statistics and the Papua New Guinea Department of Agriculture, Stock and Fisheries. A comprehensive report on the surveys was published by the Papua New Guinea 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. Statistics of indigenous cash crop and cattle projects are compiled annually by the Government's Department of Agriculture, Stock and Fisheries.

Forestry

Many species of tropical timbers are found in Papua New Guinea, and there is a large pure stand of Klinkii pine in the Bulolo Valley. This timber is used mainly for the production of plywood and veneer. The Papua New Guinean forests produce all local timber requirements as well as exports of logs, sawn timber, plywood and veneer. The Government operates a forestry school at Bulolo to train forestry officers, and has established a research centre for forest products at Hohola near Port Moresby as well as regional silvicultural stations and a large herbarium at Lae.

The Government is making available for public application a number of extensive timber areas estimated to contain a total of about 33 million cubic metres of logs and possibly twice this quantity of pulpwood. It is intended that those areas should form the basis for the development of integrated forest industries, which would be large and economically viable. Feasibility studies have been undertaken by consultants and some interested firms. Subject to negotiation the areas will be allocated on long-term permits. The Government has acquired from the indigenous peoples timber rights over 2 million hectares of forest for industrial development. Reforestation of permanently dedicated land is being undertaken by the Government, the area planted to date being 10,288 hectares.

At 30 June 1973, 72 permits and 36 licences were current, the total area of forest involved being 970,000 hectares. The total number of sawmills was 68 and the total sawn timber produced during 1972-73 was 142,000 cubic metres. Total log production was 831,000 cubic metres of which 451,000 cubic metres was exported.

Fisheries

Over 1,400 different species of fish are to be found in the coastal and inland waters of Papua New Guinea and many are important food fish. Those of greatest commercial significance are tunas (mainly skipjack), prawns, barramundi, and tropical lobster. 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 country. In the Highlands there is increasing interest in fish culture in freshwater ponds.

Commercial fishing for prawns by joint venture companies is increasing and considerable expansion is likely in the tuna fishery, in which three Japanese and one United States of America joint venture companies are at present engaged.

In the 1972-73 the main exports of marine produce from Papua New Guinea were 12,044,691 kilograms of tuna and 475,000 kilograms of frozen crayfish tails and prawns valued respectively at \$3,025,000 and \$1,355,000. Exports of cultured pearls amounted to \$186,000. Other important exports are crocodile skins, marine shell and barramundi.

Mining

A large number of minerals have been found in Papua New Guinea, including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum, lignite and brown coal.

A large low grade copper deposit with ore reserves of 900 million tonnes of ore containing 0.48 per cent copper and 0.36 dwt per ton gold has been developed by Bougainville Copper Pty Ltd, a partly owned subsidiary of Conzinc Rio Tinto Australia Ltd, with a 20 per cent shareholding by the Government. Production began in 1972 and ore is expected to be mined at the rate of 30 million tonnes per annum. Production for 1973-74 was 184,181 long dry tonnes of copper, 20,741,000 grams of gold and 46,381,000 grams of silver for export.

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. A large low grade copper ore body is being considered for development in the Star Mountains, near the West Irian border. 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 production of gold in Papua New Guinea for 1972-73 was about 17,512,000 grams.

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

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 in the Gulf District (including offshore), but its commercial use is not yet economically feasible.

At 30 June 1973, 30 permits and licences were effective under the provision of the *Petroleum (Prospecting and Mining) Act* 1951-1968 and the *(Commonwealth) Petroleum (Submerged Lands) Act* 1967-1968.

Secondary industries

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

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, aerated waters, clothing, plastic articles, concrete products, glass bottles, drums, industrial gases, chemicals, fibreglass products, nails and other wire products, packaging and paper products, paints, metal louvre frames, wood preservative, metal roofing, water heaters, cast-iron stoves and other building materials, tyre repairs, fire protection equipment, agricultural machinery, matches, printing and ship-building.

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

PAPUA NEW GUINEA: SUMMARY OF FACTORY OPERATIONS

(Source: *Secondary Industries Bulletin*, 1972-73, Papua New Guinea Bureau of Statistics.)

	1970-71	1971-72	1972-73
Number of factories(a)	729	722	702
Average number employed(b)	15,283	16,336	16,198
Salaries and wages paid(c)	19,195	23,597	24,844
Value of power, fuel light, etc., used(d)	2,812	4,963	6,648
Value of materials used(e)	54,935	58,174	62,117
Value of production(f)	49,234	58,411	69,433
Value of output(g)	106,981	121,548	138,198
Value of land and buildings(h)	30,550	46,176	46,672
Value of plant and machinery(h)	28,974	73,306	72,708

(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.

PAPUA NEW GUINEA: FACTORY OPERATIONS BY CLASS OF INDUSTRY, 1972-73

(Source: *Secondary Industries Bulletin*, 1972-73, Papua New Guinea Bureau of Statistics.)

