

Basic Problems of Relief, Rehabilitation  
and Reconstruction in Southeast Asia

by J. Russell Andrus

BASIC PROBLEMS OF RELIEF, REHABILITATION AND  
RECONSTRUCTION IN SOUTHEAST ASIA

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INSTITUTE OF PACIFIC RELATIONS  
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## DEFINITION OF THE PROBLEM

An outstanding feature of official and non-official thought during World War II is the great amount of attention given to general and specific planning for the postwar period. The wartime budgets and staffs of organizations like the Allied Military Government and the United Nations Relief and Rehabilitation Administration give proof of a determination to use inter-governmental funds, personnel and authority much more freely than ever before in history to enable the victims of war to return to normal living at the earliest possible moment.

Planning of this kind is immediately confronted with a formidable obstacle—the unpredictability of the future course of the war, and hence of the precise economic situation in the liberated areas. If Indochina, for instance, is re-taken by an outflanking movement from China, the destruction to the industrial establishments of Tonkin and the Saigon-Cholon area should be much less than if the Japanese are expelled only after a prolonged and bitter mile-by-mile struggle. Moreover, many necessary details of wartime economy in occupied territories are not known in United Nations countries, or cannot be made available for non-official use. In spite of these handicaps, however, it is possible to state certain basic problems and assumptions, based upon prewar conditions and published (or radioed) accounts of wartime conditions. Governmental and intergovernmental agencies have gone into considerable detail in their research into postwar relief and rehabilitation problems, but their findings cannot now be published.

The emphasis in the present study is entirely economic. In the first place the writer is best acquainted with the economic problems involved. Moreover, the economic factors involved are much less liable to sudden, drastic and unpredictable change than are political or other factors. In certain cases, however, it is essential that some assumptions of political status be made. Perhaps it is best, therefore to state at the outset the assumptions which I have made. This does not, of course, imply advocacy of any particular political settlement.

- a. Thailand is assumed to return to independence, with a fairly open field for foreign investment, such investment to be guided, as hitherto, by Thai governmental policy and/or participation.
- b. Indonesia is assumed to be autonomous, in accordance with the pronouncements of Queen Wilhelmina, but it is assumed that for the immediate future resident Dutch will exercise both economic and political power because of superior wealth, education, cohesion and experience.
- c. Burma is assumed to be slated for the gradual attainment of dominion status, in accordance with prewar and wartime British pronouncements. Return of British and Indian investors is assumed, with reservation in regard to Indian moneylenders. It is assumed that the difficult question of law and order will be successfully solved.
- d. French Indochina is assumed to be returned to French imperial control, and in the absence of French statements to the contrary an indefinite period of tutelage is expected. French investors are assumed to return to their controlling prewar position.

- e. Malaya likewise is assumed to return to British rule, and in the absence of definite British statements, or of an apparent local desire or ability to undertake selfgovernment, it is assumed that British political and economic control will prevail for an indefinite period.

Relief, for purposes of this study, is understood to mean provision of foodstuffs, medicines, housing, clothing, etc. sufficient to sustain life, where famine or pestilence might otherwise be expected, and to prevent unrest due to lack of customary necessities of life. This period presumably will end in many countries with the first complete crop cycle after liberation, providing law and order and adequate transport facilities have been restored in the meantime. Major emphasis must be on food and medicine, with minor emphasis on factors like clothing and housing. Reports from enemy and enemy-occupied countries in the summer of 1944 indicate widespread malnutrition and disease among civilian populations. The almost complete breakdown to be expected in economic life just before and during the retreat or capitulation of Axis forces may be expected to present the victorious United Nations armies and civilian organizations with a colossal problem of relief, which problem will need to be tackled at once and on a gigantic scale.

Rehabilitation, as I am using the term, may be defined as the restoration of economic life approximately to its prewar level. In view of the fact that changing technological, political, economic and social conditions will almost certainly make a complete return to the status quo ante impossible, the term "Rehabilitation" must be interpreted broadly. If, for example, an agricultural community used water buffaloes for plowing in the prewar period and most of the supply of draught animals is lost during the war, the provision of tractors as a substitute might be considered adequate from the standpoint of rehabilitation. Again, should world conditions make impossible the sale of Southeast Asia's enormous rubber output at reasonable prices, rehabilitation might fairly be held to include the reduction in rubber acreage and the corresponding increase in some other crop or crops sufficient to restore the countries concerned to the prewar level of economic life.

Reconstruction is used to denote change, progress, reorganization, and will be applied, in this study, almost exclusively in the economic sense. It does not mean the rebuilding of factories, power plants, etc., since that activity is more properly included under the heading "Rehabilitation".

From the foregoing definitions it will be seen that military government, assumed to last six months to a year, is concerned with relief and not much more. The United Nations Relief and Rehabilitation Organization, as its name implies, is also concerned with rehabilitation. Probably the individual governments concerned will have to undertake reconstruction for in regard to UNRRA it has been officially stated that "the end of rehabilitation is not the beginning of reconstruction." Just how the two can be so sharply distinguished in practice is not clear at the present writing, but the various pronouncements at the time of the organization of UNRRA appear to preclude the possibility of that organization taking an important part in the improvement, as distinct from the restoration, of economic life.

UNRRA, it should be observed, construes rehabilitation in a more limited sense than the term as used in this study, not as restoration of a liberated area to its prewar economy level, but to levels based on determined standards assuring liberated peoples of the basic elements of tolerable living, conducive to their health and well-being. In the case of diet standards, for example, UNRRA has recommended an average minimum daily diet for the peoples of liberated Europe of 2650 calories, recognizing that for certain categories of persons this level will be higher, while for infants and children it may be lower. In industry UNRRA has set as its objective the aiding of liberated areas in the resumption of production and the restoration of services essential to relief. Emphasis is placed upon the repair of existing facilities and the fullest use of local materials, facilities, and skills.

Southeast Asia as a whole is likely to need much less relief and rehabilitation activity than invaded areas in Europe, China or Japan itself. This is because countries in the area were, in the prewar period, mostly self-sufficient as to food, used less clothing than countries in colder climates, and most inhabitants lived and died without benefit of modern medicine. Burma, having been a "front line" country for two years and more, may be a partial exception to this generalization. It is naturally easier, however, to restore a people to a previous standard of living if that standard was very simple. As indicated below, there will almost certainly be local food shortages, particularly in Malaya and Tonkin, but nearby areas of surplus rice production should more than balance this deficiency. In fact, Southeast Asia's chief significance for relief and reconstruction may well be that of source of supply of food, petroleum and timber needed in the less self-sufficient areas of the Far East. This suggests immediately that Southeast Asian economies may be put on a "pay-as-you-go" basis long before that goal is achieved by the larger northern neighbors. Within a period of two years most of Southeast Asia may be able to export sufficient commodities to pay for necessary imports.

It is unnecessary to emphasize anew the role of Southeast Asia as a source of several basic commodities supplied to Europe and America--notably tin, rubber, quinine and spices. The rehabilitation of this area, therefore, depends to a very large extent upon conditions outside the control of the governments or peoples directly concerned. The competitive position of these "colonial" products will be determined largely by economic and governmental processes (and perhaps by meetings of international interests) taking place in the western world. Until the degree of saleability of Southeast Asia products is known it will be impossible adequately to plan for the rehabilitation and reconstruction of that area. With a favorable export position, imports should be readily available. Factories in Great Britain, the Western Hemisphere and elsewhere may be converting to the production of peacetime commodities--some of them by the time Southeast Asia is reoccupied, depending, naturally, on the course of the war in Europe, as well as the Far East. Exporters of the types of consumers' goods required in Southeast Asia are likely to be eager to gain or regain markets, and barring another depression the "terms of trade" are likely to be favorable for producers of raw materials.

## Chapter I.

PREWAR ECONOMIC BACKGROUND

Southeast Asia was in the anomalous position of being largely self-sufficient in commodities consumed by the indigenous peoples, and at the same time an important source of a large number of basic raw materials for western factories. Thus exports greatly exceeded imports in value, owing to the necessity of making very heavy payments for "invisible imports" such as interest and dividends on invested capital, remittances and pensions of civil servants and immigrants, banking, shipping, and insurance charges. The following table, based on statistics from the Foreign Commerce Yearbook of the U.S. Department of Commerce, shows the great predominance of exports and consequent large "invisible" payments by all five countries of Southeast Asia. In the extreme example of Burma, for instance, per capita exports amounted to \$12.65 against per capita imports of only \$5.60, leaving a balance of \$7.05 which, in the absence of one-sided capital movements, could only be explained as "invisible" payments.

Per Capita Foreign Trade in Southeast Asia  
(Annual Average, 1936-1939)  
U.S. dollars

<u>Country</u>	<u>Imports</u>	<u>Exports</u>
British Malaya	\$63.00	\$75.55
Burma	5.60	12.65
Netherlands Indies	4.00	6.70
Thailand	3.55	5.10
French Indochina	2.60	4.05

Cotton textiles constituted the only important import item which entered directly into the living standards of the average indigenous inhabitant of Southeast Asia. A large share of imports consisted of the machinery and transport equipment necessary to enable that area to fulfill its role as primary producer. Another large share consisted of motor vehicles, canned foods and other items which contributed to the health and comfort of foreigners and of the more prosperous local inhabitants.

The foregoing generalization was least true in Malaya, and most true of remote mountain areas in Burma and Indochina, where hill tribes still carry on a precarious, hand-to-mouth existence without vital contact with economic life of the valleys.

Agriculture and Forestry

Southeast Asia is the world's chief monsoon area. Although "monsoon" derives from the Arabic word meaning "season" it has come to be associated chiefly with seasonal rainfall—ordinarily that brought in the months May to September by the southwest monsoon. The ensuing months, however, bring prevailing winds from the northeast, so far as parts of Southeast Asia are concerned, and in parts of Indochina the rainfall during the northeast monsoon exceeds that during the southwest monsoon. Within five degrees of the equator rainfall is so heavy and so continuous throughout the year that rice is not an important crop.



The river valleys of Burma, Thailand and Indochina, together with most of the island of Java, however, constitute the leading rice-producing areas. Rice is the chief crop by a very wide margin in four of the countries of Southeast Asia, and stands second to rubber in the fifth country—Malaya. Although rice is an irrigated crop in parts of almost every country in this region, the typical rice culture is carried on during the midst of the annual monsoon rains, which usually exceed 40 inches, and hence preclude the necessity of irrigation. A single crop is ordinarily grown, although double-cropping is practised in Java and Tonkin—two of the most densely-populated areas in the world. Rice is found to have a ready market in most years, and as it is the chief item in many family budgets, it is ordinarily grown wherever soil and climatic conditions are favorable. Wickizer and Bennett<sup>(1)</sup> show the following percentages of total crop-producing areas devoted to rice culture:

Percentage of rice culture and rice production (in tens)

Thailand	95 <sup>(2)</sup>	2,711 <sup>(4)</sup>
French Indochina	86	3,945 <sup>(4)</sup>
Burma	65	4,940 <sup>(4)</sup>
Java	45	4,007 <sup>(5)</sup>
Malaya	7.5 <sup>(3)</sup>	341 <sup>(6)</sup>

In Malaya rubber occupied 3,481,000 acres of an estimated total cultivated area of six million acres in 1940. Sixty per cent of the rubber acreage was included in the 2,500 large estates, most of them European-owned. The India Rubber World, June 1, 1941 gives statistics as to acreage and production of rubber in the chief producing countries. Nearly all world production up to 1940 took place in the following countries of Southeast Asia:

Acreage and Production of Rubber

<u>Country</u>	<u>1000 acres</u>	<u>1000 long tons</u>	<u>Tons per acre<sup>(8)</sup></u>
British Malaya <sup>(7)</sup>	3,481	538	0.15
Indonesia	3,375	705	0.21
Thailand	397	52	0.13
Indochina	330	73	0.22
Sarawak	240	46	0.19
Borneo (British)	133	22	0.17
Burma	110	14	0.13

(1) Rice Economy of Monsoon Asia, Stanford, 1941, p. 31

(2) Not included in the list given by Wickizer and Bennett. Based on Statistical Yearbook of Thailand, 1938-39.

(3) Based on Malayan Agricultural Statistics, 1940.

(4) Thousands of metric tons, average 1035-36 to 1939-40.

(5) Includes Madura

(6) Based on Malayan Agricultural Statistics, 1940, converted from gantangs.

(7) Slightly different figures from official sources have been substituted for British Malaya.

(8) Compiled from the previous two columns.

The only other rubber producers of any consequence were Ceylon, with an acreage of 635,000, output of 103,000 tons or 0.16 tons per acre, and India with an acreage of 135,000 and output of 17,000 tons or 0.13 tons per acre. It is noteworthy that Malaya, original Far Eastern rubber producer and still the country with the largest acreage had one of the lowest outputs per acre. Indochina, on the other hand, the newest producer, outranked even Indonesia—chiefly because of the large proportionate use of bud grafting, tractors and modern methods generally.

The remaining agricultural products are of much less importance than rice and rubber. Indonesia accounted for about twenty-seven per cent of the world's trade in two million tons of coconut products, while British Malaya's acreage of 616,000 placed coconuts third (after rice and rubber) with exports in 1940 of 108,469 long tons of copra or equivalent. Indochina's exports amounted to only 10,000 tons of copra, while Thailand and Burma were approximately self-sufficient in coconut products. Oilseeds, particularly sesame and ground-nut, rank next after rice in the economy of Burma, but that country's culinary habits are such that the entire supply is needed for local consumption and there is normally a net import amounting to around fifteen per cent of Burmese consumption.

