

**AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT**



**COUNTRY DEVELOPMENT  
Small Program Statement**

**MAURITIUS**

BEST AVAILABLE

**DEPARTMENT  
OF  
STATE**

**January 1979**



This strategy statement has been prepared by the AID field mission. It is prepared annually and used for planning purposes in the field and in Washington but is neither officially approved nor disapproved by AID/Washington. It does not represent official Agency policy.

**MAURITIUS**

**Small Program Country Paper, 1979**

**Prepared by REDSO/EA**

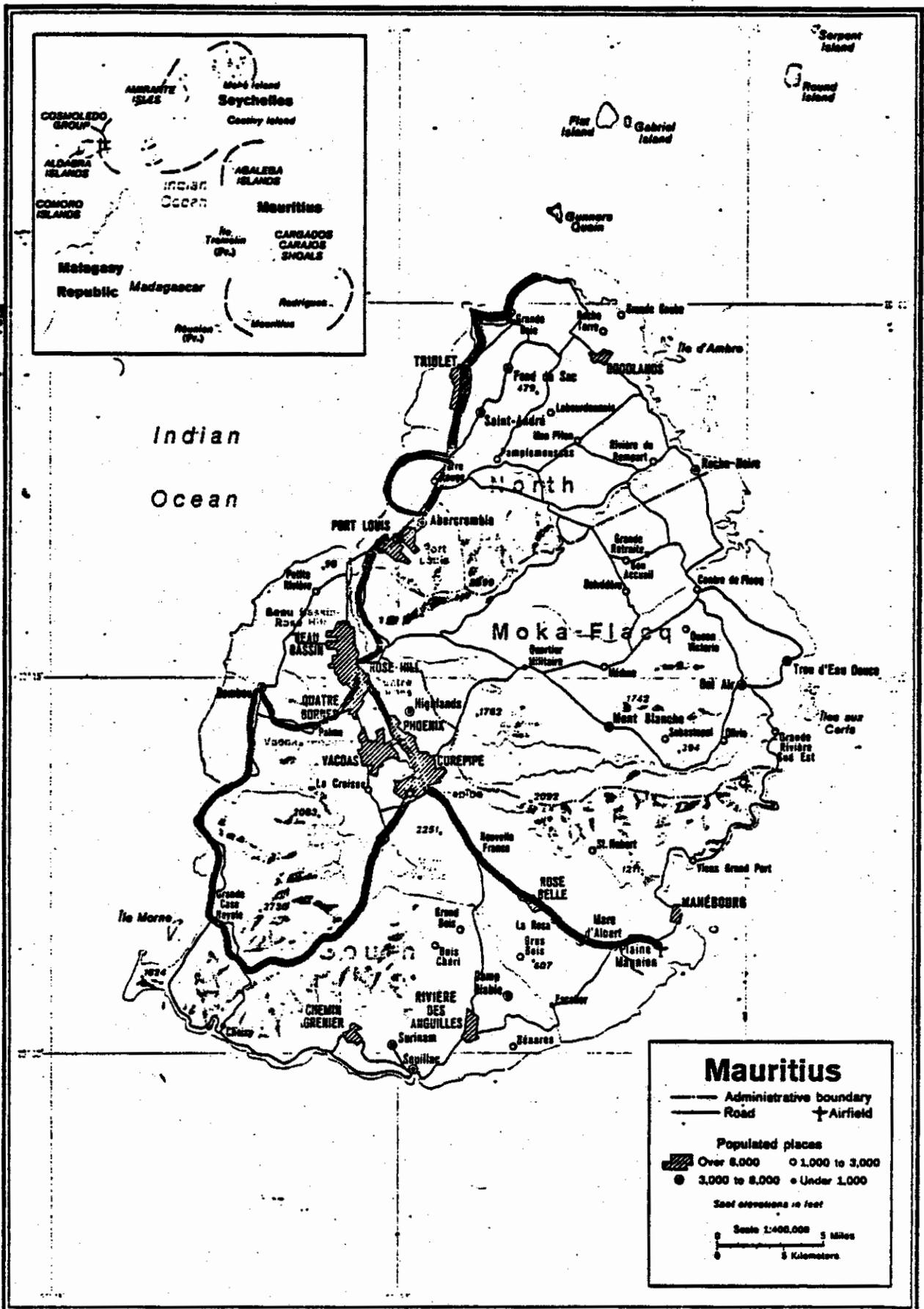
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**Reviewed and Approved by Ambassador and DCM**

