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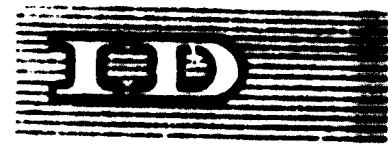
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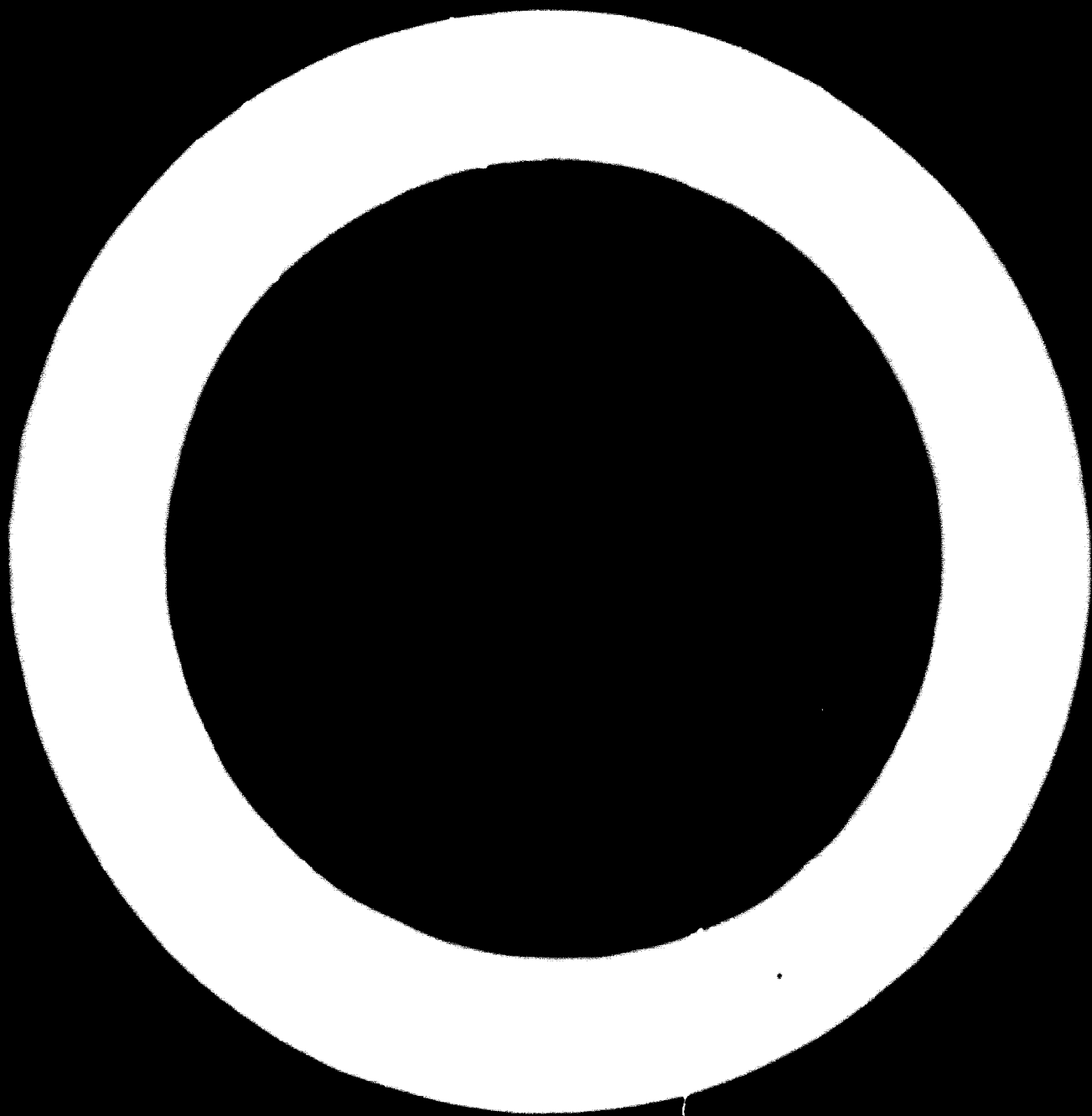
CASE STUDY:
A SURVEY OF INDUSTRY AND ITS POTENTIAL IN SURINAM ^{1/}

by

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This case study is based on a UNIDO Industrial Survey Mission of Surinam performed in 1972. Though the final report of this mission has been de-restricted by the Government of Surinam, it should be clearly stated that said report - on which the present lecture is based - does not necessarily reflect the views of the Government.

1.0 SCOPE OF WORK

A UNIDO Survey Mission was sent to Surinam from mid-January to mid-March 1972. The group consisted of :

Paul ANCIAUX - Industrial Economist - Team Leader
Raúl JOFRE - Industrial Engineer
Peter KRUCK - Engineer and Economist - UNIDO Staff Officer
William COX - Economist - UNIDO Staff Officer

It had been recommended that an industrial census be conducted as a preliminary to the Industrial Survey Mission, and a UNIDO survey expert was to arrive three months prior to the full mission to help the Surinam Planning Bureau to perform this census. However, during the intervening period, this Bureau was ordered to devote itself to an exhaustive population census. Therefore, it could not give its attention to an industrial census, and the advance man to be supplied by UNIDO was not sent. In the course of subsequent events, the Mission reached the conclusion that a full industrial census would have been difficult to perform, because of the reluctance of many managers of both national and foreign firms to deliver precise data on their operations.

Although the preliminary step of an industrial census was lacking, the mission did its best to assess the economic situation of the several industrial branches, be it through rough estimates wherever complete and accurate data were beyond reach. Despite this initial difficulty, the extensive information gathered by the Mission has allowed to draw a comprehensive picture of Surinam's industries that was lacking before. Based on this picture, the Mission has attempted to render its best judgment in response to the assignments of its "terms of reference", which are :

- "...to assist the Government of Surinam in :
- a) appraising operating conditions in industry ;
 - b) appraising expansion plans and requirements ;
 - c) evaluating the country's industrial potential ;
 - d) reviewing incentive policies and legislation ;
 - e) examining the institutional machinery for industrial promotion; and
 - f) determining further assistance requirements...

The final report of the Industrial Survey Mission in Surinam is a document of 133 pages with a number of statistical tables. In the following pages, the lecturer has tried to extract the essential of said report, avoiding too many details or figures not directly related to those specially involved in the development problems of Surinam. Attention has been reserved to the general approach of industrial survey practice, Surinam being only an example chosen for this purpose.

2. BASIC INFORMATION

Location: North coast of South America
Coordinates: 10°N, 70°W
Area: 163,800 square kilometers
Population: 1,500,000
Capital: Georgetown
Official Language: English
Currency: Guyanese Dollar

General features : area of 163,800 square kilometers
main rivers flowing northward
coastal plain 20 to 30 kilometers wide, at or under sea level, providing good water-transportation and draining facilities (area 6,800 squ. kil.)
inner district rises progressively in altitude from the coastal plain southward to reach mean heights of 500 meters (occasionally higher to around 1,000 meters along the border with Brazil (159,000 squ. kil.)
soil and vegetation
lower parts of coastal plain : swampy forests sometimes transformed into rice fields or drained for growing other crops - swamps locally interrupted by sand dunes or lateritic hollows, some of the latter made of workable bauxite
south of the coastal swamp region and parallel to it : belt of equatorial forest about 100 kilometers wide, giving gradually way to savannas with the rise of altitude to the south
climate equatorial
mean monthly temperatures : January - 25° C
October - 29° C
daily temperature variation between 10 and 20° C
dominant wind from the northeast (trade-wind)
total annual rainfall : 2 to 3 meters
humidity at or above 80%
main rainy season from April to July
secondary rainy season from November to February

Natural resources : energy - no important reserves of fossil or nuclear fuels known until now
- huge hydroelectric potential still to be fully developed
minerals - bauxite (aluminium ore) important reserves and intensive exploitation
- gold production started 1875 reached a peak of about 1 ton a year around 1900-1910 ; now declining below 100 kil./year
- pegmatite minerals (beryl, amblygonite, cassiterite, tantalite) worked on a very small scale ; never prospected systematically
- other mineral occurrences (including iron, manganese and nickel ores) are known to exist and are far from being fully inventoried
agriculture - cultivated area of about 1,500 squ. kil. : rice, sorghum, sugar, citrus fruits
- agricultural employment is one third of the labor force
- abolition of slavery in 1963 and phytological

diseases hastened the development of important plantations growing coffee and cocoa. animal husbandry and fishing. Climate and vegetation well suited for the raising of cattle, dairy cows, chicken, hogs, goats and the like. animal husbandry yet to develop.

abundant fish in the rivers and

profitable mining grounds on the continental shelf

fish and shrimp industries yet to develop

forestry - equatorial forest covers 80 % of Surinam, as follows :

| | |
|-------------------------------|-----------------------|
| . virtually inaccessible : | 12.3 million hectares |
| . accessible, non-exploitable | 1.6 |
| exploitable | 1.0 |

