Surveys made in selected areas indicate a wide variety of soils in the Mekong Delta. Soils range from light, sandy loam to heavy clay which is impossible to plow when dry. Most of it is slightly acid, generally lacking in phosphorous and low in essential organic material. Because of the manner in which the Mekong flows into the Tonle Sap during the flood period, only a small amount of silt is deposited in the delta, and the best soils are found in the southwestern section. They are of more recent origin and have a high degree of natural fertility. In the upper reaches of the delta, soils tend to contain active alumina in toxic quantities. The condition is said to be most prevalent in the plains northwest of Saigon and in the Saigon area itself. These soils, with proper leaching, are suitable for growing rice which has a shallow root system. Subsoil water tends to be salty, particularly during the dry season. Although the use of chemical fertilizer was introduced by the French, few farmers have any understanding of its proper application in relation to the various soil types.

Cultivable land in the coastal region of the Central Lowlands is confined to the small deltas of the short rivers flowing out of the eastern slopes of the Annam mountains. Because of the position of these mountains in relation to the prevailing monsoon winds, there is considerable variation in climate and rainfall from Mui Dinh (formerly Cap Padaran or Padaran Cape) to the Hue plains bordering the 17th parallel (see ch. 3, Geography and Population). The total cultivable area does not exceed 1 million acres, most of which is used for wet rice cultivation. The clustered villages of these small deltas contrast with the elongated settlements of the Mekong. Because of the scarcity of good land, most fields are double cropped. The most fertile land is located north of Mui Dieu (formerly Cap Varella or Varella Cape). South of the cape the climate is dry, and all crops must be irrigated. The soil is generally sandy and of low fertility. North of Mui Dieu fertile loams are found in the deltas, but except in the limited areas of recent alluvial deposit, the soil is generally poor. The best soil is found in the Binh Dinh region and in Phu Yen Province where a modern irrigation system, built under the French colonial administration, is in operation.

The Central Highlands rise to the steep, densely forested area of the Chaîne Annamitique bordering the narrow eastern coast. The inland plateau, ranging in altitude from 2 thousand to above 3 thousand feet, slopes gently westward toward the drainage basin of the Mekong (see ch. 3, Geography and Population). The partially laterized red soils in this plateau area are of volcanic origin. The western and southern slopes of the Central Highlands have large areas of uncultivated fertile land, estimated to amount to as much as 5 million acres. The area is sparsely inhabited by monta-
gnards engaged in shifting agriculture. Much of this land is in secondary forest or grassland.

Land Tenure

In 1954, at the end of the Indochina War, the countryside was devastated. Nearly 2.5 million acres of the most valuable rice land had been abandoned and was overgrown with brush and weeds. Irrigation and drainage facilities had fallen into disuse; canals and indispensable waterways were silted or overgrown and needed redredging.

In the Mekong Delta a few people owned most of the land. The French colonial administration, in developing the area after the turn of the century, sold or gave large tracts of virgin land to favored individuals—French and Vietnamese. French companies acquired extensive tracts of rice land. For example, one of them, the Domaine Agricole de l'Ouest, accumulated some 50,000 acres. About 2.5 percent of the landowners held roughly half of the cultivated land, and more than 80 percent of the land was cultivated by peasants owning no land at all. Most of the large landholdings were divided into small tenanted plots of 5 to 12 acres.

In the longer settled coastal plains of the Central Lowlands landholdings were small. In parts of this area three-fourths of the farmers owned their land, with holdings averaging from 2 to 5 acres. In the whole central area, not more than 50 individuals owned as much as 125 acres.

Communal or village land ownership has traditionally been important in northern and central Vietnam. This pattern was abolished in North Vietnam through the land redistribution program after 1954, but it persists in central Vietnam, and it can be found in the older areas of the Mekong Delta. In some districts of central Vietnam, 50 to 70 percent of the cultivated land may be communal; in others, this form of ownership is almost absent.

Inalienable village property, communal land is rented to members of the village on terms which vary from one village to another according to custom. Rents are paid directly to the village treasury, and in some villages it constitutes the main source of public revenue. There appears to be no firm government policy toward communal land; where it exists, it continues to be administered exclusively at the village level and the village elders, in theory at least, assign it to landless families on the basis of need. The underlying principle that no farm family should be without land has been frequently cited by government spokesmen in connection with the land-reform programs, although there has been no suggestion that new communal lands be created.

The sparsely populated Central Highlands, an area of roughly
17,000 square miles, was considered to be almost exclusively in the private domain of the royal family before 1955. After World War I the area was not extensively exploited, but some rubber, coffee and tea plantations were established by the French and a few wealthy Vietnamese. These plantations caused unrest among the montagnards who resented the invasion of their ancestral lands even though they themselves were left largely undisturbed. The montagnards belonged to different ethnic groups and had various systems of land tenure. In some groups land was the property of an extended kingroup; in others it belonged to the small family (see ch. 6, Social Structure). After independence the Central Highlands were declared to be in the public domain. The rubber plantations, reportedly covering some 250,000 acres, and a few coffee and tea plantations continued to be largely French-owned.

Large holdings and tenant farming predominated in the Mekong Delta. Although conditions of tenancy were sometimes recorded in written contracts, they were usually verbal and were renewed from year to year. Before 1954 there were no regulations governing farm leases, rents or loans. The tenant had little protection from the landlord who could dispossess him without cause. Rentals were high, frequently as much as 50 percent of the crop. The tenant had to provide his own housing, tools, livestock, seed and hire extra help for planting or harvesting. Often without sufficient rice for food or seed at planting time, the peasant borrowed from the landlord or a local moneylender to cover his immediate needs. He frequently paid double the amount at the end of the harvest, and by the time his obligations were met, his share of the crop might be less than a third of the total harvest.

In the Mekong Delta, where the worst abuses of tenancy and landlordism prevailed, the Viet Minh found ready support in the villages during the years of the Indochina War. Throughout this period the Viet Minh forces lived off the land. Where they controlled the countryside, they imposed tax burdens in grain as heavy as the rentals collected by the landlords. They did so, not only by their power to coerce, but also by convincing the peasants that they represented the cause of national liberation. Though the Viet Minh had no specific land program, the landless were led to believe that the landlord’s property would belong to them as soon as the French were defeated. Many landlords had fled and those who normally lived in Saigon did not dare to venture outside the city. Peasants were encouraged to take over abandoned land and payment of rent, as distinguished from taxes, virtually ceased. Quasi-military religious sects, such as the Hoa Hao and the Cao Dai, gained control over substantial areas of the Mekong Delta along the Cambodian border where, citing traditional concepts of
land usage, they also encouraged peasants to occupy abandoned
land without regard to legal titles.

Rent Reduction

After independence the first phase of rural reform was the
promulgation of a rent reduction and tenure security program.
The law limited rents to no more than 25 percent of current aver­
age gross yield and assured tenants of security of tenure for a
period of 3 to 5 years under a written contract. All landowners
were required to declare their uncultivated land and their inten­
tions respecting it. Those unable or unwilling to cultivate it were
directed to lease it to a farmer who would do so. Farmers who
brought back into use land which had fallen idle during the war
years were given a written guarantee of tenure for a period of 8
years, the first 3 with reduced rent and the remainder on the same
terms as established tenants. These new land ordinances had a
precedent in the precolonial tradition making land abandoned for
3 years subject to redistribution, reaching back to a fifteen­
century imperial decree which forbade landowners to leave land
fallow under threat of confiscation.

Spurred by the new measures, many owners brought their un­
used holdings back into production; others who failed to act found
their properties taken over by the government for refugee resettle­
ment. A dramatic example of refugee resettlement is the Cai
San project in the Mekong Delta. The Cai San area comprises
some 272,000 acres in the Mekong Delta between the southern­
most branch of the Mekong, the Song Hau Giang (formerly the
Fleuve Bassac or the Bassac River), and the Gulf of Siam. In
1956 the greater part of this land was an overgrown wilderness of
weeds and brush. Approximately 50,000 refugee families, each
assigned a 3-hectare plot (1 hectare equals 2.471 acres) at a nomi­
nal price, have reclaimed the land, cleared the canals and are
harvesting good rice crops. Altogether, more than 500,000 refu­
gees have been resettled on such projects.

In addition to refugee resettlement in the Mekong Delta, the
government has established a land-reclamation program in the
Central Highlands. Possibly as many as 100,000 people have been
moved from the crowded coastal deltas of the Central Lowlands
to the sparsely populated highlands. They have exchanged their
half-hectare tenant holdings in the lowlands for a gift of a plot of
3 to 5 hectares in the public domain of the highlands. By 1960,
78 new villages had been created. Under the same program,
approximately 25,000 montagnards, whose shifting agriculture
tended to isolate them from the national administration and to
make them vulnerable to Communist coercion and subversion, had
been resettled in permanent locations in the area.
Land Redistribution

President Ngo has repeatedly stated his view that widespread individual ownership of land is essential to the economic and political stability of the countryside. A decree dealing with the redistribution of ricelands was issued in October 1956. It provided that no one might own more than 100 hectares (247 acres), plus an additional 15 hectares (37 acres) of riceland entailed for the expenses of the family ancestral cult. This cult land could not be sold. Land in excess of 100 hectares was to be purchased by the government for resale in plots equivalent to 5 to 12 acres in size, preferably to the tenant farmers already working it. The purchaser could pay for the land in six annual installments, each approximately equal to a year's rent. The government was to pay the landlord 10 percent down in cash and the balance of the purchase price in nontransferrable government bonds bearing 3 percent interest and maturing over a period of 12 years. The law does not apply to village communal land.

The land redistribution program was slow to start. Surveys had to be made, and surveying personnel and equipment were scarce, as were personnel to administer the program. With United States aid these difficulties were gradually overcome, and by mid-1960 well over 1 million acres had been distributed to more than 124,000 individuals, mostly former tenants. In addition, a total of approximately 1.5 million acres, belonging to 2,500 owners (of whom 433 were French citizens), was subject to transfer. Nearly all of this land was in the Mekong Delta south of Saigon. The average price per hectare paid by the government for cultivated land was 7,000 piasters; that for idle land was about 1,000 piasters.

To enable the Republic of Vietnam to pay for the approximately 650,000 acres of riceland acquired from French citizens, the Government of France granted Vietnam 1,490 million francs, plus an additional 400 million francs for the purchase of agricultural equipment (at that time the franc was worth approximately US$0.0233).

The benefits of the land-reform program were minimized by the intensification of guerrilla warfare after 1959. Landlords gave up land to the government in areas so insecure that rents could not be collected. Tenants who had been farming such land free saw no reason why they should pay the government for it. In areas of greater security, the program, while eliminating the large landholdings of the past, did not do away with tenancy. Owners with acreages larger than they could farm themselves frequently rented part or all of their holdings, and many of them lived in the larger towns. Rents varied regionally according to the pressure on the land, but generally they appeared to have held
somewhere near the established limit. The mandatory rental contracts prevented arbitrary evictions and gave the farmer a somewhat greater sense of security than he had formerly had.

Any significant increase in productivity in the future will depend importantly on the manner in which farmers use the income available for other purposes after the payments for their land have been completed. Investment in improved agricultural techniques and equipment would improve output. Lack of educational facilities and specialists to reach the farmer through agricultural extension work, however, are likely to hinder progress for some time to come.

**Productive Activities**

**Farming**

More than 80 percent of the people in South Vietnam are engaged in agriculture. Farming is largely a family affair on small individually operated units. Farm size, climate, topography and conditions of soil and water, which vary regionally, largely determine the pattern of farm life (see ch. 3, Geography and Population).

About 90 percent of the cultivable area of the Mekong Delta is planted to rice. The only other agricultural product of importance is copra, which is grown in sandy areas along the coast near Truc Giang (formerly Ben Tre). Tobacco, corn, manioc and vegetables are grown, mostly for local consumption, on the river banks which are a few feet above the flooded rice paddies. In a few areas where irrigation is available in the dry season, corn is grown as a second crop after rice.

The farmer in the Mekong Delta depends on rain and the annual overflow of the river for flooding his rice fields. During the flood period, the only dry land in the area is that forming the banks of the canals and rivers, on which the farmhouses stand. Adjacent to most of them is a small vegetable garden for family use and an area planted with a few fruit trees, the commonest of which are papaya, banana, orange, guava, mango and jack fruit. There might be a small surplus of fruit and vegetables to sell or trade at a local market. The family may tend a few ducks, raise chickens and pigs and fish in the canals or rivers. During the 5 hot months of the dry season when there is little farm work to do, the farmer may look for supplementary labor in a larger village center. Generally, however, he is confined to fishing, mending and repairing the dikes and houses and similar work, until the start of the rainy season and a new crop cycle. The average farmer probably accepts this subsistence pattern as part of the natural order of things, but
he has shown himself ready to accept new ideas and technical innovations that will improve his livelihood.