**January 1979**

**Reviewed by U.S. Embassy, January 1979  
Port Louis, Mauritius**



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## BACKGROUND DATA \*

### AREA

2,000 square kilometers

1,100 square kilometers of arable land

### POPULATION DENSITY (1977)

455 per square kilometer

827 per square kilometer of arable land

### POPULATION AND VITAL STATISTICS

Population in 1977: 909,169

Urban population: 44 percent

Population growth rate: 1.1 percent, \*\* 2.9 percent urban

Natural rate of increase between 1970 and 1976: 1.3 percent

Life expectancy at birth in 1975: 65.5 years

Infant mortality: 40.0 deaths per 1,000 live births

Birth rate: 25.6 percent

### NUTRITION/HEALTH

Daily intake: 2,192 calories

Population per hospital bed: 1:270

Population per physician: 1:2010

### ECONOMIC INDICATORS +

Income distribution in 1975: highest quintile 55.0 percent,  
lowest quintile 5.0 percent

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\*Information is from Central Statistical Office except where otherwise indicated.

\*\*Population growth is less than the rate of natural increase because of emigration.

+ World Bank

Gross national product per capita in 1976: US \$680  
Median family expenditure per month: US \$89 (1975); US \$103 (1978)  
Average family expenditure: US \$138 (1975)  
Debt service ratio, 1976:  
Public debt, including guaranteed, 1.0  
Non-guaranteed private debt, 0.3  
Total outstanding and disbursed, 1.3

**DISTRIBUTION OF SUGAR LAND OWNERSHIP +**

80 percent owned by top 10 percent of owners  
2 percent owned by bottom 10 percent of owners

**HOUSING**

Average number of persons per household: 5.3  
Habitable rooms per house: urban 3.29, rural 3.16  
Persons per room: urban 1.66, rural 1.78  
Persons per house: urban 5.42, rural 5.65  
Housing stock in 1972, 123,290: 7,337 in straw huts (5.95 percent),  
26,068 not on foundation (21.14 percent), and 89,887 on foundation  
(72.91 percent).

**COMMUNICATIONS**

824 miles road, 80 percent paved  
107,000 telephones  
27,000 TV sets  
1 weekly English language newspaper  
8 daily French papers

**EDUCATION**

95 percent of primary age children in school  
Pupil/teacher ratio: 24:1

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+ World Bank

**CONVERSIONS**

1 Rupee = SDR 0.129638 (Before January 1976 the rupee was pegged to the pound sterling)

Rate of Exchange: Annual Averages per US \$

<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978 (Jan-March)</u>
5.44	5.70	6.03	6.75	6.34	6.20

Fiscal year July 1 to June 30

## I. INTRODUCTION AND SUMMARY

A United States assistance program to Mauritius can be justified even while the country enjoys a higher than typical LDC per capita income and standard of well-being. The Country, with a racially diverse population existing in general harmony, has an excellent human rights record. A British-style parliamentary multi-party system functions freely. Since 1976 the moderate coalition government has held office with a very thin margin (in competition with a strong marxist movement), and that margin derives from the poorest portion of Mauritian territory, the island dependency of Rodrigues. Although enjoying high economic averages and other indicators, incomes are sharply skewed and of long historic standing. Government is committed to reducing these inequities. Mauritius has no armed forces and therefore is able to devote sums which might otherwise be used for weaponry, etc. to more socially-constructive activities. A large poor population, rural or recently rural, exists and is becoming increasingly disadvantaged as the structure of the economy shifts from one of sugar dominance to a more diversified one including technically sophisticated light industries. The country has an effective family planning program which is regarded as a model. Given the strategic location of the island, Mauritius could suddenly become of greater political interest to the United States should the situation on the northern rim of the Indian Ocean continue to deteriorate. For all these reasons: problem, commitment, selected successes, a strong case is believed to exist to support a small country program for Mauritius.