. total

14.9 million hectares

- over 100 species among which only 15 used

- forestry inventory presently in progress

tourism - muddy beaches not suited for tourism, but interesting sceneries in the interior combined with mild climate and environment could make a basis for the development of tourism

Human resources - The population is a blend of people of various ethnic origins. The distribution of the various groups throughout the country is an important social feature, originating in history, which is portrayed in following table.

| Ethnic groups | Historical Origin | Geographical Distribution | | Total Number (%) |
|---------------|--|---------------------------|----------|------------------------|
| | | Coastal Area | interior | |
| Amerindian | Pre-Colombian Aborigenes | - | 8,000 | 8,000(2.0) |
| Europeans | 1499-1633 temporary dwellings 1634-1954 colonial settlements | 10,000 | - | 10,000(2.5) |
| Dushnegroes | 1634-1863 slave-trade 1726-1863 struggle for emancipation | 8,000 | 32,000 | 40,000(10.0) |
| Creoles | 1634-present interbreeding | 148,000 | - | 148,000(37.0) |
| Chinese | 1853-1870 contract-workers immigration | 10,000 | - | 10,000(2.5) |
| Hindustanis | 1873-1916 contract-workers immigration | 120,000 | - | 120,000(30.0) |
| Javanese | 1890-1929 contract-workers immigration 1930-1939 free immigration | 64,000 | - | 64,000(16.0) |
| TOTAL | | 360,000 | 40,000 | 400,000(100.0) |
| Of which : | | | | |
| | Paramaribo and suburbs | 280,000 | | (70.0 %) |
| | Nieuw Nickerie | 35,000 | | (8.75%) |
| | Dispersed | 45,000 | | (11.25%) |

The total population of 400,000 in 1970 is growing at about 0.8% per year, although significant emigration (to the Netherlands, Guyana, Colombia, etc.) has reduced this growth recently to drawing to some extent on the better trained work-age population. The age distribution is shown below.

| Age-group | Distribution by group. | Cumulative. |
|---------------|------------------------|-------------|
| 0 - 14 years | 41% | 48% |
| 15 - 29 years | 25% | 70% |
| 30 - 64 years | 25% | 96% |
| 65 and over | 7% | 100% |

The economically active population of 101,400 (1968) was divided among economic sectors as follows:

| Sector | Number | % |
|---|----------------|--------------|
| Agriculture, animal husbandry, fisheries | 22,000 | 21.7 |
| Forestry and woodworking | 1,800 | 1.8 |
| Mines, aluminium industry and electric power | 6,600 | 6.5 |
| Other manufacturing industries and construction | 17,700 | 17.0 |
| Others | 38,700 | 38.3 |
| Total working population | 86,500 | 85.3 |
| Unemployed Coastal Plain | 6,500 | 8.4 |
| Jungle | 6,400 | 6.3 |
| Total active population | 101,400 | 100.0 |

Health conditions are good due in part to the availability of good drinking water and the abundance of natural food products (fruit, fish, etc...). Good health services have eliminated or reduced the incidence of the endemic equatorial diseases. Due to the comfortable climate elementary shelter against rain or sun gives sufficient protection.

The original languages of the several ethnic groups are spoken less and less. A common vernacular language is Surinamese (Taki-taki), which originated from West-African tongues, English, Dutch, Spanish and French. A new Surinamese literature is developing. The official language remains Dutch, which is taught at school and spoken by almost all of the population. English enjoys widespread use in trade and in relations with foreigners.

Education is relatively developed. Primary school has been compulsory since 1976. There are 400 primary schools spread throughout the country, even in the remoter parts. They served 128,000 pupils in 1970. The literacy rate is greater than 90% in Paramaribo and more than 70% for the overall population. There are 20 general secondary schools with 40,000 pupils, and 5 technical, commercial and teacher's schools. University level institutions exist or are being established in medicine, laws, tropical agriculture.

Government and Administration.

Together with the Netherlands Antilles and the Netherlands itself, Surinam is part of the Kingdom of the Netherlands. According to the Charter of 29 December 1954, "except in such matters as defence, foreign affairs and nationality, which are prerogatives of the Kingdom, the three countries have exclusive authority to take final decisions. Moreover, each country can draw up and amend its own constitution."

Surinam has its own Parliament, the Staten, with 39 members elected by direct vote of the population. The Government is comprised of 13 ministers under the chairmanship of the Minister-President and is responsible to the Staten. The country's Charter, which defines its relationship to the Kingdom of the Netherlands, may be changed in the near future. A Committee for the Kingdom, created in January 1972, is to advise the respective Governments of the three member States on a new constitution for the Kingdom.

The Civil Service of Surinam is comprised currently of 20,000 civil servants, who make up more than 20% of the active population; its payroll amounted to

Sf (Surinamese Guilders) 1970 = 100. In 1970, the price level was 69 % of current (1970) prices, compared with 100 % in 1967.

Economic Situation

Measured in per-capita income, Surinam is one of the more highly developed of the developing countries. Despite population growth, real GDP per capita grew at an estimated 5.5% annually from 1961 to 1970. This level reached a level of about Sf 1,220 (US dol. 600) in 1970 prices. This level is close to those of Uruguay and Chile and is higher than in all the other countries of the Caribbean-Guyanas sub-region except for the Netherlands Antilles, Puerto Rico and Trinidad. Wage rates are correspondingly high.

Surinam's economic development was dominated in the 1960s by the construction of the hydro-electric dam at Afobaka and the alumina-alumina complex at Paranam. The impact of that investment is instructive for the future because of the approaching prospect of similar but larger investments in Western Surinam.

Development of Gross Investment, GDP and Consumer Prices.

| Year | Gross Investment (million Surinam guilders) | GDP at current factor cost | Real GDP at 1953 prices | Annual rate of change | |
|------|---|----------------------------|-------------------------|-----------------------|----------------------|
| | | | | Real GDP | Consumer Price Index |
| | | | | (percent's) | |
| 1961 | 67.0 | 165.6 | 135.8 | 5.5 | 2.5 |
| 1962 | 71.0 | 176.0 | 143.1 | 4.9 | 1.6 |
| 1963 | 77.0 | 196.5 | 150.0 | 7.5 | 4.0 |
| 1964 | 135.0 | 206.4 | 161.2 | 15.9 | 2.2 |
| 1965 | 130.0 | 241.5 | 186.9 | 23.0 | 4.6 |
| 1966 | 95.0 | 306.4 | 229.9 | 11.9 | 6.6 |
| 1967 | 106.0 | 356.4 | 257.0 | 2.7 | 2.1 |
| 1968 | 99.0 | 375.9 | 264.9 | 3.0 | 2.1 |
| 1969 | 98.7 | 410.1 | 281.1 | 6.7 | 2.0 |
| 1970 | 107.4 | 452.7 | 304.1 | | |

(Rate of change between present and following year.)

GDP excludes income transferred abroad.

The basis of calculation of the consumer price index was changed between 67 and 68.)

Sources of Finance. (million of Sf)

| Year | Domestic Savings | | Net Capital Inflow | | Total Sources of Finance | |
|------|------------------|--------|--------------------|--------|--------------------------|--------|
| | % | mil.Sf | % | mil.Sf | % | mil.Sf |
| 1961 | 32 | 19.7 | 30 | 18.3 | 38 | 23.1 |
| 1962 | 27 | 19.7 | 44 | 31.6 | 29 | 61.1 |
| 1963 | 28 | 23.1 | 43 | 34.9 | 29 | 71.7 |
| 1964 | 29 | 40.2 | 58 | 82.0 | 13 | 81.6 |
| 1965 | 25 | 33.3 | 57 | 77.1 | 18 | 141.7 |
| 1966 | 61 | 61.1 | 22 | 22.3 | 17 | 135.5 |
| 1967 | 67 | 71.8 | 12 | 12.4 | 21 | 100.8 |
| 1968 | 54 | 56.9 | 28 | 29.6 | 18 | 107.4 |
| 1969 | 54 | 58.0 | 13 | 13.8 | 33 | 105.4 |
| 1970 | 53 | 63.7 | 9 | 10.8 | 38 | 106.5 |
| | | | | | | 119.3 |

(Derived from the macro-economic accounting identity :

Savings = Investment + Balance of trade in goods and services.

Official Net Capital Inflow including direct and portfolio investment, commercial credits, and private transfers to the non-bank sector ; also official loans and grants.)

