PACIFIC ISLANDS, TRUST TERRITORY OF

by

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the production of beef cattle and sheep as subsidiary exports. Timber is processed commercially on the larger Melanesian islands.

New Caledonia is rich in nickel, chrome, and other metallic ores, New Guinea and Fiji have profited from gold discoveries, and oil dominates West Irian's export production. Reserves of natural phosphates on Nauru and Ocean Island are expected to last for 30 years before they become depleted. Marine resources, although almost unlimited, require skilled labour and capital facilities for commercial exploitation. Deep-sea fishing for tuna and bonito is practiced, mostly by Japanese crews. Canneries in Hawaii, American Samoa, Fiji, and the Carolines are in operation. Local island cooperatives have also successfully marketed fresh fish.

About half of the Pacific Islands' exports are sent to Australia and New Zealand, Japan, Canada, and the United States; most of the rest go to northwestern Europe. Traders based in Australia control most of the import commerce south of the Equator. Government grants and training programs, many promoted by the South Pacific Commission, have developed native experience in labour, marketing, and management. To some extent this has discouraged foreign, profit-seeking enterprise, although outside capital is needed. In the 1970s tourism opened up new income opportunities for islanders. Tahiti, American Samoa, and Fiji followed Hawaii's earlier lead in developing the tourist industry. Other territories are also attracting visitors by improving transport and accommodation, while at the same time endeavouring to safeguard local custom against excessive commercialization.

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(L.E.M.)

Pacific Islands, Trust Territory of the

The Trust Territory of the Pacific Islands, a United Nations strategic-area trusteeship administered by the United States, consists of more than 2,000 islands, 96 of them populated, scattered over about 3,000,000 square miles (7,770,000 square kilometres) of the tropical western Pacific Ocean. The area lies north of the Equator between latitudes 1° and 22° N and longitudes 130° and 172° E. The total land area of the islands is about 700 square miles. The population of the group numbered 107,054 in 1971.

The territory generally covers the ethnic area known as Micronesia ("tiny islands") and is composed of three major island groups—the Marianas, Carolines, and Marshalls. The Micronesian Gilbert Islands to the southeast and Guam in the Marianas are politically excluded, while the islands of Kapingamarangi and Nukuoro, which are Polynesian instead of Micronesian in language and culture, are included. The political definition of the area was inherited from the Japanese, who governed it before World War II. (For articles on the region, see PACIFIC ISLANDS; PACIFIC OCEAN; and BIKINI. For historical aspects, see OCEANIA, HISTORY OF.)

The natural environment. Three basic types of islands exist in the trust territory—low coral islands, or atolls; high islands of volcanic origin; and islands that represent a combination of coral limestone and volcanic uplift. The Marshalls and the eastern Carolines are generally of the coral variety, with elevations seldom exceeding 30 feet above sea level. In the western Carolines and Marianas are volcanic "high" islands, built upon a range of submarine mountains. The largest, Babelthuap in the Palau group, has 143 square miles of land area. Ponape, the second largest, has approximately 129, while Saipan, site of the administrative capital, has 47. The highest elevation, 3,166 feet, occurs on Agrihan, in the northern Marianas.

Three types of islands

Coral platforms built on submerged peaks form an atoll's base. On these platforms, shell, broken coral, and floating debris build up narrow islands with the open ocean on one side and the more or less sheltered waters of a lagoon on the inside. Around this lagoon, which may cover more than a hundred square miles, as in Ulithi, many small islands dot the reef, with few or no deep passages connecting open sea and lagoon.

Climate, soil, and vegetation. The climate of the entire area is generally warm and humid. Daily or seasonal changes in temperature are slight, ranging usually from about 75° to 85° F (24° to 29° C). Rainfall on larger volcanic islands may reach 300 to 400 inches a year, but on atolls in the northern Marshalls annual rainfall may be as low as 20 to 30 inches, with prolonged periods of drought.