On the coastal plains of central Vietnam all of the arable land has been cultivated for centuries, and most of it is divided into many small holdings. The average farm is in a small delta hemmed in on three sides by mountains. Most holdings do not exceed 5 acres, and they center around a plot of paddy land which is double cropped. Each farm family does most of its own work, which includes operating a paddle wheel to lift water into the fields during the growing season. In addition to rice, there is usually an acre or more of dry land where manioc, beans, vegetables, some tobacco and a few fruit trees are grown. Ducks, chicken and various other types of fowl are kept for home consumption. In some areas where livestock breeding has improved, income from the sale of pigs for export to Hong Kong and elsewhere is an important source of income for the farmer.

The rice yield in this region is lower than in the Mekong Delta, about three-fourths of a ton per acre being obtained for each of the two annual crops, although where adequate irrigation is available and adequate fertilizers used, production is considerably higher. The population of the area is around 4.5 million. The annual harvest of about 1 million tons of paddy hardly covers local consumption, and rice is imported from the southern delta.

After 1956 the Central Highland plateaus of South Vietnam, formerly limited to the shifting cultivation of the montagnards and some plantation production of rubber, tea and coffee, were opened to diversified farming. In this area, which has an estimated 5 million acres of fertile land, more than 100 new villages of 100 to 500 families each have been established for army veterans and people from the crowded Central Lowlands. Each family is given about 5 hectares (a little over 12 acres) of land. The government clears 1 hectare for each family at the village site. Roughly one-fourth of the cleared area is used for family houses and gardens; the remainder is farmed on a community basis for the production of cash crops, such as ramie, kenaf, rubber and tea. In their individual garden plots the settlers grow sweet potatoes, peanuts, corn, edible beans, pumpkin and squash, manioc and various green vegetables. Chickens and ducks are kept, and each family has one or more pigs. Substantial American aid has been given for the clearing and plowing of the newly cultivated land, and water is obtained by pumping from subartesian wells. The additional 4 hectares allocated to each family—near the village homesite but not contiguous with it—is to be cleared by the individual owners. The farmer usually plants this to unirrigated rice. Although requiring less labor than wet rice, the dryland rice averages less than a half ton an acre. Almost all of the rice
produced in the settlement areas is consumed locally. It is expected that increasing emphasis will be placed on industrial crops and livestock as the settlers become aware of the cash benefits to be derived from them.

Shifting agriculture still predominates among the montagnards (see ch. 4, Ethnic Groups). In this process a thickly wooded area is selected several months before the rainy season begins. The trees and brush are cut and allowed to dry. The fields are then burned, and before wind or rain can dissipate the ash, the fields are raked, and rice, corn, manioc, other vegetables and a small quantity of tobacco are planted. This is done with digging sticks and hoes. When the fields are at a distance from an established village, temporary shelters are constructed in which the men of the village live until the crop matures. The crops are entirely dependent upon rainfall and subject to the depredations of birds, monkeys, wild pigs and rats from the surrounding jungle. A field is usually cultivated for 3 years and then left fallow for 5 to 10 years while other fields are cleared and cultivated.

*Rice Production.* In terms of the number of people engaged in its cultivation—nearly three-fourths of the total rural population—rice production is the most important agricultural activity in South Vietnam. There are some 1,500 known varieties of rice and several distinct types of rice culture adapted to regional geographic differences. The rice may be classified into three main categories according to the period of growth from seeding to harvest—early-, medium- and late-maturing. The early-maturing varieties develop in as few as 120 days; the late varieties require 5 to 6 months to mature.

In the Mekong Delta the late-maturing varieties are most common because the poor drainage does not permit sufficient control of the flood waters to dry the fields between crops or allow for irrigation in the dry season to make double cropping possible. The normal rice season in the delta begins in June with transplanting or direct sowing in the fields from July to September. Most harvesting starts in December and continues through February.

In the region where the Mekong enters the western delta, drainage is very slow and the annual flood covers the area to a depth up to 10 or more feet. Floating rice is grown in this area. The seed is sown when the soil is dry in April and May. While the floodwaters cover the field, the rice, which is not transplanted, grows with great rapidity and, supported by the water, reaches a tremendous length with its tip just above the waterline. As the flood recedes the plants stretch out on the mud and two or three nodes on the plant produce new plants on which the rice flower develops and from which the crop is harvested. Considerably less labor is involved in this method of culture, but production levels
are generally not as high as with other varieties because of competition from weeds and the irregularity of spacing.

Further south in the delta, where the floodwaters do not reach such a great depth but where drainage is still insufficient, the soil seldom completely dries out and double transplanting is practiced. During the normal dry season the area is covered with rank vegetation which must be removed. In July seedlings grown in the nursery are transplanted to a cleared area in clumps rather close together. Four to six weeks later they are separated and replanted with wider spacing. The practice of double transplanting, peculiar to the southern area, allows for weed control and checks excessively rank growth.

More than half of the rice land in the total Mekong area is transplanted only once. The usual practice is to germinate the seeds in a nursery plot approximately one-tenth the size of the field to be planted. When the seedlings are at least 8 inches high they are transplanted to allow for even spacing, which ensures higher yield.

As they have been for centuries, most of the rice fields throughout the country are plowed by a simple wooden plow having a metal cutting blade which is drawn by the buffalo. In refugee centers, such as that at Cai San, where tractors are used for deep plowing during the dry season, weed control has been greatly improved and fertility increased. Where adequate drainage can be achieved and fresh irrigation water provided in the dry season, the cultivation of rice fields for another crop—such as corn, peanuts, soy beans or any other fast-growing crop—during the off season greatly improves the texture and fertility of soil in the rice field.

Early- and medium-maturing varieties of rice are used in areas where double cropping is practiced. Most of the rice fields in the deltas along the coast of central Vietnam are double cropped. Unlike the Mekong Delta, the rice-growing regions of central Vietnam get the benefit of the northeast monsoon and usually have good irrigation systems. The growing season is from October-November to February-March. The early-maturing varieties are grown during the beginning of the rainy season and the medium-maturing varieties follow. Although present yield levels per hectare are relatively low, increased water supply and the proper use of organic and chemical fertilizers can greatly increase the productivity.

Other Food Crops. Varied climatic and soil conditions of South Vietnam permit wide diversification of agricultural production, but until recent years development of secondary food crops has been haphazard. Corn, beans, peanuts, manioc and a wide variety of tropical fruits, including citrus, papaya and bananas, have long
been grown by the farmers for their own use and as a limited source of additional cash income by those living near larger villages and towns. Many farmers grow sweet potatoes which are an important supplement to their diet and are sometimes also fed to livestock, particularly pigs. The crop is customarily grown without the use of fertilizer.

In the 1960’s serious attention was being given to agricultural diversification in an effort to improve the living standard of the farmer. New agricultural techniques and new high-yielding varieties of staple food crops have been introduced through the agricultural extension service. In 1960 considerable success was reported, but by the close of 1961, security conditions in the countryside prevented government agricultural workers from visiting many of the rural areas, and the benefits of experimental work had reached only a limited number of farmers.

Of Vietnam’s other food crops, one of the most important is corn which, before the war, was produced mostly in the North. It is a dry-season crop customarily planted in the fall and harvested in the early winter in areas where two crops of rice are not grown. Corn is raised for human consumption and is seldom fed to livestock. In those areas of the Mekong Delta where soil conditions are favorable and irrigation is available, corn provides a supplementary income for the farmer.

Vegetables, which are of great importance in the Vietnamese diet, are grown commercially in the cool climate of the Central Highlands plateau around Da Lat. Temperature-climate vegetables may be grown there successfully, and government-sponsored cooperative programs have increased productivity and expanded the variety of vegetables. In 1960, in addition to supplying Saigon-Cho Lon and other local markets, South Vietnam was able to export 1.25 million tons of fresh vegetables to Singapore. The produce included carrots, beans, tomatoes, squash, lettuce, various cole crops, garlic and onions.

Several crops new to Vietnam have been introduced in the South since 1955. Oil palm, which thrives in the southern coastal areas and in the Mekong Delta, was formerly grown only as an ornamental, but extensive experimental plantings have been made in the expectation of producing a high-grade cooking oil. Cocoa seedlings, which have been distributed to farmers in the Mekong Delta and the Central Highlands, appear to do well. Avocado from the Philippines was introduced in various places in 1958; the first crops, harvested in 1961, were well received on the local market.

The neglect of livestock breeding during the Indochina War, combined with the slaughter of buffalo for food, reduced the number of buffalo by as much as 50 percent. The government has imported 21,000 buffalo from Thailand since 1951, and livestock-
breeding stations have improved the quality of local breeds. In 1961 the total number of buffalo was reported to be 800,000 as compared to 222,000 in 1954. The slaughter of buffaloes under 10 years of age has been prohibited since 1955.

Cattle in Vietnam are of two kinds—the Chinese yellow type, which resembles the small Jersey cow, and the large, long-legged, gaunt Indian type. The bulls of both breeds have pronounced humps at the shoulder. They are used as work animals as well as for meat. The quality of the cattle has been improved by importation of selected stock for crossbreeding purposes. Any large-scale increase in cattle herds is rendered unlikely by the inaccessibility of range land and difficulty in maintaining adequate pasture during the long dry season.

Ducks are an important source of income for sizable numbers of Vietnamese farmers. Many farms in the delta areas have small flocks which they raise from ducklings. In the Mekong Delta ducks are raised commercially in large, roving flocks which feed along the innumerable waterways and glean the rice fields after harvest. Fresh and preserved eggs are produced for both local consumption and export, and surplus ducks from big flocks are sold in the city markets. The export of duck feathers and down is an important source of income.

The production of pigs has been enormously increased in quantity and quality since 1955. Local stocks in the South have been improved by the introduction of American boars. In 1960 the export of live animals and meat ranked third in value in Vietnam's export market. Approximately 80,000 swine were shipped, mostly to Hong Kong. Deteriorating security conditions in the South in 1961 interrupted communications with the rural areas, resulting in a decline of exports.

Industrial Crops. Rubber, sugar, coffee and tea were the main industrial crops produced in Vietnam before the Indochina War. The Vietnamese showed little interest in these crops before that time, and most of them were grown on large plantations owned by French companies and the few wealthy Vietnamese.

Rubber (Hevea brasiliensis) was first introduced from Malaya in 1897, and the first trees were tapped in 1905. Cultivation of the crop was developed on large plantations owned mostly by French companies which, in 1962, still accounted for more than 85 percent of the total rubber output. Most of the rubber plantations were located on the red and grey semilaterized soils of the southern slopes of the Central Highlands. Approximately 250,000 acres were planted to rubber, and in 1960 production reached 77,000 tons and represented 60 percent of the total value of South Vietnam's exports.

Sugar production in Vietnam during the colonial period reached
a peak of 20,000 tons, most of which was produced in the southernmost slopes of the Central Highlands north of Saigon and in some of the coastal deltas. During the Indochina War many of the cane fields were diverted to other food crops, such as corn or peanuts. Some were abandoned altogether, and by 1954 sugar production had fallen to 4,000 tons. By 1961, however, production had risen to over 83,000 tons—sufficient to meet half the country's rising requirements.

The introduction of new cane varieties and improved cultivation practices were expected to increase output to the point where South Vietnam would be self-sufficient by 1965. In 1962 productivity was low, but varied widely from region to region. A single acre of the local variety of cane might average somewhere around 14 tons or less of cane, yielding a little more than 1 ton of sugar; in Taiwan, in contrast, a single acre produces 40 tons of cane and yields 4 tons of sugar.

With the exception of a small quantity of jute, fiber plants were not grown on a commercial scale before the war. As a result of extensive experimental work since 1956, and assistance from the United States foreign aid program, three fiber crops are now produced in South Vietnam—kenaf, ramie and abaca. These fibers, together with peanuts, constitute the most important cash crops of the newly created land development centers of the Central Highlands. In 1961 some 25,000 acres were planted to kenaf, producing 8,000 tons of fiber. This was sufficient to meet all local demands for the manufacture of sacking, twine and rope. Ramie was grown successfully in the red soils in the Ban Me Thuot-Pleiku area of the Central Highlands, and about 25,000 acres were planted to it in 1960. Ramie is a perennial crop which, once established, can be harvested for many years. The fiber is superior to cotton in many respects; when wet, it is six times stronger than cotton and for this reason is used extensively for making fish nets. It is a potential export item to Japan, and production will probably be expanded through substantial United States aid. Abaca, closely related to the banana and commonly known as Manila hemp, has been widely distributed to remote mountain villages in the Central Highlands in an effort to develop a cash crop for the montagnards.