Since 1977 U.S. assistance has begun, on small scale including PL 480 Title I, housing technical assistance and guarantee, and involvement of Mauritius with AID-supported regional programs-seminars, training, etc. Several opportunities exist which could become the case of a small conventional program. These include: a) vocational training and planning; b) agriculture research management; c) cooperative management; d) technical assistance to certain crop and animal production problems; e) training in family planning and health delivery systems and f) Rodrigues as a sector. Together or separately some of these opportunities could be supported with small training or short-term TA support project costing from \$100,000 to \$500,000 annually. Over a five-year period a number of highly productive interventions could be undertaken.

Given the size of our allocation, the highly focused nature of any project and the general level of competence among Mauritians, it is unlikely any prolonged TA residence will be required. Programs likely will involve short term TA and training with a minimum of management and support. Opportunities for collaborative efforts with donors have to be explored.

## II. COUNTRY SURVEY

Area: 777 square miles

Population: 900,000 (Est. 1978)

Accessible by: Regular ship service  
Daily air service

Independent since 12 March 1968; Member of British Commonwealth and OAU.

Mauritius is a microcosm of the world's demographic problems; its limited natural resources are severely taxed by a burgeoning population, (1200 per mile). The polyglot population is a mirror of the country's mixed history having been successively Dutch, French, British and since the 1860's recipient of a large Indian population brought as indentured laborers to work as field hands following the abolition of African slavery in 1833.

The island receives 60 inches of rainfall on the average, but in excess of 180 on the highlands. Passage of weak atmospheric disturbances over the island or severe storms at a safe distance provide ample water for cane fields, but an occasional direct hit from a tropical hurricane can bring extensive flooding and wind damage. Cane has been found to be the only storm resistant crop, hence its prolonged dominance in the island's economy.

The abundant rainfall, year-round warm temperature and fertile volcanic soils make the island well-suited to sugar cane. About two-thirds of the island and more than 90% of the arable land is planted under this crop. The sugar industry, one of the most efficient in the world, employs half of the wage earners. More than half of the sugar acreage is owned by a score of large estates, which process all of their own cane plus that of more than 25,000 small planters whose crops they buy. Paradoxically, there is a shortage of cane cutters despite a high unemployment rate--many of the unemployed have received a primary or secondary level education and aspire to more rewarding jobs out of agriculture. Attempts are being made to diversify the economy by expanding the cultivation of other crops (only four percent of GDP is in food crops) and by encouraging tourism and the development of labor-intensive light industry.

Whites, mostly of French descent, who constitute one percent of the population, control practically all of the sugar production. Chinese--shopkeepers and small businessmen--make up three percent of the population. Creoles, the descendants of black African slaves with a varying admixture of other racial strains, comprise 28 percent. The remaining two-thirds are of Indian descent, both Hindu and Muslims. Despite the variety of origin a distinctive Mauritian cultural identity has emerged. (See Annex 1, The Poor Majority)

The capital, Port Louis, is the largest town (139,000), followed by Curepipe and Vacoas in the high central plateau (about 50,000 each).

The official language is English, but French, Hindi and Creole are more widely spoken. Ninety-five percent of the age group attend school and 30 percent secondary school; ninety-five percent literacy is claimed for the age group up to 30.

A number of tiny islands are under Mauritian sovereignty. The most important is Rodrigues (40 sq. miles) 325 nautical miles to the east. Its 30,000 mainly African inhabitants are extremely poor and represent a distinct sub-group in the country.

The political scene is somewhat strained. In the election of December 1976 the Marxist-oriented Mauritius Militant Movement (MMM) won 34 seats, and the Labor Party (28 seats) combined with the Mauritius Social Democratic Party to form a government with a very small working majority. This thin margin is comprised of MPs from Rodrigues which fact has led to a belated interest on the part of GOM in the traditional orphan island. Since the election development funds have, for the first time, been directed to Rodrigues. In brief, a pro-western government now sits in Port Louis because of Rodrigian support. The center-oriented coalition government with a majority of one operates against a background of economic problems to fulfill the election promises of free education and improved social services. The major outstanding political issue--the transformation of Mauritius into a republic remains unsolved. The country has an excellent human rights record. The Prime Minister received the 1973 UN human rights award.