The soil of coral islands is sandy and lacking in important minerals, so that only limited and specialized vegetation can grow. Wind and sea erosion are a constant threat to atoll soils, and major typhoons have been known to completely wash over even sizable islands of this type, extinguishing both plant and human life. Smaller islets have sometimes been simply washed away.

Along the coral-sand beaches, coconut palms are the most visible and important form of vegetation, although pandanus (the screw pine) is also found. On less favoured islands these trees, together with a few ground creepers, may be the only land vegetation. On larger islands breadfruit and even bananas grow, as well as taro, a starchy root with a buried stem; the marsh taro (*Cyrtosperma chamissonis*), an edible member of the arum family, is grown in swampy areas or man-made compost pits.

High islands frequently have steep, heavily forested areas in the interior, as in Ponape or Babelthuap. Heavy rainfall leaches minerals from the volcanic soil and causes severe erosion when the vegetative cover is destroyed. Excessive timber removal and slash-and-burn farming have left badly eroded areas. Soils are generally shallow and low in fertility.

In the northern Marianas, where rainfall is less abundant, there occur level or gently sloping areas suitable for grazing. Areas resembling savanna (grassy parklands) also appear, intermingled with dense forests where local differences in soil or rainfall occur. Comparatively little use is made of the interiors of the steep volcanic islands, and settlement and economic activity cling close to the shore. Along the ocean fringe, steep, rocky cliffs, sandy beaches, or swampy areas overgrown with mangrove thickets may occur. Here, with ample rainfall, coconut, breadfruit, and pandanus thrive, together with a wider variety of native and introduced food crops than is found on the atolls.

Animal life. The original animal life on the islands was usually extremely limited, probably being confined to one or two species of bats. Pigs, small dogs, and a species of rat were introduced before the European era. Begin-

ning with the Spaniards in the 17th century, other varieties of rats, some fowl, and the water buffalo were introduced, followed by horses, cattle, goats, and cats. Deer were introduced into the Marianas by the Germans in the early 20th century and were later carried to Palau and Ponape. The larger animals were able to thrive only on the larger, high islands.

Marine and shore birds are more common throughout the trust territory than land birds. There are local variations in prevailing species. The albatross, frigate bird, shearwater, tern, and other birds of passage are widespread. Parrots, cockatoos, owls, white-eyes, finches, and other land birds are limited chiefly to the larger volcanic islands in the west. Two species of crocodile and two species of poisonous sea snakes are found in the Palau group. Other harmless snakes and lizards are fairly widespread. More than 7,000 species of insects are known.

Life in the lagoons

In contrast to the relatively few kinds of land animals, life on the shores and in the lagoons is varied and rich. Many types of reef fish, shellfish, and edible algae are found in the shallow waters of lagoons or fringing reefs. Deeper waters between islands or atoll groups offer tuna, barracuda, sharks, and other large species.

The landscape under human settlement. Variations in life-style make it impossible to speak of a typical Micronesian village or pattern of life. The simple, scattered, generally rectangular shelters of remote atolls still house Marshallese and eastern and central Carolinians as they have for centuries. Yet each area has distinctive patterns of design. Roofs and walls of traditional structures are thatched or plaited with pandanus, coconut-palm, or nipa-palm leaves, with supporting timbers of whatever wood is available. Yet, even in remote villages, modern additions in the form of boards, corrugated sheet metal, or concrete blocks have begun to come into use. Houses are built on the ground or occasionally are elevated on stone platforms, pillars, or wooden posts. The elevated houses have bamboo or board floors.

Individual dwellings are scattered among the trees near the shores of the islands, joined together by footpaths made of sand or smooth stones. When the buildings themselves are not unsightly shacks of rusting, salvaged materials, the villages thus loosely clustered make an attractive sight. In high islands where extensive mangrove swamps occur along the shore, as in Ponape, villages are usually farther back from the water's edge, with access to the sea being gained by means of water passages at the mouths of streams. In the small communities most influenced by outside contact and commerce, more tightly clustered groups of buildings along a more definitely marked main street or road have appeared.