Only a small amount of cotton was being grown in South Vietnam in 1962; production per hectare was low and the quality was poor. However, experimental planting of high-yielding, disease-resistant varieties indicated that more cotton could be produced. Although of declining importance, mulberry cultivation for a small silk industry was still being practiced in Quang Nam Province at the 17th parallel and in the upper Mekong Delta near the Cambodian border.
Tea is grown in the highland areas of both the North and the South and is indigenous to the area. In 1962 in South Vietnam it was being cultivated on approximately 22,500 acres of land in the Central Highland areas where the climate and soil are ideal. The bulk of the crop, around 4,000 tons, was processed as green tea (which the Vietnamese prefer), and the rest as black tea for export. About 3,500 tons of coffee was produced, a quantity sufficient to meet local demands. Coconut oil was also produced in sufficient quantity for local needs. Lacquer, formerly produced from lacquer-bearing trees found only in North Vietnam, is now being produced from new plantings in the Central Highlands.

Forestry

Wood-cutting for construction purposes, firewood and the manufacture of charcoal is the principal forest industry in Vietnam. About 30 percent of the country is forested, and some 2.5 million acres are covered with timber of commercial value. Four-fifths of the commercial stands are classed as hardwoods, the rest are mangrove, pine, bamboo and related species.

With few exceptions, forest land in South Vietnam is in the public domain and classified as “forest reserve.” Timber-cutting rights are granted to applicants through issuance of a forest license by the Service of Forest Products and Industries; terms vary according to the type of timber sought and the extent of the proposed exploitation. Prescribed fees are payable to the Service. All products and byproducts from protected forests are subject to taxation.

No adequate inventory or survey of virgin forests has been made, but it is from these forests that large logs are cut and hauled to the sawmills. In secondary forests, the original growth has largely disappeared, and only the most aggressive species have reappeared. More than half of the forested areas are of this secondary type which have only a limited quantity of commercially valuable species and whose main yield was fuel wood.

Bamboo, found in all parts of the country, is one of the most useful products of the forest. Because of its availability and the ease with which it can be worked, it has an enormous variety of uses. Various species suitable for particular purposes are cultivated, including several varieties whose young shoots are edible.

Rattan, known by the local name may, is a climbing palm that grows only in the dense, moist rain forests of the Central Highlands. It has exceptional tensile strength and is used for making heavy cables. It is easily bent into sharp curves and is employed in the local manufacture of furniture.

The mangrove forests in South Vietnam cover an area in excess of 1 million acres and stretch along the coast from Mui Bai Bung...
(formerly Pointe de Ca Mau or Camau Point) northeastward to Vung Tau (formerly Cap St. Jacques). There are two types of mangrove. One is the initial growth which comes up in brackish water influenced by the ocean tides; it is characterized by a stilted tripod type of root system. As silting builds up and saline deposits are leached out, a climax type of growth of larger species replaces the original stand.

Several species of mangrove have high commercial values. Three species supply wood for a charcoal which is considered superior to that produced from wood obtained in the dryland forests. Small timber is also cut from the climax-type mangrove forest for fish-net poles, pilings for home construction and small lumber. Leaves of the nipa palm, which grows in the tidal areas, are used for thatching and woven partitions and walls, and pigs are frequently fattened on the fruit. From the bark of the wood cut for charcoal and firewood, about 9,000 tons of tannic extracts are produced annually. A brown pigment used by the rural people for dyeing clothes is also derived from bark. Some 20,000 families are reportedly engaged as woodcutters, charcoal producers and laborers in the mangrove forests.

Cinnamon is gathered in the forests of Quang Ngai and Quang Nam Provinces in central Vietnam. Although there is some cultivation of the cassia tree from which the aromatic bark is derived, the highest quality is found in the wild state. It is used locally for medicinal purposes, but the bulk of the product is shipped to Hong Kong and the United States for use as a seasoning.

Fishing

Fishing is an important occupation along the entire coastline. Over a thousand edible species of deep-sea fish are known, of which around 50 are of commercial value. Inshore areas yield large catches of shrimp, lobster and shellfish. Rivers and canals also supply a considerable amount of both salt- and fresh-water fish, but by far the largest commercial catch is from the sea.

There were approximately 190,000 fishermen in South Vietnam in 1962. With substantial United States aid for the formation of credit facilities and cooperatives, some 3,500 small fishing boats have been motorized, and nylon fishing nets have been substituted for the customary cotton or ramie nets. Since the fishermen are no longer dependent upon wind and tides and are equipped with stronger nets, they can exploit the richest fishing grounds; the catch has reportedly increased by 300 percent.

In 1961 the total catch was given at close to 0.5 million tons. Although some fish were exported directly to Singapore, most were sold fresh on the local markets. From 50 to 60 thousand tons of fish is used each year in the preparation of nuoc mam, a pungent
salty sauce that is an important element in the Vietnamese diet. With the introduction of freezing facilities, shrimp culture is being developed, and a few shipments were made to France and the United States in 1961.

**Special Government Programs**

Substantial foreign aid has made it possible for the government to establish a number of special programs to benefit farmers. The most important of these are those creating farm-credit organizations, cooperatives and various facilities for improved agricultural education.

**Agricultural Credit and Cooperatives**

The National Agricultural Credit Office (NACO) was officially created by presidential decree in April 1957. Its initial capital consisted of assets transferred from already existing agricultural credit agencies which, because of duplication of effort, scattered administration and lack of trained personnel, had been ineffective. It was capitalized at 850 million piasters, of which 330 million was provided by the national budget and the remainder allocated from United States aid funds. NACO was directly responsible to the Presidency. Its policy was to grant small loans to farmers without collateral and to extend credit to cooperatives (see ch. 28, Banking and Currency System).

Agricultural cooperatives existed during the colonial period, but since they were primarily for the purpose of facilitating the export of raw material out of the country, they were of little benefit to the Vietnamese farmer. Regulations established in 1954 governing cooperatives imposed such complex procedures that no effective leadership or organization was developed. Various rice-milling, fishing, tobacco, charcoal and forestry cooperatives were in operation before this time, but these had little support and only a precarious financial standing because of insufficient capital and bad debts.

In 1959 the Commissariat for Cooperation and Agricultural Credit was created by presidential decree to coordinate and provide general direction in the area of farm credit and cooperatives without undue interference in the internal affairs of local organizations. In June 1960 there were reported to be 266 cooperatives with a total membership of 96,810 and a paid-in capital of 27,660,807 piasters. There were 40 rice cooperatives, 80 farm cooperatives of other types, 3 forestry cooperatives, 2 livestock cooperatives, 76 fishery cooperatives, 57 handicraft cooperatives, 6 consumer cooperatives and 2 others.

Farmers' Associations (Hiep Hoi Nong Dan) were also authorized by presidential decree in 1958 and were, in part, designed to
supplement cooperative organizations. Established with the assistance of technicians of the Joint Commission for Rural Reconstruction from Taiwan, the associations were organized on village, district, provincial and national levels (see ch. 6, Social Structure).

Insufficient capital and a lack, at district and village levels, of trained administrative personnel able to explain the purpose and benefits of cooperative action and to direct specific programs has limited the expansion of the cooperative movement. Another obstacle has been the farmer's distrust of all forms of outside authority which, when not feared, has often been resented as interference in village affairs. Furthermore, the government policy of promoting and directing cooperatives from above, without adequate explanation of the program to the people, has worked against it.

The villagers have traditionally cooperated with one another in certain tasks beyond the capacity of the single family or of special importance to the community, such as the repair of dikes, the gathering of the harvest or the thatching of a roof. The principle is not readily carried over, however, into work in which there is no established sanction for joint effort, and much education and demonstration will be needed to develop general enthusiasm for the cooperative movement.

Agrovilles

Within the framework of rural development, President Ngo inaugurated a program for the creation of agrovilles in the Mekong Delta. These new villages, of which there were 21 in 1961, brought together the inhabitants of scattered and isolated hamlets strung along the banks of the canals and waterways. They were created for the dual purpose of bringing urban benefits to rural areas and providing security for the villagers.

The program has been controversial, and in 1962 no new agrovilles were being constructed. Criticism has included charges of abuse of voluntary labor used in constructing the centers, claims that favoritism has influenced the assignment of dwellings and complaints of failure to provide promised facilities and services. Aside from such complaints, the program has inevitably involved the problem of popular adjustment to a radically new pattern of community life.

Agricultural Education

A serious difficulty facing the government of South Vietnam has been the shortage of trained personnel to carry out programs for improved agricultural techniques and crop diversification. There was no reservoir of specialists to draw upon since the tradition in well-to-do families was to send their sons to study the
humanities, law or engineering rather than agricultural science. Recognizing the need for agronomists able to explain modern methods in simple terms to the tradition-bound farmer, the government established a National College of Agriculture at Bao Loc in 1955. A 4-year institution with a faculty of 17 and an enrollment of over 350, it has benefited from extensive foreign aid. Applications for 1961–62 far exceeded the number that could be accepted. There are also two vocational agricultural schools which are geared to take students with elementary education and give them 2 years of agricultural training. The courses include animal husbandry, agronomy and forestry.

Agricultural extension services have been made available in all the provinces of South Vietnam, and local training centers have been established. Proper application of fertilizers and insecticides, better methods of cultivation and improved techniques of animal husbandry are parts of the extension service program, which operates in conjunction with the rural cooperatives and the farmer’s associations. Rural youth groups, called 4–T clubs (similar to 4–H clubs in the United States), have been organized and claim a membership of over 100,000. Where conditions are relatively secure, the 4–T clubs appear to be popular and have made significant contributions to improved agricultural productivity, particularly in the field of animal husbandry. Ten pilot agricultural experimental stations have been functioning for several years, conducting test demonstrations for the benefit of the farmers.

DEMOCRATIC REPUBLIC OF VIETNAM

Land Utilization

Agriculture in Communist North Vietnam is confined almost entirely to the Red River Delta and the northern coastal deltas of what was formerly Annam. Less than 13 percent of the total area is cultivated. As in the South, rice is the dominant crop. The whole region comprises about 4.5 million acres of cultivated land, of which about 60 percent is double cropped. Less than 15 percent of the cultivated area is devoted entirely to crops other than rice.

Of the estimated population of more than 16 million, about 90 percent is rural. The Red River Delta itself is one of the most crowded agricultural regions in the world, with a population density as high as 2,000 persons per square mile in some provinces. In the less fertile coastal plains south of the Red River Delta, population density is only slightly less.

Land holdings in the North, the historic center of Vietnamese civilization, have never been large. Here, in contrast to the big estates which were acquired in the Mekong Delta during the colonial period, holdings have been kept small by the traditional
Vietnamese practice of dividing property equally among sons. Before the war a farm of 10 acres was considered large.

Agriculture in the Red River Delta is governed by the annual flood of the river. The river, draining the high and steep mountains to the northwest, is subject to great fluctuations and may increase its volume of flow as much as 30 times during the peak of the flood period from May to October. Over the centuries, the river has gradually been diked to contain its flood and enlarge the area of productive land. There are estimated to be some 4 million acres of cropland in the delta itself, most of it planted to rice. Except for some terraced cultivation of dryland crops, such as manioc, on the lower hillsides, the North Vietnamese did not farm the upland regions.

The success of the rice crop is dependent on control of the river floods. A complex system of waterways, consisting of the Red River and its main tributaries, forms a network over the delta. The proper drainage and irrigation of the rice fields is a dominant concern in the area, as it has been for many hundreds of years. River water is directed into the rice paddies through an elaborate system of canals and sluice gates. Gravity flow is employed for fields adjacent to the main waterways and bamboo baskets and simple machines are used to lift water to higher fields. In 1961 North Vietnam claimed that 70 percent of the total cropland was irrigated.

All of the cultivated land in the delta is alluvial and varies in composition from heavy clay to loam and sand. In the coastal reaches of the delta, sandy areas are common. In the northwest, red, grey and yellow loams predominate. Although the soils of the delta are essentially very fertile, the gradual diking off of the river against destructive floods and for irrigation has reduced the annual deposit of enriching silt on the land, and fertilization is required to maintain an adequate level of soil nutrients. Insufficient work has been done to determine the optimum fertilizer requirement for all these soils, but farmers have long been aware that organic material is needed if good rice crops are to be grown and have added decayed plant material as well as human and animal manure to their fields to maintain fertility. Chemical fertilizers are used but in insufficient quantity to bring sufficient increases in productivity.

Agrarian Reform

Before World War II, of an estimated 1.5 million rural households in the delta, nearly 1 million owned their land. Many, however, were owners in name only because of permanent indebtedness to moneylenders who generally were more interested
in keeping the farmer in a constant state of indebtedness than in repayments of the principal. Communal land owned by the villages was leased to landless farmers at rents as high as 50 percent or more of the crop. Communal lands before the war amounted to as much as 20 percent of the total cropland in North Vietnam, and they were the main source of income for many villages.