Cotton acreage has been as high as half a million acres in Burma, but even had extensive local spinning and weaving facilities existed, that country would have produced no more than half enough cotton for local consumption. The rest of Southeast Asia produced only negligible quantities of cotton, relative to consumption. Similarly, jute and hemp production were far below local needs. Kapok was the only fibre export of any importance, the Netherlands Indies producing about three-fourths of the world total, with Indochina in second place, 1939 exports of the latter country having amounted to over three thousand tons.

In certain relatively minor specialty crops Southeast Asia was particularly important. Java, as is well known, produced about ninety per cent of the world's quinine. Competent observers hold that the cutting off of the Java quinine supply is one reason for the malaria epidemics which contributed to the unusually high death rates of India in 1943 and 1944. Castor oil is an important export of Indochina. Indonesia was until recently a leading world exporter of sugar, while Burma normally sent large quantities of beans to Japan. Indonesia normally followed India and Ceylon as tea exporter, accounting for twenty per cent of the total tea entering world trade. Indonesia furnished about 86 per cent of the world pepper exports, 75 per cent of the citronella oil, five per cent of the coffee and nearly a fourth of world trade in palm oil. Indochina normally exported half a million tons of maize.

The large plantation or estate, often European-owned, is correctly associated in the public mind with the production of rubber. In 1939, in fact, the 2401 Indonesian estates had an acreage of over six million and produced sixty-three per cent, by value, of total agricultural exports. In the other countries of Southeast Asia estates were not of great importance except in rubber production. Typically, the attempt was made to introduce or foster peasant proprietorship, but throughout this area the small peasant

has been losing ground for decades, as the moneylender and large landholder has taken over his small farm. Debtless peasants are the exception throughout this area. In some cases, particularly in Indochina, large landowners tend to import tractors or otherwise practise large-scale, scientific agriculture, but ordinarily a farm of a thousand acres or more is sub-let to a large number of tenants, each one of whom farms his holding independently. Imported Indian or Chinese labor is sometimes used, particularly in Lower Burma and Cochinchina, but the greater part of farm labor is provided by the tenant or peasant farmer, his family and his neighbors.

Southeast Asia is the world's principal source of teak, Burma, Thailand and Indochina being the largest exporters, in that order, and accounting for a total export of about 300,000 cubic tons, three-fourths of which comes from Burma. Indochina has in addition an export of around 40,000 tons of other woods annually. Minor exports of forest products from one or more countries of Southeast Asia include derris root, gutta percha, gambier, dammar, gum benjamin, rattan, turpentine, lac, benzoin and catch (for tannin).

### Minerals

World War II has made the world acutely conscious of the fact that Southeast Asia is the chief source of tin and (with adjacent areas of China) of tungsten. Malaya, Indonesia and Thailand ranked first, second and fourth among world tin producers, while the production of Burma and Indochina was considerable. Production in 1940 or 1939, was as follows: (content of ore)

#### Tin production in Southeast Asia

<u>Country</u>	<u>Production, metric tons</u>
Malaya	85,384
Indonesia	44,447
Thailand	17,447
Burma	5,879
Indochina	1,560

Tungsten occurs in very small quantities only in conjunction with the tin of Indonesia and Malaya, but is more important than tin, from the value standpoint, in Burma, where 1939 output was 8,882 tons of concentrates, 60% wolfram trioxide. Indochinese production in the same year was 2,440 tons, against 600 tons for Malaya and 400 tons for Thailand.

Although Indonesia's eight million tons of crude oil in 1940 amounted to only about three per cent of world production, it was of good quality and played a very important part in the economy of the oil-poor Far East. Burma, similarly, source of 300,000,000 imperial gallons of oil, supplied about half of India's substantial needs for petroleum imports.

Burma's great Bawdwin Mine made that country an important producer of lead, zinc and silver, and a minor producer of antimony, nickel, copper and cobalt. Bauxite ore has been exploited in commercial quantities in Indonesia, Indochina and Malaya. Other metals produced in Southeast Asia include iron, coal, chrome, apatite (phosphate) and manganese.

Practically all mineral production was in the hands of large European firms, except for Japanese iron ore production in Malaya and small-scale tin and tungsten production throughout the area. Most tin and tungsten was produced by dredgers or European-owned mines, however.

### Industries

Partially because it is relatively so much better equipped for the production of valuable raw materials, partially because of its late entry into world commerce, and partially because its own people were technologically quite unable to contribute capital or management, Southeast Asia has a very low level of industrial development. Some nationalists have attributed this condition to purposeful boycott of industrialization by foreign capitalists, who preferred to develop only export industries, and the complementary import of manufactures from the west. A more sober view is that the industrial skill for intricate manufacturing industry was lacking whereas the labor as well as natural conditions were present for the production and export of raw materials.

Factories, in the great majority of cases, have been built to process locally-produced rice, timber, petroleum, metals, oil-seeds and similar products of farm, forest and mine. In the Netherlands Indies, in 1940, no less than 1137 of the 3010 industrial establishments were rice mills, and they employed 28,560 of the 193,291 workers. In Burma 637 of 1027 factories were rice mills and employed 41,626 of the 89,383 industrial workers. Malayan statistics do not distinguish between factories and household industries, but of the total of 3347 "factories and other industrial establishments" at the end of 1937 in the Straits Settlements only 13 were rice mills. In Thailand and Indochina it is certain that rice mills exceeded any other type of factory in numbers, but precise figures are unobtainable.

The general pattern of most kinds of industrial establishments---particularly true of sawmills and rice mills---was for a few large European-owned mills to operate in the port cities, handling a large share of the exports. A much larger number of Chinese and Indian-owned mills of medium and small size could be found in the ports, and also in other parts of the country, producing both for export and for the local market. Finally, a considerable number of smaller mills in most parts of Southeast Asia belonged to the local inhabitants, were scattered about in medium sized and small towns, and produced almost wholly for local consumption.

This close correlation between nationality of ownership and type of enterprise did not apply to cement, sugar or mineral industries, for the capital required was ordinarily so great that only European capital was interested. These industries, moreover, existed to supply the local market, so far as cement and sugar were concerned. The textile and alcohol industries also were engaged in supplying a part of the local market only.

Another way of dividing the industries of Southeast Asia is to classify them as those engaged (a) in the processing of local produce for export (ricemills, sawmills, petroleum refineries, smelters, rubber processing works) (b) in the processing of local produce for local consumption (smaller ricemills, sawmills, oil presses) (c) in the processing of imported materials for local consumption (textiles in Indochina constitute the only important example).

Dr. J. O. M. Broek, in his "Economic Development of the Netherlands Indies" points out that the depression of the early 1930's and the accompanying worldwide trade restrictions encouraged a strong movement for the local production of consumption goods, such as textiles, pottery, hardware, beer, cigarettes and soap. The local population pressure with an abundance of cheap and not particularly inefficient labor provided another incentive. The outbreak of war in Europe in 1939 accelerated the process, and Dr. Broek states that in 1941 (just prior to the entry of Japan into the war):

"In addition to encouraging the expansion of such light industries as spinning and weaving mills, factories for glass, paper, cement, plywood, soap, rubber goods, etc., the government is proceeding with the establishment of heavy industry--an aluminum plant in Sumatra for the processing of domestic bauxite by water power; a scrap-copper plant and a scrap-iron smelter with a rolling mill in Java for the manufacture of steel products; several chemical producing units; shipbuilding yards in Semarang, Java. The list is long, and is largely the composition of the new advisory Industrial Council, which represents the government departments including the army, navy, and the Java Bank. The allocation of 10 million guilders from the 1941 budget to be employed as subsidies for certain industrial enterprises (smelters, chemical plants, spinning mills, etc.) marked the inauguration of direct government assistance to large scale private industry."

Industrialization in Thailand has had a distinctly governmental flavor in recent years also. Several large Chinese rice mills were bought out to form the government-owned Thai Rice Company. Other government enterprises include manufacture of sugar, matches, textiles, chemicals, petroleum products (a failure) and leather. By such means the Thai government was able to prevent any one foreign community from obtaining overwhelming control over the country's economic life.

Power plants served a number of the factories mentioned above, as well as the needs of consumers in the cities and towns. Burma had electric power stations in no less than 105 different towns in 1937. Indochina had a similar number, generating 89,808 thousand kilowatt hours in 1939 from publicly-owned plants alone. Power plants belonging to private industrial and mining concerns are believed to have been of equal importance. Most of the plants were quite small, operating from sundown till midnight, or in some cases until dawn. Thus lighting was much the most important use of the electric current.

### Commerce

The Chinese are the outstanding traders everywhere in Southeast Asia except Burma, where Indians predominated in both wholesale and retail trade, at least prior to 1942. A much longer tradition of commercial life, more frugal habits, greater steadiness of purpose, and greater ease of access to foreign sources of supply all combined to place the immigrants in the van of commercial progress. They not merely ran the large bazaars in the chief towns, but also had small shops in the remotest villages. It is doubtful if the vicissitudes of war have greatly weakened the Chinese commercial position.

Indians probably number 5-600,000 in Burma now, against over a million in 1942, and there have been some reports of discrimination against them so that their share in total trade, particularly outside Rangoon, may have declined considerably. However, when Myitkyina was retaken in the summer of 1944 Indians were still found to be the chief traders, even as in prewar days!

As pointed out above, Southeast Asia's important share in world economy prior to 1941 was as a source of agricultural, forest and mineral products. Thus in 1940 rice and petroleum products constituted no less than 73% by value of Burma's total exports. Nearly 77% of Indochina's exports consisted of rice, maize and rubber. Of Netherlands Indies huge export of commodities valued at 883,239,000 guilders in 1940 over 56% consisted of raw rubber and petroleum products. Rubber alone constituted 54.1% of British Malaya's exports in 1940, and tin another 25.3%, while almost 90% of Thailand's exports consisted of rice, tin and rubber.

Imports, quite naturally, showed a much greater variety, since the great majority of items for consumption, other than food, had to be imported. Even in imports, however, a few commodities were outstanding in all countries. Cotton yarns and textiles, for instance, comprised 20% of Indonesia's imports and a similar percentage of Burma's imports, against 11% for Thailand and 13% in Indochina. Iron and steel, machinery and hardware, motor vehicles, chemicals, paper and a host of other commodities completed the list.

Nearly 60% of Indochina's prewar imports originated in France and in the other French colonies, and nearly as large a proportion of exports cleared for those destinations. As to Burma, 55.3% of the 1939-40 imports cleared for India (with which Burma was included, for customs purposes) 17.2% for the United Kingdom and 4.7% for the Straits Settlements. No such one-sided geographic division was noticeable in the foreign trade of the relatively free-trade colonies of Malaya and Indonesia. Thailand, with an economy similar to that of Indochina and Burma, traded chiefly with British Empire countries of Singapore, Hongkong, Penang and United Kingdom—some 37% of Thai imports having cleared from one of those countries in 1938-39. However, geographic considerations sufficiently account for this predominance of British trade, and many commodities imported from Singapore and Hongkong probably originated in Continental Europe or the U.S.A.

The importance of Southeast Asia as a source of "colonial" products became realized generally only with the cessation of trade with that region in 1942. The Netherlands Indies supplies 99 per cent of the quinine consumed in the U.S.A. Dr. Broek (op cit) is authority for the statement that the Indies supplied the following percentages of total American consumption of the products mentioned:

Pepper	96	per	cent
Tapioca	89	"	"
Kapok	88	"	"
Rattan	88	"	"
Mace	86	"	"
Sago	83	"	"
Palm Oil	83	"	"
Tobacco leaf for cigar wrappers	92	"	"

"In addition" writes Dr. Broek "between one-half and two-thirds of the United States consumption of nutmeg, citronella, damar and copal (resins) and gambier or terra japonica are supplied by the Netherlands Indies". French Indochina, Thailand and Malaya also supplied considerable quantities of some of the minor commodities listed above.

### Transport and Communications

Ocean transport necessarily cared for all Indonesia's foreign trade except for the relatively small amount of air traffic. It also absorbed the lion's share of the trade of the other four countries. This was not only because they had supplementary economies, and did not have much occasion to trade with each other, but also because the railways of Indochina and Burma were not connected with those of Thailand at the outbreak of war in the Pacific. It was only between Malaya and Thailand that land traffic was comparable in tonnage to seaborne trade.

Each of the five countries of Southeast Asia has an outstanding port through which most of its foreign trade passes. Rangoon handled 85 per cent of Burma's overseas trade, while Bangkok had almost an equal share in Thai foreign trade. Singapore's miles of well-equipped docks handled almost exactly two-thirds of the tonnage of merchant vessels calling at the five ports of the Straits Settlements, and its share of goods loaded and unloaded was probably larger. Batavia was Indochina's premier port, but Soerabaya at the other end of Java, and Medan, near the northern tip of Sumatra, were also of considerable importance. Indochina's outstanding port was Saigon, which accommodated 800 large vessels in 1939 with a total tonnage of three and a half million tons. Haiphong, in Tonkin, northern Indochina, received visits from nearly as many vessels, but had only half the traffic.