	Class of industry				Total
	Industrial metals machines and conveyances	Food, drink and tobacco	Sawmills, plywood and joinery	Other industries	
Number of factories	342	124	135	101	702
Number of employees—					
Non-indigenous	n.a.	n.a.	n.a.	n.a.	2,997
Indigenous	n.a.	n.a.	n.a.	n.a.	13,201
<i>Total employees</i>	<i>5,402</i>	<i>4,114</i>	<i>4,184</i>	<i>2,500</i>	<i>16,198</i>
Salaries and wages paid	\$'000 12,140	3,898	4,354	4,452	24,844
Value of power, fuel and light, etc.	587	1,085	428	4,548	6,648
Value of materials used	17,379	24,242	8,488	12,008	62,117
Value of production	22,152	17,227	10,013	20,041	69,433
Value of output	40,118	42,554	18,929	36,597	138,198

See footnotes to previous table.

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

Electric power generation and distribution

Electric power generation and distribution

Papua New Guinea Electricity Commission. Responsibility for the prescription of the terms of operation and establishment of the electrical undertakings in Papua New Guinea is vested in the Papua New Guinea Electricity Commission whose headquarters are located at Port Moresby. The Commission was established by the *Papua New Guinea Electricity Commission Ordinance 1961* and on July 1963 acquired the assets of the Electrical Undertakings Branch of the Department of Public Works. In Papua New Guinea the Commission owns and operates the electrical undertakings at Port Moresby, Lae, Rabaul/Keravat, Madang, Wewak, Goroka, Kavieng, Samarai, Yonki and Kieta/Arawa. It also maintains, operates and carries out administrative functions relating to the electrical undertakings at Mount Hagen, Kundiawa and Kainantu. In addition, it has regulatory functions associated with the licensing of electricians and contractors, the control of franchise holders, the approval of appliances and electrical materials for use in Papua New Guinea, and it operates a showroom at Port Moresby for the purpose of selling electrical appliances.

Generating facilities. The Commission owns and operates hydro-electric power stations at Port Moresby, diesel and hydro-electric stations at Goroka and diesel stations at other centres. At Lae, local diesel generation is supplemented by purchases of power in bulk from the Baiune Hydro-Electric Power Stations of Commonwealth New Guinea Timbers Limited. At Kieta the Commission purchases bulk power generated in the Bougainville Copper Pty Limited steam power station at Anewa Bay. The installed capacity of generating plant at centres owned or managed by the Commission at 30 June 1974 was as follows:

Centre	kW
Port Moresby	37,020
Lae	15,280
Rabaul/Keravat	6,395
Madang	5,900
Goroka	(a)3,450
Wewak	2,090
Kavieng	660
Samarai	440
Yonki	1,600
Mount Hagen	(b)2,225
Kundiawa	300
Kainantu	300
Total	75,660

(a) Includes 600 kW hydro. (b) Includes 124 kW hydro.

The total substation capacity within the Commission's system totals approximately 108,700 kVA. In addition, the Commission supplies power to 67 customer-owned substations totalling some 17,400 kVA in capacity. The number of customers served by the Commission at 30 June 1974 was 24,762.

The Commission also maintains the generating plant and distribution system in minor centres acting as an agent of, and from funds provided by, the Government. The installed capacity of continuous generating plant in the 136 minor power stations owned by the Government at 30 June 1974 was approximately 8,400 kW, excluding emergency plant. The centres at Wau, Bulolo, Kupiano, Karkar Island and Banz are supplied by private electrical undertakers under franchise from the Commission.

The demand for power throughout Papua New Guinea continues to increase, although the spectacular growth rate experienced towards the end of the 1960s has now levelled out at approximately 10 per cent per annum. In Port Moresby the installation of two 6 MW sets at Rouna No. 3 Power Station, under construction alongside the existing Rouna No. 1 Station is proceeding. When commissioned in November 1974 this station will boost the area's installed generating capacity to 49 MW.

New diesel plant was commissioned at Lae and at Goroka during the year ended 30 June 1974. The two new 18 cylinder 3.2 MW diesel sets at Lae are the largest yet to be installed by the Commission.

Work is well advanced on the manufacture and installation of three 15 MW generators, representing the first stage of the Ramu No. 1 Hydro-Electric Power Station under construction near Kainantu in the Eastern Highlands. Work is also proceeding on the erection of some 530 kilometres of high-voltage transmission line which will interconnect the new station with the towns of Lae, Madang, Goroka, Mount Hagen and some smaller Highlands centres. This scheme is scheduled for commissioning in mid-1975.

Future development. Papua New Guinea is a mountainous country and high annual rainfalls occur in many areas; thus the basic requirements for hydro-electric development are clearly evident. As in the past, the Commission continues to initiate, and participate in, investigation work to obtain assessments of potentials and feasibilities of hydro-electric schemes. Investigation work already completed indicates a hydro-electric potential within Papua New Guinea of between 20,000 MW and 25 MW.

The potential of the Purari River basin alone is conservatively estimated at 8,000 MW, and office studies and field investigations continue—directed at the 1,800 MW Wabo Dam Site as the first stage of the Purari development.

With Purari power unlikely to be available before 1984, other development is under active investigation by the Commission for further reinforcement of the Port Moresby area. Alternatives include Rouna No. 4 Power Station, the Musa River development (dependent on the availability of a customer to utilise most of the 400 MW potential) and the possible interconnection of the Port Moresby system with Ramu. The Ramu Scheme, too, is capable of development to some 200 MW by the building of a dam (at Yonki) and a further power station, both on the Upper Ramu River.