An agrarian reform program was announced shortly after the Viet Minh regime came to power in August 1945, but little was done to carry it out. During the Indochina War, official attention focused on the distribution of abandoned land. What was called for at this time was little more than recognition of the rights of peasants to continue cultivation of abandoned land they had already taken over. As military successes enlarged the area of Viet Minh control, preference was given to Viet Minh soldiers and their families in the redistribution of land confiscated from French nationals or absentee supporters of the Bao Dai government. In the mid-1950's Truong Chinh, then Chairman of the Central Committee of the Lao Dong Party, announced that the peasants would receive training in "mass action" under Party direction and, in the cooperatives, would be weaned away from their traditional individualism and be prepared to participate in collective farming.

A more rigorous program based on the political loyalty of landowners was formulated at a Cabinet meeting in 1953. The rural population was classified into landless agricultural laborers, poor peasants, middle peasants, rich peasants and landlords. All land and personal property belonging to "colonialists, traitors and reactionaries" and communal land belonging to the villages was expropriated for distribution to the landless and poor peasants. People's Courts were established to classify the rural population, and all local leadership was brought under the control of the Lao Dong Party.

Holding out promises of free land, Party cadres organized mass trials before the People's Courts. Peasants were encouraged to denounce their wealthier neighbors. It was enough for a man to be accused by a neighbor for him to be condemned as wealthy, cruel or reactionary. Once convicted, his land and goods were redistributed, and he might count himself lucky if he suffered no further penalty. Spectacular trials and emotional attacks quickly got out of hand. But by the summer of 1956 the excesses had brought disillusion and, in some places, outright rebellion. "Grave errors" were admitted by the Party in October 1956, and a "mistake correction" campaign was launched which was intended to correct the worst abuses and restore rural confidence.

In fact, the Communist campaign had few "wealthy landlords" to deal with in this area of small holdings. It did punish and expropriate the lands of the sizable group of moderately pros-
perous small farmers. In so doing, it liquidated the only experienced rural leadership then capable of challenging the regime. Of the total of 4.5 million acres of arable land north of the 17th parallel, somewhere between 1 and 2 million acres of land were redistributed. Approximately 8 million peasants gained some land, but the size of the average holding was not generally increased.

Cooperatives and State Farms

The stated policy of the Communist regime is to reorganize the peasants into cooperatives as a step toward ultimate collectivization. The first phase of cooperation in this process, the work-exchange team, is little more than an agreement among peasants to help each other during peak periods of the rice-growing season. The teams are organized with the assistance of local Party cadres and may include an entire hamlet or only a few families. In the course of time, they generally grow in size and become permanent. Thereafter the teams operate within a yearly production plan rather than simply for peak seasonal needs. The comparatively slow rate of development of these permanent work-exchange teams suggests popular reluctance to participate. At the end of 1956 it was reported that there were 190,249 teams; in 1958, the number had increased by only 5,000 and included, in all, somewhat less than 50 percent of the population.

There are two types of rural cooperatives in the North, both under the direct supervision of the Party. The most common is the elementary cooperative which preserves individual ownership of cropland and draft animals. The owner receives part of the gross yield, but all farm work is done in conformity with an overall plan determined by the cooperative. In the second, or advanced, type of cooperative, land, draft animals and farm tools are common property. Crop yield and any other income derived from the property are deposited to the account of the cooperative, and members are paid in proportion to their contribution in workdays without regard to the amount of land each may have contributed to the cooperative. The size of the cooperatives, according to one Hanoi publication, is limited by the managerial skill of the local cadre, and the optimum size is said to be 200 families. Cooperatives larger than this apparently have encountered serious difficulties in maintaining efficient operation. Farm owners were evidently reluctant to give up control of their land, and despite official fanfare, the number of advanced cooperatives remains small in comparison to those of the elementary type.

Eleven state farms were created in 1955 on land expropriated from French owners without compensation. Three years later there were reported to be 16 state farms with a total of nearly
125,000 acres of agricultural land, most of it in industrial crops, such as sugar, tea, hard fibers, cotton and coffee. By 1960 the regime claimed to have 60 state farms in operation, some on newly cleared land in the upland regions and a few developed from the collectivization of small holdings in the delta. They seem to have a fairly high degree of mechanization, and according to reports, are well supplied with technicians from the Soviet Union and Communist China. Reliable data on the total number of people employed and the total acreage included in these farms are not available, but the Hanoi press in 1961 claimed that the total area of the state farms was upward of 0.25 million acres. The main functions of the farms were stated to be the training of cadres for farm cooperatives and the establishment of qualitative standards and production norms which the cooperatives would be expected to equal or surpass.

Productive Activities

Farming

Despite the government's objective of complete collectivization of all agricultural activities, farming continues to be largely a family affair. Individual holdings, traditionally small in the area, were further fragmented by the redistribution program. Farms average no more than 2 acres. Except where cooperative effort and consolidation of holdings has made the use of machinery possible, methods of cultivation have not changed. Most of the work is done by hand with the help of a water buffalo for plowing and harrowing. It is noteworthy that the most optimistic plans projected for 1965 called for not more than 15 percent of the agricultural land outside state farms to be farmed with machinery. An estimated 80 man-days of labor per acre are required to produce a rice crop in the Red River Delta. As 60 percent of the rice land is double cropped, a single acre may consume roughly 160 man-days of work annually. The average holding of two acres or less thus provides insufficient work for an average family of five active members. Surplus labor appears to be diverted to industrial development and to state projects, such as those for improved land utilization, irrigation projects and flood control.

The North Vietnamese rice farmer makes a bare subsistence living. The per capita production of paddy rice in 1955 was approximately 630 pounds, and by 1960 it had risen by only about 88 pounds. The farmer supplements his food resources with produce from a family garden, fish from the canals or rice paddy and small livestock raised on scraps and gleanings from the harvest. Although all produce is supposed to be sold through cooperative or state-owned stores, farmers are evidently unwilling to relin-
quish all of their food supply, and officials of the regime have frequently complained of peasant hoarding.

Russian and Chinese experience was continuously cited as inspiration to the farmer. There was, however, a significant absence of comment on the Chinese communes, although cultivation techniques as practiced in China were recommended to the farmer. Advanced cooperatives and state farms appear to be increasing steadily, if slowly, but, in terms of numbers, the small family farm predominates.

In the Northern Highlands the government established autonomous zones for the montagnards, and attempts were made to settle them into cooperative centers for the production of industrial crops, such as hard fiber, coffee, tea and peanuts. Some success has been reported, but the same resistance to abandoning shifting agriculture was encountered in the North as was found among the montagnards in the South.

Rice Culture. As in South Vietnam, rice is the most important agricultural product and the same traditional methods of hand planting and culture are used. The farmer uses the lunar calendar and refers to his crop by the month in which it is harvested. The schedule of harvesting two crops of rice in the Red River Delta area is interesting (see table 1). In some areas a third rice crop, a novelty in Vietnam, has been introduced, but the acreage is still limited.

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<thead>
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<th>Table 1. Double Cropping Rice-Harvesting Schedule in North Vietnam</th>
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<td><strong>Operation</strong></td>
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<td>Sowing in nursery Transplantation Harvesting</td>
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Other Food Crops. Deprived of the rice surpluses from the Mekong Delta, North Vietnam found it difficult to produce sufficient rice to feed its rapidly growing population. This has resulted in special emphasis being placed on supplementary food crops. The most important food crop, other than rice, is corn which is grown as a dry-season crop in the rice fields where irrigation is inadequate for a double crop of wet rice. In 1960 government production figures for corn showed an annual total of 198,000 tons. An increase of nearly 30 percent for 1961-62 was anticipated from newly cleared lands in the upland areas. Peanuts, manioc and beans are also grown during the dry season. Most farmers grew sweet potatoes and a wide variety of other vegetables for their own use, with,
in many cases, a small surplus for sale. Leafy vegetables of many varieties were grown in most family gardens. Near the largest cities, small truck gardens of half to three-quarters of an acre were common. There were, however, no large-scale vegetable farms, such as those in the Central Highlands of South Vietnam around Da Lat, and fruit is not as abundant as in the South.

Considerable attention has been given to animal husbandry. In 1960 it was reported that the area had 4,000,000 pigs, 845,000 cattle and nearly 1,500,000 buffalo. Chickens, ducks and other fowl were also kept by farmers, but ducks are not raised on the same commercial scale as in South Vietnam.

**Industrial Corps.** Only a small section of the highland area in the northern section of central Vietnam will support the rubber tree, and no large plantations were developed there during the colonial period. In order to develop its own supply of rubber, however, the rubber tree was introduced in 1954, and extensive plantings have been made on recently cleared land on state farms and in the upland regions. Actual production must await the maturation of the trees which normally takes about 7 years.

Sugar cane is grown on some state farms, but relatively little land in the North is well suited to sugar cane cultivation. In 1961 reported sugar production was 14,500 tons.

Special efforts have been made by the regime to encourage the production of fiber crops. Kenaf and ramie are grown on cooperative farms in the highland regions of the North, but the area suitable for such cultivation is only a small fraction of that available in the South.

The production of cotton, which before the war was grown on small peasant holdings in Thanh Hoa Province during the dry season as an additional cash crop, has been greatly expanded. Most of the cotton grown is reported as being produced on state farms, and in 1961 the total area in cotton was given as 16,000 hectares (about 39,000 acres) in Thanh Hoa and Thai Binh Provinces along the coast south of the Red River. New varieties have been introduced from Egypt and China, and technical assistance has been given by the Chinese. Plans have been reported for the expansion of the cotton-growing area to the middle and highland regions. Although the North was by no means self-sufficient in cotton in 1962, government sources predicted that at least partial self-sufficiency would be achieved.

**Forestry**

There are approximately 22 million acres of forested land north of the 17th parallel. Large reserves of commercially valuable timber include teak, ebony, rose wood, and various other species commonly used for furniture, boxes and finishing work.
the Japanese occupation, forest tracts convenient to rivers or established roads were ruinously exploited. Extensive road building or adaptation of waterways for transporting logs to the sawmills will be needed to provide access to the good forest which remains. Firewood and charcoal are produced from mangrove in the tidal regions of the delta, where the pattern of lumbering and collection of firewood is similar to that in the South.

Close attention has been paid to the gathering of wild forest products which provide an important source of revenue. Anise, from which an aromatic oil is produced as well as a spice related to the ginger family, is gathered in the forests of the Northern Highlands. A very fine quality of cinnamon is harvested—reportedly 6,000 tons in 1960. Lacquer is also an important forest product.

Fishing

Fish of many varieties abound in all the inlets and river mouths of the northern coast, and carp is stocked in many inland ponds and flooded rice paddies. Estimates of the number of fishermen vary from 140,000 to upward of 200,000, and according to a report issued by the Directorate of Sea Fisheries in 1962, more than 60 percent of the fishing families were members of advanced cooperatives which were reported to number 648. Various agricultural cooperatives were also reported to be engaged in rearing freshwater fish.

The same report indicated that a state-owned fishing fleet of 31 motorized ships was in operation. In addition to the state-owned fleet, some power boats are used in the off-shore fishing, but sails continue to predominate. Entire families sometimes live on the larger vessels which often work fishing grounds 20 or 30 miles out.

More than three-fourths of the annual catch—mainly striped tuna, bonito and mackerel—is marketed fresh. A small amount is dried, and the remainder—mostly sardines 6 inches and under—is used to make fish sauce (nuoc mam).
CHAPTER 26
INDUSTRIAL POTENTIAL

As of mid-1962 industry was expanding in both the South and North; the pattern of development, however, was very different in the two areas. Light industries were being introduced into South Vietnam, while these were not entirely neglected in the North, the Communist regime gave priority to the rapid expansion of heavy industry. Industrial growth in both areas depended almost entirely on heavy infusions of foreign aid—from the United States in the South and from the Sino-Soviet bloc in the North (see ch. 30, Foreign Economic Relations).

South Vietnam is relatively poor in industrial resources. There is a vast hydroelectric potential which, however, would require large sums for development. Agricultural raw materials and some ores offer opportunities for the development of light industries, but in 1962 the area lacked the fuel and power to support even those few manufacturing plants it had. Only one coal mine was in operation, and there were no known oil deposits. Capital was scarce, and reserves of skilled workers, technicians and managerial personnel were inadequate for a rapidly developing industrial sector (see ch. 13, Labor Force).

A start had been made on creating an industrial base and, notwithstanding the difficulties, there had been progress. Certain light industries were in operation, and others were in the planning stage. To make loans to industry, the Industrial Development Center had been established by the government with funds derived from American aid, and the government was striving to attract other foreign capital. The whole effort, however, was taking place under wartime conditions and during a time in which the Republic had to expend much of its energy and resources in defending itself against the mounting campaign of guerrilla attacks, subversion and terror waged against it from the North. The prospects for industrial development appeared to depend as much on mastering the Communist threat as on solving the economic and technical problems of industrial progress.