The following table shows approximate shares of the leading maritime nations in the shipping of Southeast Asia:

Percentage Shares in Southeast Asia Shipping  
1938

<u>Nationality of vessels</u>	<u>Straits Settlements</u>	<u>Indonesia</u>	<u>Indochina</u>	<u>Thailand</u>	<u>Burma</u>
British	43.4	30.7	35.2 (9)	26.4 (10)	57
Netherlands	20.3	25.8 (11)	7.6	13.4	(12)
Japanese	10.3	2.9	9.6	14.3	(12)
German	5.9	4.7	1.3	1.8	(12)
Norwegian	5.9	9.4	5.3	25.6	(12)
French	4.1	---	25.5	0.1	(12)
American	0.8	0.7	1.1	0.4	(12)

(9) In most years before 1938, and in the first 7 months of 1939, French shipping exceeded British shipping.

(10) Bangkok figures only.

(11) An additional 20.9 per cent was carried in vessels registered in the Netherlands Indies.

(12) Foreign vessels carried 9 per cent of Rangoon's foreign trade, and British Indian and British Burma vessels the remaining 34 per cent.

The outstanding characteristic of trade in this area, as shown by the foregoing table, is the strong tendency to "follow the flag". Thus France, which had a negligible share in the shipping of the other four countries, stood second to Britain in seat transport in 1938, and considerably ahead of Britain (43 per cent against 19 per cent at Saigon) in the first seven months of 1939. On the other hand, Netherlands vessels, and vessels registered in the Netherlands Indies, enjoyed 46.7 per cent of Indonesia's foreign shipping. British shipping was obviously outstanding throughout the area, but less so elsewhere than in the Straits Settlements and particularly in Burma, where the British India Steam Navigation Company had an unassailable position.

Coastal shipping was the most important means of transport in Indonesia, and was probably of equal importance in Malaya. It was likewise of considerable significance in Burma, Thailand and French Indochina, for all have rather long coast lines, and outlying coastal towns were not adequately served by rail.

Railways were, for obvious reasons, of less economic importance in Indonesia as a whole than inter-island and coastal shipping, although the country's much greater economic strength and population caused it to have over twice the mileage of any of the other four countries of Southeast Asia. Java was fairly well served by a network most of which was state-owned. The two ends of Sumatra had railways, but otherwise traffic was by water or, occasionally, by road. The Malayan Railways were of considerable importance to the economy of the country, with the great port of Singapore at the southern end with a line roughly up the west coast, through the capital, Kuala Lumpur and sending a spur to Prai on the mainland opposite Penang before connecting with the Thai State Railways at Padang Besar. Another line branched off at Gemas and went due north to Tumpat on the eastern coast, a branch connecting this line also with the Thai State Railways. Thailand probably has an economy more dependent upon the railway than that of any other country in Southeast Asia. Population centers are much less adequately served by coastal steamers than in most parts of the region, while inland navigation does not benefit from such conveniently-long waterways as in Burma. Nor are highways as well developed as in French Indochina. The Thai Government undoubtedly desired to prevent road competition from interfering with the revenues of the railways, and only after 1936 was a nationwide road network undertaken.

The railways of the entire region are almost exclusively of meter gauge, except for Indonesia. This facilitated the linkage of the Thai Railways with the southwestern fragment of the Indochinese system in December 1941 and with the Burma Railways at the end of 1943. Prior to the Japanese period, however, Thailand had 2,136 miles of meter-gauge railway against 2,060 miles in Burma, 1,814 miles in Indochina, 1,068 in Malaya and 4,560 miles of mostly 1.067-meter gauge track in Indonesia.

In addition to connecting with both of the Malay lines and with Burma (via Banpong, Kanchanaburi and Three Pagodas Pass) as well as with part of the Indochinese Railways, the Thai State Railways run north to Chiangmai, near the Shan States of Burma, and northeast to the Korat Plateau. The southwestern fragment of the Indochinese State Railways ends at Pnom Penh,



on the Mekong, the main part of the system connecting Saigon with Hanoi, mostly following the coast, and continuing to Nanchang on the Chinese border. A privately owned railway connected the port of Haiphong with Lao Kay on the Yunnan border, and completed the railway system of the country. It continued to Kunming, China, prior to 1940.

In addition to the line running south from Moulmein and establishing connection with the Thai railways, the Burma Railways connect Rangoon with Moulmein, and have a main line up the Sittang Valley through a rather populous area to Mandalay. Branches from Mandalay proceed to Lashio, starting point of the Burma Road, to Myitkyina in the far north and to Ye-U to the northwest. Another line runs from Rangoon to Prome, on the Irrawaddy, with a branch to Bassein, the western delta's only seaport.

Comparable statistics for the railways of the five component parts of Southeast Asia are as follows:

Traffic and density of freight vehicles

	<u>Metric tons freight</u>	<u>Number of passengers</u>	<u>Number of freight cars per kilometer of track</u>
Burma, 1940-41	4,095,143	19,758,079	2.91 (13)
Thailand, 1938-39	1,677,982	5,725,998	1.18 (14)
Indochina, 1939	1,793,748	17,187,556	0.89 (15)
Malaya, 1938	1,886,700	9,923,000	3.15 (16)
Indonesia, 1938	9,717,000	66,717,000	(17)

Inland water transport was probably of about equal importance with rail transport in Burma, Thailand and French Indochina. Each country has a large delta (Indochina has two) in which water transport is the only, or at least the chief, means of transport. Almost every family has some sort of craft, and the farmer often takes his paddy to market in the family boat. Rice companies have paddy barges of their own, and modern launches take care of fast passenger and freight service. The Irrawaddy Flotilla Company had a near-monopoly of public transport on Burma's inland waterways, and was reported to have carried 1,300,000 long tons of cargo annually. However, great quantities of paddy and other commodities were carried in vessels belonging to the rice companies and to private individuals not operating as public carriers. Streams within 50 to 75 miles of tidewater are ordinarily tidal, and slow paddy barges often tie up at the bank while the tide flows the wrong way.

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- (13) Burma Road traffic caused the Burma Railways to end a succession of nine deficits in 1939-40.
- (14) Interurban lines are omitted, and therefore passenger figures are probably not comparable with those of the other countries included in the table. Last column relates to 1928.
- (15) The Yunnan section of the Haiphong-Kunming line is included in calculation of number of freight cars per km. of track.
- (16) Revenue freight only.
- (17) Not available, but in view of the much greater amount of traffic carried per mile, it is probable that the figure is greater than that for any of the other four countries.

The French Indochinese highway system in the prewar period was the envy of Southeast Asia. Smooth, all-weather roads connected Saigon with Hanoi and the Chinese border on the one side, with the Thai railhead at Aranya Pradet on the other, and with numerous towns along the Mekong above Pnom Penh. Just before the outbreak of war in the Pacific the Thai completed a motor road linking Bangkok with the Indochinese network. The Japanese radio has announced the completion of the road from Saigon to Luang Prabang, on the Mekong in northwestern Indochina. Additional roads from the Indochinese coast to the Mekong have also reportedly been completed. The Thai road system is much less adequate, although Bangkok was linked with Chantaburi in southeastern Thailand before the outbreak of war, as well as with most centers on the Korat Plateau of the northeast. There was no road connection between Bangkok and Chiangmai, but the latter center was connected with the Burmese Shan States via Lampang.

Burma's road network was fairly adequate. It paralleled the railway to a much greater extent than did Thai routes. The main route was that from Rangoon to Mandalay, and then to Lashio and via the Burma Road to Kunming and Chungking. This was a fairly smooth, all-weather road. Another route followed the Prome Line of the railway to its terminus, and then continued north through the oilfields to join the first at Meiktila. A third route, from Myingyan, on the Irrawaddy, followed the railway line through Meiktila and Thazi to Shwenyaung, near Taunggyi, and then went east across the Shan States to Kengtung, whence it turned south to Lampang on the Thai State Railways. There was no connection by road, however, between Rangoon and either Moulmein to the east or Bassein to the west.

The war has reportedly changed Burma's road situation greatly. Doubtless the Japanese have permitted many roads to fall into a state of partial disrepair, but they have reportedly connected the main part of Burma much more adequately with the western or Arakan Coast, while innumerable roads have been built or improved, for military reasons, in the north and northwest. The highly advertised Ledo Road connects Burma with India by highway for the first time, with the possible exception of the Palel-Tamu-Imphal or Manipur route, which was barely "jeepable" in early 1942. A new all-weather road parallels the new Burma-Thailand rail link.

The economic significance of roads in all parts of Southeast Asia depended chiefly on the bus and the motor lorry, for only a very insignificant portion of the population had the means to purchase motor vehicles for themselves. Bicycles were increasing in numbers, but were not yet of great importance. In islands such as the Netherlands Indies, where coastal transport is readily available and otherwise satisfactory, roads furnish a cheaper and more flexible system of "feeders" for the small ports than do railways. All in all, it is not unlikely that thousands of discarded military vehicles may, at the close of the war, end their days in the unglamorous task of helping restore economic life in this needy but important part of the world.

Southeast Asia was the junction of long distance air lines representing Great Britain, France, Holland, China and Japan. The only indigenous or strictly local line was a very small one operated by the Thai government within its own boundaries. The British Overseas Airway Corporation (formerly Imperial Airways) operated three services per week through Burma, Thailand,

Malaya and Indonesia, with connecting service to Australia and from Penang to Hongkong via Indochina. The Dutch K. L. M. operated two fast services per week along the same route to Java, with connections to Australia and Indochina. The French served Rangoon, Bangkok and Indochina, their line terminating at Hongkong. The China National Aviation Corporation had two services per week from Chungking and Kunming to Rangoon and an additional service as far as Lashio. The Japanese line, after much negotiation, was just commencing service to Indochina and Thailand at the outbreak of war.

The war has necessarily multiplied the number of air bases and landing fields many fold---for obvious military reasons. In spite of damage done by opposing air forces, it is likely that the end of the war will find Southeast Asia possessed of several times more airports than will be of peacetime use.

The telephone, the telegraph and the wireless had all found a place in the economic life of Southeast Asia before the war, and fairly adequate networks of telegraph lines criss-crossed the entire area, except for Indochina which relied more upon wireless telegraphy. Japanese broadcasts mention restoration of telegraph service in most areas, and some expansions of service. The radio stations have been kept going, for propaganda purposes, but it is doubtful if the total number of radio receiving sets, never large, has even kept up to prewar levels. Numerous radio announcements have called upon listeners to bring their radios in for "adjustment" to prevent short-wave reception.

### Immigration

Taking an overall view of Southeast Asian economy, the westerner is likely to be struck by the poverty, judged by western standards. On the other hand, every country of Southeast Asia attracted hundreds of thousands of immigrants from China, while Burma, in addition had over a million Indians, mostly immigrants. Malaya also had large numbers of immigrants from southern India. Living standards in Southeast Asia, low as they were, were better than those of India and China and this has been the main incentive to Chinese and Indian immigration. Moreover, it was precisely those elements in the population which had least to do with modern commerce which had the lowest living standards. The Moi of Indochina and the Chins and other hill tribes of Burma are obvious examples. Lack of pressure on the soil (with possible exceptions in Java and Tonkin) coupled with rich natural resources, both vegetable and mineral, provided living standards which were higher than those of most surrounding countries.

### Colonial Economy

Many writers have condemned the "colonial economy" of Southeast Asia, depending as it has on specialization on a few products destined for the world market, and produced with the aid of European or other foreign capital and management. A more "well-rounded" economy, according to the critics, would be preferable, particularly if Southeast Asia manufactured its own consumption goods. Assuming world trade conditions with any relation to sanity it seems no more sensible to expect Southeast Asia to refrain from exporting tin, rubber, rice, teak and spices in exchange for manufactured goods than it would be to expect Iowa to reduce its production of corn and

hogs, attempting to manufacture all its requirements of farm implements and other manufactured goods. "Autarkie" is a type of economy which could do nothing but result in a great lowering of living standards in Southeast Asia. A gradual growth in manufacturing industry was under way before the war, and will presumably continue in the postwar period. This growth, however, does not need to interfere in any way with the continuance of Southeast Asia as an important part of world economy. The postwar period may see other governments in this area taking a large part in economic development through ownership and development of manufacturing and mineral industries, just as the governments of Indonesia and Thailand have done in the past. This development undoubtedly means that the profits of enterprise will remain in Southeast Asia, and that indigenous peoples of this region will fill a larger proportion of the well-paid jobs in industry, commerce and mining. Thus a prosperous middle class can be built up with funds hitherto leaving the area. In the past, however, modernization took place in the only feasible way--by the import of European capital and skill. Living standards of the masses were raised to some extent, but very naturally the foreign capitalists and technicians secured a large share of the added wealth. To envisage a postwar world in which a much larger share of the economic benefits of modernization stays in Southeast Asia to build up a prosperous middle class is not by any means to condemn the role of foreign capital and enterprise in this area during the past two generations.