Trade, transport and communication

Value of imports and exports

PAPUA NEW GUINEA: IMPORTS AND EXPORTS

(\$A'000)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics.)

	1968-69	1969-70	1970-71	1971-72	1972-73
Total imports(a)	150,455	213,051	254,599	256,386	228,815
Exports—					
Domestic exports	64,896	71,443	77,447	93,039	200,542
Re-exports	10,348	22,117	24,485	34,142	29,072
Total exports	75,244	93,560	101,932	127,181	229,614

(a) Includes value of outside packages.

Country of origin or destination

PAPUA NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics.)

Country of origin	1968-69	1969-70	1970-71	1971-72	1972-73
Australia	82,165	114,332	130,395	141,330	123,507
Canada	1,162	3,012	2,066	2,556	734
Ceylon	341	342	329	328	315
China, People's Republic of	2,758	2,254	2,201	1,905	2,361
France	1,402	1,668	1,031	823	540
Germany, Federal Republic of	3,448	3,933	3,893	4,598	3,459
Hong Kong	4,760	5,654	7,542	6,121	5,389
Italy	746	1,122	895	1,347	868
Japan	17,849	26,393	43,650	38,009	35,647
Malaysia and Singapore	4,357	5,692	6,685	9,648	9,535
Netherlands	913	2,046	2,795	3,828	4,644
New Zealand	841	2,618	2,727	3,169	1,844
Sweden	610	613	640	638	921
United Kingdom	8,574	12,347	9,823	11,415	9,242
United States of America	11,589	22,556	29,585	20,232	20,973
Other countries	8,940	8,469	10,342	10,439	8,834
Total	150,455	213,051	254,599	256,386	228,815

PAPUA NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics.)

Country of destination	1968-69	1969-70	1970-71	1971-72	1972-73
Australia	29,548	41,295	43,373	53,245	46,059
Germany, Federal Republic of	8,403	7,549	5,377	17,590	53,435
Japan	3,732	8,560	11,813	21,377	81,440
Netherlands	3,869	4,303	2,066	1,537	1,211
United Kingdom	18,769	15,394	19,567	13,264	11,365
United States of America	5,662	11,076	13,337	10,710	11,455
Other countries	5,261	5,383	6,399	9,458	24,649
Total	75,244	93,560	101,932	127,181	229,614

Principal commodities exported

PAPUA NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS

(\$A'000 f.o.b. port of shipment)

(Source: Overseas Trade Statistics, Papua New Guinea Bureau of Statistics.)

Commodity	1968-69	1969-70	1970-71	1971-72	1972-73
Copra	14,804	13,340	14,209	9,392	8,083
Other coconut products(a)	6,361	7,619	9,901	6,476	7,124
Coffee beans	15,531	20,182	20,572	20,458	23,395
Cocoa beans	16,060	15,549	13,643	11,109	11,175
Timber(b)	2,296	3,796	6,401	6,988	8,334
Plywood(c)	2,504	2,529	2,505	212	2,655
Rubber(d)	2,276	2,798	2,297	1,995	1,998
Gold	807	824	720	814	953
Crayfish and prawns	268	659	875	2,051	1,355
Crocodile skins	473	452	264	198	650
Peanuts	469	550	518	616	305
Pyrethrum extract	313	332	286	227	192
Passionfruit juice	122	131	1	288	226
Tea	297	645	1,094	1,500	2,048
Other	2,315	2,037	4,161	30,715	161,122
Total	64,896	71,443	77,447	93,039	229,614

(a) Dessicated coconut, copra oil and copra pellets. (b) Logs and sawn timber. (c) Plywood, veneer and battery veneer. (d) Raw and scrap rubber.

Shipping

In 1972-73 shipping entries (excluding coastal shipping and cargoes) at Papua New Guinea ports totalled 2,581, and 1,526,000 tonnes of cargo were discharged and 1,585,000 tonnes were loaded. Corresponding figures for 1971-72 were 2,301, 1,627,000 and 976,000 respectively.

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

Other forms of transport and communication

Scheduled flights provide a network of air transport throughout Papua New Guinea and regular air services link the country with Australia and neighbouring countries, also with Manila, Hong Kong, Honiara and Jaipura. There were 465 licensed aerodromes in the whole of Papua New Guinea at 14 August 1974, and of these 5 were the responsibility of the Civil Aviation Agency, 142 are Papua New Guinea Government-owned commercial airfields, 108 are privately (i.e. non-Government) owned commercial airfields and 210 are restricted airfields (i.e. non-commercial) for the use of the airfield proprietor only. Much of the internal traffic and freight is carried on a charter basis.