In most villages, often in a central location, is a larger structure, which is the dwelling of the chief, a communal meetinghouse, or men's clubhouse. Schoolhouses, clinics, administrative housing, or community centres of modern construction may constitute the largest, if not the most beautiful, buildings. Substantial wooden or concrete buildings of Japanese construction may still be found, particularly in the Marianas and western Carolines. Concrete construction has become increasingly common during the recent period of American rule, particularly where exposure to devastating typhoons has made lighter construction appear impractical.

Major settlements

The principal towns of the trust territory are the district centres, which form the main focusses of foreign influence. Some of them, notably Koror in the Palau group and Truk in the Carolines, were much larger communities in the Japanese period and still have an air of decline, despite recent building.

The district-centre towns are usually built of wood or of corrugated iron. Power and water supplies are found only in the district centres and, even there, are often unreliable. Capitol Hill on Saipan, the administrative centre of the territory, is exceptionally efficient in this respect. Among the largest of the district centres are Majuro, an unplanned and struggling town on a long coral island in the Marshalls, and Koror, on a green volcanic island in the western Carolines. Their populations each numbered about 6,000 in 1970. Residents have been attracted to

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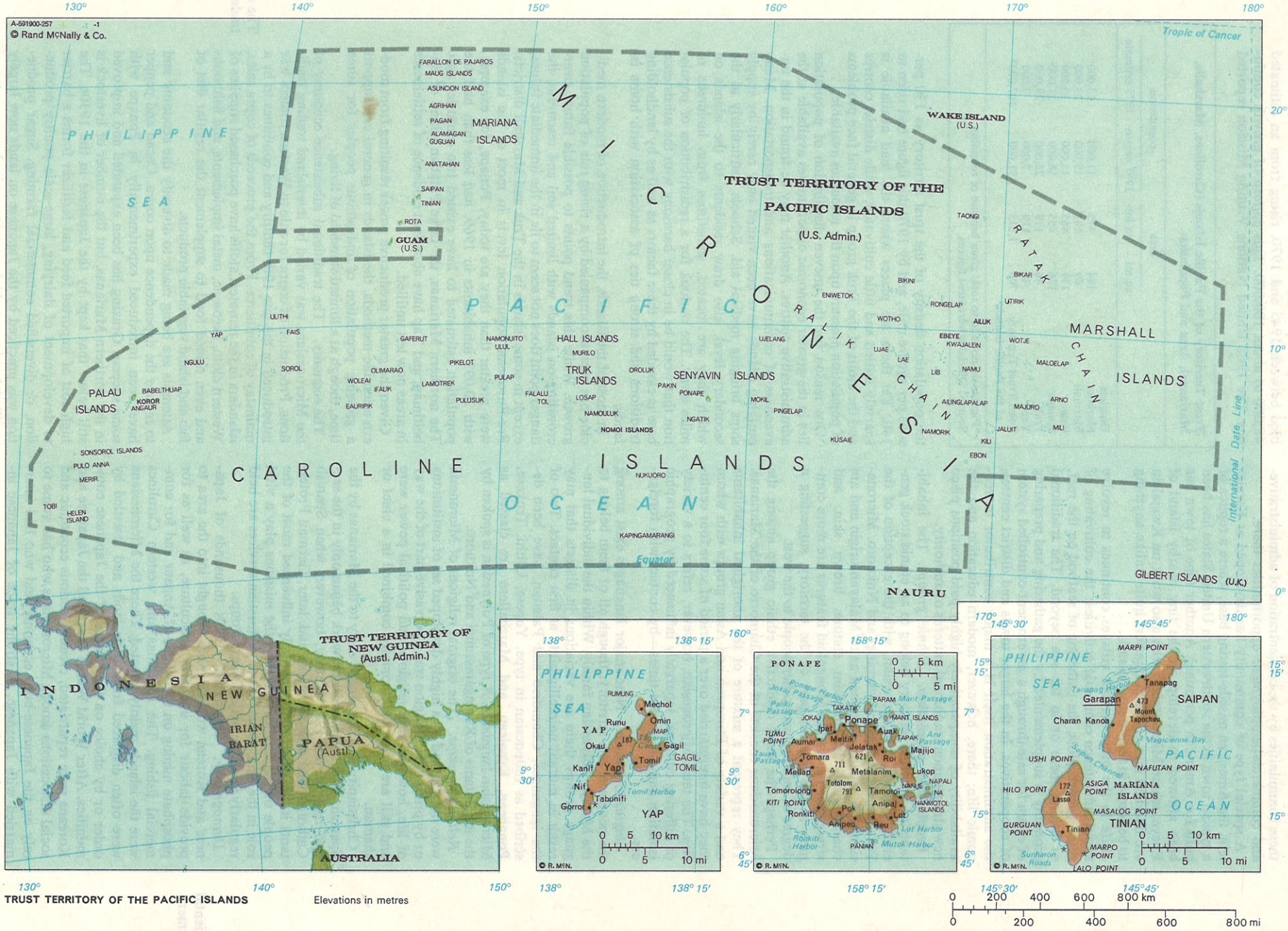