## Chapter II

### RELIEF

The justification for extensive relief operation in Southeast Asia after the war is not greatly different from the justification of such operations in Europe or China. There seems no doubt that millions of lives can be saved by the sufficiently large and well directed activities, and in spite of (some say because of) the emotions generated by the war the possibility of saving lives furnishes a compelling incentive. Moreover, the possibility that a proper combination of sympathy, wisdom and tact may help to create a psychological atmosphere conducive to world peace cannot be ignored. Neither can one ignore the truism that prosperity and depression have come to be a world wide phenomena, and the prompt restoration of the economies of devastated countries will accelerate the return to normal trading relations and opportunities for mutually beneficial trade. This last argument applies with particular cogency to Southeast Asia, which simultaneously provides a unique market in which to buy numerous commodities not presently available in satisfactory quantities to the United Nations and also (in normal times) constitutes a market for considerable quantities of manufactured goods. In fact, there is an interesting and high correlation between the amount of money contributed to the United Nations Relief and Rehabilitation Administration by the leading countries and the amount of "colonial" products (other than rice) purchased in Southeast Asia.

Relief operations in such an area as Southeast Asia, therefore, not only appeal to the altruism of western nations---they offer every prospect of an important contribution to world recovery as a whole and perhaps to lasting peace as well. On the other hand, the vast projected experiment, along lines almost new, offers no guarantee of economic benefits proportional to contributions. Non-contributing countries will also share the benefits of restored trade and lasting peace.

Relief and rehabilitation operations also have an interesting psychological and political aspect. After years of wartime suffering and privation the coming of peace will be welcomed in itself. If it is also accompanied by the distribution of food, clothing and medical care those who administer relief will inevitably be regarded with gratitude and respect by those whom they help. In fact, the work of the military administration, and later of the civil administration, may be considerably lightened by the psychology created by wisely administered relief. This fact might tempt the colonial powers to carry out relief exclusively with their own staffs, independent of any international organization in order to reap the entire benefits of the gratitude resulting from such operations.

At the meeting on October 12 of the Committee of the Council of UNRRA for the Far East it was reported that estimates for relief and rehabilitation requirements had been received from member governments for the Netherland East Indies, Burma, Malaya, British Borneo, Hongkong, China, French Indochina, and the Philippines. Most of these governments which will in general pay for their own relief products, materials and supplies. They submit their requirements to UNRRA in order that they can be commented upon as to whether supplies are sufficient in view of the requirements of other areas. UNRRA does not supply countries that can pay, but on request it performs functions for paying countries and coordinates the programs of member governments everywhere. UNRRA never goes into a country unless it is invited.

There is another aspect of the problem, however. "Doles" have often proved to cause a relaxation of effort even among people living in more enervating climates than Southeast Asia. Great skill will be necessary in the administration of relief not to weaken the incentive to self-help, for otherwise the resentment when the relief is withdrawn may more than overbalance the gratitude when it is first given. This constitutes an argument for permitting an international and obviously temporary body like UNRRA to assume some share of the responsibility for relief, in order that it may also receive its share of the resentment, if any, when the relief is withdrawn.

#### Population Trends and Migrations as Complicating Factors

As yet Southeast Asia has experienced no wholesale movement of population comparable to that in China. However, an estimated half million Indians and others left Burma in the first half of 1942. During this tragic evacuation, most of it taking place along the wild and hazardous Imphal route, an unknown number, perhaps many thousands, perished en route. Many of the emigrants were born in Burma, speak the Burmese language, and have not proved very adaptable to life in India. Perhaps the majority of them will wish to return to Burma as soon as possible after the war. They previously were prominent in agriculture, manufacturing, commerce and urban labor generally, besides furnishing many of the government clerks and professional people. During the spring and summer of 1944 discussions took place at Simla between the Government of Burma (in exile) and various representatives of Burma-Indians. In addition, groups like the South Indian Chamber of Commerce have been reported by the press to have passed resolutions demanding free and unrestricted right of entry for Indians in the postwar Burma. There has been no press report to suggest that the Government of Burma has agreed to such a proposal, nor has there emerged anything to suggest that Indians from Burma will not be permitted to return to the land of their adoption.

It might have been thought that the tragedy of the 1942 evacuation of Indians, plus the 1930 and 1938-39 Indo-Burman race riots in Rangoon and elsewhere would destroy the Indian desire to migrate to Burma. It appears, however, that economic factors, particularly the higher standard of living and wage scale in Burma, constitute a compelling appeal to a country which increased in population at the rate of five million annually between 1931 and 1941.

Censors have passed aerial photographs of Mandalay showing that city to be in ruins in 1944 as it was by the middle of 1942. Doubtless much of its population lives in surrounding villages. Probably some population movements have taken place out of Rangoon and Moulmein. Singapore, Batavia, Soerabaya and Saigon, on the other hand, appear to be as populous as ever. The oft-bombed cities of Hanoi, Nam Dinh and Haiphong in Tonkin, on the other hand, appear to have been partially deserted by their former inhabitants, and a migration problem may exist there.

Since the vast majority of the people of Southeast Asia live in rather small villages, however, it would take major military operations, covering the countryside as well as the main lines of communication, to effect a serious or mass movement of population. Alternatively, a widespread famine might accomplish the same result, were it not for the presence of ricefields near the great majority of villages in this area.

If the re-occupation of Southeast Asia is anything like its original occupation by the Japanese, most villages will be by-passed and only the relatively small portion of the population resident in towns along the main railways, roads (and perhaps rivers) seems likely to suffer loss of homes. The river deltas of Indochina, Thailand and Burma, and the numerous islands of Indonesia present military transport problems which make it extremely unlikely that a large proportion of the villages therein will actually be disturbed by the fighting. In this case relief problems will not include major population or housing problems.

Only a few large camps would appear to be necessary, and when the military need for patched up railway and road facilities has passed it should not be difficult to move their former populations back to Mandalay, Hanoi, Bangkok, etc. and provide necessary housing. The housing problem is minimized by the almost universal adeptness at fashioning the ubiquitous bamboo into housing. Except for middle and upper class urban residences, the provision by authorities of bamboo and thatch, or of access to the same, plus a few simple cutting instruments, should result in the automatic solution of the housing problem, at least according to prewar standards. The old problems of sanitation may return unless special care is taken.

(1) Java's population problem. Java's population problem has taxed the statesmanship of able Dutch rulers for some decades, so it is not a peculiarly wartime problem. If the population has been increasing during Japanese occupation at anything like the prewar rate of half a million yearly the problems facing relief and rehabilitation authorities will be all the more acute. Concerning the magnitude of this problem Dr. Broek writes:

"On Java, without industrialization or any significant immigration, the population doubled in the fifty years from 1890 to 1940--a growth identical with that of England and Wales in the early period of industrialization, and considerably more rapid than that of modern Japan. The average density of population on Java is now about 950 per square mile . . . higher than that of any other agrarian area in the world with the exception of the Nile Delta."

To put the problem another way, Amry Vandenbosch<sup>(1)</sup> cites a colonial official who calculated in 1937 that "Java's need of food was increasing at 4.2 kilograms per second." Emigration to Sumatra and others of the Outer Islands had been tried for a generation, without much result. Intensive irrigation works were undertaken, and additional works may increase the area able to grow three crops per year. On the other hand, Java achieved self-sufficiency in rice for the first time in 1940, and Japanese radios boast of increased food production in this area. It may be, therefore, that the food problem of Java will not become acute until after the relief and rehabilitation period. Much depends, of course, upon the type of military operations used in the retaking of Java. The remainder of the Netherlands Indies is rather thinly populated (partially because natural resources are much less rich than those of Java) and unlikely to have a population problem for many years, if at all.

(2) Malayan population problems. Malaya grew only one third of its own rice in 1940, although its population of five and a half million was spread

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(1) The Dutch East Indies.

over fifty thousand square miles--a density of around 100 per square mile. Much has been made by Japanese propagandists of alleged transformation of rubber estates and other non-food producing land into paddy fields. The actual degree of success in the "grow more food" campaign in Malaya is not known at present. It is known, however, that there are considerable areas of jungle which are potential rice-growing land but have not yet been brought under cultivation. With the obvious decline in demand for the tin and rubber of Malaya, it is not unlikely that considerable effort has been devoted to increasing production of rice and other food crops.

(3) Indochina's population problem. Only in the Tonkin Delta of northern Indochina is there an acute problem of over-population. The Mekong Delta of the south was brought under general cultivation only late in the last century, as was the delta of the Irrawaddy in Burma, and population has not begun to reach its limit. Tonkin, however, has been rather thickly populated for centuries, and a recent scholarly study by Pierre Gourou<sup>(2)</sup> lists areas in which the rural population rises to over 1600 per square kilometer or 3800 per square mile. Hence in spite of an intensive agriculture and two crops per annum Tonkin is hardly able to feed itself even in normal years. There has been a movement of Tonkinese to the rice surplus area of Cochin China, in the south, for many years past. Japanese-controlled broadcasts from Indo-China during the war speak of continuation and acceleration of this population movement.

Moreover, enemy radios speak of migration out of bombed areas in Tonkin. There are dense rural areas in the immediate vicinity of most of the obvious bombing objectives in Tonkin, and it is therefore not unlikely that the end of the war may find hundreds of thousands, perhaps even millions, of Tonkinese far from their homes. The resettlement of many of them in Cochin China and Cambodia, rather than in their previous villages, might help at least to alleviate the Tonkin population problem. The prompt restoration of Tonkin's numerous factories as a means of livelihood for surplus population forms another possible partial solution.

(4) Little or no population problem in Thailand or Burma. Burma and Thailand had the lowest population densities in Southeast Asia--72 and 65 per square mile respectively, in 1941 and 1937. There is little or no evidence of overcrowding in either country, and no reason to think that there will be any such problem during the relief and rehabilitation period.

The only areas from which large scale emigration appears to have taken place are such cities as Mandalay, Bangkok and possibly Rangoon, and the return of their population should not present any major problems.

A much more important related problem is the question of immediate postwar immigration, referred to above. The Chinese minority in Thailand is variously estimated at half a million to over two million, while the 1931 census gave the Indian minority in Burma as about 1,100,000. Those communities were unusually important in commerce, finance, and industry. Thailand has had a rather strict immigration law for a number of years, and Burma negotiated an agreement with India in 1941 providing for restriction of Indian immigration. With the possibility of civil disturbances in postwar China it

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(2) Les Paysans du Delta Tonkinois.



would not be surprising should great numbers of Chinese seek admission to Thailand. The Bengal famine of 1943-44 with food shortages in other parts of India may similarly stimulate Indian desire to migrate to Burma in large numbers.

The question of immediate postwar international migration raises one of a large number of problems which pertain partially to relief and rehabilitation, but are most closely related to national policy as a whole. They therefore can only be decided by the governments concerned. Relief agencies, therefore, should only be concerned with such aspects of these problems as have already been decided upon by the local governments.

### Food

Rice is the staple food with very few exceptions throughout Southeast Asia. It forms a very much larger proportion of the local diet than do bread and other wheat foods in the temperate zone. In fact, the poorer the household, the less of other foods than rice, until in the poorest home there is virtually nothing but rice and salt for many meals. Fish probably ranks next to rice as a universal food in Southeast Asia, being eaten fresh, salted or dried, and also as a malodorous fish paste, called "Nuoc mam" in Indo-China and "ngapi" in Burma. It is interesting to note that although the large Buddhist population in this area professes to oppose the taking of life, and does not eat meat to anything like the extent that meat is eaten by the local Chinese and Moslems, nevertheless Buddhists are heavy consumers of fish. A few fruits and vegetables are grown and consumed locally, but in spite of abundant opportunities for growing them, consumption is much lower than in western countries, and also much lower than dieticians advocate.

Since Southeast Asia exported approximately four-fifths of all the rice entering world trade, it might be assumed that the area presents no problem whatever, so far as food is concerned, during the relief period. While food problems will probably be much less acute, however, there is reason to believe that some areas, particularly Malaya, Java and Tonkin, may experience severe food shortages, even though the deltas and lower reaches of Thailand's Menam Chao Phya and Indo-China's Mekong produce a net surplus of rice. Should the reoccupation of Southeast Asia entail heavy fighting, with consequent disruption of normal transport facilities and perhaps, of law and order as well, rice production may be seriously affected, and certainly the transport of rice from surplus to deficit areas cannot take place in the normal manner. And as indicated above, Java and Tonkin were barely self-sufficient in rice before the war, while Malaya imported two-thirds of its rice. Areas in the Outer Islands of Indonesia and the Dry Zone of central Burma were also deficient in rice production even in normal times.

An offsetting factor is the natural tendency of the conservative peasant to hoard small quantities of food in times of disturbance, hiding the food where necessary. Particularly when there has been inflation of the currency, as in nearly all parts of Southeast Asia during Japanese rule, and when consumers goods are nonexistent or priced prohibitively, the typical peasant may be expected to provide at least for the food of his family if that is at all possible. Even this hope, however, is vain in some areas where Japanese troops are quartered for any length of time. Japanese troops in Burma have proved themselves able to extract food from villagers, under threat

of torture or death, even when no food was in sight and the Japanese may not have been able to locate the hoards. It is unlikely, however, that the total number of Japanese troops will be great enough thus to strip bare very large areas.

(1) Malaya's food problem. In 1940 Malaya produced 331,871 long tons of rice, according to official statistics, and imported 653,222 tons, for a total estimated consumption of 985,093 tons. In other words, the rice consumed by three and a half million of the five and a half million Malays was imported from Thailand, Burma and Indo-China. It is believed that some rice imports still enter Malaya, chiefly from Thailand, although Burma, as indicated below, is thought to have little or no rice surplus, and transport difficulties would make it difficult for Malaya to draw much rice from either Burma or Indo-China. On the other hand, there are numerous Japanese radio reports of an increase in acreage planted to rice. Rice was a less profitable crop than rubber or spices in the prewar period, but wartime conditions may cause a considerable increase in the incentive to rice production. All things considered, however, Malaya will require at least 500,000 tons of imported rice annually, during the period of relief and rehabilitation, for there is nothing to indicate that the normal population increase has not been taking place.