PAPUA NEW GUINEA: AIR TRANSPORT; SUMMARY OF SCHEDULED AND CHARTER SERVICES

	<i>Overseas services(a)</i>			<i>Internal scheduled services(b)</i>			<i>Internal charter services</i>		
	<i>Passengers embarked</i>	<i>Freight</i>	<i>Mail</i>	<i>Passengers embarked</i>	<i>Freight</i>	<i>Mail</i>	<i>Passengers embarked</i>	<i>Freight</i>	<i>Mail</i>
	No.	short tons	short tons	No.	short tons	short tons	No.	short tons	short tons
Year ended 30 June—									
1969 .	132,557	2,794	534	280,618	4,927	902	106,212	25,618	138
1970 .	166,078	3,298	583	346,440	6,538	975	112,973	25,104	102
1971 .	195,490	3,358	633	425,554	7,358	1,080	216,350	22,372	118
1972 .	206,755	3,325	608	472,641	8,107	1,080	233,144	21,867	104
1973p .	219,616	4,440	667	514,788	8,141	1,085	221,186	20,211	112

(a) Services to ports outside Papua New Guinea.

(b) Internal scheduled airline services only.

At July 1973 there were 10,395* miles of roads in the country. Total motor vehicle registrations (excluding defence force vehicles) at 31 December 1973 were 39,006.

Telephone services operate between the main centres by radio telephone. These together with telex and telegraph services are operated within the country by the Department of Posts and Telegraphs, while overseas traffic is handled by the Overseas Telecommunications Commission. The National Broadcasting Commission broadcasts on medium wave and short wave from Port Moresby, Rabaul, Lae, Goroka, Madang and Wewak. There are 10 other stations broadcasting on short wave only. The Government Office of Information operates transmitters at a number of centres, broadcasting programs in several local languages.

Indigenous labour

Some 120,014 indigenous workers were enumerated in the Department of Labour count of the indigenous labour force as at 30 June 1972. Of the enumerated indigenous labour force, 32 per cent were employed by the Papua New Guinea Government and Australian Government Departments. Private industry employed 68 per cent. The larger industries employed the following percentages of the workforce; rural industry, 30 per cent; building and construction, 10 per cent; commerce, 8 per cent; manufacturing, 8 per cent and transport and storage, 6 per cent.

At 30 June 1974, 2,486 tradesmen had satisfactorily completed their indentures in 41 trades and had been awarded completion certificates. At the same date 1,289 apprentices, including 38 non-indigenes were undertaking indentures under provisions of the Papua New Guinea Apprenticeship Act.

Minimum conditions of employment for Papua New Guinean workers in the private sector are prescribed by statute under the Native Employment Act and minimum rates of pay for these workers are similarly prescribed by Minimum Wage Board Determinations made under the Industrial Relations Act. There exists a number of awards, i.e. registered industrial agreements made between organisations of employers and employees which contain rates of pay and/or conditions of employment which are more liberal than those prescribed by law. It is of interest to note that a non-discriminatory Labour Code is presently being drafted to replace the Native Employment Act.

Wage rates and conditions of employment for Papua New Guinean officers and employees in the public sector are as prescribed in the Public Service (Papua New Guinea) Act, Teaching Service Act, etc., and determinations made under those Acts. Conciliation and arbitration machinery exists for the settlement of disputes in all sectors of employment in the Public Services. Conciliation and Arbitration Act, the Teaching Service Conciliation and Arbitration Act and the Industrial Relations Act.

The minimum national wage is \$8.00 per week for workers directly engaged in the copra, cocoa, tea, coffee, rubber, oil palm, fruit and vegetable growing industries, and the livestock raising industry. For all other workers the national minimum has been determined to be \$10 per week.

* Urban road net component of this figure is incomplete.

General employment awards are in force in 21 towns. The awards apply to all workers employed by members of the Employers Federation regardless of whether or not they are members of a workers organisation (excluded from the awards are those workers directly engaged in primary production, domestic duties, stevedoring operations, shipping operations or apprentices indentured under the Apprenticeship Act). In many of the towns affected the terms of the awards are applied to all workers engaged by all employers and not only members of the Employers Federation due to common rules having been declared under the Industrial Relations Act. In addition to general awards applying to workers in the 21 centres mentioned, there exist awards for specific industries, e.g. stevedoring, timber and logging, building and construction, mining and exploration, shipping.

The minimum wage rate for adult unskilled workers employed in 'Level 1' towns is \$20.00 a week and for those in 'Level 2' towns \$15 a week. Margins for skill are prescribed for semi-skilled and skilled workers. Margins are from \$21.75 to \$35.20 all-up a week in Level 1 areas and \$16.75 to \$35.20 in Level 2 areas. These wages are the result of a Minimum Wages Board Determination handed down on 11 October 1974; the Determination provided for further wage movements at six monthly intervals.

The *Industrial Organizations Act 1962-1970* provides for the registration and control of industrial organisations. At 30 June 1974 there were 51 registered employees' organisations in Papua New Guinea with a total membership of 40,220 workers, of which 39,196 are Papua New Guineans. Thirteen of the above employee organisations have joined together to form the Federation of Workers' Associations of Papua New Guinea. Another 5 have joined together to form a Council of Trade Unions which was registered on 31 May 1973.

The Bureau of Industrial Organisations is a statutory authority established on 23 March 1972. The functions of the Bureau are to provide advice and assistance in the establishment, administration and development of industrial organisations and to provide courses and programs of training for members and officials of industrial organisations.

The Papua New Guinea Labour Advisory Council advises the Minister for National Development and the Government on labour matters generally, and in particular on:

- methods of improving industrial relations,
- measures needed to achieve full and efficient use of the country's manpower,
- methods of bringing about rapid localisation of the work force in the private sector and incentives and other measures to achieve this end,
- measures to improve productivity, and
- trade union development.