TRUST TERRITORY OF THE PACIFIC ISLANDS

Elevations in metres

these communities by the concentration of administrative- and commercial-employment opportunities there.

A special type of community has developed at Kwajalein, the American missile-testing base, where a replica of a typical town in the southwestern United States has been built for American personnel. Another type of town has been allowed to develop on the tiny nearby island of Ebeye, where Micronesians who also work on Kwajalein are huddled into crowded quarters quite unlike anything to be found in their native islands.

Life in the more remote villages continues to revolve about subsistence economic activities: the cultivating of small garden plots, the gathering of seafood on the reef, or fishing there or in the sea beyond. The traditional economy is supplemented by the gathering and preparing of copra for sale through a government-controlled system of cooperatives. In the larger towns and district centres, the administration itself is a major contributor to economic life; there, however, modern education and the availability of comparatively highly paid positions place new strains upon traditional patterns of authority.

People and population. *Ethnic groups.* The inhabitants of the trust territory belong to an ethnic stock generally known as Micronesian, with the exception of the Polynesians of Kapingamarangi and Nukuoro. Micronesians are usually described as of Malayan origin and are characterized by medium stature, brown skin, and straight or wavy hair. Mongoloid features are more common in the western part of the territory, suggesting a degree of mixture with other people to the west.

Perhaps the most distinctive ethnic group among the Micronesians consists of the Chamorro of the Marianas. They represent a mixture of the aboriginal inhabitants and a variety of European and Asian groups with whom they have intermarried over a period of some four centuries. The term Micronesian, however, refers to a variety of differing cultures, separately influenced by geographic isolation and—in recent times—by contact with foreigners.

Linguistic groups. Nine major languages exist among the people of the territory, though all of them belong to the Malayo-Polynesian family. Within the individual language groups there are variations in dialects that may result in mutual unintelligibility at first contact. Two of the languages, Chamorro and Palauan, have been described as Indonesian in type. Yapese, Ulithi, Trukese, Ponapean, Kusaiean, and Marshallese are classed as Micronesian languages. A type of Polynesian is spoken by the inhabitants of Kapingamarangi and Nukuoro.

Religious groups. The original religions of Micronesia were not marked by a highly developed set of institutions or by priestcraft. Religion was a pervasive part of the way of life, however, and religious and political power were and still are often ceremonially combined in a chief or shaman.

Christianity was introduced early to the Marianas by the Spanish. Widespread mission work began only in the second half of the 19th century, however, when Spanish Catholics vied with American and, later, German Protestants in an effort that eventually influenced most of the people of the territory. Today, the missions play a vital role in the educational system. Christian services are held regularly in all the major island groups.