North Vietnam, in contrast to the South, is, for its size, one of the richest countries in Southeast Asia in mineral resources (see fig. 15). Development of its large deposits of coal, iron, tin, zinc and chromite had been begun by the French, and there were also small unworked deposits of a number of other ores. North Vietnam also inherited from the French colonial period two major industries—cement and textiles—and a variety of smaller factories. These installations, even though obsolescent or damaged
Figure 15. Main Mineral Resources of Vietnam.
by war, gave the Communist regime an industrial base at the time of partition in 1954.

After the existing plants were re-equipped with Sino-Soviet help in 1954-57, the Communist regime in the Three-Year Plan (1958–60) turned to the development of heavy industry. The Plan called for the building of power plants, an iron and steel complex, shipyards, locomotive repair shops, expansion of existing machine shops, the mining of iron, lead and zinc, and the establishment of a number of consumer goods industries. Of 96 undertakings, 56 were to produce capital goods; 70 percent of the funds allocated to industrial development were earmarked for these capital goods projects and the remainder for consumer goods enterprises. In 1961, the Three-Year Plan having ended, it was officially announced that in the last year of the Plan industry, including handicrafts, had for the first time contributed more than agriculture to national income. When the Five-Year Plan was initiated in 1961, Deputy Premier Nguyen Duy Trinh stated that it aimed at “continuing socialist industrialization” and that electricity, iron and steel and machine building would be powerfully developed.

No accurate assessment of the expansion in industrial production which had taken place in the North can be made from the government reports usually manipulated for propaganda purposes. Certainly the greatest single contributory factor has been large-scale aid delivered by Communist China, the Soviet Union and its satellites. Almost all of this aid was given in the form of capital goods—factories, heavy or light industrial equipment—and in the services of technicians and skilled workers. All factories were modern, many of them highly mechanized.

**BACKGROUND**

The extent and character of Vietnamese industry in the past was limited by traditional preferences for other pursuits on the part of the Vietnamese themselves and by French colonial development policies. So ingrained has been Vietnamese orientation to agriculture as a means of livelihood and to scholarship as the goal of education that only since World War II has serious attention been given to other economic opportunities and any esteem been accorded to technical and specialized administrative skills. Those Vietnamese with money to invest usually lacked business experience and preferred to invest their capital in urban real estate. Industrial development was almost entirely the concern of the French.

French policy was guided by two major principles: the exploitation of those natural resources which provided raw ma-
The establishment of a few mining operations and some small processing industries producing items which were uneconomic to import from France or peculiar to the culture. The first electric power plants were built at the end of the nineteenth century, mainly in the cities of Saigon, Haiphong and Hanoi.

France viewed the area of Tonkin, Annam and Cochinchina—now North and South Vietnam—as an economic unit, and since the southern part of this area was considered best suited for agricultural production, most industrial development was concentrated in the northern part. In exchange for rice, the North supplied the South with coal, paper, cement, textiles and glass.

Northern industry was exposed to the hazards of war for more than a decade after 1941. During World War II some factories and mines were kept in operation by their French owners or by the Japanese, but others were damaged or deteriorated through disuse or lack of maintenance. The Indochina War which followed brought further deterioration as well as sabotage by guerrillas and the dismantling of some plants by withdrawing French and Vietnamese forces. Moreover, a sizable, if unknown, number of skilled workers were among the refugees who after 1954 moved southward (see ch. 2, Historical Setting).

Within a year after the partition of the country in 1954, all French-owned installations in the North—coal and other mines, textile mills and electric power plants—had been taken over by the Communist regime. As for the South, United States aid brought in the imports from the outside needed for its survival.

**REPUBLIC OF VIETNAM**

Until 1954 the role of government in Vietnamese industrial life was largely confined to the administration of the match, alcohol, tobacco and opium monopolies and to the ownership of some utilities and the nominal control of others. The government owned some transportation facilities and the radio, telephone and telegraph systems. It exercised its influence in the industrial sphere mainly by indirect methods, especially by taxation and subsidies. It also supported industrial development by sponsoring research it considered of value to industry and mining and by opening up sources of raw materials with new transportation routes. Private firms, once they were granted concessions or a permit to operate, were subjected to little governmental interference.

After 1954 the Republic of Vietnam found itself cut off from its customary northern source of coal and other minerals and
certain manufactures. Steps were taken by the government to develop a number of hitherto unexploited natural resources, such as the Nong Son coal deposits, water power in the Central Highlands (the Da Nhim Project) and the phosphate deposits of the Paracel Islands and Spratly Island. To reduce the dependence on imported articles, the government policy also aimed at the gradual development of small industries, such as sugar refining and the manufacture of pottery, glassware, household articles and fiber sacks. The disturbed condition of the country and the urgent need to increase agricultural production initially kept the industrial development program almost at a standstill for several years. By 1961, however, although industry still played a minor role in the economy in comparison with agriculture, industrial activity contrasted markedly with the stagnation of previous years.

A Five-Year Plan for industrial development was announced in 1957, but never formally adopted. However, a list of plants to be completed by 1965 has been released. Scheduled for completion between 1961 and 1964 were the following: 2 paper mills; 1 spinning and weaving mill; 4 sugar mills; 2 cement plants; 1 rice bag plant; 4 bicycle tire plants; 1 soda plant (for the manufacture of soda, hydrochloric acid and calcium carbide); 1 plant for the manufacture of prefabricated houses; 1 oil refinery; 1 fertilizer plant; and several pharmaceutical plants. By mid-1962 some of these plants were in operation and others were under construction. Scheduled for completion between 1962 and 1965 were: 1 urea plant; 1 calcium carbide plant; 1 plant for manufacturing artificial silk and pharmaceuticals; 1 cannery; 1 pulp and paper mill; 5 rubber-processing plants; 1 cotton gin.

Various forms of assistance were provided by the government to promote industrial development. An important step was the establishment in late 1957 of an Industrial Development Center. Its objectives were to provide credit and technical assistance for the expansion and modernization of existing industries and to facilitate the establishment of new industries. Between late 1957 and May of 1961 the Center had made available to local industries some 480 million piasters. Of this, 351 million piasters represented loans; the remainder was in direct investments. By the end of 1962 the financial role of the Industrial Development Center will be taken over by an investment bank (see ch. 28, Banking and Currency System).

A Handicraft Development Center, established in 1958, provided organizational and technical assistance and also extended long-term loans to craft enterprises. To supplement the inadequate private sources of industrial financing, the government-
owned Commercial Credit Bank of Vietnam, which operates principally as a commercial bank, was authorized in 1958 to engage in investment banking (see ch. 28, Banking and Currency System).

A tax was levied on selected import commodities to protect local producers, although import restrictions were not widely used to protect local industry. Industrial development in certain areas was encouraged by permitting access to foreign exchange at an official rate more favorable than the limited access free market rate for most imports. Certain tax exemption privileges were also extended on a case-by-case basis to new industrial undertakings (see ch. 27, Public Finance; ch. 28, Banking and Currency System).

A further stimulus to industrial growth was President Ngo Dinh Diem's foreign investment policy which gave foreign investors assurance against war risk, expropriation or possible nationalization. Incentives were also offered in the form of exemption from taxes and guarantees concerning repatriation of industrial and commercial profits.

The government exercised its role in industry and mining largely through the Department of National Economy which included the Directorate General of Mining, Industries and Handicrafts. The functions of the Directorate General were to prepare and implement administrative, technical, economic and financial measures relating to the operation and development of extracting and manufacturing industries. Within the Directorate General, the Directorate of Mining and its operational arm, the Mining Technical Service, administered matters pertaining to mine ownership. They drew and amended mineral maps, enforced technical regulations applying to the exploitation of mines, quarries and springs, prepared statistics on mineral production, controlled the distribution and use of mineral products, fixed prices for raw materials and gasoline, maintained records on the areas and yields of mines for tax purposes and supervised industrial safety measures.

The other division of the Directorate General, the Directorate of Industries and Crafts, gave technical advice on the import and export of equipment and supplies for industries and handicrafts, distributed and controlled the use of raw materials and industrial products required by industries and handicrafts, drafted projects for industrial enterprises, maintained a register of enterprises and industrial plants, including production statistics, and studied programs for the expansion and marketing of handicrafts and handicraft products.
Structure and Ownership of Industry

Before 1954 practically all Vietnamese industry was privately owned. The handicrafts were almost exclusively in the hands of Vietnamese individuals and families. Machine-equipped enterprises belonged to the French and to the few Chinese who had the financial resources, the experience and the interest in business to succeed in this field. What Vietnamese capital there was went, for the most part, into real estate.

Since 1954 important economic changes have taken place in the South. The end of French control brought restrictions on the transfer of profits to France and other measures which made business enterprise less attractive to the French than it had been. As a result, private ownership shifted from the French to the Chinese and Vietnamese. In the rapid liquidation of French business interests, it was more often the Chinese than the Vietnamese who acquired the properties the French put up for sale. Subsequently the Chinese were forced to accept Vietnamese citizenship to retain their holdings.

Although the declared policy of South Vietnam was to reserve areas of the economy for private enterprise, the government acted to influence the type and character of new industries, especially where foreign private investment was involved. For industries which it considered basic to the welfare of the country, the government insisted that it hold at least 51 percent of the stock, and it was sole owner of some manufacturing plants. Its role was explained as necessary for the development of needed industries which private agencies were unwilling or unable to start, and the authorities pointed to the shortage of private capital and the general lack of managerial experience in the industrial field.

Natural Resources and Development

Since the country had never been completely surveyed, the Republic of Vietnam in 1954 found itself without a clear knowledge of what its scanty natural resources were. In 1959 an agreement was concluded with the United States Operations Mission (USOM) for a geological survey of southwest Vietnam, and in 1961 an operational plan for a mineral survey of central Vietnam was signed with the United Nations Special Fund (see ch. 30, Foreign Economic Relations).

Fuel and Power

South Vietnam's only exploited coal field is at Nong Son, about 30 miles southwest of Da Nang (formerly Tourane). This deposit, with estimated reserves of 3.5 million metric tons (1 metric ton equals 2,204.6 pounds), was worked by the Chinese under
the terms of a concession granted by the court of Hue in 1878. Operations, halted before World War II by exhaustion of surface beds and lack of capital, were resumed by the South Vietnamese Government in 1957, and 80,000 metric tons were produced in 1961. This was sufficient to meet the requirements of the railroad and some thermal power plants.

The coal at Nong Son is a somewhat sulfurous anthracite which must be washed before it is marketed. The deposit varies in thickness from a few inches to 60 feet. Coal is transported on the Song Thu Bon to the Ky Lam transshipment point just south of Da Nang on the Trans-Vietnam Railroad. The Agency for International Development (AID) is investing almost $2 million on improvements and technical assistance in order to expand production to 150,000 metric tons per year.

Coal outcrops have also been found in the Mekong Delta. The only other fuel in South Vietnam is peat in the southwestern part of the country. The deposit has not been prospected, but on the basis of surface measurements it is thought to exceed several million metric tons. Peat, however, is not well suited to most industrial uses.

In South Vietnam, particularly around Saigon, the most important sources of electric power are diesel engines and thermal installations, relying almost entirely on imported fuels which have been costing South Vietnam $3 million annually. Water is potentially an important source of power, but the area’s one hydroelectric plant serves a single factory in the Central Highlands. Additional hydroelectric installations are planned.

In 1958 South Vietnam had an installed electric power capacity of 100,000 kilowatts and an annual production rate of 239 million kilowatt hours. About 80 percent of the generated power was consumed in the Saigon-Cho Lon area where, it was reported, the supply was so short that some textile mills could operate only part of their machinery at a time. Although about 75 percent of the homes in the country were without electricity, only 20 percent of the power consumed was used by industry. The high cost of electricity is a factor restricting the development of new industries.

In the late 1950’s electric service was supplied principally by five privately owned companies; the smallest was Vietnamese-owned, and the other four were in French hands. Steps were being taken to increase power facilities. By the end of 1960 United States aid had supplied 80 diesel electric generators with an installed capacity totaling 3,714 kilowatts, together with transmission and distribution equipment, and thus established the nucleus of an overall electric power network.
In January 1961 the National Office for Reequipment of Installations for Production and Distribution of Electric Power received a loan of $12.7 million from the United States Development Loan Fund for the construction of a 33,000 kilowatt thermoelectric plant at Thu Duc and related transmission and distribution facilities. This thermal plant will provide electric power to the Saigon-Cho Lon area. A hydroelectric power plant is to be built by the Japanese at Don Duong (formerly Dran) on a river called the Da Nhim under a reparations agreement. Together, these plants are expected to meet most of South Vietnam's electric power requirements for the near future.