Housing

Village housing is constructed to traditional patterns using local materials including bush timber, bamboo, grass, pit-pit and sago palm leaves. Town housing is generally constructed from comparatively expensive imported material including fibrous asbestos cement, aluminium and galvanised iron. The majority of houses are timber framed and made from both locally milled and imported timber.

The rapid growth of urban areas consequent upon increased economic development has created a housing shortage. Major programs are directed towards reducing this shortage.

The Housing Commission was established in 1968, with charter to construct housing and accommodation for all sections of the community. The intention is for the Commission to progressively assume responsibility for all Government houses in its areas of operation. The Commission currently operates in Port Moresby, Lae, Madang, Rabaul and Goroka.

The major urban centres in Papua New Guinea have squatter settlement problems. Squatter houses are mostly of the substandard shanty type. The Administration and the Housing Commission are assisting squatters with self-help housing schemes in both existing squatter settlements and new resettlement areas by providing housing allotments, supervisory staff, building materials at cost price, and basic services. Self-help housing schemes are to be expanded significantly over the next five years, particularly in the major urban centres.

Education and health

Education

Schools in Papua New Guinea are conducted by the Papua New Guinea Government and various Christian missions. In February 1970 the Australian Government adopted the recommendations of the Advisory Committee on Education in Papua New Guinea, and the House of Assembly subsequently passed the Education (Papua New Guinea) Act and the Teaching Service Act. The new legislation provided for the voluntary merger as from 1 July 1970 of mission schools and colleges and teaching staff, with those of the Government, into a unified National Education System and a single National Teaching Service. A representative National Education Board and a number of District Education Boards were created to advise on educational planning and administration at the national and district levels respectively. A Teaching Service Commission was also created to employ teachers and to determine their salaries and conditions of service.

Preliminary figures show that at 30 June 1974 there were 236,060 children enrolled in 1,744 primary schools in the Papua New Guinea national education system; and a further 35,638 enrolled in 178 secondary, technical and vocational schools. Some 7,639 of the 9,451 teachers employed in schools were Papua New Guineans. Qualified teachers are recruited from Australia and overseas, and Papua New Guinea teachers are trained in 11 teachers' colleges conducted by the missions and the Papua New Guinea Government. Of these 10 are primary colleges and one, the Goroka Teachers' College, currently a secondary college will become part of the University of Papua New Guinea in 1975. Post-graduate studies in the form of in-service courses held at one or other of the teachers colleges are available to teachers.

A two year secondary course designed to provide opportunities for further education for children completing a primary course but not selected for secondary or vocational training was introduced in February 1973. The schools called 'Skulanka' will concentrate especially on practical and outdoor activities and are community oriented.

At the post-secondary level of education there are a range of specialist vocational training institutions including two Universities.

The University of Papua New Guinea and the Papua New Guinea University of Technology are autonomous institutions offering courses at both degree and diploma level. The University of Papua New Guinea has faculties of Arts, Law, Science, Education, Medicine and Agriculture. At 31 March 1974 were 1,102 full-time and 629 part-time students enrolled in degree, diploma and post-graduate courses. Of these 1,300 are Papua New Guinean students. In 1973, 139 students graduated from the University of whom 87 were Papua New Guineans. It is estimated that in 1974, 218 students will graduate of whom 120 will be Papua New Guineans.

The University of Technology offers degree and diploma courses in civil, electrical and mechanical engineering, architecture, building, surveying, valuation and chemical technology, cartography and communications. Certificate level courses are also being introduced as needed. There were 800 Papua New Guineans and 46 expatriates enrolled at the University of Technology in 1974. In 1973, 62 students graduated from the University of Technology and it is expected that in 1974, 87 students will graduate.

There are 9 technical colleges in Papua New Guinea offering a wide range of trade apprenticeship and secretarial courses. Certificate level courses are available in the engineering, building, laboratory, catering and hotel administration and commercial fields. The Vudal Agricultural College offers a post-form IV Diploma course in agriculture, and lower level certificate courses are provided at two agricultural training centres. The Bulolo Forestry College offers a diploma course in Forestry.

There are 2 Government and 8 Mission Primary Teachers Colleges. Secondary Teacher training is provided at the Goroka Teachers College and at the University of Papua New Guinea. Most of the other post-secondary institutions are operated by Government departments and include the Co-operative College, Police College, Public Service Board Administrative College, Local Government Council Staff College and the Para Medical Colleges. To ensure that there is co-ordination among post-secondary training institutions and that the future development of post-secondary courses is related to Papua New Guinea manpower needs, the Government established in 1973 an Office of Higher Education responsible to the Minister for Education.

International Training Institute. In November 1971, the Australian Government decided that the Australian School of Pacific Administration at Mosman, Sydney, would be developed as an important centre for training Papua New Guineans, as well as people from other countries. The school has been renamed the International Training Institute.

In its new role, the Institute is supplementing training and undertaking specially structured training which cannot be better or more conveniently provided in Papua New Guinea or elsewhere in Australia. The Institute is concentrating on administrative and specialised training to prepare Papua New Guinea Public Servants.