Oriental farmers

Demography. During the 1920s thousands of Japanese and Korean workers were brought into the area to provide labour for intensive agriculture, as well as for phosphate mining on the island of Angaur and for commercial fishing. The Marianas and western Carolines were the islands mainly affected. There the Micronesians were often displaced from their lands and resettled by order or by choice on the fringes of the Japanese communities. After World War II nearly all the Japanese and Koreans were repatriated, creating serious economic and social dislocations among Micronesians who had come to rely on the Japanese-built economy and who had intermarried with Japanese. A strong trace of Japanese influence on life patterns remains.

Though the total population was drastically reduced by repatriation, the number of Micronesians more than doubled between 1945 and 1970, rising from an estimated 48,000 to about 100,000. This pattern of growth continues. The 1967 United Nations Visiting Mission reported the population density of the trust territory as 130 persons per square mile, and by 1970 this figure had risen to 140. Yet there are places where the land available is sparsely settled and little cultivated, while district centres and the atolls of the Truk group in general face problems of population pressure upon the resources available.

Trust Territory of the Pacific Islands (Carolines, Marshalls, Marianas), Area and Population

	area		population	
	sq mi	sq km	1967 census	1971 estimate
Districts				
Mariana	184	475	11,000	13,000
Marshall	69	181	19,000	23,000
Palau	179	465	11,000	13,000
Ponape	176	455	18,000	21,000
Truk	46	118	25,000	29,000
Yap	46	119	7,000	7,000
Total Trust Territory of the Pacific Islands	700	1,813	91,000	107,000*

*Figures do not add to total given because of rounding.
Source: Official government figures.

One reason for the uneven distribution of population lies in the greater economic opportunities available at the administrative centres. Another may be found in the unevenness of communications and transportation. Many outlying islands have been visited only rarely by supply ships bringing medical aid. Schools, particularly at the secondary level, also draw residents to the islands on which they are located, sometimes from hundreds of miles away. The outlook for a redistribution of population that would be in closer harmony with the subsistence base is clouded by these factors as well as by landholding traditions and strong ties of association with home islands.

In most of the islands, the introduction of modern medicine has been accompanied by a rising rate of population growth. While this trend points to possible future overcrowding on islands with limited soil and resources, the danger point does not seem to lie in the immediate future, except in some islands in the Truk and Marshall districts. Pre-European population levels in most of the islands were greater than they are today. Ponape, for example, with 20,093 inhabitants in 1969, had less than half the population estimated to have existed two centuries ago. The northern Marianas, the large Palauan island of Babelthuap, and Yap have abundant evidence of settlements in areas now left untilled.

Given the greater productive power resulting from modern scientific methods, the islands in general can support a growing population of indigenous peoples for some time, though at a limited standard of living.

The economy. The traditional subsistence economy of the Micronesians was varied by interisland trading traditions. Production of copra for sale to Western traders was introduced in the late 19th century and continues to be a mainstay of commerce. From the proceeds of copra sales, islanders in the remotest atolls have purchased supplies of Western cloth, kerosene, metal implements, and fishhooks and even tinned food to supplement the regular diet of fish and island vegetable products.

The copra trade

Attempts are being made to diversify the economy and to reduce the dependence upon copra. Cacao and pepper have been introduced experimentally in Ponape with some success. Grazing has been expanded and improved in the northern Marianas, but the number of livestock is still below that kept by the Japanese in the 1930s. The high cost of imported feed and fertilizer forms a barrier to development of dairying, large-scale poultry production, or diversified commercial farming. Sugar production was practiced by the Japanese on lands now largely untilled, but imported labour was required.

If good agricultural soil and minerals are scarce in the trust territory, there are both abundance and variety of

marine resources. Fishing is still chiefly a subsistence activity for the Micronesians, and they lack the technological equipment for a modern commercial fishing industry. Young men are being trained in Japanese and Hawaiian methods, and boats are being built; but fuel will still have to be imported for modern vessels and for machinery to be used in canning or refrigerating plants. Japanese competition and American tariff policies offer additional obstacles in this field.

Some income has been secured from sales of Micronesian handicrafts. Here again, potential expansion is hampered by the amount of time and hand labour required. Another supplement to the economy has been the salvaging of scrap metal left from World War II activities, carried on chiefly by Japanese teams under contract; by the 1970s, however, the richest sources had become exhausted.

