

NEW HEBRIDES

by J. Bonnemaison

The archipelago has a total area of approximately 14,800 km² and is located between latitudes 13°S and 21°S and longitudes 166°E and 170°E. The islands were first discovered by the Portuguese mariner Louis Fernandez de Queiros in 1606. Subsequently England and France competed for them, finally establishing a condominium in 1906, an agreement which is unique and is still in force.

The archipelago is the southern extremity of the huge volcanic arc that stretches southeastwards from northern New Guinea through the Solomon Islands. The islands were first formed during Miocene times and have suffered tectonic movements and numerous eruptions. On average over 10,000 earthquakes are recorded every year, though few are severe. Three volcanoes are still periodically active, on the islands of Ambrym, Lopévi and Tanna. The island group lies in the zone of Pacific "high" islands.

Geologically the islands are composed of eruptive volcanic rocks, lava flows and coral limestones. Earth movements have in places raised coral platforms as high as 800m above sea level. As the soils have had recent volcanic ash deposited on them, they are often very fertile. Some 400,000 ha could be classed as cultivable, chiefly those on the limestone platforms, lower volcanic slopes and alluvium.

The high islands of the archipelago are mountainous and much dissected, with a high range of relief. Such level surfaces as exist are located in foundered basins or on uplifted coral platforms. Some parts of the coasts are inhospitable places and access by boat is often very difficult. Vegetation is luxuriant, especially in the northern isles.

The climate is hot, humid and rainy. The hot humid season lasts from November to April. The rest of the year is drier, with pleasant, often cool, night temperatures. Climatic conditions vary locally according to location, altitude and aspect; for example the southern islands receive less rainfall and are cooler than the northern isles. For most of the year the mountain summits are enveloped in cloud or mist, and the eastern and southern faces of the islands, exposed to the predominant southeasterly winds, are much wetter than the leeward slopes. Rainfall amounts can vary considerably — by as much as five times — over quite small distances.

Annual rainfall amounts are generally over 2,000mm, reaching 2,748mm at Santo and 2,302mm at Port Vila. The archipelago lies on the track of hurricanes that sweep this sector of the South Pacific. While hurricanes may be irregular and infrequent, they are liable to cause devastating damage to coconut palms and to shipping around the islands.

Communications on the islands are limited to a few tracks and roads, commonly around the circumference of the islands, as on Efate. Coastwise communications by small craft and more modern motor-driven or sailing schooners link the islands within the group and with the principal ports of the South Pacific islands.

TEMPERATURES AND RAINFALL
(twenty-year averages)

	Temperature °C		Rainfall mm (average monthly)	Number of rainy days	Relative humidity Average monthly %
	Average daily maxima	Average daily minima			
Santo					
January	29.1	22.2	328.2	27	90
February	29.6	22.5	329.8	28	89
March	28.9	22.5	429.5	25	88
April	28.0	21.9	328.9	15	85
May	27.1	21.3	257.9	23	86
June	26.5	20.9	164.9	19	85
July	25.9	20.1	158.9	20	86
August	26.2	20.2	141.6	23	85
September	26.5	21.0	199.3	23	85
October	27.1	21.1	218.6	22	85
November	27.9	21.4	211.3	14	80
December	28.5	22.0	298.1	20	86
Port Vila					
January	29.6	23.1	314.7	18	84
February	20.1	23.3	231.9	26	88
March	29.3	23.1	381.3	23	87
April	28.3	22.0	231.9	17	82
May	27.2	20.9	159.3	20	81
June	26.4	20.3	152.1	17	82
July	25.7	19.2	125.7	14	83
August	26.1	19.3	105.9	13	83
September	26.3	19.9	114.8	16	78
October	27.5	20.3	94.5	20	81
November	28.5	21.3	175.3	13	78
December	29.3	22.3	214.1	19	81

ETHNIC COMPOSITION OF POPULATION, 1967

	Persons	% of total population
New Hebrideans	70,837	92.5
Europeans	1,773	2.3
Chinese	252	0.3
Vietnamese	397	0.5
Other Melanesians	426	0.6
Polynesians and Micronesians	1,270	1.7
Mixed European groups	1,151	1.5
Other groups	476	0.6

Source: First Census of the New Hebrides, 1967.

NEW HEBRIDES

The population is largely composed of New Hebrideans, who belong to the Melanesian ethnic group. The 1967 census gave a total population of 76,582 persons.

The age structure of the Melanesian population is youthful. Their average annual increase is estimated to be about 2.5 per cent, on the basis of an annual birth rate averaging 45 per 1,000 and a death rate of 20 per 1,000. At the Census of 1967 it was estimated that the Melanesian population is likely to double within 30 years. The infant mortality rate has fallen markedly and 90 per cent of children born survive beyond one year. Average life expectancy at birth is 51 years.