The Institute program provided for over 330 Papua New Guineans to attend courses during 1974. Of this number, 120 have undertaken vocationally oriented courses of 8 months duration to upgrade their qualifications for advancement within the Papua New Guinea Public Service. The balance of trainees undertook shorter courses in advanced administrative and executive development training, industrial relations and local government practice.

Health

The Department of Public Health of Papua 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, maternal and child health, dental education, administrative services, and mental health. To facilitate administration and co-ordination of the field services of the Department of Public Health, Papua New Guinea is divided into four geographical regions: the New Guinea Mainland, Highlands, New Guinea Islands Region and Papua.

Finance

Revenue and expenditure

PAPUA NEW GUINEA: REVENUE AND EXPENDITURE (\$'000)

	1970-71	1971-72	1972-73	1973-74	1974-75(a)
REVENUE					
Civil aviation . . . . .	..	..	..	225	250
Customs	30,960	33,135	34,141	40,182	45,410
Licences	1,038	1,440	1,535	1,647	1,703
Stamp duties	683	964	833	723	750
Postal	(b)	(b)	(b)	(b)	(b)
Land revenue	1,098	1,200	1,566	1,568	1,635
Mining receipts	241	153	1,859	3,541	4,697
Fees and fines	567	647	845	1,114	1,255
Health revenue	676	725	658	592	594
Forests	923	938	1,203	1,706	1,860
Agriculture	1,021	1,053	1,233	1,638	2,032
Public utilities	1,653	1,791	1,812	1,428	930
Direct taxation	29,375	36,117	38,229	52,761	63,500
Miscellaneous	5,953	6,708	9,153	24,950	28,700
Recoverable services	9,478	10,382	..	..	..
Recoveries—A.S.A.G. expenditure . . . . .	..	..	..	4,292	4,850
<i>Total internal revenue(c)</i>	<i>83,666</i>	<i>95,253</i>	<i>93,067</i>	<i>136,368</i>	<i>158,166</i>
General loans	15,587	25,540	27,600	32,040	32,000
Grant by Australian Government	(d)70,000	(d)69,875	(d)82,863	(d)133,069	89,172
International loans	2,620	8,131	7,869	9,347	20,612
Australian Government loans	6,300	11,700	4,400	2,200	..
Special Loan—Purchase of Equity in Bougainville Copper Ltd	12,500	..	..	..	..
Consolidated revenue	203	..	367	..	8,300
Budget equalisation reserve fund . . . . .	..	..	..	..	3,000
Total revenue	190,876	210,499	216,166	313,024	311,250

For footnotes see end of table next page.

PAPUA NEW GUINEA: REVENUE AND EXPENDITURE—*continued*
(\$'000)

	1970-71	1971-72	1972-73	1973-74	1974-75(a)
EXPENDITURE					
Defence Department . . . . .	..	..	..	8	9,489
Special appropriations	13,295	13,943	14,174	21,837	22,617
Administrator(e)	6,491	8,056	9,700	..	..
High Commissioner(f) . . . . .	..	..	..	65	53
Chief Minister and Development Administration(g) . . . . .	..	..	..	9,593	12,968
Foreign Relations and Trade(h) . . . . .	..	..	..	2,792	6,912
House of Assembly	409	377	393	392	671
Information and Extension Services(i)	1,171	1,600	1,603	..	..
Public Service Board	1,155	1,367	2,290	3,002	3,821
Finance (formerly Treasury)	4,928	3,948	3,800	4,146	3,720
Public health	13,231	14,491	16,242	19,456	24,146
Interior(j)	5,297	7,089	9,937	15,037	11,977
Labour	741	880	1,037	943	1,114
Education	17,939	20,758	25,230	29,657	38,269
Agriculture, stock and fisheries	7,209	7,983	9,081	9,791	13,561
Royal Papua New Guinea Constabulary	7,689	7,908	9,627	10,803	14,330
Law	3,705	4,556	2,107	1,776	2,792
Lands, surveys and mines	4,780	4,398	4,115	5,762	8,865
Forests	2,082	2,367	2,509	2,532	4,219
Posts and Telegraphs	6,774	6,519	4,791	3,118	2,655
Trade and industry(e)	817	647	754	..	..
Transport(k)	2,504	2,984	3,351	12,508	18,162
Business development(l)	377	865	1,012	998	1,518
Stores for resale	5,368	6,410	..	..	..
Public works	5,564	5,677	5,594	5,149	5,125
General overheads	2,540	2,817	2,220	2,281	3,239
General maintenance	15,698	17,040	18,211	22,158	24,163
Capital works and services	29,675	40,000	33,392	27,870	32,500
Other institutions	15,022	22,868	30,313	49,727	53,094
Motor transport	3,482	3,659	..	..	..
Government printer	417	538	..	..	..
Purchase of investments	12,500	..	..	2,500	1,000
Special advance to the Secretary of Finance . . . . .	..	..	4,683	..	..
Capital expenditure on transferred functions . . . . .	..	..	..	34,751	270
Reserves . . . . .	..	..	..	6,000	..
Total	(m)190,860	(m)209,745	216,166	304,651	321,250