One of the most promising economic possibilities for Micronesia appears to lie in tourism. The beauty of the islands, the year-round mildness of the climate, and the exotic nature of island cultures all offer attractions to visitors. Improved transportation and accommodations are being developed in parts of the territory. In parts of the Marshalls and in conservative Yap, however, resistance to the growth of tourism and its inevitable intrusion into traditional ways of life appears likely to limit the industry.

By far the largest economic enterprise in the trust territory is the administration itself. Salaries paid to Micronesians and Americans in the employ of the government compose a major part of the money economy.

Taxation

Levels of taxation are generally low, being hampered by the difficulty of levying property taxes where land titles are still so uncertain. Absence of adequate tax revenues is viewed by administration officials as an obstacle to early self-government. For the immediate future it appears clear that economic support from outside will be needed to maintain the economy. Some young Micronesian leaders, however, feel that most of the money now used to support the administration goes to a bureaucracy of American and Micronesians that would not be needed under self-government. They foresee a much simpler political structure that Micronesians could support with only minimal foreign aid.

Transportation. The vast open ocean spaces between islands make transportation and communication a major problem. Canoes are inadequate to meet the freight needs of today, and the Micronesians generally lack the capital to purchase modern motor ships or the skills required to operate them. Fuel, also, must be imported.

The administration operates motor ships in each district to provide interisland freight and passenger service. Two additional ships are operated on a territory-wide basis to meet educational, medical, and community needs. Private local concerns handle lading and ship-agency work at district ports. On outlying islands the whole population may turn out to help bring imports in over the reef or through difficult waters.

In 1968, Micronesian Interocean Line, Inc., began operating between the trust territory and ports in the United States and the Far East, on a ten-year contract with the government. It is hoped that Micronesian labour and capital will play an increasingly important role in this enterprise and in intraterritory shipping.

Air Micronesia, a combination of the United Micronesia Development Association (which owns a 40 percent interest) and two American airlines, began regular air-transport service in 1968. Airfields at the six district centres can handle jet aircraft, and plans have been made to build hotels nearby for American and Japanese tourists. Charter airlines carry some local freight and passenger traffic among Guam, Saipan, and major centres in the Carolines.

Land transportation throughout the territory is limited in extent and is hampered by poor roads outside the main population centres. Heavy rainfall and sea erosion make road maintenance difficult and costly, and it is seldom possible to maintain roads circling larger islands to connect their shoreline settlements.

Bus services exist in the largest towns, extending to a few outlying communities. By the 1970s, other vehicles, including trucks and motor scooters, numbered about 7,000. Radiotelephone and teletype stations connect the district centres, and some form of radio contact is maintained with the outlying populated islands. A telephone link from Saipan to Guam and thence to the outside world was completed in 1970. Ship-to-shore communications and navigational aids are maintained at the district centres.

Administration and social conditions. In accordance with the provisions of the 1947 United Nations Trusteeship Agreement, the legal basis for government within the area was laid down in the Code of the Trust Territory, enacted December 22, 1952. Later amended, the code defined citizenship, provided a formal law code, and created six administrative districts, centred at Saipan (northern Marianas), Moen (Truk), Colonia (Yap), Koror (western Carolines), Kolonia (on Ponape in the eastern Carolines), and Majuro (Marshalls). The Code recognizes local customary law, but in many cases, especially on land tenure, formal codification of customary law has not been completed. The administrative officials of the trust territory are appointed, not elected. A high commissioner is appointed by the president of the United States, and he, in turn, appoints the six district administrators, their deputies, and the heads of administrative departments at Saipan, under authority from the secretary of the interior. The judicial system consists of a High Court, six district courts, and community courts throughout the islands. Only the High Court justices, appointed by the secretary of the interior, are Americans. The law applied by the courts is a mixture of United States and Trust Territory codes, together with local customary law.