Malaya was normally deficient in the production of vegetables, fruits and even fish. Japanese requisitioning of Malayan fishing boats may have made the problem of fish supply still more difficult. Imports of these foods during the relief period would seem to be imperative, along with such fishing boats as can be spared, or tools to enable local boat builders to provide the necessary craft at the earliest possible moment.

(2) Tonkin's food problem. Indochina's production of seven million tons of paddy (unhusked rice) is spread over the entire country, but the surplus rice all comes from the Mekong Delta area of Cochin-China and the Grand Lac (Tonle Sap) area of Cambodia. Two crops annually are grown in the irrigated littoral sections of Tonkin and northern Annam, but the local population is extremely dense. Most of Indochina's mining and industrial population lives in Tonkin, and the only cereal export of any importance was maize, while Tonkin contributed but a small portion of the country's maize exports.

It was inevitable that the people living in the populous Red River Delta area of Tonkin should suffer from bombing for this area was among the main objectives of air attack in Indochina, although wild Japanese radio claims of great loss of life by the local population due to American air raids may be considerably discounted.

The delicately balanced agricultural system of Tonkin depended upon extensive irrigation works and upon constant application of fertilizer (frequently night soil from cities and towns). Neglect of the irrigation canals and of intensive agriculture generally would not have to be very prolonged to produce a considerable drop in rice production. Movement of refugees and of beaten Japanese troops in Tonkin would almost certainly take place around the chief cities, and therefore in the most heavily cultivated areas. Crops can easily be trampled, rice stocks plundered and farmers frightened away until too late to plant the next crop.

It is believed that famine, or near-famine occurred in Tonkin in 1943, and the 1944 situation may not be much better. If such is the case existing rice stocks must be very low, and the vicissitudes of an actual campaign in Tonkin could easily produce a situation requiring the immediate import of at least half a million tons of rice after United Nations reoccupation. The normal rice surplus of southern Indochina was one and a half million tons in the prewar years. There is nothing to suggest that there has been any important change in the size of that surplus since the Japanese occupation, except reports that great quantities of rice were stored in Saigon for lack of shipping to Japan and for lack of adequate rail transport to hungry Tonkin. One would suppose that unsaleable rice stocks in Saigon of one year would be reflected in reduced rice plantings in the Mekong Delta the following year. It is therefore not improbable that in the immediate postwar period Tonkin will absorb practically all the rice surplus from Cochinchina, leaving Indochina approximately self-sufficient, with a rice surplus of no more than half a million tons for the hungry millions of China and Japan. Since there are two rice seasons per annum in Tonkin, however, energetic rehabilitation measures should speedily restore equilibrium and with it the country's large rice export--which export will no doubt be in great demand elsewhere. It is greatly to be hoped that military developments will be such as to prevent the destruction of Saigon's large rice stocks at the time of United Nations reoccupation of Saigon and environs.

(3). Thai rice situation. Thailand, like Indochina, normally exported a million and a half tons of rice, or approximately twenty per cent of the rice entering world trade. Nearly all the surplus came from the valley of the Menam Chao Phya and its tributaries and effluents. Although there has been an unseasonal flood which greatly affected the rice situation for a time, there is little evidence to suggest a rice shortage in Thailand. On the other hand, it is not known if there are the large warehouses full of rice in Thailand which are reportedly in the Saigon area of Indochina. Aside from exports on a small scale to Malaya, there is no evidence of important wartime rice exports from this country, which normally shipped out about a third of the crop. There is no part of Thailand which seems likely to be in such dire need of surplus rice from another area, as is Tonkin, so it is probable that Thailand will be the world's leading rice exporter in the immediate postwar period.

The fact that the nature of Japanese occupation of Thailand has permitted the Thai government to carry on, with a minimum of Japanese interference suggests less damage to the economic system than in most parts of "Greater East Asia." Law and order does not appear to have broken down, and it appears quite possible that future military campaigns will not affect the chief Thai rice growing areas. There have been no reports of wholesale slaughter and military requisitioning of cattle in Thailand, whereas such reports regarding Burma are numerous. Thai have not, so far as is known, been removed from the soil in great numbers for service in Japanese sponsored "labor corps". The restoration of Thai rice production would therefore appear to be a very simple postwar task, if it is any task at all. Irrigation is fairly important in many parts of the rice producing area, and if damaged or allowed to fall into disrepair the restoration of irrigation facilities will perhaps be the chief item on the relief and rehabilitation agenda.

(4). Burma's unexpected rice problem. Burma, with nearly two-fifths of the world's normal rice exports, is thought to be producing less rice than is normally consumed, although ordinarily over half the crop was exported. This amazing condition is thought to come about because of a breakdown in internal transportation, requisitioning of men and cattle for large engineering and other works of the army, slaughter of cattle for food when fish prices rise, lack of consumption goods for purchase with money to be got from selling the rice crop, and the general inflationary condition of the economy.

It is highly possible, therefore, that no great stocks of rice will be found by United Nations forces when they retake Burma. This is by no means a certainty, of course, for the Rangoon radio has broadcast claims of large-scale government paddy purchases. There can, on the other hand, be no doubt that Burma is not producing anything like the normal seven million tons of paddy or five million tons of rice and rice products. This may perhaps mean that some of the Central Burma irrigation works will fall into disrepair, although that is not likely in view of local rice shortages, in normal times, in the Dry Zone areas around the irrigation works. Rice prices are much higher in the Dry Zone than in the Irrawaddy Delta.

If reoccupation of the great rice surplus area of the Delta and the lower Sittang and Salween valleys finds perhaps half the rice land uncultivated, there will arise an immediate problem of inducing farmers (and enabling them) to plant a full crop at the commencement of the next monsoon (May-June, 1945). Should such efforts succeed, Burma might begin exporting rice around the first of the following year, under optimum conditions. Otherwise, rice export would depend exclusively upon the forlorn hope of capturing large stocks, and finding the local population in possession of sufficient stocks to last for food and seed until the forthcoming harvest. A more realistic appraisal might be that with the cattle situation as bad as it is believed to be, and with the prompt restoration of law and order perhaps more difficult than anywhere else in Southeast Asia, it would be the second or even the third January after reoccupation before Burma would export a sizeable crop of paddy once more.

In the absence of a reliable contemporary livestock census it is necessary to guess how many of Burma's cattle have been slaughtered as a substitute for fish in the diet, worked to death providing transport for the Japanese army and construction gangs, or died of rinderpest and other cattle diseases. A conservative estimate is that a third of the normal 4,500,000 working cattle and 800,000 working buffaloes have already been killed. Further attrition and the vicissitudes of the reoccupation may perhaps reduce cattle or buffalo working population to half the normal number. Since the great majority of farmers use cattle or buffaloes for plowing, it seems evident that normal rice production cannot be restored without a restoration of cattle population or of equivalent import of tractors.

Import of a million or more cattle would probably tax world shipping capacity, even were that many cattle available in India or elsewhere, --and probably there will not be. The only solution to the vexing cattle problem therefore seems to be either to wait for the natural increase in cattle population, which would require three to five years at least, or import tractors. Tractors have hitherto not been regarded as a success in the flooded areas of Lower Burma where most of the rice is grown. There is no reason to doubt,

however, that they would be successful in the Central Burma Dry Zone, in plowing and cultivating the land used for irrigated rice, and for ground-nut, cotton, sessemmum and millet. Should a few thousand tractors be imported for use in the Dry Zone, therefore, all working cattle not needed for breeding purposes might be transferred from that area to the paddy fields of Lower Burma, their place being taken by tractors. While the working out of plans for the effective utilization of power equipment would present obstacles, they should not be insuperable. It would probably not be wise to take too many breeding cattle to Lower Burma, where the climate is less favorable, and where in normal times cattle deaths exceed births, the stock being kept up only by annual importations of fresh cattle from the Dry Zone and the Shan States.

Another problem requiring prompt solution if Burma's rice is to start feeding millions in India, Ceylon, Malaya and other countries promptly is internal transport. That problem will be dealt with in a later section, but so far as rice is concerned it will be chiefly a matter of providing sampans, junks and other river craft capable of moving the rice crop of the Delta to the mills. Perhaps an initial import of cheap and simple craft of the kind from India may be necessary, but local boatbuilders should be able to satisfy the requirements fairly promptly, if given adequate wages and the opportunity to spend their wages on desired consumption goods.

The great claims of Ceylon and India upon Burma's rice surplus would suggest that Thailand, perhaps aided by Indochina, will have to be the chief source of rice imports for Malaya, the Philippines, China and ultimately Japan (except as Formosa and Korea are able to resume exports to Japan).

(5) Other aspects of food problem. If rice is available in sufficient quantities few of Southeast Asia's millions are likely to suffer for want of food. Local fruits, vegetables, fish and in many cases locally produced salt can fill out a meager diet without great imports from outside. Vegetable oil imports are needed by Burma for a sixth of normal production, but Malaya and the Netherlands Indies have a normal export surplus of copra. There is considerable trade in dried fish within Southeast Asia, and a restoration of simple fishing equipment, including boats, may be necessary on a fairly extensive scale. Motor trawling and deep sea fishing generally have not been as well developed in this area as in Japan or Europe. Perhaps the introduction of such methods (unless they have been introduced during the war by the Japanese) might be a new way of solving the problem of a balanced diet, and removing the temptation to slaughter work cattle for food.

Detailed estimates of degree of Burmese self-sufficiency or surplus in all types of food products will be found in the Appendix to this pamphlet. It will be noted that there was a surplus, or approximate sufficiency, of practically all foodstuffs except vegetable oils, salt and a few minor items like tea, coffee and alcoholic liquors. Mr. B. O. Binns, who prepared the estimates from both official and private sources, is probably better acquainted with the normal Burmese food and agricultural situation than anyone else.

On balance, it seems that the outside world will be fortunate to be able to purchase from Southeast Asia one and a half million tons of rice the first year after reoccupation, instead of approximately six million tons normally sent outside this area. It may be several years before the prewar

figure of exports can be achieved. Meanwhile, however, the world's chief wheat exporters have not been invaded, or had production seriously curtailed by the war. Large scale shipment of Argentinian, Australian, Canadian and perhaps American wheat to the Far East may be a necessary relief measure. Since there are millions of people in Central India and North China who shift from rice to wheat or vice versa according to which is the cheaper grain, the temporary change in proportion of wheat and rice consumed in the Orient might take place without undue disturbance of consumer tastes.

An essential feature of any plan for restoration of rice production in Burma, at least, is a solution of the vexing problem of alien land ownership. Chettyars, a money-lending group from South India, loaned an estimated Rs.500,000,000 on the security of Burmese land, chiefly the rich rice land of Lower Burma, and by 1936 a fourth of that land had passed into Chettyar hands, while large additional areas were heavily mortgaged, but the Chettyars had not yet foreclosed. It is not believed that Chettyars have received any substantial payments of rent, interest or principal, since the Japanese occupation, although some Chettyars and agents remained in Burma, and have probably made minor collections. Should the reoccupation of Burma entail the restoration of the status quo ante regarding Chettyar claims, it is highly possible that the resulting peasant opposition and disorders would seriously interfere with the restoration of normal production. It required about five years after the defeat of King Thibaw's army in the Third Anglo-Burmese War of 1885 to restore tranquility throughout Upper Burma, and an equal period might well be required for Lower Burma to enforce the undoubtedly legal claims of Chettyars and other alien absentee landlords. A well planned and carefully executed scheme of land purchase and economic utilization of the land seems indicated. There had been legislation looking toward such a plan just before the Japanese invasion, but the vast and prompt expansion of government land holdings and the letting out of holdings or sale of the land to peasants is truly a colossal problem of administration and could only be recommended because the alternative seemed even more fraught with peril.

Taking Southeast Asia as a whole, with its relatively primitive economy, its family system, its fairly common local self-sufficiency of food and the general availability of fish, jungle herbs, etc. the immediate post-war problems of relief are unlikely to be great, compared with those of China and Japan. Burma, which has been in the front line since 1942, may be a partial exception.

#### Medicines and public health

The great majority of the people of Southeast Asia lived and died without benefit of modern medicines or modern medical care. Free public hospitals, dispensaries or clinics have long been available, it is true, in the cities and towns, but most of the population is rural. In times of sickness the old indigenous methods are used—some of them helpful, some of them demonstrably harmful from the standpoint of modern medicine.

Vital statistics show birthrates of 37.1 per thousand in Indochina, 35.3 in Burma and 34.9 in Thailand. Official death rates are 20 per thousand in Indonesia, 17.3 in Thailand, 24.2 in Indochina and 25.1 in Burma. All these

statistics must be accepted with great caution, for the public health officials who compile them are the first to stress the fact that the village headmen and others who report births and deaths do not do as complete a job as their counterparts in western countries. Comparison of birthrate, deathrate and population increase between censuses, for instance, reveals an obvious discrepancy pointing to greater underestimate of births than of deaths. The most literate areas are likely to have the highest birth and death rates, simply because local officials are more conscientious in their reporting. The first effect of the institution of the Rural Health Unit at Hlegu, Burma, by the Government in cooperation with the Rockefeller Foundation, was an immediate and large increase in both birth and death rates as officially recorded! The foregoing figures, therefore, do not at all prove that Indonesia is the healthiest part of Southeast Asia. They may merely underline the known fact that it is the least literate part, although proof or disproof cannot be had.