Balance of Payments and Reserves

| | | | | |
|----------------------------|--------|--------|--------|--------|
| Exports (Goods + Services) | 204.7 | 204.7 | 204.7 | 204.7 |
| Imports (Goods + Services) | 204.7 | 204.7 | 204.7 | 204.7 |
| Balance of Current Trade | 0.0 | 0.0 | 0.0 | 0.0 |
| Net Income to Capital | 29.1 | 29.1 | 29.1 | 29.1 |
| Net Loans and Investments | (29.1) | (29.1) | (29.1) | (29.1) |
| (of which long-term) | (19.0) | (14.3) | (25.4) | (15.7) |
| Unilateral Transfers | 3.4 | 12.5 | 12.5 | 20.2 |
| Balance of Payments | 3.4 | 12.5 | 12.5 | 20.2 |

| | 1965 | 1967 | 1968 | 1969 | 1970 |
|---------------------------|--------|--------|--------|--------|--------|
| Exports, Goods + Services | 204.7 | 204.7 | 254.6 | 280.5 | 297.9 |
| Imports, Goods + Services | 204.7 | 204.7 | 227.5 | 251.7 | 268.8 |
| Balance of Current Trade | 0.0 | 0.0 | 27.0 | 28.8 | 29.1 |
| Net Income to Capital | 29.1 | 29.1 | 69.1 | 78.5 | 72.8 |
| Net Loans and Investments | (29.1) | (29.1) | (69.1) | (78.5) | (72.8) |
| (of which long-term) | (19.0) | (14.3) | (25.4) | (15.7) | (12.6) |
| Unilateral Transfers | 3.4 | 12.5 | 12.5 | 20.2 | 23.4 |
| Balance of Payments | 3.4 | 12.5 | 12.5 | 20.2 | 23.4 |

It appears from these tables that Surinam's economy was relatively stable in the early 1960's. Both incomes and prices were rising moderately; domestic savings also were stable at about 12% of GDP. The surge in foreign investment activity in 64-65 generated a sizable amount of new income in the country, and the production of alumina beginning in 64-66 continued to inject new income until its volume leveled off in 68. The predictable result of sudden new demands for goods and services was a rather rise in the consumer price level, which accelerated from an annual average of about 3.5% before 65 to some 6.6% in 66-67, despite the fact that sharp income growth also boosted savings temporarily to the range of 18 to 20% of GDP.

The sources of finance have exceeded gross investment since 1962. Domestic savings (estimated from the national accounts identity: savings = investment + exports - imports) have increased suddenly from less than one-third of total available finance during the early 1960's to more than half since 1966. The pressure of money incomes upon prices has been contained within bounds through this rise in savings combined with growing imports of consumer goods, financed from the foreign-exchange proceeds from rising exports of bauxite and its derivatives. The surplus of total sources of finance over gross investment has gone in effect to build up the country's international monetary reserves in step with its rising volume of trade.

Although the balance of payments has been positive since 1962, its structure has changed markedly. As much machinery and equipment were imported in 64-65, this increase in foreign investments was reflected in the trade deficit. The decline of the capital inflow after 1965 was followed in 1968 by a large rise in repatriated profits to foreign capital, but these negative developments were more than offset by the rise of alumina and aluminium exports, leaving room for sizable additional imports as well. Most of the growth in exports has been to Europe in the form of alumina and aluminium, while the fastest growth in imports has been in those from the United States in the form of inputs for the bauxite processing. Balance-of-payments difficulties could develop if the present slump in the world aluminium market results in falling exports from this sector while consumer imports continue to grow. Surinam has not yet finally determined whether or not to join the Caribbean Free Trade Association (CARIFTA).

Considering the development of the economy, the boom in Surinam has in fact been a continuation of the boom in the economy, especially that of other major countries, during the late 1960s, the pattern of the boom in Surinam is similar to that of other countries. Even larger investments in mining and other primary industries during this period again the economy will continue to grow rapidly. It is the time therefore for vigorous promotion of other industries, particularly in the late 1970s.

Surinam's advantage is the extent of bauxite and its derivatives has the economic consequence of a comparative disadvantage in the export prices of certain other goods and the competitiveness of import substitutes. This occurs because exports based on bauxite help to maintain a stable exchange value for the Surinam guilder as prices in the country rise, while countries without such a strong line of exports tend more frequently to devalue their currencies. While this stable exchange value for the guilder may be the proper one for Surinam, it is not favourable to the development of new exporting and import-competing industries at a lower value. This is one of several constraints bearing upon Surinam's industrialization.

3.0 INFRASTRUCTURE FOR INDUSTRIAL DEVELOPMENT

Electric Power Industry.

Total generating capacity in 1970 : 277 megawatts (MW)

Total energy produced in 1970 : 1,400 gigawatt-hours (GWh)

The bulk of the energy is produced by the two big aluminium companies :

SURALCO (a subsidiary of ALCOA : Aluminium Company of America), and Billiton.

These are also the main consumers. The capital Paramaribo is electrified at 100 %, the rural settlements at 25 %, but the electric tariffs are especially high for industrial or private consumers, although the cost of the energy delivered from

the main hydro-plant (Afobaka) is only around 3 mills/kWh.

In Western Surinam, there is an important project of hydroelectric scheme on the Kabalebo river, related to the installation of a third big aluminium company :

Reynolds Metals Company. The final installed capacity of this scheme alone would be 1,065 MW.

Transport.

The most important mode of transport for Surinam's manufacturing industries is general cargo shipping. Air freight is secondary, although the cost of air passenger transportation to and from Surinam is of significance for the prospects of the tourist trade. Internal transport by road, water and air is important, but it is less critical than in many countries because of the high concentration of economic activity in the Paramaribo area.

The Study Mission heard some complaints from businessmen about the high price and alleged unreliability of general cargo services to and from Surinam.

The long delay often experienced in receiving materials ordered from abroad makes it necessary to bear holding and storage costs of large inventories of imported goods and occasionally requires a factory to reduce production for lack of critical input. High shipping rates for imports and exports allegedly make it difficult for Surinam's manufacturers to compete in export markets.

Financial Institutions.

With a National Development Bank and four commercial banks, adequate funds can be raised for medium-sized, well secured loans for commerce and industry, and the foreign exchange can be obtained to import equipment and materials. There is considerable evidence, however, that these sources are closed to would-be industrial enterprises whose promoters are less well established. Therefore, there is some justification to the creation of a risk-bearing fund.

Other aspects of infrastructure for industrial development such as housing, education, telecommunications and health services are not treated in detail for reasons of time. Moreover, it appeared to the Mission that these aspects of development did not raise fundamental problems in Surinam.

4.0 INDUSTRIAL SECTOR SURVEY

4.1 Food Industry

The relative importance in gross domestic product of the agriculture, animal husbandry and fisheries sector has been declining in Surinam as in most other countries. It remains true even if the rapidly growing mining and aluminium industries are excluded from the calculation. In 1970, the sector represented (mining and aluminium industries being excluded) 18.3 % of the GDP, and all indications point to an accelerated decline from 1970 on.

Only about 1,500 square kilometers of the country's area, mostly on the coastal plain, are under cultivation. These areas do not always have the most suitable soil. The main characteristics of agriculture are small farms with an average size of 6.3 hectares (a very few farms are over 100 hectares), lack of mechanization, inefficient farming practices, underemployment and poor marketing channels.

| Production of principal cash crops in 1970 : | tons | contribution to total value (%) |
|--|---------|-----------------------------------|
| rice (paddy) | 143,300 | 63.4 |
| cane sugar | 13,056 | 14.7 |
| bananas | 39,740 | 8.4 |
| citrus fruit | 10,900 | 2.8 |
| vegetables | 3,041 | 4.8 |
| coconuts | - | 1.9 |
| others | - | 4.0 |
| | | <u>100.0 %</u> |

The main characteristics of the food industry are the small size of the domestic market and large imports. These imports have increased substantially during recent years in response to rising incomes and flagging domestic production. Meat imports have risen by about 10 % annually between 1966 and 1970, while cereal imports increased five times during the period. Meanwhile, imports of manufactured food products doubled with the most striking increase (28 % annually) occurring in dairy products, mostly butter. The aggregate value of food imports in 1970 was Sf 23.5 million or about 5.5% of GDP.

Total exports of food products - consisting mainly of rice, bananas, shrimp and alcohol (rum) - amounted to Sf 19 million in 1968. Thus the balance of food imports and exports is not very favourable for a country with such a vast potential for agriculture, animal husbandry and fisheries. These food exports are shipped out after only minimal processing. The healthy development of this important industry in the future requires a concerted effort to streamline existing production and distribution facilities and to introduce more processing of export products within Surinam. (The Survey Mission Report, after a detailed discussion, makes proposals concerning new product lines and improvements in present facilities).

The livestock industry is small and fragmented. Except for two chicken farms with about 350,000 broilers, animals are raised in small numbers by farmers on small plots. Large scale ranching has not developed. A recent attempt at large-scale cattle ranching in the southern savannahs, near Brazil, came to an abrupt end when the entrepreneur died in an accident.

The meat and dairy production is as follows for 1970 :

| | Production | Average annual increase on the 67-70 period (%) |
|-----------------------|----------------|---|
| <u>Meat</u> | | |
| beef(tons) | 1,347 T | 5.5 |
| pork | 534 T | 9.4 |
| poultry | 2,708 T | 20.5 |
| Total meat | <u>5,679 T</u> | 14.1 |
| <u>Dairy products</u> | | |
| milk(1,000 litres) | 11,340 | 3.05 |
| eggs(1,000's) | 45,670 | 32 |

Surinam's coastal waters contain a rich variety of fish and shellfish also in the country's rivers and in the large lake created in 1964. Nevertheless, the country is a net importer of fish. The total catch of fish for a modern American shrimp enterprise with exclusive rights for catching, processing and exporting shrimp and fish from 1964 to 70, export volume of shrimp increased by 40 % though, but, in the same period, export value for Surinam dropped by nearly 50 %. This anomaly comes through the fact that the Surinam Government receives its fee on 2 % of the value added in the country itself through a secondary processing operation only.