During the 1950s criticism of administration policies in the trust territory was expressed by Micronesians, in the Trusteeship Council of the United Nations, and within the United States. Specific complaints concerned inadequate budgets for education and health services, the slow pace of economic development, and an apparent absence of American plans for future self-government. Following this criticism, trust-territory budgets were markedly increased, particularly after 1960.

Early in the 1960s, an advisory Council of Micronesia was created as a step toward representation of the inhabitants of the trust territory, and in 1965 this body was succeeded by an elected Congress of Micronesia with legislative powers. These powers are subject to approval by the high commissioner or, on appeal, by the secretary of the interior of the United States. The 12 senators and 24 representatives of the Congress are elected in even-numbered years. The former serve four-year terms and the latter, two. There are two senators for each district, while the representatives are apportioned on the basis of population. Six district legislatures are also elected, each under its own charter. Agitation for increased self-government grew among Micronesian leaders and subsequently found support both in the United Nations and in the United States.

Medical care in the trust territory is entirely a public service. There are hospitals at all six district centres, three sub-district hospitals, and rural dispensaries. Doctors and nurses visit the remoter islands on field trip ships, and Peace Corps physicians and medical aides supplement their work. Cases requiring special treatment are still referred to Guam or Honolulu hospitals, though a larger, new hospital with modern equipment opened at Truk in 1971. Micronesians have been trained as nurses, technicians, and medical practitioners, but not yet as qualified physicians. Micronesian students are sent outside, mostly in Guam, Hawaii, and the mainland United States. By 1971 there were public high schools in all district centres and five additional ones on outer islands. At Ponape a community college offers training, primarily to teachers.

Prospects for the future. In 1968 Pres. Lyndon B. Johnson suggested 1972 as a possible date for a plebiscite on the future political status of the trust territory. In 1970 the Congress of Micronesia sent a committee to the United States and to various self-governing island groups to

Movements toward self-government

examine other systems. A resulting report led the Congress to vote in favour of self-government in free association with the United States. When the U.S. Department of the Interior offered the Micronesians a commonwealth status under United States supervision, members of their Congress voted to reject the offer and to seek either "free association" status or complete independence from the United States. The question remains unsettled, subject to further negotiations.

In contemplating the future, U.S. administrators see in the existence of different traditional systems an obstacle to unified government. Micronesian leaders, on the other hand, tend to minimize this difficulty and to place a higher value on maintenance of local custom than on foreign tutelary dominance. The problem of balancing the need for unity in administration against cultural diversity is also marked in the field of language. Micronesian sentiment appears divided between the need for a modern common language of administration on the one hand and pride in local dialects on the other. Leaders with modern education appear more attuned to change than are tradition-oriented Micronesians, and they are also more determined to secure self-government on a unified basis.

An independent Micronesia would require economic support from abroad until a viable economy combining the traditional and modern sectors could be developed. Military protection from without also appears likely to be needed, for the trust territory still occupies an area that is of potential strategic importance in the relations between major powers. If neutralization through international agreement cannot be arranged, then some form of major-power protectorate appears certain.

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(D.D.J.)

Pacific Ocean

Of the three oceans that extend northward from the Antarctic continent, the Pacific, occupying about a third of the surface of the terrestrial globe, is by far the largest. Its area, excluding adjacent seas, encompasses about 64,000,000 square miles (166,000,000 square kilometres). It has double the area and more than double the water volume of the Atlantic—the next largest division of the hydrosphere. Its area exceeds that of the whole land surface of the globe, Antarctica included, with Africa counted twice. The Pacific stretches from the shores of Antarctica to the Bering Strait through 135° of latitude, or for 8,350 nautical miles (9,600 miles or 15,500 kilometres). Its greatest longitudinal extent measures 11,500 nautical miles along the parallel of 5° N, between the coasts of Colombia in South America and the Malay Peninsula in Asia. The mean depth of the Pacific (excluding adjacent seas) is 14,050 feet (4,280 metres). Its greatest known depth is 36,198 feet or 11,033 metres (in the Mariana Trench).