There were 6 main hospitals, 112 secondary hospitals and ambulances, 344 medical posts, clinics and dispensaries in Indochina in 1935. The total number of medical institutions came to 594, and many of the institutions were reportedly of very high professional standards. Burma had 315 hospitals with a total of 9,364 beds, and 3,983,747 patients in 1939. It is thought that hospital accommodations in Thailand and Indonesia were no more adequate, in proportion to population, than those of Indochina and Burma.

Malaria, cholera and a variety of intestinal parasites caused most of the sickness in Southeast Asia. Sanitation has never been understood or practiced in the vast majority of villages, and the westerner visiting a village sometimes wonders that the deathrate is only about twice that of western nations,

Prewar imports of medicines were very small. Hence the problem of "rehabilitation" in the sense used in this study is a very simple one, for the quantity of medicines and medical service could be restored to prewar standards without great difficulty. The standard of living is normally so close to the subsistence level, and health conditions are so deplorable that relief is by no means a simple matter, either in wartime, after the war, or in peacetime. Rehabilitation is often thought of as involving greater effort than relief but the opposite is true, particularly of health conditions, in most parts of Southeast Asia. Many people died every year in the average village, who could have been saved by the use of modern medicines and medical skill. Just how far into this almost endless problem it will be feasible for relief and rehabilitation workers to go is difficult to determine. Perhaps a fair dividing line would be to tackle the problem of epidemics through wholesale vaccinations and inoculations (as Public Health Departments in the respective countries ordinarily did before the war) but leave the grave problem of teaching villagers sanitation and providing medical aid for them to the permanent administration of the country.

### Clothing

In most of Southeast Asia the climate greatly simplified the clothing problem. It is not permissible, however, blandly to assume that people whose civilization is many centuries old will take to nudity without a struggle. There are reports of areas in Japanese occupied Southeast Asia where there is but one presentable piece of cloth for a whole family--the members venturing out one at a time. The psychological suffering caused by lack of clothing is

perhaps less than it would be under similar conditions in Europe and America, but is not greatly different.

Shortage of fibres of almost every kind is an outstanding characteristic of "Greater East Asia" as a whole. The cotton and wool of China and Manchuria are far from sufficient to clothe the inhabitants of those countries alone, without providing any exports to Japan. In Southeast Asia the only prewar cotton growing country of any importance was Burma, which produced about 18,000 long tons of lint per year--approximately half as much as the cotton content of the cloth annually consumed in the country. There have been Japanese radio claims of increased cotton growing in every country of "Greater East Asia", but even the claims do not come up to prewar consumption. In the case of Burma it is admitted that production up to the end of 1943 had not exceeded the prewar amount, and radio claims in July 1944 mentioned an acreage only slightly higher than the previous all-time high of a decade earlier, and far below Burma's normal consumption. Moreover, the wide discrepancy often noted between Japanese radio claims and hard fact should not be forgotten.

It therefore is reasonable to suppose that the people of Southeast Asia have been using up their prewar clothing supply, with very few replacements. Raw cotton production has probably increased but little. Some spinning machinery has been imported from Japan, but handlooms appear to be the chief means of processing locally produced fibre. Indochina has a great surplus of cotton spinning capacity, but Japanese transport difficulties preclude gathering cotton from a wide area for spinning at Nam Dinh and elsewhere in Tonkin. Probably the need for clothing is sufficiently great to induce the local population to resort to hand spinning as well as hand weaving, where necessary, to use up the current crop. The most fortunate areas, in a sense, are mountains and backward areas, to be found in all five countries, where modern commerce never penetrated, and local fibre production and handloom weaving always sufficed. Such people experience no special difficulties now!

The standardization and simplicity of clothing needs for the masses in this area simplify relief problems greatly. Sarongs, longyis, panungs, etc. ordinarily consist of straight pieces of cloth, sometimes sewed together at the ends, and tucked around the person in various ways. Dressmaking and tailoring are practically eliminated, except for the upper garments and underwear. Thus it would be possible to send along great numbers of standardized garments, without the complicated problem of fitting sizes, styles, shapes, etc., so far as the chief items are concerned.

The simplest commodity to import and sell, therefore, will probably be standardized clothes of acceptable pattern. The immediate availability of such clothes in exchange for whatever money is introduced by the occupying authorities and/or the local civil government, should instantaneously solve the problem of community acceptance of the new money to be introduced. Moreover, it would make unnecessary the importing of great numbers of laborers from India and elsewhere, for the local people would in most cases be eager enough to work for money which can promptly and without question be converted into new clothes. Similarly, the self advertising garments in the usual gay colors of the area, should immediately give the farmers an incentive to plant, cultivate and harvest the maximum crops. It is believed that the absence of imports under the Japanese regime has largely nullified



Nipponese attempts to secure increased production of cotton and other crops.

### Housing

The problem of housing in the great majority of rural villages in this area is not a difficult one. Nearly all houses are constructed chiefly or entirely of bamboo, except for the roofs, where some form of local grass, palm leaf, etc. is used. When an epidemic strikes a village, superstition rather than modern health notions sometimes causes the abandonment of the houses there and the prompt rebuilding of homes in some nearby location. A knife or two and access to the ubiquitous bamboo suffice to enable the average villager to build a house in short order.

It is unlikely that a large proportion of the thousands of villages in Southeast Asia will be demolished in the forthcoming campaign of reoccupation. Those which are can be rebuilt by their inhabitants promptly, provided, perhaps cheap knives of the normal kind are available in some quantity. It is probable that the Japanese have been unable to import new knives as the old ones have worn out, so there may be a big backlog of demand.

In some areas, notably Tonkin, a sturdier and more permanent type of house is found. Bamboo is often used, but is ordinarily covered by a coating of mud. More permanent houses of masonry are also fairly common, as in adjoining areas of China. Thus Tonkin may present much the most difficult problem of any area in Southeast Asia both with respect to relief of food and relief of housing difficulties.

The urban housing problem is much less simple than the rural problem, for a large proportion of urban houses are constructed of wood and/or masonry. Overcrowding is the rule, and any destruction of houses instantly causes acute misery, except when and where sleeping in the open is feasible. The prompt restarting of sawmilling activities would seem necessary and also the reopening of brick kilns. Imported timber in fairly large quantities might also be required as a very temporary measure. However, only Bangkok, Singapore, Batavia and Rangoon had populations of half a million, and only Singapore approached the million mark. Not more than six or eight other cities exceeded one hundred thousand in population.

An advantage of stressing brick houses in the rebuilding of cities, wherever feasible, is that brick yards would use a maximum of hitherto partially employed or unemployed labor, and would require a minimum of machinery imports. Fuel might be the only problem at all difficult of solution.

Rebuilding of some of the cities and towns might offer an opportunity to improve public health through providing more plumbing facilities. This, however, raises problems of water supply, of large scale plumbing imports, and of economic improvement which transcend both relief and rehabilitation.

## CHAPTER III

## REHABILITATION

Transport

The relief period will probably see something like normality restored as to food, medicines and possibly clothing, for such are necessary for the maintenance of life. Chronologically, however, the partial restoration of transportation facilities may precede many of the relief activities, and it is obvious that in some cases the restoration of internal as well as external transport facilities must precede the supply of food and other commodities for relief work.

It seems reasonable to suppose that where transport facilities have been disorganized by war, military necessity will in many cases compel at least the partial restoration of traffic. It seems likely that the army engineers, for instance, will put in a temporary wooden bridge where necessary, to replace a steel bridge wrecked by bombing or by demolition squads. It should not be assumed, therefore, that the military authorities would restore facilities to the prewar and permanent level. This would be part of the problem of rehabilitation. Moreover, there may be many bridges, highways, railway tracks, etc., which natural deterioration will have made unusable, but which are not essential to military operations. They also will constitute a rehabilitation problem. This problem is further discussed in Appendix I.

Repair facilities similarly will need replacement due to wear and tear in any case, and those of Burma and other areas where severe fighting takes place will be similarly in need of considerable outside help. Much work will undoubtedly be required to put tracks and bridges in normal condition.

Since practically all railways of this area are state-owned, stable governments should be in a position to pay part or all of the cost of importing necessary equipment, ordinarily through borrowing by means of debentures or otherwise.

The Japanese have undoubtedly imported many of their own nationals to assist in running the railways, but they have also used large numbers of local people, particularly in Thailand and Indochina. Presumably much of such employees, plus a few Burma Railways employees who evacuated in 1942, will be available by the time the railways are ready to run under civilian management.

(1) Inland Water Transport. Rail transport is not available to many densely-populated areas in Burma, Thailand and Indochina, as indicated above. These delta regions must necessarily rely on water transport. It is highly possible that considerable numbers of small native craft will be hidden by their owners, and will prevent traffic from coming to a standstill as rail and even road traffic may quite possibly do. On the other hand, it is not unlikely that the end of the war will find vast numbers of landing barges and small military craft of all kinds in this area, and of no particular use to the partially-demobilizing armies which own them. Perhaps, as a temporary measure, some of these vehicles can be secured as gifts, or at very cheap prices. This would be more of a "relief" than "rehabilitation" measure, however, for it is extremely unlikely that vessels designed for the landing of tanks or men on hostile beaches would prove suitable for normal passenger and freight traffic.

In Burma and Indochina, more so than in Thailand, large and near-monopolistic companies carried on river transport. The Irrawaddy Flotilla Company of Burma, in particular, may be assumed to possess the capital, credit, experience and skill to restore traffic promptly and with no outside help other than an opportunity to buy necessary equipment. Perhaps the French companies in Indochina will be similarly placed.

It may be assumed that inland water traffic will be more readily restored to normal than either rail or highway traffic, for, aside from minor dredging and buoying operations, the right of way is in no need of repair, being indestructible, and only the provision of craft, simple landing stages and personnel will be required.

(2) Coastal and Ocean Shipping. Ocean shipping should be easiest of all to restore to normal, for the end of the period of military government should approximately coincide with conditions making for a great sufficiency, if not an over-supply, of cargo vessels, as the world shipping position changes rapidly, convoys are no longer necessary, no more ships are sunk, and the colossal military shipments cease to be necessary.

The repair of docks and raising or removal of sunken ships will presumably be undertaken by the military, wherever necessary - at least so far as necessary to facilitate essential operations.

The reported Japanese campaign to increase the building of small wooden vessels in this area may leave a legacy of boat-building and use which will help the prompt restoration of inter-island and coastal services. It is certain that ocean and coastal shipping service must be restored for all five countries before any vestige of normality can return, for the partial cessation of such shipping under the Japanese has led to great privation and a drastic fall in the standard of living. Except for part of the coastal traffic, however, this portion of the rehabilitation problem will be a matter for the great maritime nations of the world, rather than a distinctly Southeast Asia problem, for in normal times very little traffic of this area was carried in locally-owned vessels.

(3) Highway Transport. Many of the more important highway bridges are also railway bridges. Their restoration raises the problems already discussed. Highway transport is much more flexible than rail transport, and the sale of a few thousand jeeps and other motor vehicles by the army should help to restore highway traffic to normal in short order. Army repair facilities, similarly, might be disposed of in this manner for the mutual benefit of all parties.

The total number of motor vehicles in this area was pitifully small by European standards, not to mention American standards. Indochina, with a famed highway network, had but 1,750 passenger busses and 1,550 commercial trucks and 13,600 pleasure vehicles in 1936. Thailand in 1938-39 had just under 11,000 motor vehicles of all kinds, while Burma at the end of 1941 (after Burma Road traffic had greatly boosted the total) had just under 20,000 motor vehicles. It will thus be seen that the number of vehicles required to return traffic to normal is not excessive.

(4) Air Transport. The postwar pattern of aviation may be so different from the prewar pattern as to make it undesirable to work for a "rehabilitation" which merely restores the prewar condition. Air fields will be many

times more numerous than in the prewar period. Types of transport planes will have improved immeasurably. Once more it is possible that military aviation facilities may be left to start civil air bases and equip them with repair facilities for any probable quantity of international aviation.

Air transport seems likely to increase the transport importance of Southeast Asia, as that area occupies a very strategic corner of the world's largest and most populous continent. Like ocean shipping, however, air transport will presumably be provided almost entirely on a world-wide basis, and will present no particular problems to those responsible for rehabilitation in Southeast Asia, other than the very minor problem of providing a few air bases.

### Industry and Power

As indicated in an earlier section, the largest factories in Southeast Asia are those owned by European firms or (in the case of Thailand in particular) by the government, and located in the port cities. It is precisely such cities which are most likely to be the objectives of bombing raids and to suffer damage if a mile-by-mile advance should prove necessary for the retaking of this area. The smaller and generally native-owned industries of the interior may very often be intact, requiring only spare parts, lubricants and in some cases certain raw materials to recommence operations.

There is a slight possibility that reparations may be secured from Japan in the form of machinery and factories, and that some of these reparations may be used in Southeast Asia. The likelihood of factories escaping wartime destruction, and then such as are useful in Southeast Asia being forcibly taken from the Japanese and sent there rather than to China seems remote.