The Da Nhim Project, which is expected to cost $50 million, is to be built in two phases. At the end of the first phase 80,000 kilowatts of power will be generated. Involved in the project is the construction of an earthen dam 1,585 yards long. The waters of the Da Nhim will be backed up to create a lake containing 209 million cubic yards of water and covering an area of 3.7 square miles. The water will fall 2,500 feet, producing enough power to turn four generator turbines. Power capacity on the completion of the second phase of the project will be 160,000 kilowatts, sufficient to provide a yearly output of 800 million kilowatt hours. Construction began in October 1960, and the first phase is expected to be completed by 1965.

South Vietnam also has a potential source of power in the Mekong River. The United Nations, through its Economic Commission for Asia and the Southeast, has explored the river and proposed a comprehensive development program for navigation, large-scale irrigation, and an installed electric power capacity of between 10 and 15 million kilowatts. The Republic would share in these benefits (see ch. 3, Geography and Population).

Minerals

Mineral deposits do not promise to be of more than moderate economic value. Before partition, gold, lead and copper were mined at Bong Mieu, and prospecting for copper ore was carried out at Duc Bo, south of Da Nang. The copper seam at Duc Bo has been reopened, but no regular prospecting has yet followed. This deposit and two other areas where indications of copper have been found are scheduled for further investigation. Prospecting has been started around Phong Dien where, during World War II, the Japanese obtained substantial tonnages of high-grade iron ore. Other indications of iron have been found in Quang Ngai and Quang Tri Provinces. Molybdenite was also mined on a small scale at Song Pha (formerly Krong Pha) by the Japanese during the war, but the economic value of the deposit has not yet been investigated.
The white sands along almost the full length of the coast, which are reported to contain more than 99 percent silica, are being investigated as raw material for the establishment of a glass-making industry. A privately financed project at Vinh Cam Ranh (formerly Baie de Cam Ranh or Cam Ranh Bay) is excavating glass sand for export to Japan. Considerable deposits of limestone 3 miles southwest of Hue supply the Long Tho cement plant. Other limestone deposits have been surveyed in the Ha Tien area on the coast near the Cambodian border with a view to establishing a cement factory in the region. Clay deposits are numerous and are the basis for a small ceramics industry.

Manufacturing

Manufacturing in South Vietnam is very limited, but since 1958 some progress has been made in establishing light industries which complement agriculture and cater to the domestic market. The most promising results have been obtained in plants for the processing of local agricultural or forestry products, such as wallboard, sugar, paper and bicycle tires, or other local products, such as mineral waters, coal, glass and cement. An oil refinery was also planned, and as of early 1962, the first stage of the project—a lubricants blending plant—was under construction.

Manufacturing facilities were characteristically small. There were factories producing cotton cloth from imported yarn, foundries, machine shops, pulp and paper mills, pottery and glassware plants, match factories, cigarette manufacturing plants, printing plants, sugar cane processing mills, leather tanning establishments and plants manufacturing sandals, soap, brick and tile. Oxygen, acetylene, carbon dioxide and some other industrial chemicals were also manufactured. Important food industries were those producing sugar, beer, ice, alcohol, soft drinks and fish sauce.

Industry was concentrated in the Saigon-Cho Lon metropolitan area. The comparatively few manufacturing establishments elsewhere in South Vietnam included some small paper and pulp mills and assorted plants making ceramics, fish sauce and some other consumer goods. Production of all important manufactured goods rose steadily after 1957, and the trend was continuing in 1962. The biggest rise was in production of cotton yarn.

The conversion of food and industrial crops into products ready for consumption, or into a semifinished state, led all other industrial activities in number of units and people employed. In size, such enterprises ranged from the artisan family to the modern mill. Since virtually the entire country produced rice, husking and other processes connected with rice were common.
activities. Rice milling was the principal food products industry. The large surpluses over the needs of the growers were processed by large mills, located chiefly in the port area of Saigon-Cho Lon. Most of the rice mills were owned by Chinese and French businessmen who also controlled virtually all of the rice-marketing network.

Some rice was converted into alcohol for local consumption, the chief producer being the French Distilling Company of Indochina (Société Française des Distilleries de l’Indochine). The company also produced rum. By concentrating most of the alcohol production in one company, the government found it easier to assure the flow of tax receipts from this important source of revenue. The few other distilleries were financed by French, Chinese and Vietnamese capital.

The making of cane sugar ranked second in the food-processing industry. The production of sugar increased six-fold between 1955 and 1962. Under the colonial regime the highest annual production of sugar was 20,000 metric tons. During World War II and the Indochina War many plantations were abandoned and the production of sugar fell drastically. In 1955, the first year of the Republic, about 7,000 metric tons of sugar were produced. By 1960 output had risen to 33,372 metric tons (provisional figures). However, South Vietnam continued to import raw sugar with imports still totaling 51,763 metric tons in that year.

Of the total production in 1960, 82,000 metric tons of raw sugar came from some 400 small artisan sugar mills in the provinces of Binh Duong, Tay Ninh, Gia Dinh, Bien Hoa, Long An, Vinh Long, Quang Ngai and Quang Nam. Only in Quang Ngai was there a mill capable of producing white sugar. White sugar production was otherwise confined to the large refinery in the southern part of the country at Hiep Hoa. This refinery was formerly owned by French interests, but it had been renovated and newly incorporated as a joint enterprise of the Vietnamese Government and French capital. The enterprise also owned the Khanh Hoi sugar refinery which has an annual capacity of between 20,000 and 30,000 metric tons. Plans were announced at various times for the construction of at least three additional sugar refineries, but by mid-1962 none of the plans had matured to the point of breaking ground.

Textiles were the oldest, most important and fastest growing consumer goods industry in the country. Textile production climbed from 14.8 million yards of cotton cloth in 1956 to 38.5 million yards in 1960. In the same period the number of looms (power and hand) for all textiles increased from 5,000 to over 15,000, most of the new ones being electrically operated.
jected further expansion should, within a few years, bring the country close to self-sufficiency. In mid-1962 most of the raw cotton was being imported, and there was a need to increase domestic cotton cultivation.

Major producers were the Vietnam Cotton Mills, founded in 1955, the Vietnam Textile Company (VINATEXCO), officially opened October 1959, and the Vietnamese-American Textile Company (VIMYTEX) which began operations in 1959 and expanded again in March 1961. All were expanding their operations with government loans and assistance from the United States. Vietnam Cotton Mills was constructing a branch factory in Da Nang Province which would be the first cotton mill to operate outside of the Saigon area. This company expected to double its capacity during 1962—an expansion which would enable it to supply a third of domestic requirements. The Vietnam Synthetic Fabrics, Inc., a new company established in June 1960, planned to build in Phuoc Long village the first synthetic fabrics factory in the country. It was to be equipped with German-made knitting machines and looms and a dyeing complex from Japan. Using imported raw materials, it was expected to produce between 2½ and 3 million yards of synthetic fabrics (nylon, dacron and orlon) per year.

By mid-1962 pottery production equal to domestic requirements was assured by three modern plants, and pottery imports were prohibited except for some luxury items. Production of rubber and plastics was estimated at 5,000 metric tons and included a great variety of items. Tires for bicycles and motorcycles will also be manufactured when a new factory, under construction in 1962, begins production. It was reported that this plant will have a daily output of 4,000 tires and inner tubes. Glassware, in 1962, was being produced at a rate of 25,000 metric tons a year. Pencils and light bulbs were also being manufactured. In addition there were assembly plants for sewing machines, for portable radios and for automobile and flashlight batteries. Some 60 laboratories were producing drugs and pharmaceuticals. Four of the largest were either subsidiaries of foreign firms or were licensed to produce foreign products in Vietnam.

Establishment of a cellulose and paper products industry to utilize the country's abundant raw materials was one of the major projects under consideration. One company, the Donai Paper and Chemical Products Company, began operating in 1962. Its capital was provided by the West Orient Trading and Financial Trust, an Italian-Swiss company, and by the Vietnamese Government. The plant, with an initial production capacity of 9,000 metric tons of writing and packing paper per year, was located to the north...
of Saigon. The intention was to use imported raw materials only in the beginning, turning later to local wood, bamboo and rice straw fibers. A second paper manufacturing enterprise, in the blueprint stage in 1962, was to be a joint American-Vietnamese venture. The projected plant would produce 30 metric tons of paper and 30 metric tons of pulp daily. It was expected that the combined output of both plants would be sufficient to meet Vietnam's domestic requirements.

The Bien Hoa Lumber and Sawmills Company, which had a monthly production capacity of 2,000 cubic yards of finished timber, was purchased by the Republic in 1958 from its former French owners. A wood paneling plant built by this company went into production in 1960, and in 1962 it had an output of 3,000 metric tons of paneling annually. The Republic of Vietnam and West Germany have agreed to collaborate in setting up a plywood factory. Equipment for the factory and technical aid will be provided by West Germany.

A few other small industries were engaged in processing local raw materials. The Vietnam Jute Society in Saigon produced rice bags from jute and kenaf. Its capacity of 3 million bags per year was scheduled to be increased to 6 million bags in 1962 with equipment bought from Ireland. Another rice bag factory using equipment from Italy started production during 1960 at Bien Hoa near Saigon. Its capacity will be 3 million bags a year, but its total production in 1960 was only 2.76 million bags. The Saigon Feather Mill Company, which had a worldwide market, produced about 1,800 metric tons of feathers a year, using the most up-to-date machinery. A small company for bottling mineral water was located at Vinh Hoa, and a condensed milk canning plant was being established in Saigon.

There were numerous brick and tile kilns throughout the country. Most were traditional village installations which converted delta clay into bricks and tiles. A plant at Saigon produced soil pipe and artificial stone which was used in a wide variety of construction projects. By 1962 the government had taken the first steps toward creating a cement industry designed to displace imports. The Long Tho cement plant, 3 miles southwest of Hue and near good limestone deposits, was acquired in 1959 from the French firm which owned it before World War II. New machinery gave it a capacity of 20,000 metric tons of lime cement a year. By 1961 it was supplying one-fourth of the needs of central Vietnam. Another cement factory, capable of producing 160,000 to 200,000 metric tons annually, was scheduled to be built at Ha Tien and was expected to be in production by 1963. Together
with the Long Tho plant, it will supply the whole of South Viet­nam's demand.

**Handicrafts**

Craftsmen working in tin, pewter, copper, bronze, silver, gold, lacquer, wood, marble, tile, ceramics, cotton, jute, silk, ivory, tortoise shell and leather produce a wide variety of essential articles and luxury goods. Although the government has encouraged the formation of cooperatives, most craft industry is organized on a family basis. The Handicraft Development Center was established in 1958 to give financial and technical assistance to craftsmen, and a Handicraft Sales Store located in Saigon was inaugurated in August 1959. Technical services for the project have been provided through contracts with American consulting firms. The program has brought an expanded domestic market for handicraft products and helped to create a foreign market which shows promise of becoming increasingly important.

Coppersmiths produce bells, trays, boxes, vases, Buddha statues, bowls and containers of variable shapes and sizes. Potters pride themselves on the traditional and classical designs with which they decorate glazed pots and bowls. Bien Hoa is renowned for its pottery. Woodworkers include sculptors, engravers and artisans who inlay mother-of-pearl in wood. Objects decorated with inlay include: altars for pagodas, temples, churches and homes; tables; chairs; beds; chests of drawers; trays; screens; and panels. The lacquer industry manufactures all kinds of useful articles, including tables, boxes, trays or purely decorative objects such as the gilt-lettered maxims written in parallel script and hung against a black background on each side of ancestral altars.

Embroidery is an old and advanced art in the area. Embroidered silks are often given on ceremonial occasions, and designs vary with the purpose of the gift. Fine brocaded silks continue to be woven, and this craft receives special encouragement from the government. Baskets are of all shapes and sizes and are made in close and open weave. Mats, window shades, parasols, hats and fans are also made. The main raw material, bamboo, is put to an almost endless number of other uses as well.

**DEMOCRATIC REPUBLIC OF VIETNAM**

The Communist regime in North Vietnam is committed to a policy of rapid industrial expansion, and despite severe food shortages and lack of capital, by 1962 the policy had had considerable success. The economic strength of the area lay in its raw material resources, its relatively extensive industrial base created
under the French and its large and hard-working labor force from which the Communist authorities had been able to demand considerable sacrifices. The influx of Soviet, Red Chinese, Czech and East German technicians and of equipment under aid agreements concluded with the Sino-Soviet bloc indicated the emphasis placed on industrialization.

By 1957 North Vietnamese industry had largely been restored to its pre-World War II level. In 1958 the country began a Three-Year Plan which was to give the area a nucleus of heavy industry, lacking in the past, and to lay the foundation for a modern industrial state (see table 1). A blast furnace, iron and steel plants and shipyards had been built by the spring of 1960, and other installations came into operation in 1961.