AGE STRUCTURE OF POPULATION, 1967
(per cent of total)

Age group	New Hebrideans		Others		Total population	
	Males	Females	Males	Females	Males	Females
Under 15 yrs.	45.2	46.6	38.3	46.5	44.7	46.6
15-29 yrs . .	25.4	27.1	22.9	24.3	25.2	26.9
30-44 yrs . .	14.9	15.1	24.1	17.6	15.6	15.3
45-59 yrs . .	9.2	7.6	11.2	9.0	9.3	7.6
60 yrs and over	5.3	3.6	3.5	2.6	5.2	3.6

The distribution of population is very uneven; some islands are practically uninhabited (there are 0.5 persons per km² on Erromango) while others are greatly overcrowded. Population density on Tongoa is 60 persons per km² and some of the coastal zones of Aoba and other islands have at least double that density. At least 85 per cent of the population may be classed as rural, dwelling in villages close to the sea.

Migrations to work in the towns of Port Vila and Santo and on the larger plantations are substantial but unrecorded. Over 80 per cent of wage earners under 30 yrs originate and live in rural areas. In recent years there has been a substantial emigration of workers to the nickel mines of New Caledonia.

The land tenure system was established in 1906 by Franco-British agreement.

In the early years of European colonization large areas, frequently located on the coral platforms of the coastal regions, were bought from tribal chiefs by individual Europeans or by private companies. The most important company was the Société Française des Nouvelles Hébrides (SFNH), which eventually ceded part of its properties to the French government.

European-owned land has to be registered with the Condominium office. Some native-owned land is reserved as inalienable (16,000 ha); it is subject to traditional usages and customs and is inherited through tribal lineage customs.

Owner-operation is the predominant method of land tenure

OWNERSHIP OF LAND, 1967

	Area (ha)
New Hebridean	758,950
British	51,182
Religious missions	(12,046)
Individual owners	(23,609)
French	377,475
Catholic missions	(4,183)
Individual owners	(104,685)
SFNH	(173,133)
Condominium	395
Total	1,188,000

in the islands. Sharecropping, though very rare, exists on a small amount of land (not more than 2,500 ha) on which, under the "extended family" customs of the islanders, there may be a half-share contract between the cultivator and the landowner.

LAND TENURE, 1965-67

	Area (ha)
Owner-operated enterprises:	
New Hebridean land:	
in field and garden crops	56,000
in coconut groves and plantations	55,000
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European land:	
in coconut plantations	25,000
in cattle stations	20,000
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	45,000

Much of the land owned by New Hebrideans is too rugged or too humid to be readily brought into cultivation or even cleared of trees and undergrowth. Almost 15,000 ha of New Hebridean land had been registered in 1967 and some 100,000 ha were in cultivation. Of the 428,657 ha of European land in 1967, 217,338 ha were registered and about 25,000 ha were in coconut plantations. Several private European plantations that had become more or less insolvent have been taken over by large companies and are now run by European or Tahitian managers; on some islands they have been broken into small New Hebridean holdings. About half the European plantations and cattle stations are operated by managers on behalf of companies.

LAND UTILIZATION, 1965-67 ⁽¹⁾

	Area (ha)
Arable land	56,000
Fruit trees, bushes and orchard land ⁽²⁾	83,300
Rough grazing land	25,000
Woods and forests	8,000
Non-agricultural land, and virgin forest	1,303,700
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Total	1,476,000

The land classed as arable is devoted essentially to subsistence crops and includes fallow land. About 0.7 ha per head of population is cultivated. The exact area is difficult to evaluate because of the character of the traditional peasant farming system. Crops are grown in plots, like gardens, in which banana trees are planted in association with the principal food plants — yams, taro and South Pacific cabbages. More recently introduced crops, such as various vegetables, sweet potatoes and manioc, are also widely grown. The crops are planted on burnt-over soil after the land is cleared of trees and other vegetation by fire, and the plots are shifted from time to time. The interval between fallow periods tends to become shorter — 5 years, or even 3 years — which may be inadequate for the recovery of soil fertility. No fertilizers are used in the cultivation of food crops.

The islands' cash crops are coconuts, coffee and cacao, the first being supremely important and yielding the chief agri-

⁽¹⁾ Estimates.

⁽²⁾ Includes coconut groves and plantations, about 80,000 ha.

cultural product, copra, which is processed from the coconut flesh by the islanders themselves. The bulk of cash crop production is exported.