There is a modern flour mill with a processing capacity of 100 tons of wheat per day. Current imports of wheat are 28,000 tons annually. The flour yield is 71-75 %. The total annual production of the flour mill is about 19,000 tons. Flour imports have declined radically as a result of the modernization of the flour mill capacity from 50 to 100 tons per day.

A well-equipped margarine factory produces about 700 tons annually of several kinds of margarine. However, the two shifts have a potential capacity of 1,000 tons each. Thus, the factory is producing only 35 % of its capacity output. Though the retail price of the domestic product is only 82 % of the imported one, and the absolute price difference is larger than the duty, margarine imports increased by about 90 % in the 4 last years. The 1970 import share in the total margarine market in Surinam was about 50 % and rising. (The import share of butter consumption has reached about 94 %).

In general, oil palm is very suitable for Surinam's conditions. Erection of a vegetable-oil processing complex is to begin in 1972. The future output of the palm plantation will be about 6,400 tons of raw oil yearly, of which 2,700 tons are to be processed by the complex for local use and for export.

The soft drinks sector seems to be adequately developed, producing 35 million litres annually (86 per capita). The 1970 production of Surinam's only brewery was 8 million litres; this represented almost 90 % of the total domestic sales of 9 million litres (22.7 litres per capita). An alcohol distillery produces ethyl alcohol and rum alcohol from sugar cane molasses. In 1970, about 1 million litres alcohol at 50 % strength were blended and bottled for the home market and some 2.2 million were distilled further and exported to Germany. Liquor consumption in 1970 is estimated at 1.6 million litres of 40 % alcohol, or 4 litre per capita (over 7 litres per adult). Liquor imports are steadily increasing and amounted in 1970 to 370,000 litres or 23 % of total consumption.

Five animal feedstuff enterprises are utilized only at 25-30 % capacity. To provide for 1970 consumption, 16,500 tons of feed were manufactured locally from about 8,100 tons of domestic and 8,400 tons of imported raw materials. The remaining 3,500 tons of feed, consisting of special types, were imported.

4.2 Clothing and Shoes Industry

It is difficult to determine the total sales of clothing because of the numerous independent tailors and the large imports. Prices of locally made clothes are lower, in general, than for imports, and their quality is acceptable. It is felt that this is one sector in which consumer prejudice rather than objective difference often militates against sales of a domestic item of equivalent quality and lower price. Moreover, there seem to be two feasible export markets: the EEC and the Caribbean countries.

The shoe industry is represented by four factories. Due to poor equipment and antiquated procedures productivity is only 4-5 pairs of shoes per man-day. Only Bata uses modern machinery and procedures. The total market is estimated at 600,000 pairs annually, or 1.5 pairs per capita, including sandals and plastic children shoes. In 1971, total production in all four factories was about half of this number. Men's and boys' shoes accounted for 60 % of domestic production by quantity and a higher proportion by value, and local production probably captured 80 % or more of all sales in this category. Local output of women's and children's shoes was significant but less dominant. None of the factories is working at capacity, and one may close because of losses. almost all raw materials are imported, although one enterprise produces vegetable-tanned leather

for insoles by primitive methods and also exports salted hides. Of the roughly 300,000 pairs of shoes that are imported, about 40% are women's shoes, 40% children's shoes, and 20% men's shoes. The total value of shoes imported are 40%, and an import quota has been set for 40%. Duties for women's shoes are also 40%, but there are no quota restrictions. Thus, the local industry supplies most men's and boys' shoes, while the majority of women's shoes are imported.

Shoe export from Surinam seem to be feasible when the necessary initiative is present. The IEC market is readily accessible and, indeed, one factory expects to export soon. As for the supply of raw materials, there seems to be a good possibility for a local tannery. Besides, large-scale alligator farming could be encouraged because of the high value and growing demand for handbags and shoes made of alligator hides.

4.3 Wood Industry

Surinam's vast forests are the country's second most important presently exploited natural resource (after bauxite), but its potential has not yet been adequately developed. The nature of the Surinam forests poses many difficulties for the wood industry. Only 7 to 10 of the many timber species are sufficiently well-known and in extensive use in the lumber business. At least 100 species have not been systematically investigated. The small number of usable trees per unit of area and the necessity to build roads in very dense jungles makes the logging operation quite costly.

The largest lumber operation in Surinam is the Bruynzeel Company, a Dutch firm operating since 1943. Its current activities encompass an extensive logging operation, a saw and planing mill, and a plywood and particle board factory. It employs about 1,250 persons and is the third largest industrial employer after SURALCO and HILLION.

There are six sizeable wood-furniture manufactures. Except for chairs, children's beds and desks, most furniture is produced in small series or custom built. Everything but the wood itself is imported. A great problem in this sector is the shortage of management and skilled labor as well as the high labour turnover.

Bushnegro wood carving is an example of genuine indigenous handicraft. Approximately 6,000 carvers are registered with the Bushnegro Wood Carvers Association, but only 1,100 are working steadily because of limited sales. However, a potential exists for export to the Caribbean region, which now obtains indigenous wood handicrafts almost exclusively from Haiti to supply its booming tourism.

Since suitable wood species are available, a wooden boat building industry might be established.

4.4 Paper and Packaging Industry

There is no paper industry so far in Surinam despite the fact that the establishment of a venture in this field has been under intensive consideration for some time. All paper and most packaging materials presently used are being imported. The problems relating to a potential pulp and paper industry are not of technical but rather of economic nature. Specifically, they result from the need to assure an export market for the output, and from the high cost of the logging in present conditions.

4.5 Chemical Industry

The only major enterprise in this sector is a manufacturer of toothpaste and various detergents. Its annual production of detergents is 670 tons and its capacity utilization stands at 40%. Present sales of detergents in Surinam are estimated at 1,200 tons annually.

4.6 Ceramics and Glass Industry

There are no ceramics or glass factories in Surinam, though extensive kaolin reserves exist and such project has been proposed more than once. Most of the kaolin is inside the processing areas of the powerful aluminium companies, and its removal would create drainage problems in low-lying places. Moreover,

the other countries of the Caribbean Basin. The Government

2.2.1.1. Bauxite

The aluminium industry in Suriname produces bauxites of good quality. The Suriname Aluminium Company (SURALCO), a subsidiary of the Aluminum Company of America (ALCOA), has conducted the exploration and mining activities in Suriname since 1957. The Sullit mine, a subsidiary of Royal Dutch/Shell, began the exploitation in 1960. Until 1965, all the bauxite extracted was exported, most of it to the United States. In that year, SURALCO put into production an alumina refining plant with a output capacity of 1 million tons and an aluminium smelter with a capacity of 60,000 tons. Due mainly to value added through these processes, the total value of Suriname's exports roughly tripled from 1964 to 1970. The present share of bauxite, alumina and aluminium in these exports is at least 66%.

In 1970, aluminium industry employed about 6,100 persons at its various locations, of whom some 4,600 worked for SURALCO. This direct employment amounted to only 5 or 6 % of the nation's labour force, aluminium being a capital-intensive process, but its stimulation of employment in ancillary sectors and consumer industries and services may add to its significance. The book value of capital invested in the industry at the end of 1970 was approximately Sf 369 million of which about half is related to processing and smelting, one-quarter is associated with the hydroelectric plant, and the remaining quarter with mining itself.

2.2.1.2. Fabricated Metal Products

This industry consists of some 30 firms making metal furniture (about 20 of them), sheet-metal products, machined objects, wire fencing, nails, aluminium windows and doors, lighting fixtures and lamps, and bottle caps.

A variety of steel framed furniture is sold on the small home market, which is protected from imports by quotas from the EEC and prohibition against those from elsewhere. The wholesale value of metal furniture production is estimated to have been about Sf 1.2 million in 1970 and Sf 1.6 million in 1971, this rapid growth being probably stemmed from the recent boom in housing construction. Because of protection from imports, high prices can be charged. Imported components make up about 45 % of the total production cost. The making of metal furniture employs some 180 persons of whom about 90 in the two largest firms. These two plants are utilized on a one-shift basis. Considerable underutilization exists in many of the smaller shops. The two larger firms are talking of exporting, especially within the Caribbean Region.

The biggest market for general purpose steelworking is that for construction and repair of boats, barges and storage tanks and for steel bridges, towers, sheds and buildings. Large sales fluctuations are characteristic of those firms making heavy producer's goods, because of both the cycles in investment and the irregular intervals at which large new construction orders are received. The steel yards have a presently combined work force of perhaps 185 employees, although this number has declined and may well decline further unless major new orders soon follow the boatbuilding contracts now coming to a conclusion.

A market exists for aluminium fabrication. Some 30,000 sets of aluminium window frames were sold in 1970, of which about 500 only were locally fabricated from imported aluminium shapes. There is negligible tariff protection for the domestic items.