Table 1. Three-Year Plan of the Democratic Republic of Vietnam, 1958–60

<table>
<thead>
<tr>
<th>Area of development</th>
<th>Type of project</th>
<th>Anticipated annual capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric power</td>
<td>Construction of 6 new power plants (capacity 67,000 kw.).</td>
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<td></td>
<td>Construction of 11 transmission lines.</td>
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<tr>
<td></td>
<td>Consolidation and enlargement of 4 existing power plants.</td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>Expansion and improvement of Hon Gay and Cam Pha coal mines at Quang Yen.</td>
<td>3,000,000 tons</td>
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<td></td>
<td>Improvement of phosphate mine equipment.</td>
<td>500,000 tons</td>
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<td></td>
<td>Construction of chromium mine.</td>
<td>20,000 tons</td>
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<tr>
<td></td>
<td>Extraction of iron ore, coal and limestone for steel works.</td>
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<tr>
<td></td>
<td>Restoration of zinc mine at Cho Dien.</td>
<td></td>
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<tr>
<td></td>
<td>Restoration of oil stone quarry at Quang Yen.</td>
<td></td>
</tr>
<tr>
<td>Metallurgy</td>
<td>Completion of first period of construction of the iron and steel works at Thai Nguyen (a combined works to include coal and other mines, blast furnaces, iron smelting works, steel rolling mill, piping and cable workshops).</td>
<td>100,000 tons²</td>
</tr>
<tr>
<td></td>
<td>Recommissioning of zinc mine at Quang Yen.</td>
<td></td>
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<tr>
<td></td>
<td>Provision of more equipment for the Hanoi Engineering Plant.</td>
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<tr>
<td></td>
<td>Construction of a shipyard at Haiphong.</td>
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<tr>
<td></td>
<td>Enlargement of Gia Lam railway workshops.</td>
<td></td>
</tr>
<tr>
<td>Mechanical</td>
<td>Development of Quang Yen oil refinery for production of petrol, diesel oil and kerosene.</td>
<td>30,000 tons³</td>
</tr>
<tr>
<td>construction</td>
<td>Development of factories for producing caustic soda, chlorine and insecticides.</td>
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<tr>
<td>Chemicals</td>
<td>Construction of superphosphate fertilizer plant.</td>
<td>100,000 tons</td>
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<tr>
<td></td>
<td>Construction of a thermophosphate fertilizer plant.</td>
<td>50,000 tons</td>
</tr>
<tr>
<td>Area of development</td>
<td>Type of project</td>
<td>Anticipated annual capacity</td>
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<tr>
<td>Building materials.</td>
<td>Construction of 2 nitrogenous fertilizer plants.</td>
<td>54,000 tons</td>
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<tr>
<td></td>
<td>Improvement of existing fertilizer plant.</td>
<td>32,000 tons</td>
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<tr>
<td></td>
<td>Enlargement of cement plant.</td>
<td>500,000 tons</td>
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<tr>
<td></td>
<td>Construction of brick kiln at Viet Tri.</td>
<td>3,000,000 bricks</td>
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<tr>
<td></td>
<td>Construction of 6 brick and tile yards.</td>
<td>1,500,000 tiles</td>
</tr>
<tr>
<td></td>
<td>Construction of 2 concrete-making compounds for making electric transmission poles, sleepers and building materials.</td>
<td>6,000,000 tiles</td>
</tr>
<tr>
<td></td>
<td>Completion of construction of Viet Tri plywood factory.</td>
<td>26,000 cubic meters of timber; 3,000 square meters of plywood.</td>
</tr>
<tr>
<td>Weaving industry</td>
<td>Construction of a saw mill at Thanh Hoa.</td>
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<td></td>
<td>Construction of a timber plant at Vinh.</td>
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<tr>
<td></td>
<td>Enlargement of Nam Dinh weaving mill.</td>
<td>50,000,000 meters</td>
</tr>
<tr>
<td></td>
<td>Construction of weaving mill at Hanoi.</td>
<td>35,000,000 meters</td>
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<td></td>
<td>Construction of a new knitting mill.</td>
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<tr>
<td>Food industry</td>
<td>Construction of 3 sugar refineries.</td>
<td>17,000 tons</td>
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<td></td>
<td>Construction of 13 rice husking mills (capacity 1,500 tons a day).</td>
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<td></td>
<td>Construction of a slaughter house.</td>
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<tr>
<td></td>
<td>Construction of a tobacco factory.</td>
<td>1,000 tons</td>
</tr>
<tr>
<td></td>
<td>Construction of a fruit-canning works.</td>
<td>1,000 tons</td>
</tr>
<tr>
<td></td>
<td>Construction of a fish-canning factory (to be equipped with fleet of fishing boats).</td>
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<tr>
<td>Paper industry</td>
<td>Construction of a paper mill at Viet Tri.</td>
<td>20,000 tons</td>
</tr>
<tr>
<td>Rubber and plastics.</td>
<td>Construction of a rubber factory at Hanoi.</td>
<td>(b)</td>
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<tr>
<td></td>
<td>Construction of plastics factory for making household articles and toys.</td>
<td>200 tons</td>
</tr>
<tr>
<td>Glass and chinaware.</td>
<td>Construction of a glass factory at Haiphong.</td>
<td>12,000 tons</td>
</tr>
<tr>
<td></td>
<td>Construction of chinaware factory at Hai Duong.</td>
<td>1,500 tons</td>
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<tr>
<td>Other light industries.</td>
<td>Construction of enamelware factory.</td>
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<tr>
<td></td>
<td>Construction of a soap works.</td>
<td>3,000 tons</td>
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<td></td>
<td>Construction of a stationery factory.</td>
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<td>Construction of a veterinary medicines works.</td>
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<td></td>
<td>Construction of a national printing works.</td>
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<tr>
<td></td>
<td>Construction of studios and film developing and printing works.</td>
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<tr>
<td></td>
<td>Construction of a water works.</td>
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</tr>
</tbody>
</table>

1 By 1960 combined capacity of new and enlarged stations is expected to be 186,000 kw.  
2 Eventual capacity anticipated at 200,000 tons; sufficient to supply greater part of domestic demand for east iron and steel.  
3 Expected to be adequate to meet most of domestic demand.  
4 Combined output.  
5 Amount not stated but to be adequate to meet domestic requirement for tires and tubes for bicycles and motor cars.  

The Five-Year Plan, inaugurated in 1961, continued to give priority to heavy industry, with emphasis on electric power, iron and steel production and the manufacture of machines. Production of hardware and farm implements was considered of outstanding importance, and a network of machine shops had been established in all provinces and districts. At the same time consumer goods production was increased, with particular emphasis being placed on development of local industries and handicrafts which were expected to meet domestic requirements in the near future.

The all-pervasive economic role of government was exercised by a complex apparatus of official bodies. The Central Statistical Bureau of the State Planning Commission compiled and issued statistics on production and announced planning goals and achievements. The National Scientific Research Commission concerned itself with technical training and advised the Vietnam Polytechnical College and Engineering College on research and technical training. Control of the salt industry was exercised by the Bureau of the Salt Industry in the Ministry of Finance. In the Ministry of Foreign Trade, the National Mineral Import-Export Corporation had a monopoly of exporting and importing minerals, and the National Machinery and Technics Import-Export Company had a monopoly of importing and exporting machinery, equipment and technical assistance. The Ministry of Heavy Industry and the Ministry of Light Industry controlled factories which fell into each of these categories.

Structure and Ownership of Industry

The Communist regime has largely replaced private with public ownership of industry. Pressure was brought to bear on French enterprises, through exorbitant tax rates and other means, which forced them to sell out to the government at extremely low prices. In September 1960, Premier Pham Van Dong reported that 95 percent of the total number of privately owned and operated enterprises, industries and trading businesses had been transformed into public-private joint enterprises, with a few becoming cooperatives. He further stated that the cooperative movement was also making progress among the crafts.

Factories, including those which were still privately owned, were administered by Communist cadres and were required to work to set production norms with raw materials allotted and sold to them by the state. If production fell short, the factory was required to make up the difference. Since private owners were forbidden to sell either plant or equipment, their ultimate solution was to present their factories to the government.
North Vietnam produces coal, zinc, tin, iron ore, uranium and—in much smaller quantities—tungsten, lead, antimony, manganese and gold. Salt is produced along the coast. A General Geological Department, established with Sino-Soviet technical assistance, has made a geological map of the area, and the Five-Year Plan calls for increased prospecting for minerals. Hydroelectric power was also being developed. Lack of a domestic source of petroleum to supply the growing industry and transport system was the most serious natural resource deficiency.

Fuel and Power

Coal, with reserves estimated at 20 billion tons, is the main source of power for the generation of electricity and for transport and other industrial uses. It is found principally north of Haiphong at Quang Yen and in smaller fields near Phan Me and Tuyen Quang, about 50 miles northeast of Hanoi. In 1961 the coal fields produced 2.8 million metric tons, an amount only slightly higher than annual output under the French. Production was enough, however, to meet the needs of industry and the railways and to permit some export.

The Quang Yen field, estimated at some 200 million metric tons, is the biggest in Indochina. The coal is a good quality anthracite. The seams vary greatly in thickness—from less than 3 feet to over 250 feet. At one time the mines were of the open-pit type, but deep-shaft mining developed rapidly in the 1930's. Operations have been largely mechanized since World War II. The coal fields have the advantage of proximity to Haiphong and adjacent ports. Information is lacking as to current processing and shipping facilities, but those removed by the French in 1955 were among the most modern in Vietnam.

The Phan Me coal field has been exploited since 1910 and the Tuyen Quang field since 1915. The soft coal from these fields is moved by railroad or inland waterway to the larger centers for use or transshipment. Another band of coal is known to extend from Ninh Binh to Van Yen in the mountains southwest of the Red River Delta.

The generation of electric power is largely based on the area's rich coal deposits. In the absence of information about the extent of war damage and obsolescence, it is not possible to estimate what the electric power capacity and output were at the time of partition. It is fairly certain, however, that capacity has been greatly expanded. By 1959 Haiphong and Hanoi power plants had been rehabilitated and transmission lines extended. In 1961 the Soviet Union is reported to have built seven power plants, including
those at Vinh and Thanh Hoa. In that year it was claimed that 276 million kilowatt hours of electricity were produced, and the Minister of Water Conservation and Power, without giving any figures, reported that the power industry had developed at a fairly high tempo, implementing the government's policy of keeping the power industry one step ahead of other branches of heavy industry. Construction had begun on a thermal power plant and a hydroelectric plant, both located north of Haiphong. Reportedly these and the Thai Nguyen Iron and Steel Works north of Hanoi were to be completed in 1962. New transmission lines were also to be constructed.

Minerals

A variety of metallic ores are found in North Vietnam. Promising iron deposits have been found near Thai Nguyen in the Viet Bac Autonomous Region and on the île de Ke Bao northeast of Haiphong; both contain good quality ore although their reserves are unknown. The Thai Nguyen reserves are estimated at more than 10 million metric tons, and it is possible that they may prove to be 10 times greater than that. Another bed near Lao Kay on the Chinese border is said to contain another 10 million metric tons. Small iron-mining centers are found near Thanh Hoa, Vinh and Ha Tinh. In these areas the ore is associated with manganese.

The known tin deposits all lie about 35 miles southwest of Cao Bang and Ta Sa. The mines of Tinh Tuc were reopened in 1957 with Soviet equipment, and production is reported to average 3,000 metric tons annually. In certain veins uranium occurs in association with tin.

Gold is obtained from streambeds and alluvium in many parts of the country, and lodes also have been discovered. Zinc is found in the limestone massif north of Tuyen Quang and Thai Nguyen. Lead and silver veins are associated with the zinc, and small quantities were exploited by the Chinese before the French occupation. The chief mining area lies near Cho Dien and there is a smelting plant at Quang Yen. Antimony deposits are found at Mon Cay and near Thanh Hoa where chrome is also found. Graphite occurs in the rocks near Lao Kay on the left bank of the Red River. Other metals found include nickel, cobalt, aluminum and platinum.

Under the stimulus of a rapidly increasing demand for chemical fertilizer, widespread phosphate deposits estimated to contain hundreds of millions of metric tons have been identified and are being developed. The mineral is obtained from fissures and cavities in the limestone plateaus. The main mining operation is located at Lao Kay, where deposits are estimated at 100 million tons, and there is another at Thanh Hoa. A superphosphate plant has been
established at Haiphong with Sino-Soviet assistance. Clay is plentiful; limestone deposits are few and scattered. Glass sand is abundant along the coast.

Manufacturing

North Vietnam possesses sufficient raw materials to permit the development of some heavy industry, especially iron and steel, metalworking and chemicals. Part of the industrial accomplishment of the 1950's was based on French undertakings which could be rebuilt without too much difficulty, particularly on the installations at Hanoi and Haiphong, but most of the modern equipment was dismantled by the French Expeditionary Corps when it left the North. The effect on the economy began to be relieved in 1955 when essential machinery and technicians from China and the Soviet Union began to arrive.