(a) Estimated. (b) Postal Revenue is retained by the Department of Posts and Telegraphs in accordance with the change to commercial accounting for that Department. (c) Refunds of revenue have been deducted from gross collections by items. (d) As from 1970-71, the following additional amounts which were not part of the Papua New Guinea Budget, were provided by the Australian Government: for Australian Staffing Assistance (salaries and allowances) in 1970-71, \$31.5 million was provided; in 1971-72 \$38.3 million and in 1972-73 \$43.3 million. Also \$0.8 million was provided for Termination and Retirement Benefits, and \$1.1 million for Emergency Food Relief in the Highlands. In 1973-74, \$49.9 million will be provided by the Australian Government for Australian staffing assistance, and \$17.8 million for Termination and Retirement Benefits. (e) Abolished in 1972-73. (f) New Office established in 1972-73, formerly included in Department of the Administrator. (g) New Department established in 1972-73 which includes former sections of the Department of the Administrator. (h) New Department established in 1972-73 which includes former sections of the Department of Trade and Industry and the Department of the Administrator. (i) Information and Extension Services has now become the Office of Information within the Department of the Chief Minister. (j) Formerly the Department of Social Development and Home Affairs with the exception of one section which has been absorbed by the Department of the Chief Minister and Development Administration. (k) New Department established in 1971 from former sections of Departments of the Administrator, Treasury and Trade and Industry. (l) New Department established in 1970-71 which includes former sections of Department of Trade and Industry. (m) Amount reduced by taxation refunds and refunds of revenue.

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. Income Tax is about two thirds of the tax payable on the same taxable income in Australia. Tax on chargeable income was introduced to apply from 1 January 1967 and has supplanted a previous *Personal Tax* of \$4 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 2.00 cents in the \$1 applying on income above \$416 with a maximum of \$20.00. The two methods of calculating tax payable are complementary, 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 1971 a flat rate of 25 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. As from 1 July 1972, companies paying a dividend to shareholders resident outside Papua New Guinea are required to deduct and pay a dividend withholding tax of 15 per cent. To encourage industry in Papua New Guinea certain companies manufacturing products new to Papua New Guinea may be granted complete tax exemption for the first five years of operation under the *Industrial Development (Incentive to Pioneer Industries) Ordinance 1965-1969*. This includes exemptions from the dividend withholding tax. In addition to income taxes Local Government Councils 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.

Papua New Guinea has a single column tariff applying to all goods regardless of country of origin. 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 duty free or at a low rate of duty on most necessities affecting living and building costs. 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 were imposed on prescribed primary products at the rate of 2.5 per cent and prescribed unprocessed natural resources at the rate of 5 per cent as from 18 November 1974.

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

Effective from 2 September 1970, a general levy of 2.5 per cent was imposed, subject to certain exemptions, on all goods imported into Papua New Guinea. Exemptions apply in the main to goods imported by the Administration and/or the Australian Government and their statutory authorities, goods imported for the use of charitable organisations and goods used for educational, health or medical services or for scientific research.

This levy, although administered by the Comptroller of Customs, is not a Customs Duty and does not affect rates of duty imposed under the Customs Tariff.

Banking

Prior to November 1973, several Australian banks operated branches in the main centres of Papua New Guinea and their operations formed part of the Australian banking system under the supervision of the Reserve Bank of Australia. Full trading and savings bank facilities were provided by the following trading banks and their associated savings banks: the Commonwealth Trading Bank of Australia, the Bank of New South Wales, Australia and New Zealand Banking Group and the National Bank of Australasia Ltd.

Since 1 November 1973, the operations of banks in Papua New Guinea have been governed by Papua New Guinea banking legislation in the place of Australian legislation, and the banking system has been subject to supervision by the Bank of Papua New Guinea (the central bank). Under the Papua New Guinea banking legislation there is no distinction between savings banking and trading banking. Most of the assets and operations of the Commonwealth Banking Corporation in Papua New Guinea were taken over in April 1974 by the Papua New Guinea Banking Corporation. In October 1974, the assets and operations of the National Bank of Australasia Ltd were taken over by its subsidiary, Bank of South Pacific Ltd.

Papua New Guinea at present uses Australian currency, but a new currency will be introduced in 1975. Since 1 November 1973, exchange control has been administered by the Bank of Papua New Guinea through provisions of the Foreign Exchange Regulations. At present, exchange control does not apply to dealings with Australia.

The average level of deposits with commercial banks in Papua New Guinea for the year 1972-73 was \$95,502,000; and the average level of loans, advances and bills discounted was \$118,406,000.

The Papua New Guinea Development Bank was established in 1967 to provide finance for primary production, manufacturing and commerce. In early 1972 the Papua New Guinea Investment Corporation was established to acquire equity interests in major enterprises in Papua New Guinea for disposal to Papua New Guinea institutions and individuals.

Co-operative societies

Co-operatives are under the guidance of the Department of Business Development. The present structure of the co-operative movement is based on primary societies, associations of societies, regional unions and a Territory-wide Federation formed by the unions. At 31 March 1972 there were 351 primary societies with 141,000 members. Turnover exceeded \$7 million including \$5 million from produce. In addition there are service organisations for wholesale trade, insurance and shipping.

A Co-operative College has been set up near Port Moresby with United Nations Development Programme and International Labour Organisation assistance. The first buildings were opened in May 1971.