Rice milling is by all odds the chief industry of Burma, Thailand and Indochina. In Burma, at least, reasons have been given for expecting no large exportable surplus of rice for a year or more after reoccupation. Thus there will be plenty of time to repair and/or replace damaged Rangoon rice mills. Thai rice exports normally passes through the seventy-odd mills scattered along the Bangkok waterfront. Many of these may be damaged by bombing or otherwise. Moreover, there is no indication of such a drastic decline in export surplus from Thailand as from Burma. Depending upon the fortunes of war, therefore, it may be necessary to import some rice milling machinery promptly, for the rehabilitation of Bangkok mills. Throughout this area it is assumed that mills producing for the local market will be undamaged, or at least capable of prompt repair and operation.

The Saigon-Cholon area of Cochinchina likewise contains most of the rice mills producing for export, and there is likely to be a fair export surplus of rice from this region, and hence a need for considerable large-scale milling capacity, even though the entire surplus goes at first to Tonkin. The prompt repair or replacement of large Saigon-Cholon mills will therefore be highly necessary, if they are out of operation at the time of reoccupation.

The sawmills of this area are numerous and like the rice mills those which are large, and are important for the export market are in the chief ports. Japanese activity in the timber industry has been sporadic, and logs in depots, etc., are not easily sabotaged, although they may be cut adrift. It seems possible and desirable, therefore, to start restoring the timber industry to normal promptly, and to have the large port mills ready for operation as soon as logs are available.

The miscellaneous industries - cement, alcohol, soap, textiles, chemicals, rubber and foodstuffs - are important for the production of consumption goods, of which there is a great dearth under the Japanese. An immediate and important lift to morale could be given by promptly putting such industries into operation through importing the necessary machinery and setting up machine and repair shops to service them. Perhaps the army engineers will have unused equipment which can be turned over for this purpose rather than returned to America or Great Britain.

The prompt reopening of as many factories as possible may be expected to: provide employment for the destitute; provide goods for exchange to farmers and workers on the large reconstruction and public works projects; provide material for rebuilding (lumber and cement); produce an atmosphere of reconstruction which has desirable psychological connotations from the standpoint of both military and civil government.

The important companies which owned most of the larger factories in question have headquarters (normally) in Great Britain, Holland or France. In the case of British factories, in particular, the top management doubtless has all necessary information as to types of machinery previously used and can make rather complete rehabilitation plans. If a considerable interval occurs between the liberation of France and Holland and the liberation of their Far Eastern dependencies similar information may be available with regard to the latter. Machinery was ordinarily bought from the colonial power, but prompt rehabilitation may necessitate purchase of considerable machinery in the United States, at least for Indonesia and Indochina, as Holland and France may be unable to export machinery for some time. In many industries the numerous medium and small-scale factories owned by the indigenous peoples and by Indian and Chinese immigrants were in the aggregate much more important than European-owned factories. Such small factories, particularly close to the life of the people, may require much more outside aid than their European competitors.

(1) European investment. The foregoing paragraphs are written on the assumption of no change in the dominant European ownership of large-scale industry. Some readers may impatiently ask whether it is desirable that such a condition be perpetuated. The answer lies beyond the purview of this pamphlet. It is believed, however, that the best interests of all concerned will best be served by promptly restoring industries at least to their prewar level, and European firms have the capital, experience and technical skill for a large part of the task.

The desire for larger indigenous participation in industry and economic life generally is closely related to political and nationalist movements. But participation in industry requires either the ownership and investment of great quantities of capital by indigenous people or borrowing and investment of large amounts of capital by the local governments. There seems no likelihood, at present, that small-scale local businessmen can borrow significant quantities of capital from western bankers. Only in Indochina and to a small extent in Malaya are there indigenous businessmen who are able to purchase or build modern factories like those put up by European firms. Since only Thailand was de facto self-governing before the war, and since no definite date has been set for the actual attainment of self-government by the indigenous peoples of the other four countries, it seems futile to plan for industrial rehabilitation except on a basis of largely European, or possible European-American, enterprise.

In this connection, it may be observed that there has been considerable looseness in the discussion of "economic exploitation" and "economic imperialism" in areas like Southeast Asia. Some writers appear to have used these terms in regard to foreign enterprise generally. From this standpoint the United States during the nineteenth century was the victim of a vast amount of exploitation and imperialism merely because great quantities of European capital were invested in growing American industries. In view, however, of the fact that few of these enterprises were monopolies, and that practically all contributed to the wealth of the country more than they took abroad in dividends, there appears to have been little or no exploitation. Similarly, there have been few if any charges that such European investments led to political control, and thus it is difficult to argue that "imperialism" was present. Similarly, it seems unwise to use such moralistic terms with regard to areas like Southeast Asia except where there is evidence of monopolistic exploitation or of the use of economic power to influence local politics.

The Thai government has for several years been pursuing a policy which appears to offer prospect of securing the undoubted benefits of foreign capital, enterprise and technical skill without surrendering national control of economic life. There is direct government participation in business, and in some cases fairly careful supervision of foreign companies. This has not, however, precluded fairly large investments by British, French and particularly Danish firms. It should not, therefore, tax the political abilities of those in charge of the various administrations of this area to devise methods whereby large quantities of foreign investments could be secured without running the risk of monopolies, "exploitation" or economic controls which interfere with political life.

(2) American investment? In the summer of 1944 it appears that the greatest, and almost the only, large source of capital available for foreign investment will be the U.S.A. But Southeast Asia (excluding the Philippines) has been an area in which very little American investment was made prior to the present war. It is problematic whether American investors will be any more likely to risk their funds in Southeast Asia after the war, at least until law and order have been restored, and a demonstrably stable political regime set up. The uncertainty of the political future of this area may well deprive the area of the capital and advanced industrial technique which America might otherwise provide.

If there is to be considerable American investment, perhaps the type of mixed corporation represented by the China National Aviation Corporation would prove most suitable. The Chinese Government owns a majority share in that company, while Pan American Airways owns the minority share and provides much technical assistance and numerous skilled personnel. Such a solution brings in foreign capital and organizing ability without sacrificing political control, and without involving Americans in local politics. The fact of government sponsorship offers the maximum chance of stability. A possible objection to this type of enterprise is that with state aid it has every temptation to become an entrenched monopoly.

It might be suggested that the international bank mooted at the Bretton Woods conference in the summer of 1944 should contribute to solving the problem of making necessary capital available for industrial and commercial development of undeveloped areas. There is no evidence, however, that such a

bank could lend much money in areas without a strong group of local entrepreneurs. Banks seldom invest in equities, and entrepreneurs are the outstanding need of Southeast Asia rather than facilities to sell debentures, mortgages, etc.

### Commerce

In the earlier, or relief, stage of operations the military government authorities may need to be large-scale importers of cloth and some other commodities for local consumption. Such import would probably greatly simplify the problems of military government through offering a great incentive to labor, and to acceptance of the new currency.

For the longer period, Chinese and some Indian merchants will doubtless continue to be available, having weathered the storm of invasion and reoccupation. With family connections in India and China, they will in all likelihood start up operations on a fairly large scale, with no particular outside assistance other than the restoration of normal transport facilities, and the opportunities to erect godowns and shops.

Similarly, such large general companies as Steel Brothers in Burma, the Borneo Company and Danish East Asiatic in Thailand and Dennis Freres in Indochina may be expected to return to take a leading part in importing and exporting with little outside assistance.

Throughout Southeast Asia the indigenous peoples had been developing greater skill in the years before the war. Particularly was this true in Indochina, where the Annamese were more and more competing with both Chinese and French. The end of the war will perhaps find them more eager than ever to enlarge their share of the local trade.

The need of all Southeast Asia for imports of textiles and other commodities is obvious and pressing, and in the first instance will probably have to be met from relief funds. The outstanding problem of the rehabilitation period, however, will be to stimulate exports in order to make further relief unnecessary. Rice, rubber, tin, timber, iron ore, spices and similar raw and semi-manufactured commodities would seem to be the obvious objects of any policy making for prompt rebuilding of export industries.

Should Southeast Asia merely return to the export of its basic products of the prewar period? What about the technical innovations whereby western nations have attempted to find substitutes for products hitherto secured in this region? In the case of rubber the future is indeed problematic, and no attempt will be made here to assess the various technological, political and economic factors involved. In view of the fact that Southeast Asia has most of the world acreage of rubber, and that synthetic rubber has not yet proved to be cheaper to produce, there seems no present reason to make plans to uproot rubber trees or do anything but restore production to normal pending further developments.

The rebuilding of European and Chinese industries will undoubtedly require vast quantities of raw material, and there is no reason to believe that Southeast Asia's tin, tungsten, iron ore and timber will not be as much in demand as before the war, in spite of some changes in techniques. In other words, there appears to be no other major export of this area about which such

doubts occur as are reasonable in the case of rubber. Nevertheless, it is likely that Southeast Asia's economic future will partially depend upon inventions, political policies and economic policies adopted in western Europe, Russia, China and America, and unpredictable at this time.

The distribution of Southeast Asia's trade with various countries may well be altered considerably by the war. Concerning the period of the first world war and its effect on the trade of Indonesia, Broek has written:(1)

"The first world war disorganized Indies relations with Europe and established new channels of supply and outlets for products with Japan and the United States. The peace led of course to the re-establishment of many former connections, but not to a restoration of the prewar situation."

### Communications

Wartime developments of radio and wireless may make it unwise to attempt to restore the telegraph and cable service completely. They may make it possible to give much better service more efficiently and with less expense through use of the ether. Once more there will be in this area, at the end of the war, great quantities of equipment belonging to the signal corps of the United Nations armies, and that equipment might perhaps be very useful in restoring communications on a permanent basis. In any case, prewar facilities, with regard to telephones, telegraphs, cable, wireless and radio were so little developed that their restoration at least to the prewar level should not be difficult.

### Minerals

The exploitation of the mineral deposits of any nation raises grave problems not encountered in connection with agriculture or with properly-conducted fishing or forestry. Farsighted nationals of more backward countries may oppose the development at this time of mineral deposits on the grounds that in the absence of locally owned and managed industries they cannot now benefit to the greatest extent by the exploitation of local mines and oilwells. When, at some future time perhaps, their countries are self-governing and economically developed, they may discover that irreplaceable natural wealth has been forever lost. One very large and important mine in Southeast Asia, for instance, reportedly had ten percent of its known reserves removed in the last year for which accurate statistics are available.

In any case, most of the mineral production of Southeast Asia was formerly in the hands of large and well-financed European corporations. Presumably nearly all of them can restart operations fairly soon after reoccupation with their own capital and technical staffs.

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(1) Economic Development of the Netherlands Indies, p. 88.



## CHAPTER IV

## RECONSTRUCTION

Even if U.N.R.R.A. should in response to request assist in the relief and, what is less likely, the rehabilitation stages, the subsequent work of reconstruction, or improvements of economic life, will be the responsibility of the national governments and colonial powers. They may or may not seek the aid of technicians from some international organization. The following very tentative remarks include suggestions as to possible directions of economic improvement. Many of them are merely continuations of policies already adopted before 1941.

A. Changes in the Basic Economic Structure

Since the world's most powerful and wealthy nations are the nations with the greatest industrial establishments, it is but natural that smaller and less developed nations should judge industrialization the key to wealth, power and happiness. Thus nationalists in Southeast Asia may be expected to clamor for grand programs of industrialization.

While, as indicated above, there is undoubtedly some scope for the building up of consumption goods industries, it appears unwise to attempt to make any part of Southeast Asia primarily a manufacturing country. Basically, Southeast Asia is splendidly equipped to continue as a source of specialty raw or semi-processed material. Like Denmark, it may well find considerable prosperity and well-being for its people in a development which does not lead to industrial or military greatness. In the absence of sufficient quantities of bituminous coal, or of a population presently able to compete in heavy industries, no large scheme of industrialization is indicated.

Textiles, bicycles, perhaps tires, canned foodstuffs, flashlights and batteries, sugar, and many chemical products, etc. may well be manufactured from local products with a minimum of imports and a maximum of adaptation to local tastes.

Some writers who value industrialization highly blame European enterprises for a lop-sided economic development which lays all the stress on exports. It is undoubtedly true that European enterprises, (like the very numerous and important Asiatic commercial and industrial firms) set up business in this area primarily to make a profit, and that they found the greatest opportunity for profit in the development of export industries. In view, however, of the fact that they could equally well have developed local industries for the production of consumption goods had conditions justified, it is not necessary to impute to them any sinister motives, such as the desire to prevent optimum local economic development. The small size of the local market for most manufactured goods made it appropriate that Chinese, Indian and in some cases indigenous firms should spring up, operate on a small scale, and satisfy local needs. In some cases, moreover, European concerns did set up manufacturing industries with considerable success and profit, and catered to the local market. Indochinese textiles are an outstanding example. That they did not set up more such enterprises probably shows that in their seasoned judgment more profit was to be made in developing the export industries for which this area was best endowed by nature. Some facts of geography and economics are no respectors of politics, and it is highly possible that a national government, itself owning a controlling interest in all local enter-

prises, would come to the same conclusion - that primary stress should be laid on the development of export industries.

This does not preclude the possibility of considerably greater industrial development than before the war. For instance, in countries like Burma containers of jute, wood or metal have to be imported for the internal transport as well as the export of most local products other than teak. Perhaps most of such containers could profitably be manufactured locally.