Coconut groves on small peasant holdings and plantations on the larger New Hebridean and European holdings occupy by far the greatest area of crop land (about 80,000 ha), mostly located on the best soils of the littoral lowlands or on the coral platforms. European plantations have not been greatly extended since 1946 but the area under New Hebridean plantations is continuously increasing. While yields of copra on European plantations have been estimated as between 8 and 10 quintals per ha, New Hebridean plantations are generally poorly managed, the palms are planted too closely together and the holdings are infested with rats and other pests; they generally yield less than 5 quintals of copra per ha. In recent years the production of New Hebridean plantations and groves has accounted for over 60 per cent of total output. Because the traditional methods of processing copra produce an inferior quality, however, there are difficulties in competing in the international market for this product.

The area under cacao was estimated in 1963 to be about 3,000 ha and output has fluctuated during the 1960s. Coffee occupies only a limited area and output has declined.

EXPORTS OF CASH CROPS, 1955 TO 1965
(in tons)

Year	Copra	Cacao	Coffee
1955	24,032	781	455
1958	33,548	921	...
1959	35,067	857	...
1960	23,844	955	...
1961	32,362	617	...
1962	31,449	663	105
1963	35,617	811	217
1964	37,666	389	170
1965	28,725 ⁽¹⁾	515	135

The principal areas of cultivated land are located on the following islands: Malekula (11,000 ha), Espiritu Santo (7,000 ha), Aoba (7,000 ha), Efate (6,378 ha), Pentecost (5,000 ha), Ambrym (4,400 ha), Epi (3,000 ha), Tongoa (2,800 ha) and Paama (2,300 ha); Tanna may have several thousand hectares under cultivation.

The economy of the New Hebrides has for long been based on the monoculture of coconuts and therefore competed with copra-producing countries in southeast Asia which have easier transport and trading links. A fall in the price of copra has led many growers in recent years to diversify production and to turn to cattle rearing. The number of cattle on the islands has been increasing steadily while the number of pigs, the traditional livestock of the Pacific islands, has tended to grow only slowly.

Cattle rearing was formerly carried on chiefly as a subsidiary activity, the cattle being kept on the coconut groves, grazing amongst the palms and thereby keeping down the luxuriant growth of grass and weeds. It is now being developed in its own right and large cattle stations, modelled on Australian examples, have been opened on Espiritu Santo and Efate. These are run on extensive lines, some stations being about 2,000 ha in area. The total area of European stations in 1965 was estimated to be about 20-25,000 ha. No fodder crops are grown but the rich and abundant natural pastures provide

⁽¹⁾ Decline in production of copra owing to hurricane damage in the northern islands, and general drought conditions in the southern islands.

adequate rough grazing. Some are sown with green pannick and buffalo grass. They support 3 or 4 head of cattle per ha. The real area of rough grazing used on the islands therefore comprises both the cattle stations and many of the coconut plantations.

New Hebrideans are beginning to follow the example of the large cattle stations and several villages now possess herds. In 1965 there were some 68,000 head of cattle altogether, of which 30,000 on Espiritu Santo and 18,000 on Efate were generally reared on a commercial basis. Cattle raising is now the second most important economic activity in the New Hebrides and supplies abattoirs and meat packing factories in Santo and Port Vila. Some sheep can be raised on Efate, where conditions are cooler.

Farming economies are not the same throughout the islands. About 10 per cent of the population belong to the inland villages of a few islands which are generally outside the money economy. They live at self-sufficient subsistence level, on the products of their garden plots and raising some pigs and poultry. The great majority of villages are scattered round the coasts, however, and their inhabitants are integrated, in various degrees, in the commercial economy. These are the chief producers of copra. Some 10 per cent of this sector have broken away completely from the traditional farming system and have become commercial plantation farmers or cattle breeders.

The total value of exports was 9.12 million U.S. dollars in 1965, of which exports of manganese ores accounted for 26 per cent.

EXPORTS OF AGRICULTURAL PRODUCTS, 1964 AND 1965

	1964		1965	
	tons	% of total export value	tons	% of total export value
Meat, frozen and canned	48	0.5	200	1.9
Fish, frozen	2,873	9.5	3,366	12.0
Copra	37,666	64.2	28,725	57.8
Cacao	384	1.6	515	1.4
Coffee	170	1.1	135	0.7
Sandalwood	67	0.4	58	0.4

After deficits from 1960 to 1962 the balance of trade was favourable for the next five years, maintaining a fairly steady level. According to the United Nations Yearbook of International Trade Statistics 1967, France and Japan are the chief recipients of New Hebrides exports, taking 53 per cent (which included about 60 per cent of all the copra exported) and 20 per cent of total value of exports respectively in 1965. The United States of America, Australia, Fiji and some South American countries are the other major markets for exports. Australia supplies the bulk of imports (46 per cent in 1965).

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