Mauritius receives both capital and technical assistance from a variety of sources, including UK, France, West Germany, UNDP, FED, IBRD and AFDB. Capital loans approved from all of these sources in the current development plan (1975-80) total \$50 million and emphasize infrastructure--power, water supply and sewerage, telecommunications, education and cooperative development. Technical assistance is provided by all of the above donor countries and institutions, along with a large technical and cultural program from India. Russia and China (PR) have recently begun technical assistance on a small scale. Also Libya has given \$200,000 for the University of Mauritius.

In addition to direct assistance Mauritius receives substantial indirect support from very generous price supports for sugar from the EEC to which Mauritius supplies some 500,000 tons annually. (The Community pays twice the world price for sugar.) Similarly since the early sixties Mauritius has enjoyed access to the American market as well, which takes some 90,000 tons under its sugar quota. (Annex III, Foreign Assistance.)

### III. OVERVIEW OF THE ECONOMY

Despite a deteriorating situation in sugar markets, the momentum of the 1974-75 sugar boom has insured some growth to continue into 1978. Both investment and employment have risen, as have exports. GNP at

current prices is estimated to have risen 14 percent in 1976 and likely in 1977 as well. Consumer prices rose about seven percent in 1977. Government is faced with declining revenues and mounting recurrent commitments. The 1978-79 budget has been drawn up with an austere background.

Mauritius had a balance of payment surplus until 1976; but in 1976 ran a deficit of Rs. 250 million. Due to worsening terms of trade, foreign exchange reserves have also been declining . . . although this trend could reverse as domestic consumption decreases. According to Ministry of Finance and World Bank projections, the debt service ratio should remain below eight percent up to 1985. (Table I)

The government plans to seek partial funding for the development plan from external sources and is a good candidate for credit. About one-sixth of planned investment (Rs. 4,865 million at 1974 prices) was to be from foreign sources and another sixth from direct budgetary savings. Since the budgetary savings will fall short of what was expected, an additional amount will be sought from foreign sources.

Since the mid 1960s, about 45 percent of the recurrent expenditure has been for social programs. Public savings capacity consequently has been restricted by the government's use of the budget as a mechanism for the redistribution of income. However, about 21 percent of the capital budget is presently being spent on housing and the shelter-related sectors of water and sewerage with ten percent on housing alone.

a) Agriculture (Table 2)

Sugar constitutes about 85 percent of Mauritius' exports.

This dependency on the world price of sugar is evident from the recent economic history of Mauritius. In the 1960s, when world sugar prices were stable, the Mauritian economy had a real annual growth rate of less than one percent. When sugar prices began to increase rapidly in 1971, the economy underwent a period of rapid growth of somewhat over eight percent per year between 1970 and 1976. However, nearly simultaneously with the end of the sugar price boom in 1975, Mauritius was struck by cyclone Gervaise which destroyed roughly a third of the sugar crop. As a result of these two occurrences, sugar earnings fell sharply in 1976 and Mauritius sustained a trade deficit of Rs. 563 million. The country has consequently entered a phase of slower growth than in the first half of the 1970s . . . requiring more credit restraint and an efficient use of resources. Moreover union demands for higher wages and increased fringe benefits during the past several years have made Mauritius uncompetitive in sugar production. The premium paid for sugar by the EEC constitutes the industry's annual profit margin. Consequently, any reduction in the price paid by the EEC on the tonnage sold to the Community would have immediate negative effects on the economy. Since EEC domestic beet sugar production

is greater than consumption in the Community, continued support for Mauritian sugar cannot be assumed in all circumstances.

The second export crop is tea, planted on the high ground unsuitable for sugar. Tea now covers about 52 square km; production in the 1975 season totalled 3.7 million kilos, a drop on the last year as land use switched to sugar. About 70 percent of production is normally exported (2 million kg in 1975). An expansion program, financed with a 3 million pound World Bank loan, began in 1971; the government, through the Tea Development Authority, is planting large areas of tea to sell off in small units as they become productive. The lower wages in the tea plantations compared with those for sugar workers have led, however, to a labor shortage and the project is now under review.