THE CURRENT CONCEPTS OF INDUSTRIAL GROWTH

Compared to many developing countries, Suriname has certain advantages that favour its industrial growth. Among others, there are the following positive elements:

- the first phase of industrialization already has been achieved, and a certain momentum of development exists;
- general education is widespread; there is very little illiteracy; a common language adapted to industrial life renders communication easy between groups of different origin, faith and social level;
- some important export industries linked to fast-growing international markets are well established and have good growth prospects; they provide an important stimulus to the development of smaller-scale industries;
- the balance of payments has been favourable consistently during recent years, and the price level has been relatively stable providing a healthy economic environment;
- funds are available for investments both from domestic savings and potential foreign sources; foreign concerns are willing to participate in joint ventures, to which they provide capital, know-how and connections in international markets;
- good international relations exist with a stable internal political situation.

Nevertheless, there are constraints on Suriname's industrial growth.

One way to overcome these difficulties is through diversification, as follows.

- Small scale of the domestic market, which is restricted to only 400,000 consumers, most of whom with low incomes. As a consequence, many production lines devoted to local consumption alone cannot reach the scale of economical production series. Typically this means that

- an enterprise confined to the local market cannot grow with one or a few lines of production and thus cannot specialise and lower its production cost;
- on the contrary the firm can grow only through diversification of its products, resulting in a number of small series with high production cost with little possibility of efficiency;
- protection from imports means high prices, which induce several several enterprises to compete with each other in similar short production runs, resulting often in a prevalence of unused plant capacity.

- Lack of price competitiveness on foreign markets due to:

- high production costs (see above);
- isolated geographical situation and high ocean transport costs, especially in the Caribbean;
- resulting high cost of material inputs most of which are imported;
- high cost of labour, compared to most other developing countries;

- Inadequate number of managers and skilled personnel. Difficulties faced by Surinam's infant industries require much managerial skill. This skill is well developed among the existing entrepreneurs, most of whom possess much energy and experience. It is difficult, however, to retain qualified staff, which often prefers after training to take employment in the metropolitan Netherlands for the sake of better salaries and social security advantages.

The same phenomenon occurs with skilled workers. Although labour is basically educated and relatively easy to train, many workers emigrate when they have enough skill to find work abroad and enough money for the passage.

This continuous brain drain among managerial assistants and skilled workers means that senior managers must handle many tasks that should be delegated

of the, therefore, by making available to them the pertinent information, resulting in a different approach to the problem, and a different type of decisions and frequently a different result, in terms of the investment distribution.

- Poor information - Investigations, now being made by the foundation for the promotion of investment in Guyana, created in the Hague, are well conceived. However, the potential foreign and local investors have been discouraged by the absence of an industrial development center in Paramaribo to provide full up-to-date information concerning:

- . existing investment possibilities;
- . market and feasibility studies already made;
- . incentives and facilities granted to new investors;
- . official procedures to acquire a license and to qualify for such incentives;

and to give practical assistance to potential investors in fulfilling their aims.

- Inadequacy of licensing procedures. It seems that the Government is not always in a position to act with dispatch on applications for new licenses in full cognizance of the necessary information. To reduce delay but still protect the national interests, an expert analysis should be prepared as background for Government decisions on each new project. These analyses should take account of the following points:

- . existing installations in the same branch;
- . market and feasibility studies;
- . relevance of the new industry to national priorities, (job creation, income distribution, use of local raw materials, import substitution, exports, interlinkage with other industrial branches, etc.)

- Difficult access to long-term credit for less well established enterprises. Although money is available in the National Development Bank, in private banks and sometimes also in private hands, industrial firms frequently do not find access to adequate long-term credit. A main reason for this is that commercial banks do not make loans without iron-clad security against default, which is impossible for many new independent enterprises to provide. The National Development Bank, although somewhat more willing to accept risk, has inadequate staff to analyze the proposals of loan applicants, and the applicants themselves often cannot provide information to support their requests.

1970-1971 The impact of a new industry on the national level does not depend on the amount generated in the new activity in itself, but also on the nature of the activity and related economic activities. (For example, the production of sugar for export and feeding supplies to others, is not related to the national product of the G.F.S. beyond the effects of its own production. The possibilities for integrating industries have to no extent been fully exploited. The country's abundant natural resources could be used to a much greater extent in the near future.

- The high cost of energy. Until 1971, production and distribution of electricity was run by a foreign corporation. The Energie Bedrijven Surinam, a state-owned enterprise, has now taken over these functions, but it has not yet lowered the electric rates either for industrial or for private use. These rates are very high. As a result, industries with high electricity consumption cannot produce at reasonable costs. Although this does not play an important role in most present small-scale industries, it is a handicap to those using electric arc welding (e.g. the shipyard) and it is hampering factor for future industrial development.

- Excessive geographic centralization. At present, Surinam consists of a metropolis - Paramaribo and its surroundings - with a nearly empty hinterland. Some efforts are now being made by the Government to develop major new activities in the Nickerie district. These efforts should be extended to the other settlements, where possible, and even to remoter parts of the country to provide opportunity there and to retard migration to Paramaribo. Because major development in those places can most plausibly be based on natural resources, the starting point should be a completion of the resource inventory and evaluation. The process of economic decentralisation, of course, will require several decades.

c.0. THE STRATEGY OF DEVELOPMENT

In the introduction to the Second Five-Year Plan of Surinam (Second-Five-Year Plan, 1972-1976) the strategy of development adopted by the Government is reported as follows:

"The strategy of development of Surinam during the second five-year plan is oriented towards the realization of an optimal combination of production, job creation and spreading of welfare.

"The primary national objectives are based on this strategy and concern:

1. the national income;
2. the creation of jobs;
3. the spreading of welfare.

"To approach these primary objectives, it is necessary to realize the following secondary objectives:

4. formation of a development fund from the profits of the corporations in which the Government participates, so that Surinam will be less dependent on foreign capital and so that, from these profits, new job opportunities can be created every year;
5. improvements of the budgetary situation of the Government through:
 - recovery of corporate taxes,
 - reform of the Government administration;
6. improvement of the foreign-exchange reserve position of the country through import substitution and export promotion, and through a system of joint-ventures that would diminish the transfers to foreign countries;
7. promotion of industrialization by the creation of a new industrial estate in West Surinam with optimal utilization of its possibilities for new enterprises.

Following are:

- I. growth of gross fixed capital formation at the rate of at least 10% and of gross value added at least 7%;
- II. reduction of unemployment to at least 10%;
- III. promotion of:
 - a. a better distribution of income.
The distribution of income can be improved by the application of the following means:
 - a highly progressive tax schedule;
 - reduction of unemployment;
 - improvement of fringe benefits;
 - enactment of minimum wages.
 - b. an optimal spreading of the economic activities by region.
(For that purpose, the activities will probably be oriented towards a significant increase of the production in West Surinam - the Nickerie, Coronie and a part of the Saramacca Districts - and through an optimal spreading of the investments among several river basins (a 'river basin development approach')."

The UNIDO Mission is devoted to industrial development, which is closely related to the development of other sectors and cannot be separated from them. For the same reason, it cannot be considered as an aim in itself. Like any other sector it must be considered in terms of its contribution to general economic development. Our set of proposed policies for industrial development is oriented accordingly toward the primary objectives stated in the national plan. Fulfilling these objectives is largely a matter of resource allocation: abundant resources (especially unskilled and semi-skilled labour) should be used as widely as possible; on the contrary, scarce resources must be used sparingly and in a way that relaxes the constraints they impose upon growth.

The purpose of the present report is to review the country's productive resources and the functioning of other institutions for mobilizing these resources and to propose recommendations and practical suggestions to guide policies for industrial development. Some of the main points also are suggested. Some of the details of these recommendations and their effect are dealt with in Chapter III of the General Report.

1.2. Human Resources

Unskilled workers are abundant. Around 15% of the labour force is unemployed, and the figure is much higher in the ranks of the unskilled and semi-skilled. Therefore:

Principle 1: seek opportunities to create new jobs for unskilled or semi-skilled people.

This kind of employment can be encouraged

- by selective promotion of industries using unskilled and semi-skilled labour, such as clothing, construction, and small-scale industries such as woodworking, repair shops, etc.;
- through subsidization of productive employment for otherwise unemployed unskilled workers. It must be recognized that the minimum wage legislation proposed by the Second Five-Year Plan is inconsistent with reduction of unemployment among the unskilled, and it may therefore be preferable to grant income supplements to the poor in a different manner.

On the other hand, management assistants and skilled workers constitute a scarce resource that should be developed and allocated in the most efficient way. Therefore:

Principle 2: conserve managerial and skilled personnel.

- by stopping or reversing the brain drain through appeals combined with better pay and conditions for highly qualified personnel; it appeared to the Mission in many of the plants visited that the

- recruitment of all types of managerial and technical staff even from abroad and the use of foreign managerial staff is fully justified through involved operations.
- by entering joint ventures providing some foreign management inputs, especially in functions for which foreign firms have an advantage, such as in marketing for export. All joint venture agreements, however, should contain provisions for the training of national managers and a schedule for the ultimate replacement of foreign managers by nationals.