There is evident a worldwide trend toward greater government participation in economic life and its control. There is every reason to suppose that a similar trend will go on in Southeast Asia, particularly if and as the colonies move toward self-government. They may eventually find that such economic control is more necessary to prevent the development of monopolies with headquarters in nearby parts of Asia than to prevent the development of similar monopolies with headquarters in Europe. Mixed companies, with control in the hands of the local government but minority holdings and technical management in the hands of foreigners may serve a useful purpose.

## B. Agriculture

Since agriculture is the means of livelihood of the vast majority of the people of Southeast Asia, and will probably continue to predominate into the indefinite future, great importance should be given to long-range plans for applying in this area the proved results of agricultural research. It might be well to point out, however, the necessity of westerners understanding the reasons for doing things in a particular way in the Oriental environment, before suggesting specific improvements. Innovators have sometimes discovered that methods which were excellent in the west did not work in monsoon Asia.

There can be no doubt, however, that the extensive use of fertilizers is economically justified in Southeast Asia. Yet only about ten percent of the phosphate production of Christmas Island (Straits Settlements) was used locally, the rest being exported. Similarly the phosphate (apatite) from Leo Kay in Tonkin is said to be exported by the Japanese in its entirety. In the latter case it is reported that special processing is required to make the apatite suitable for use on Indochinese soil. It is not unlikely that research will discover additional resources in various parts of Southeast Asia which can be exploited for the provision of a vastly greater quantity of fertilizer for local use.

Throughout Southeast Asia there are Departments of Agriculture which have developed or imported new and improved varieties of seed. Much remains to be done, however, in popularizing among the largely-illiterate farmers the improved seeds already available. The outstanding improvement along this line, however, POJ sugarcane from Java, appears to have almost completely supplanted previous types in this part of the world. Better-supported Departments of Agriculture in the future may well repay the investment many times over, judging by excellent past results.

Similarly, with great areas of cotton, groundnuts, etc. planted broadcast when line planting and inter-cultivation have been proved more profitable everywhere, there remains much to be done in persuading farmers to use implements and methods which are ready and waiting for them. It is barely

possible that the tremendous dislocations of life caused by the war will make the peasant a little less conservative in the postwar world. If so, techniques are available which will enable him appreciably to increase his standard of living.

Peasant proprietorship has been anything but a success in Southeast Asia. In areas which started out primarily as areas of small-scale holdings by actual farmers, indebtedness has been incurred and moneylenders have taken over large areas. Cooperative credit has been tried extensively, with some good results, but with many failures. Many still look to it as a source of great amelioration of the conditions of life of Southeast Asia's millions, but past experience does not raise very sanguine hopes.

The forests of Indochina and of the Outer Islands of Indonesia remain very largely unexploited, and in the other three countries there are still areas where the provision of adequate transport facilities should result in profitable timber extraction.

The agriculture and forestry of this area will perhaps be profoundly affected by technical changes taking place in the west. The following passage from Dr. Brook furnishes food for thought:

"For years, certainly since the first world war, the trend in most countries has been from a specialized to a diversified economy, and the present war has greatly accelerated this tendency. Industrial countries have diversified their manufactures and have intensified agricultural production; countries producing raw materials have developed manufacturing industries. The 'chemical revolution' has facilitated domestic production by making available various universal substitutes for commodities which were once highly restricted to certain areas. Whether the aim has been a better balanced domestic economy or autarchy for war purposes, the result remains the same: disruption of the traditional world trade pattern.

"....Manufacturing countries will probably import less raw materials for which satisfactory substitutes have been developed but more of such basic resources of modern industry as rare metals and fuel, while industrializing countries will import less consumers' but more capital goods..."

It will thus be seen that some changes, such as the invention of satisfactory substitutes for quinine, may affect Southeast Asia's economy adversely, while others, including an increased demand for tin, tungsten and perhaps for most forest products, may be favorable.

### C. Transport

Parts of Southeast Asia had regular commercial airfields before they had either rail or road connection with the outside world. This area may be expected to share with the rest of the world in the results of postwar advances in long-distance air transport. It is difficult to foresee a time, however, when the lion's share of its commerce will not be carried by water, rail or road.

The new Thailand-Burma rail connection, linking the latter country with the rest of Southeast Asia, may lead to some economic changes, particularly as it will stimulate trade between Malaya and Burma. A more spectacular

connection may be the actual completion of the Manchuria-Singapore line by the building (and rebuilding?) of a few hundred miles of road in China and connection of the two fragments of the Indochinese system. An alternative to the latter connection is a line from near Vinh on the Indochinese coast through Thakhek to connect with the Udorn branch of the Thai railways. In any case, such a through line, even though it suffered from a change of gauge at the Chinese border, would have far-reaching repercussions on the economy of the entire region, making for economic development generally and a closer integration of the economies of Southeast Asia and China. Similarly, if the proposed Burma-Yunnan railway is completed during or after the war it may contribute to the development of backward areas of both countries, greatly increase the traffic on the Burma Railways, and lead to a new orientation of trade and perhaps industry as well. The other obvious possibility in the way of railway expansion is a Burma-India connection, either along approximately the same line as the Ledo Road of current interest or via the Arakan Coast. Such a road would have to depend for its economic justification on future development of population, agriculture and industry. Many roads in North and South America were built with future hopes of this kind, and most of the hopes were realized.

There has been much more Japanese activity in highway building than in the extension of rail lines. Moreover, the Ledo Road may have great postwar importance. It may in fact cause the abandonment of the Burma-India railway project. The general effect of these improvements may be, like the railway projects discussed above, to knit more closely the economies of the countries of Southeast Asia, China and India.

#### D. Foreign Commerce

The foreign trade of Southeast Asia depends to a large extent upon scientific, industrial and political developments throughout the entire world. Unknown factors are very numerous and it is impossible to be very certain how nearly postwar trade will resemble prewar trade. Japan, which was a growing factor in the trade of the entire region, both in exports and imports, may be less of a factor if it is devastated by a last-ditch defense of the home islands. However, Japan's large and vigorous population cannot be supported without a considerable foreign trade, so eventually that country may regain its former position and perhaps be more of an economic factor than before. The wartime development of India, and the possibility of some such economic development as that envisaged by the "Bombay Plan" make it highly possible that that important country might not only take more than half of Burma's exports and supply more than half of Burma's imports, as before the war, but might also take a much larger part in the trade of the rest of Southeast Asia. Similarly, renaissance China may be a great factor, depending on internal developments.

International cartels and agreements, such as the International Rubber and Tin schemes may be continued in the postwar period and perhaps other products may be similarly protected. It remains to be seen how much of the restriction involved is calculated to benefit the indigenous inhabitants of Southeast Asia. Indonesia was working toward a system of state partnership in the tin industry whereby a larger and larger proportion of the proceeds of that industry stayed to benefit the living standards of Indonesians. Perhaps postwar cartels will more generally achieve a similar result. Present trends suggest that in the case of rubber, at least, consumers may be represented in postwar cartels.

There have been occasional suggestions of a Southeast Asia customs union. In view of the fact that the surplus products of this area are sold chiefly to India, China, Japan and Ceylon, and that the countries concerned export much the same commodities, it is doubtful if a customs union would fill a very important economic purpose. (Its political importance might be great, but that is beyond the scope of this pamphlet). It is difficult to see just which industries of which countries in Southeast Asia would be protected by a customs union, and whether such protection would commend itself to the union as a whole.

Southeast Asia is probably the most important part of the world to which attention might be directed by reference to Article IV, the "free access" clause, of the Atlantic Charter. The prewar barriers to free access were many, varied, and often of a subtle nature so that their very existence was a matter of dispute. Tariffs were of course an obvious means of favoring imports from imperial sources into Burma, Indochina and (after 1932) Malaya. There appears to have been no outright tariff discrimination in the Netherlands Indies but the quota system was adopted during the depression of the 1930's and gradually extended with the result of protecting Holland's trade to some extent from Japanese competition. Government purchases, motor car taxes, currency regulations and other means were used on occasion to help direct the flow of trade in desired directions. It is reasonable to suppose that a more general adherence to the principle of "Free access" will result in some betterment of the terms of trade of Southeast Asia. It is doubtful, however, if discrimination was ever carried so far that its complete abolition would by itself greatly affect the native living standard.

### E. Summary and Conclusions

The main lines of the economy of Southeast Asia were already rather well laid down in the prewar period. Geographic factors make this part of Asia an extraordinarily efficient producer of a number of agricultural, mineral and forest products, while geographic and social factors make undesirable an attempt to develop heavy industries or anything approaching industrial self-sufficiency. Considerable development, however, is possible in the direction of producing certain consumption goods for local use and producing packages for internal transport and export of domestic raw materials.

The chief future development may well be that which enables the indigenous inhabitants to take the lead in the direction and control of their own economic life. This will call for great advances in local acquaintance with modern technology, and a tremendous increase in savings and the capital funds in the hands of local people, particularly in Burma and Indonesia.

It is doubtful if the local inhabitants, with the possible exception of the Annamese of Indochina, can accumulate the necessary capital in the coming generation. Government and cooperative activity would seem to offer the only practicable means for this generation to achieve the goal of local economic autonomy without a tremendous sacrifice in living standards. As cooperative activity has given no evidence of success on such a grand scale in Southeast Asia, government activity, perhaps in partnership with foreign concerns, appears to be the only recourse.

It has been suggested that the restoration of Southeast Asia as an important source of rubber, tin, quinine, rice, etc. for the rest of the world

is even more important than simple relief activities in other regions engaged in less essential (from the world's standpoint) activities. The products of Southeast Asia are needed in almost every country of the world, so the relief and rehabilitation of this area is definitely a matter of worldwide concern.

Because of the fact that Southeast Asia was nearly self-sufficient in foodstuffs in normal times, and had a large export of rice, it should not be a recipient of aid for a very long time. The small scale of industrialization and the large share of water-borne traffic in the transport system also point to fairly prompt restoration of normal life. Unless unwise policies of western nations force a lapse into self-sufficiency, Southeast Asia should be growingly prosperous in the postwar period.

## APPENDIX I

## . PROBLEMS OF RAILWAY REHABILITATION IN SOUTHEAST ASIA

Railway rehabilitation should be made less difficult by the near-universality of the meter gauge in Southeast Asia. The Japanese, also, have found this useful, and reportedly carriages plying across Thailand are sometimes marked "Pnom Penh-Moulmein," and hence ply from Indochina to Burma. Locomotives being prime military targets, will probably be few in number, except for those imported by United Nations forces, and presumably available, through purchase or otherwise, when those forces turn over management of the rail lines. It is not so likely, judging by past experience, that a correspondingly large proportion of passenger and freight cars will be unusable after the Japanese withdrawal, but it must nevertheless be assumed that wartime damage and deterioration will be very great, so that a large import of rolling stocks will be necessary.

Figures were given on page 13 above indicating the density of freight cars in the four smaller countries of Southeast Asia. Official Indochinese statistics list 4,115 freight vehicles of all kinds in 1938, and 645 passenger cars, most of which were equipped with vacuum brakes, although the shorter Haiphong-Yunnan line may have used pressure brakes. There were 277 locomotives and 13 railcars at that time, with weights varying from 11 to 57.5 metric tons each, a large number being 53 tons in weight. There were reportedly 17 steam and five electric locomotives on the Hongay coal mine railway in 1940. It is possible that the Japanese have imported a few locomotives since their occupation of Indochina in 1940. It is doubtful if United Nations forces and relief agencies, etc., will be able to restore rail traffic to its prewar level without importing upwards of 200 locomotives, 3,000 freight cars and perhaps 400 passenger cars, if Indochina is retaken only with a mile by mile advance. Should Japan proper be conquered first, of course, the situation might be very much better.

The Thai State Railways had approximately 143 steam locomotives and 34 Diesel locomotives in 1941, passenger and freight vehicles numbering 370 and 3,817 respectively in that year. There is little to indicate damage to many of these locomotives or cars since the outbreak of war, except as they may have crossed into much-bombed Burma to be destroyed there. It should be noted, however, that the Japanese may be able forcibly to withdraw Thai rolling stock either into Cambodia or into Malaya, according to the direction from which United Nations forces attack that country (if it proves necessary to make such an attack). At the best, there might be necessary only the replacement of a few locomotives and cars lost by bombing and worn out in the normal course of traffic over the past few years. At the worst, perhaps 90 percent of the locomotives and two thirds of the rolling stock may be destroyed and require replacement.

The Burma Railways in 1940-41 were officially reported to possess 358 locomotives with a total tractive effort of 6,496,364 pounds. There were 762 passenger carriages and 384 "other coaching vehicles." Freight cars numbered 7,583, with a capacity of approximately 130,000 long tons, in addition to "other goods vehicles" numbering 2,006. It is thought that all but 125 of the locomotives were rendered unusable before their acquisition by the Japanese in 1942, and there have been numerous reports of successful bombing attacks

against locomotives in Burma since that time. There thus seems little doubt that very few locomotives, and perhaps not over a third of the rolling stock will be regained when the Japanese are expelled.

No comparable figures are available for Indonesia and Malaya, but from freight and passenger statistics cited above it may be assumed that the former had more locomotives and rolling stock than at least any two other countries of Southeast Asia, and that Malaya was not far behind Thailand. Rehabilitation needs there, as elsewhere, will depend mostly upon the amount of destruction occasioned by the reoccupation.