Extent of the Pacific

The Pacific and Arctic systems mingle their waters in the Northern Hemisphere at the shallow Bering Strait—whose width is a mere 55 nautical miles—and in the Southern Hemisphere the Pacific and Atlantic mix in the relatively narrow Drake Passage between Tierra del Fuego in South America and Graham Land in Antarctica. The separation between the Pacific and Indian oceans is less distinct; in this article, it is considered to lie along the line of islands extending eastward from Sumatra, through Java to Timor, thence across the Timor Sea to Cape Londonderry in Australia. To the south of Australia the boundary extends across the Bass Strait and thence from Tasmania to Antarctica.

Because of the pattern of major mountain systems of the globe, a relatively small proportion (one-seventh) of the total continental drainage enters the Pacific—*i.e.*, a total drainage area of not more than about three times that of Australia. Of the rivers that drain into the Pacific, those of China and Southeast Asia are of the greatest importance; the basins of these rivers support more than one-quarter of the world's population.

The eastern boundary of the Pacific is associated with the American Cordilleran mountain system, which stretches from Alaska in the north to Tierra del Fuego in the south. Except for its extreme northern and southern sections, which are characterized by fjords (narrow arms of the sea bordered by steep cliffs) and their numerous off-lying islands, and except for the deeply indented Gulf of California, the coastal boundary is relatively regular and the continental shelf narrow. The western, or Asiatic, coastal boundary, in contrast, is irregular. Although the mountain systems there lie roughly parallel to the coast, as they do on the eastern Pacific coastlands, the western Pacific is noted for its many peripheral seas. From north to south they include the Bering Sea, Sea of Okhotsk, the Sea of Japan, the Yellow Sea, the East China Sea, and the South China Sea. Their eastern boundaries are formed by southward-jutting peninsulas or by island arcs or both. It is of oceanographic significance that the great rivers of eastern Asia—including the Amur, the Yellow River, the Yangtze, the Hsi Chiang, and the Mekong—enter the Pacific indirectly by way of peripheral seas. (For associated physical features, see BERING SEA AND STRAIT; BIKINI; CHINA SEA; DRAKE PASSAGE; EASTER ISLAND; GALAPAGOS ISLANDS; JAPAN, SEA OF; PACIFIC ISLANDS; and YELLOW SEA; for historical background see OCEANIA, HISTORY OF; see also CONTINENTAL DRIFT; CONTINENTAL SHELF AND SLOPE; OCEAN BASINS; OCEAN CURRENTS; OCEANIC RIDGES; OCEANS AND SEAS; and OCEANS, DEVELOPMENT OF.)

THE NATURAL ENVIRONMENT

Relief. The Pacific Basin may conveniently be divided into three major physiographic regions, the eastern, western, and central Pacific regions.

Eastern region. The eastern region, which extends southward from Alaska to Tierra del Fuego, is relatively narrow and is associated with the American Cordilleran system of almost unbroken mountain chains, the coastal ranges of which rise steeply from the western American shores. The continental shelf, which runs parallel to it, is steep and comparatively narrow. Significant oceanic trenches in this region are the Acapulco and Guatemala trenches in the North Pacific and the Peru–Chile Trench in the South Pacific.

Oceanic trenches

Western region. The second physiographic province is the western region, the seaward boundary of which is marked by a broken line of oceanic trenches, extending from the Aleutian Trench in the north through the Kuril and Japan trenches and southward to the Tonga and Kermadec trenches, terminating close to the southeast of North Island, New Zealand. The western region has a structure more complex than that of the eastern region. Characteristically associated with the ocean trenches of the western region are festoons either of peninsulas or islands or both. The islands, which include those of Japan as well as numerous small islands, represent the upper parts of mountain systems that rise abruptly from the deep ocean floor. The island clusters of the western Pacific form the boundaries of the several wide and deep continental seas of the region.

Central Pacific region. The third province is the central Pacific region lying between the boundaries of the eastern and western regions. The largest and the most geologically stable of the structural provinces of the earth's crust, it is characterized by expansive areas of low