Principle 3: improve the efficiency of management assistants and the productivity of skilled workers.

A permanent institution should undertake the important tasks of education and consultation on various aspects of firm operations. This could be done by the proposed Industrial Development Center through seminars, on-the-job training, engineering and studies, etc. In general, private industry growth could be enhanced by favouring industries with long runs of standard products (e.g. processed foods, etc) or shorter runs with simple changeover between different products (e.g. extrusions, shoes) rather than diversification into products intensive in design effort, production management and marketing. Obviously, this consideration must be tempered by prospects for marketing and profitability.

5.2 Natural Resources and Industrial Structure

Natural resources are to date still partly unevaluated. Therefore:

Principle 4: proceed to complete the economic assessment of natural resources (including minerals, oil and gas, forests, agricultural soils and sea products) following priorities reflecting their apparent potential for early exploitation.

This inventory should not be limited to exploration but, wherever exploitation was possible, should be advanced to quantitative evaluation, assessment of location of feasibility, and also experimental exploitation. Several of this kind have been performed in the past, and others - like the Hostenheer-FAO forestry survey - are currently going on. They should be extended to all natural resources of economic interest. Besides FAO assistance for forestry, agricultural and sea resources, United Nations assistance also may be requested by the Government for the acceleration of the on-going inventory of minerals or for an independent assessment of findings concerning oil and gas.

The ultimate benefits from natural resource exploitation cannot easily be predicted. Of course a general rule for maximizing these benefits might be formulated as follows:

Principle 5: favour backward and forward industrial integration.

Backward integration means the development of domestic raw materials and semi-finished products to replace imported ones. An example of this would be the use of local materials to make the starch extensively used in producing aluminium. In the selection of wholly new sectors, integration means promoting agro-industries and enterprises based on the forestry, minerals or sea-products of Surinam. Many of the Mission's recommendations concerning specific industries (Section 7.2) aim at this purpose. Forward industrial integration implies extending the processing performed in manufacturing industries toward the level of final products. An example is the fabrication of lumber into pre-fabricated housing components. While these principles, of course, cannot supplant commercial criteria and other national priorities in project selection, integration has the advantage of exploiting the value of nature's gifts to the nation (natural resources) and creates clusters of mutually supporting industries that serve in turn to encourage the erection of other related activities.

Furthermore, in promoting industries

Principle 6: production for export is to be favoured over production solely to displace imports.

This is a trade policy problem. It is not a problem of increasing the remitting market proceeds to a certain level. However, if the capacity is likely to be better utilized, it is more likely to be able to provide goods to the home market at a more attractive price. Finally it earns foreign exchange to buy exports. On the other hand, exporting encounters more competitive and political risks than operations in the domestic market.

Recent evaluations of industrialization in developing countries indicate that the necessary development of manufactured exports requires basic reforms of the commercial policies of most such countries. The Mission assigns great importance to a detailed analysis of Surinam's structure of tariffs, subsidies and other policy influences. This work could be undertaken by the proposed Industrial Development Center.

Whenever a choice arises between import and local production, the choice must be seen in terms of the stated national objectives. The real costs and benefits of domestic production to the national economy should be calculated, taking account of

- the at least temporary real income losses to consumers from the differences in price and/or quality between imported and locally-made goods;
- the income gains to productive factors in the new domestic industry, some of which would remain unemployed or less well employed in the absence of this industry;
- income losses or gains to importers.

These losses and gains have to be discounted appropriately over time.

In general, the losses to consumers are least for goods for which preferences for the imported item are based mainly on brand snobbism and prejudice and where a good quality domestic good is (or can be) sold at an equal or lower price. This seems to be the case in Surinam with fruit products, beer, rum, many clothing articles, shoes and margarine; this list might be lengthened by other knowledgeable observers. Of course, other reasons for not raising protection on some of these goods may exist.

The gains to income of import substitution are in general - especially when distribution is considered - an activity less intensive in the use of unskilled or semi-skilled labour. Appraisal of one of these industries. In gauging the impact on importers and shippers, it must be recognized that the displacement of a limited number of imported foods by domestic substitutes would almost certainly be offset by imports of equipment and materials for the new home production plus the imports of consumer goods from the enhanced consumer incomes of the newly employed labour and capital. Thus, import substitution is not inimical to the interests of Suriname's importers but only requires them to adapt their businesses to the development of the economy. The public fisc can recoup its revenue losses, if any, through adjustments in tax rates or collection procedures.

From this much simplified explanation, it is clear that a sound decision on import substitution requires special calculations for each case. Nevertheless, it seems to the Mission that general guidelines for a deliberate foreign trade policy for Suriname could be:

Principle 7: adjust imports to economic development necessities; import capital goods and raw materials for feasible operations; restrain imports of goods of which domestic production yields the greatest net benefits based on the principles stated above; raise excise taxes on sumptuary commodities if a balance-of-payments deficit threatens the needed supplies of capital and intermediate goods (the use of tariffs instead of excises merely promotes domestic production of goods that may not accord with national priorities and may not be possible to produce efficiently).

6.3. Financial and Other Institutions

Although financial resources are less scarce in Suriname than in some other developing countries, foreign capital is needed at least for the launching of large industrial projects. It is in the interest of the country to be less dependent on external financing. Therefore, it is necessary to

Principle 8: enhance national savings.

After rising sharply with the rapid growth of incomes in the mid-1960's, savings have slumped again as a portion of GDP. Savings can be enhanced through promotion as well as through the establishment of

attractive incentives to invest in the country. They can be increased, moreover, by diverting some of the current income into public or regulated social services, insurance schemes and housing programmes engineered to collect a surplus over current payments. Given the young age structure of Suriname's working population, this technique should be quite practicable. If income increases are expendable in consumption expenditures, savings can be enforced through taxation to establish a fiscal surplus to be devoted to investment. Already the Government has committed itself to utilize for investment purposes the profits generated from corporations in which it has a participation.

The complement of saving in economic development is to

Principle 9: promote productive investment of domestic savings

- by re-establishment of investment incentives to assist new ventures over the initial years;
- by expeditious and sympathetic decisions on licenses, incentives and credit applications for productive enterprises;
- by actively seeking joint-ventures with foreign firms when the scale and nature of projects justify the participation of foreign capital, know-how and market connections and where the national interest can be preserved through adequate control of the operations;
- by taxing heavily the gains of purely speculative investments in holding land, buildings and inventories.

Furthermore,

Principle 10: foster better industrial information and organization by establishment of an Industrial Development Centre to provide sound technical and market information, both to potential investors and to the authorities responsible for economic policy.

To diversify the economy geographically, it is necessary also to

Principle 11: favour developments in regions outside Paramaribo.

This might be achieved

- by fiscal incentives to enterprises in other areas;
- by extension of the above information facilities and other services to enterprises in these areas;
- by favouring firms in outlying areas in cases where licenses or resources must be rationed.

These preferences probably must be permissive in nature rather than coercive because of the risk that the latter will suppress certain developments altogether instead of diverting them to the desired areas.

Finally, as Surinam's economy develops a denser network of industrial activities, it is becoming necessary to

Principle 12: perform some industrial planning in the framework of the general national development plan.

The national development plan should not only deal with the allocation of government resources but also should include indications of the future of individual industrial sectors. These forecasts can be based on general economic factors and also on the intentions of government policy if a comprehensive policy is known. Such a statement would aid private investors and managers to formulate their own plans and to allocate their resources in ways that promise greatest commercial success and also best serve the nation.

7.0 RECOMMENDATIONS

7.0 RECOMMENDATIONS

7.1 Institutional and Legal Measures, and Basic Studies

a. An Industrial Development Centre - The Government should proceed promptly with its intention to establish an Industrial Development Centre to provide a continuing capacity for industrial surveys and to conduct necessary industrial studies. The Centre should consult on economic and technical matters with the Council for Economic Affairs (CEA), the National Development Bank and also with existing and potential firms operating in Surinam. A detailed proposal for the organization and functions of this Centre is drafted by the UNIDO Industrial Survey Mission.