The functions of the College are to provide business training for Papua New Guineans and to train Government officers for the Department of Business Development. The College has living accommodation and classroom facilities for 130 students. It is expected that facilities will be enlarged in 1975 to allow for a 40 per cent increase in students.

HEARD ISLAND AND McDONALD ISLANDS

These islands, about 4,100 kilometres 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 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

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 43 kilometres long and 20 kilometres wide. The McDonald Islands are 43 kilometres to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island station.

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. In 1968, responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply, and in 1972 the responsibility was transferred to the Minister for Science.

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 a 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° 58' E. The station was named in honour of the late Captain John King Davis, second-in-command of two of Mawson's expeditions and master of several famous Antarctic ships. The station was temporarily closed on 25 January 1965 and re-opened on 15 February 1969. On 4 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° 32' E. The station was named in honour of Lieutenant Charles Wilkes who commanded the 1838-42 United States expedition to the area. The station was closed on 19 February 1969 when activities were transferred to Casey station built about 2 kilometres south of Wilkes. Casey station, which was opened on 19 February 1969, was named in honour of Baron Casey, former Governor-General of Australia, in recognition of this long association with Australia's Antarctic effort.

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, Denmark, the Netherlands and Romania 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 several consultative meetings under the Treaty, the first at Canberra in July 1961.

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 14 square kilometres, are situated in the Indian Ocean in latitude 12° 05' S and longitude 96° 53' E. They lie some 2,750 kilometres north-west of Perth and 3,700 kilometres almost due west of Darwin.

The main islands of the Territory are West Island, the largest, about 10 kilometres long, on which are the aerodrome and most of the European community; Home Island, the headquarters of the Clunies-Ross Estate; Direction Island; South Island; and Horsburgh Island. North Keeling Island, which forms part of the Territory, lies about 24 kilometres to the north of the group 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 an anchorage 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 for those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 21°C and 32°C, and the average yearly rainfall is about 2,180 mm. There are occasional violent storms. The estimated population at 30 June 1973 was 654.

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 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 Australian Parliament whereby the islands were declared to be accepted by Australia as a Territory to be known as the Territory of Cocos (Keeling) Islands.

Responsibility for the administration of the Territory rests with the Special Minister of State. 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 airport at West Island of international standards under the control of the Australian Department of Transport. There is a regular 3 weekly charter service Perth-Cocos (Keeling) Islands-Christmas Island-Perth. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals. A radio teletype link with Perth is maintained by the Administration. 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 360 kilometres south from Java Head at the south entrance to Sunda Strait, 1,300 kilometres from Singapore and 2,600 kilometres from Fremantle. Christmas Island covers an area of about 140 square kilometres. It consists of a central plateau about 150 to 250 metres above sea level with several prominent rises up to 360 metres high. The plateau descends to the sea in a series of steep slopes alternating with terraces. Sea cliffs over 200 metres high run along a considerable portion of the coastline 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 anchorage.

The climate is 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 1,930 mm 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 27°C, and does not vary greatly throughout the year.

The economy of the Territory is based 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 1973 the estimated population was 2,884 (1,952 males and 936 females).

Education

The Christmas Island education system comprises a primary school and a secondary school following the Singapore curriculum, a primary school following an Australian curriculum and a technical training centre. The Singapore curriculum schools provide classes to Form 4 level and scholarships are available for students wishing to proceed to Singapore or Australia for education beyond that level.

At 30 June 1973, 499 children were enrolled at the primary and secondary schools following the Singapore curriculum. The combined staff establishment consisted of a headmaster, two senior teachers, 29 trained teachers and 1 assistant teacher. The Australian curriculum primary school had 60 pupils at 30 June 1973, with teachers seconded from the Western Australian Department of Education. There is also a Technical Training Centre, which opened in 1969.

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 Australia by the *Christmas Island Act* 1958. Responsibility for the administration and government of the Territory rests with the Special Minister of State, 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. They may be amended or repealed by Ordinances or by laws made under Ordinances of the Territory.

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. Phosphate is mined at several locations on the Island. During 1972-73, 1,225,170 tonnes of phosphate were exported to Australia and New Zealand. In addition 134,698 tonnes of phosphate dust were exported to South-East Asia and 8,269 tonnes went to 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 is staffed and operated by the Administration. The British Phosphate Commissioners operate an internal telephone system which comprises five automatic exchanges and three small subscriber-attended exchanges. A radio station is used for messages via Perth and Singapore and for communication with ships at sea. A limited broadcasting station also operates.

Regular air charter flights commenced in 1974. The charter operates every 3 weeks from Perth in Australia through the Cocos (Keeling) Islands.

CORAL SEA ISLANDS

The Coral Sea Islands were declared to be a Territory of Australia by the *Coral Sea Islands Act* 1969 which was slightly amended in 1973. The scattered reefs and islands, often little more than sandbanks, spread over a sea area of 1 million square kilometres with only a few square kilometres of actual land area, between the Great Barrier Reef, latitude 12°S and longitude 157° 10' E. The Territory which is administered by the Minister for the Capital Territory, has no permanent inhabitants. There is a manned weather station on Willis Island, some 500 kilometres east of Cairns and a number of unmanned facilities are operated by the Australian Government.