The largest industrial establishment in the North was the Thai Nguyen Iron and Steel Works which was still under construction in 1962. It consisted of blast furnaces, an iron smelting works, a steel rolling mill and piping and cable workshops. Initial output was planned at 100,000 metric tons of iron ingots annually, with this amount to be doubled by enlarging the plant when necessary. Communist China was supplying the equipment and technical assistance. After completion, which was behind schedule in 1962, it was expected to supply the greater part of domestic requirements in cast iron and steel.

The metalworking industry covered a wide range of products from machine tools to assorted farm implements and hardware. Two large modern plants were turning out machine tools: the Duyen Hai Machine Works in Haiphong, formerly owned by the French and retooled by the Soviet Union; and the Hanoi Engineering Plant, completed in 1958 with Soviet assistance. In 1961, 1,029 cutting machines alone were reportedly produced. The Duyen Hai Machine Works blast furnace reported an output of 20 metric tons of pig iron a day; that of the small blast furnace of the Hanoi plant was 2 metric tons a day. No information was available on the shipyards at Haiphong. The Gia Lam railway workshops were said to have been retooled, and they were to be enlarged under the Five-Year Plan.

Small local machine shops have been increasing in number, and 30 "backyard" blast furnaces were reported to be in operation in 1962. According to official statements made in January 1962, there were 210 engineering shops in towns, provinces and districts as well as 5,000 farm-tool making teams in agricultural cooperatives. The local engineering shops not only made repairs and some farm implements but were also reportedly turning out simple machine tools.
A rudimentary chemical industry was in the process of expansion. The Quang Yen oil refinery, using imported crude oil, was producing 30,000 metric tons of gasoline, diesel oil and kerosene annually—a large part of current domestic need. There was also reported to be a chemical plant capable of producing annually 1,700 metric tons of caustic soda, chlorine and insecticides and 15,000 metric tons of sulfuric acid. Special attention has been paid to increasing the production of chemical fertilizers, and output had reached 11,000 metric tons in 1961.

Cement, bricks and tile were being produced by an increasing number of plants. Much the largest producer was the Haiphong cement works. Its reconstruction was completed in 1956, and it produced 452,000 metric tons of cement in 1961 in comparison with 300,000 metric tons before World War II. With the completion in 1961 of a new brick kiln at Thanh Hoa and a prefabricated ferroconcrete factory at Hanoi, further expansion of building materials production is expected in 1962.

Sawmills at Vinh and at Viet Tri provided timber for the building industry, reportedly producing nearly 184,000 cubic yards of lumber in 1961. The wood products industry at Viet Tri also included a new plywood factory, completed with Czech help, and a paper mill. The capacity of the plywood factory was not known, but it was claimed that the paper mill produced 4,000 metric tons of stationery and packing paper in 1961.

In the field of consumer goods, the textile industry was the largest and most important. It consisted of the cotton combine at Nam Dinh, the biggest in Indochina; a knitwear factory in Hanoi, built with Chinese, Czech and East German aid; a wool-spinning factory with a yarn-dyeing department in Haiphong; and a cloth-printing factory at Ha Dong. There was also a large number of small weaving and dyeing shops organized into cooperatives. In 1961 the industry was reported to have produced 60 million yards of cotton cloth. The knitwear factory produced underwear, winter clothing, mosquito nets and other articles; information on output was lacking.

Other light industrial establishments included a bicycle tire plant installed by Chinese Communist engineers; two match factories provided through Czech aid; three cigarette factories; a soap factory; a plasticware plant with an annual capacity of 200 tons; an enamelware factory with a capacity of several hundred thousand bowls and pots a year; and a plant with a production capacity of 744,000 pens and pencils annually.

The main food-processing industries were rice milling and sugar refining. No statistics were given for milled rice, but 7,731 metric tons of sugar were reportedly produced in 1961. As in South
Vietnam, most rice mills were small family concerns serving local communities. North Vietnam had nine new rice mills which were completed in 1958 and 1959 with Chinese aid. Four sugar refineries were also built under the Three-Year Plan with Chinese help at Ha Dong, Ha Nam, Nghe An and Viet Tri; a fifth was under construction in 1961 at Van Dien near Ha Dong with Polish technical assistance. Other food-processing plants included two provided by the Russians for processing tea; a fish cannery at Vinh and one at Haiphong, also completed with Russian aid; and a distillery at Hanoi. Great efforts are being made to produce cheap foodstuffs by processing sweet potatoes, cassava, soybeans and vegetables in numerous small establishments.

**Handicrafts**

Handicrafts contributed importantly to the consumer goods available in North Vietnam. Output included not only traditional products, such as pottery, pots and pans, textiles and baskets, but also agricultural tools and simple machines. Emphasis was on reducing dependence on imported goods. Luxury articles, such as ivory carvings, silver inlay, lacquer, embroidered items and bamboo objects, were usually produced only for export. A number of craft training centers had been established to improve quality and productivity.

Artisans could pursue their callings in their own villages throughout the year or, in certain seasonal crafts, they could work away from home at certain times of the year. Most basketmakers, for example, worked at home, but those who fashioned the huge storage baskets, called bo, were seasonally drawn to various provinces. Similarly, the making of soybean curd was carried on by individual families and by commercial establishments which employed a sizable number of trained workers.

In 1961 there were reported to be 66,000 craftsmen in North Vietnam and, although the government has encouraged the formation of cooperatives, most craft industry continued to be conducted by individuals or families on a seasonal or part-time basis as a supplement to farm income in catering to local needs.
CHAPTER 27
PUBLIC FINANCE

Public finance in both South Vietnam and North Vietnam is characterized by deficit financing. In neither have national budgets been balanced by internal revenues; in each a major portion of the government expenditures is met with foreign aid. In South Vietnam the United States supports the defense budget and supplies a further portion of government revenues through customs paid on imports largely derived from United States aid. In North Vietnam economic development expenditures are financed almost entirely by loans, grants and credits from the Sino-Soviet bloc.

Both systems of public finance reflect, on the one hand, their French colonial background and, on the other, the high cost of rebuilding their economies while maintaining a large defense apparatus and an expanding development program. They differ decisively in that the North Vietnamese regime is based on Communist premises while South Vietnam is committed to a mixed economy of private and governmental enterprise. Measured in terms of ability to acquire revenue from domestic sources, North Vietnam seems to have been the more successful of the two. Not only is the burden of taxation heavier in the North than in the South, but tax collection appears to be more efficient. Moreover, with the progressive elimination of the privately owned sector in the North, profits and tax payments of state-owned enterprises have become a major source of government revenue. In contrast, the system of public finance in the South assumes the continued existence of a large private sector, and the form it has taken reflects a competition between concepts of the private and public interest. There the fiscal system is still in the process of evolution, and it confronts difficulties which range from the confusion of continued military strife to widespread tax evasion.

BACKGROUND

Before the arrival of the French, the imperial government of Hue did not concern itself much with economic development or with services in the field of social welfare. It left to the villages the collection of taxes for the national exchequer as well as those for local purposes. It was the village as a unit, not its inhabitants as individuals, that paid taxes to the national treasury. The central authority had no contact with the villagers as long as they stayed within the confines of their communities. The financial outlay of the national government and, therefore, the revenue demands imposed on the country as a whole were relatively low because of
the delegation of public works and most other economic responsibilities to local authorities and the obligation of local government to pay the expenses of the military contingents they were expected to provide.

The responsibilities of the central government expanded in the colonial period, increasing the need for revenue. Beginning in 1890 the French introduced the land tax, the business license tax, a head tax, excise taxes, customs duties and a variety of consumption taxes. The first direct tax on income, a gross tax on dividends and interest paid by corporations at the source, dates from 1908. By 1938 the head tax had evolved into a tax on salaries, wages and pensions and into a general income tax with progressive rates. Finally, in 1941, a special tax on agricultural, commercial and industrial profits of both unincorporated and incorporated enterprises was added.

The French administration collected taxes and managed finances and also formulated, authorized and applied budgets. Vietnam as a whole did not exist, and funds were channeled through the separate establishments for the protectorates of Tonkin and Annam and the colony of Cochinchina. Detailed regulations, providing comprehensive financial procedures for all French Overseas Territories, had been promulgated by the French Government in 1912, and these were still in force with only minor changes in South Vietnam in 1962. They had also exerted strong influence on the fiscal system in the North.

In 1949, when Vietnam became an associated state within the French Union, conventions liquidating various French-administered financial interests were signed between the two states. While the French retained control of customs, collection of some taxes and other financial matters until 1954, other responsibilities, including that for the preparation and administration of its own budget, were assumed by Vietnam at this time.

REPUBLIC OF VIETNAM

After 1954 the Ngo Dinh Diem government introduced two major budgetary reforms in connection with government reorganization. The first was the abolition of the three autonomous regions into which South Vietnam was administratively divided. The tax collecting and budgetary functions of the abolished regions were transferred to the national government, thereby creating a national budget. The second fiscal reform was the introduction of the National Assembly into the budgetary process in accordance with the provisions of the Constitution (see ch. 19, Constitution and Government).

Early in his second term of office President Ngo announced a
program of fiscal reform. A commission was set up under the Secretary of State for Finance which was to make recommendations for simplifying the tax system, eliminating fraud and injustice and raising revenue. Certain of the commission’s recommendations were incorporated in proposals made by a joint Vietnamese-American Committee in 1961 and were adopted by the government later in the same year in a decree which provided for increases in the main indirect taxes. Certain other recommendations were reflected in a simplification of the foreign exchange system which was, in effect, a devaluation of the piaster (see ch. 28, Banking and Currency System; ch. 30, Foreign Economic Relations).

Tax administration in South Vietnam has been handicapped by the lack of an experienced body of career revenue officers. Under the French the Vietnamese occupied only the lower positions in the administrative hierarchy, and in the confusion of the years after World War II, they had little opportunity to gain experience. The exodus of the French administrators with the advent of independence left a gap which the Vietnamese were in no position to fill. This situation was a factor in the important use which was made of the indirect forms of taxation since sales and excise taxes can be collected with greater ease and efficiency than direct taxation on individual incomes and business profits. The withdrawal of French capital resulted in a considerable shrinking of the income tax base and this also greatly increased the burden on other sources of tax revenue.

The total expenditures of the government are not published. The published budgets do not include the total amounts spent on United States military and economic aid, although these grants provide the greater part of the government’s revenue. Domestic sources of revenue, derived mostly from customs duties and excise taxes, cover only a portion of published expenditures. The resulting deficits are, however, covered by United States aid and the smaller sums received under the financial settlement with France.

The part played by the United States and France in keeping the Republic of Vietnam financially on its feet has been the target for criticism only from the Communist-bloc countries. To the South Vietnamese, who place responsibility for World War II and the Indochina War on the foreigner, it seems only natural and fair that the deficits which these conflicts have generated should be financed from foreign resources. It is, in fact, President Ngo’s ability to obtain financial and other forms of assistance that has given him much of his political strength.
The Budgetary Process

The most remarkable aspect of the budgetary process in South Vietnam is the overriding power of the Presidency to decide the allocation and utilization of public funds despite the special prominence the Constitution gives the National Assembly's budgetary functions (see ch. 19, Constitution and Government).

The budget presents a comparison of current and estimated receipts by type and makes a detailed exposition of proposed expenditures. The expenditures are organized by titles, each dealing with a single department or major agency. Each title contains chapters relating to subdepartmental units and each chapter contains articles relating to major items of expenditure.

This document, along with another outlining the government's fiscal policy, is submitted to the National Assembly at the beginning of the October session. The fiscal year coincides with the calendar year and the Constitution requires that the National Assembly vote the budget by December 31, the last day of this term. A supplementary budget may be submitted to the second session (April-June).

Though the National Assembly votes each chapter and title separately, the budget is treated as a lump sum appropriation and the President is bound only by the total amount voted.

An innovation introduced for the 1962 fiscal year was the creation of an extraordinary security budget to include all expenditures of the national armed forces and supplementary forces—the Civil Guard (Boa An), the Self-Defense Corps (Dan Ve) and the youth groups in charge of security maintenance in rural areas—thus permitting flexibility in use of funds during the critical period of pacification without relaxing strict control of government expenses. The government expected that this supplementary extraordinary security budget would be temporary and would be eliminated when security was restored. The National Assembly in November 1961 unanimously endorsed a bill granting the President a 2-year authority to promulgate laws relating to the extraordinary security budget, including measures to finance it.

Government Expenditures

The government's budgeted expenditures are published at the time of their presentation to the National Assembly (see table 1). However, since these figures do not include the total amounts spent by the United States and France on military and economic aid or the expenditures of certain autonomous agencies, such as the railway administration, meaningful analysis of them is made difficult. In 1959, for example, 1,305 million piasters was budgeted for the Department of Public Works and Communications, but this figure...