It is recommended moreover that the Government request the United Nations Development Programme to provide 5 experts for 3 years, to be augmented by short-term consultants and fellowships to support and assist the Centre in its early stages. This is the major recommendation for technical assistance in this report, and it is envisioned that various short-term specialized needs for assistance could be handled under it. The proper channel for such a Government request is through the UNDP Resident Representative in Port-of-Spain, Trinidad.

b. An Inter-Bank Risk-Bearing Fund - It is recommended that an Inter-Bank Fund for making risk-bearing loans should be established under the chairmanship of the National Development Bank to facilitate long-term loans to some enterprises unable to meet conventional requirements for

collateral or other security. This fund should be built up to some Sf. 10 million over the years, using a large part supplied by Surinam's banks and financial institutions and the remainder guaranteed by the Government.

c. Tax Rebates for New Exports - Production for export is highly advantageous for developing adequate scale and efficiency, especially in a small country. Many nations grant generous tax incentives for export. It is recommended that the Surinam Government also be willing to extend prompt encouragement to new exports by approving rebates of indirect taxes and by waiving the statistical tax whenever these measures are deemed necessary to achieve the sale. A strong added incentive to export could be provided by a fund to make partial advance payment to exporters pending settlement by the customer and/or to extend export credits. The proposed Industrial Development Centre could also advise on applications for such incentives. Because it is not proposed to grant such treatment to already established exports such as bauxite and plywood, it is estimated that a fund of Sf. 7-10 million could make a major contribution to the stimulation of new sales.

d. Export Marketing - Because of the importance of exports, a more active and aggressive promotional effort should be undertaken in Europe and the United States. It is suggested that a constant liaison with the European market be maintained by seeking to broaden the role of the Foundation for Investment Promotion in The Hague. Marketing efforts should concentrate on fruit and fruit products, rum, clothing and shoes, wooden furniture and building components and wood handicrafts. It is felt that the potential payoff of industrial exports justifies a larger promotional investment.

e. Standardization of Corporate Accounts - The absence of consistent business accounts makes economic analysis and enlightened policy making difficult. It is recommended, therefore, that a standard format be prescribed for annual corporate balance sheets, cost and profit statements

and annexed accounts. It is recommended further that the association of Accounting Bureaux be fully agreed with the planning organs after aggregating the accounts of firms in such a way as to serve the following purposes:

- establishment of a disaggregated input-output matrix;
- inter-industry comparisons of labour and capital intensity, size and nature of value added, etc.;
- checking and summation of imports and exports of raw and intermediate materials, capital equipment, repair parts and other goods by sector;
- fundamental data for national accounts.

UNIDO could provide a short-term consultant to help formulate the format and the use of these data if requested by the Government to do so. This assistance might be provided from the consultant funds of the Industrial Development Centre.

f. Acceleration of Licensing Procedures - It is necessary to set out concrete and objective criteria to be fulfilled by new enterprises to obtain a license. Their formulation might be one task of the proposed Industrial Development Centre. Agreed criteria should then be authorized by the Government. After these criteria are established, the legal and administrative regulations for licensing should be revised to declare applications for licenses to be granted automatically if not acted upon within two months from the date when filed. This proposal is intended to end excessive administrative delays in decision-making. The establishment of the Industrial Development Centre to assume the task of preparing the background for licensing decisions should help to make this rule practicable.

g. Basic Economic Studies - should be undertaken by the Planning Bureau concerning:

- income distribution and household expenditures studies by income class, to serve as a basis for market forecasts for new Surinam products; this study would be a periodic revision of the 1968-1969 household survey;

- manpower use and job availability, to include training and placement programming;
- regular data on inputs, output, costs and prices of industrial branches.

These efforts could be assisted by United Nations experts if necessary.

n. An Inventory of Natural Resources of Possible Economic Value - Much already is being done in this area, especially for minerals and forestry resources. In each case, such an inventory should go through the following phases:

- prospecting to ascertain presence and approximate amounts;
- evaluation of quantities, other measurable characteristics, exact location, etc.;
- studies of extraction feasibility and experimental exploitation.

Mineral resources presently are being inventoried and evaluated in a survey based on aerial mapping already done for the entire country. This inventory should treat any resources of possible economic value, including for instance the valuable minerals usually associated with pegmatites (a common rock formation in Surinam). As the basis for integrated national industries, the present evaluation programme should be accelerated following priorities based on the world markets for various minerals and their products and on the economic and technical promise of the suspected occurrences in Surinam. One main constraint on progress today seems to be the limited staff and budget of the Geological and Mining Service. Both the formation of priorities and the substantive work could be assisted by technical assistance from the United Nations Resources and Transport Division in New York. Such assistance also could provide the basis for an effective system of controls on present exploitation of mineral deposits. Special attention should be given to optimizing the benefits derived from the mining concessions granted to foreign interests.

In forestry, an exhaustive inventory is now being performed by the Forestry Service with the technical assistance of the Food and Agricultural Organization. Such assistance could usefully be extended to soil and sea-products as well.

7.2. Electric Power

This section discusses various investment opportunities, some of which require further studies to be conducted to clarify technical details. Some of these studies may well be undertaken by the Industrial Development Centre with the assistance of UNIDO resources as proposed above.

7.2.1 Electric Power

The Mission endorses INOP's recent proposal for a power market survey and recommends a revision (in general a reduction) of the electricity rate structure to remove this constraint on power-intensive industries.

7.2.2 Transport

International - Suriname should assure that its interests are taken into account in the international discussion (spearheaded by UNCTAD) to obtain better rates for service to and from developing countries. An operations analysis of customs procedures in the Port of Paramaribo, possibly by the proposed new Institute for Public Administration, should try to reduce clearance time to 2 or 3 days. Finally there is an obvious need for refrigerated storage at the port.

Internal - After the completion of present road projects, other types of facilities should receive higher priority in order to maximise the return on the existing transport infrastructure.

7.2.3 Food Industry

(a) Rice: The application of the parboiling process would use some of the broken and stabilise the rice bran, making the latter more suitable for oil extraction. Other broken can be used as fillers for canned soups. If the market for rice remains favourable, much greater benefits ultimately would evolve from the installation of a modern rice milling complex, including facilities to produce rice bran oil and concentrated animal feedstuffs. Such a modern mill would yield considerably fewer broken.

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... ..

(c) Guinea: Because of the strong export market for this crop, possibilities for increasing the yield and the total crop area should be promoted. To secure a higher export price, efforts might be made to set up a joint production-marketing venture together with an European importer.

(d) Citrus Fruits: Due to excellent climate and soil conditions in Surinam and the likelihood of continued world market growth, the rationalization and expansion of this industry should be pursued. A mission by a UNIDO marketing expert would be very useful to develop the export market not only for unprocessed fruit but also for its manufactured derivatives. The efforts by the Citrus Growers Cooperative to establish a juice factory should be supported.

(e) Meat and Meat Products: The earlier attempts at large-scale cattle farming in the southern savannahs should be revived. Such efforts should be part of a programme for establishing an integrated agro-industry encompassing production of feedstuffs, raising of several types of animals, processing, cold storage and distribution facilities. A joint FAO/UNIDO mission could clarify the many technical questions surrounding such an agro-industrial complex and recommend the necessary steps to bring it to fruition.

(c) Industrialization: The development of a local industrial base for processing the fish harvest is the most desirable option. Such projects must be planned by the Government and financed through the public sector. It can be maintained only if the Government provides sufficient financial assistance which may include the purchase of machinery and equipment, mill, collection, drying, packaging and distribution plant and distribution facilities, and other aids available to manufacturing concerns. FAO could provide assistance in determining the most desirable types of uses for Surinam conditions.

(g) Fish and Shrimp: To increase the country's share in the profits from the fishing and shrimping operations, closer monitoring of the existing firm's operations should be exercised. At the same time a significant expansion of the catch should be encouraged by attracting additional foreign shrimping operations into Paramaribo. The necessary docking, boat repair and fish processing activities could provide considerable employment. To increase further the direct benefit from the fishing operations to the country, the Mission recommends reactivation of the project to establish a local fisheries school (National Project No. N. 10 4/714). This would permit more Surinamers to be employed in the fishing industry and would lay the basis for a domestic fishing fleet to be established within the next 10 years, perhaps consisting of standardized, locally built boats. Assistance for the above recommendations can be requested from the UNDP/FAO Regional Caribbean Fisheries Development Project. Finally, a public education campaign to increase local fish consumption should be launched.

(h) Grain Mill and Bakery Products: In conjunction with the local grain mill, it is considered worthwhile to set up a small spaghetti factory with a capacity of around 4000 tons annually.

(i) Vegetable Oils and Fats: The development of an oil processing complex based on the output of the Victoria Palm Oil Plantation comprises a radical expansion of this heretofore small sector. The Mission also

proposes that feasibility studies of expanded oil palm cultivation (such as the proposed Falmacca extension) take cognizance of the possible inclusion of a palm kernel oil factory. Besides the palm kernel oil itself, considerable quantities of high-protein animal feed would emanate as a by-product.

(k) Beer: The demand for domestic beer will warrant an expansion of brewing capacity in Surinam between 1975 and 1980. A techno-economic study of the timing and conditions of this expansion should be made.

(l) Alcohol: Provided the local production of molasses can be expanded on a viable economic basis, the Mission recommends investigating the prospects for producing new types of liquor locally, such as gin, vodka and cordials. Furthermore, additional alcohol can be exported, and the prospect of exporting finished rum instead of 80% alcohol should be investigated. Surinam rum could be bottled in Europe under a suitable Surinam brand name. A joint-venture bottling and distribution enterprise between the Surinam producer or exporter and the European importer(s) would be advantageous.

(m) Animal Feeds: The Mission strongly recommends that domestic supplies be developed for several main components of present feeds that are now imported or that other potential components emanating as by-products from the domestic rice milling, citrus, fishing, brewing or palm kernel processing industries be substituted for imports. Moreover, output should be expanded in step with development of an integrated animal farming industry recommended above. A techno-economic analysis of these possibilities is necessary. A joint-FAO/UNIDO Mission could provide the necessary assistance. The local feed mills, all of which are under-utilised, should be encouraged to branch out into animal farming themselves in order to utilize their capacity more fully.

7.2.1. Clothing and Textiles

(a) Clothing: In order to be competitive in this labour-intensive sector, the following measures are recommended:

1. Collective bargaining with the labour unions to set up agreed salary scales, avoid strikes and increase productivity;
2. Restriction of certain imports after achievement of an understanding with main producers about maintenance of price and quality standards;
3. Stimulation of exports by tax incentives and marketing efforts.

(b) Shoes and Leather: Imports could be further reduced, especially for women's shoes, to permit an expansion of scale also in this labour-intensive industry. Favourable consideration should be accorded to this sector for risk-bearing loans to permit the acquisition of much-needed new machinery and the introduction of plant improvements. A modernized shoe industry should have a good export potential to the EEC market. The establishment of a tannery for chrome and vegetable-tanned leather also could be encouraged. Alligator farming and the fashioning of shoes and purses from alligator hide should be investigated.

7.2.5. Wood Industry

(a) Lumber: Operations of sawmills not conforming to requirements for providing more uniform and consistent products should be curtailed. This applies particularly to the proper drying of wood. The utilization of species other than *virola* for the production of plywood should be encouraged and consideration given to a halt of peeler log imports. The Mission also recommends a study by independent experts to determine the feasibility of producing standardized moldings, doors, windows, partitions and prefabricated houses, both for the domestic market and for export. Success in exporting these products undoubtedly would require fiscal incentives. Because of an estimated 7% yearly increase in sawwood

consumption in the country. The Government should encourage and coordinate, especially in the near future, the activities of the United Business Council (UBC) technical assistance program and other similar programs for the benefit of the country.

(b) Wood Furniture: The location of new furniture factories should be discouraged for a time to permit the mechanization, rationalization and expansion of existing firms. Better product planning also is necessary. Raw material imports should be factored. The production of knock-down furniture components is particularly promising for export to Europe and the United States. A joint export bureau or sales association serving all firms is necessary to get these exports moving.

(c) Handicrafts: A UNIDO Management Mission could help the Basanegros to mechanize their woodcarving, improve product design, and put the Woodcarvers' Association in contact with suitable foreign sales outlets, including those supplying the Caribbean tourist industry, which now suffers from a deficiency of supply of wooden handicrafts.

(d) Boats: An investigation of the feasibility of locally producing a standardized wooden craft for river transportation and the fishing industry should be carried out.

1.2.6 Paper and Packaging Industry

Imports of wooden and plastic crates for the soft drink, beer and liquor industries could be replaced by locally made corrugated boxes. This would necessitate employment of a second shift in the box factory. The box company with its access to know-how from its parent company, probably could be encouraged to install a production line for multiwall paper bags if assured of some protection from imports. Multiwall bags could be used to package local rice, flour, sugar, animal feed, cement and other products.

Because of the enormous potential benefit of an integrated pulp and paper industry, the Mission recommends that a team of independent experts carry out a study of logging costs with clear cutting and a survey of the potential export markets for paper and related products. If the results of

the above more favorable development prospects in their countries. For financing and other practical considerations, attention should be directed on a world-wide basis.

7.2.7 Chemical Industry

To utilize the modern local soap factory's idle capacity, the Mission recommends that licences for the local production of the most popular foreign brands of laundry detergent and toothpaste could be solicited.

7.2.8 Ceramics and Glass

The Mission is of the opinion that insufficient information is at hand to recommend the creation of a glass bottle factory. It is clear that such a factory could operate only at a small fraction of capacity, but with used equipment its output might be relatively competitive. A more thorough study is recommended to clarify the demand for bottles, particularly for uses other than in the local beverage industries, and also the economics of local production versus imports.

7.2.9 Primary Metals Industry

It seems worthwhile to evaluate anew the possibility of economic extraction of the valuable products contained in the red muds of alumina production in the light of recent technical developments. UNIDO could provide independent experts with up-to-date information on this question.

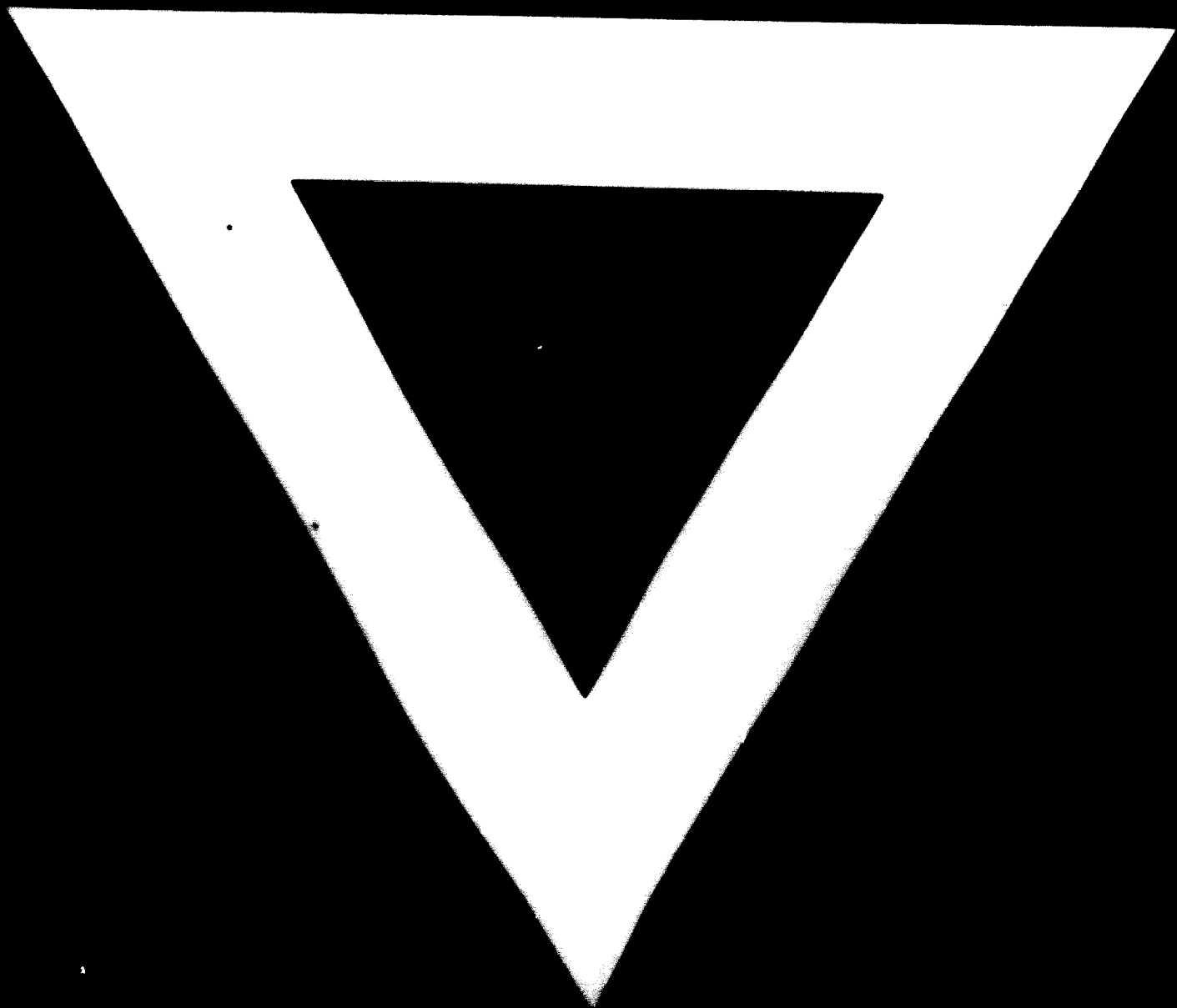
7.2.10 Fabricated Metal Products

(a) Metal Furniture: The existing firms could rationalize production techniques to lower unit production costs. No more new firms should be licensed for a time. Better prices and delivery times from suppliers might be obtained by consolidating orders of the main inputs such as steel tubing, screws, foam rubber and vinyl.

Steel The Government should try to
attract investment in the steel industry in
private form and provide the necessary facilities. The
establishment of a central steel industry study, a
task that must well be undertaken by the proposed Industrial Develop-
ment Centre. The area should also receive the initiation of a survey
of existing machinery to determine which spare parts might be fabricated
in bulk at a cost economical enough to make local procurement.
This could provide the necessary market for a local foundry for grey
cast-iron and mechanics. Measures should be taken to reduce to a
reasonable number the different makes of vehicles entering the country.
This should be done by soliciting proposals from manufacturers for
sales-cum-service agreements. The production of pails, rice cookers
and rain gutters is proposed.

(c) Aluminium Fabrication: because the prospects for local aluminium
fabrication have been studied recently by a specialist consultant,
the Mission refrains from any recommendations on this matter.





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