Agricultural diversification is a major government priority. Almost any crop can be grown in Mauritius as a result of the fertile soil and abundant rainfall, but the shortage of land makes self-sufficiency impossible in cereals and rice, the staple food. Rice production reached 1,150 tons in 1972, but this is only about 2 percent of consumption. Other crops can be grown in the sugar fields between the rows of cane, and self-sufficiency is aimed at for vegetables, of which 70 percent are now grown on the island; potato and tomato output both now almost meet domestic demand. Other crops encouraged with a view to export are fruit, flowers and tobacco (658,700 pounds of virginia flue-cured and 495,200 pounds of amarello in 1972/73).

The government is anxious to improve beef and dairy production, still mainly a smallholder occupation, and there are promising experiments in producing high-protein animal foodstuffs from the by-products of the sugar industry. Local fishing catches have been declining as a result of over-fishing around the island; 2,000 tons were caught in 1973. Expansion of a longer-range fishing fleet is underway.

#### b. Manufacturing

Sugar is also the basis of much of the manufacturing sector, with some 8,000 people employed in the sugar mills. Several sugarcane by-products have shown increased production in recent years, including molasses, and rum, ethyl alcohol and acetic acid from molasses, and particle board from bagasse. There are advanced plans to add pulp, baker's yeast, citric acid and lysine to these.

From 1962 to 1970 the industrial strategy was import substitution, and 70 to 80 new projects were stimulated by the system of development certificates, which gave new industries a tax holiday for five to eight years. These included brewing, canning and other food processing, nails, paints, packaging, concrete products and several metal and plastic products. In 1971 the priority switched to export promotion, and partly in imitation of Taiwan, a system of export processing zones (EPZs) was introduced. New investors in the EPZs agree to export all

their produce; in exchange they get a tax holiday of 10-20 years and their dividends are free of tax for five years, their imports of raw materials and machinery are free of duty, and low-interest loans are available. Industrial buildings are rented cheaply, and electricity and water supplied at cost. The EPZs were employing 11,401 people (of which the majority were women) by end 1975 in 66 projects. Main industries include diamond-cutting, clothes, knitwear, gloves, electronics and day-old chicks; a vertically integrated textiles industry is now being brought into operation, importing raw cotton and exporting cloth. Foreign investors include French, South African, West German, Indian and other interests, but 45 percent of the capital so far invested is Mauritian and more than half the firms are under Mauritian control. A main attraction is the possibility of escaping EEC tariffs from a Mauritian base, as a result of Mauritius' associate status. Other projects include a 100,000 ton capacity fertilizer factory and a tea factory, which is being built for the Tea Development Authority with the help of the World Bank. Other plans are for handloom silk weaving, enamel household ware and pulse and grain processing.

The main source of energy is hydroelectricity. Generating capacity in 1974 was 63 megawatts. (See Annex 4, Other Data)

Table 1

**Balance of Payments**  
(\$ mn)

<u>Current account</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Trade balance fob	10.5	-4.7	47.7	25.2
Services	2.9	-2.1	-7.8	-17.5
Private transfers	3.8	4.8	5.3	5.0
Government transfers	5.0	2.4	9.3	5.0
Balance on current account	15.5	0.4	54.5	17.6
 <u>Capital account</u>				
Capital long term	6.0	4.9	9.5	12.3
short term	-0.9	-6.4	-7.7	26.2
Allocation of SDRs	2.5	-	-	-
Balance on capital account	7.6	-1.5	1.8	38.5
Errors and omissions	0.8	-2.0	7.5	-
Net changes in reserves (- = increase)	-23.9	3.2	-63.7	-56.1

**Foreign Exchange Reserves**

(\$ mn at end of year)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
SDRs	2.6	5.4	7.9	8.8	3.4	3.0	3.1
IMF position	1.8	2.7	2.7	3.0	-	6.4	6.4
Foreign exchange	41.7	43.6	59.5	55.1	127.7	156.5	80.0
Total	46.1	51.7	70.1	66.9	131.1	165.9	89.5

Source: IMF International Financial Statistics

Table 2

GDP by Industry  
(at current prices )

	<u>1968</u>		<u>1975</u>	
	<u>MR mn</u>	<u>% of total</u>	<u>MR mn</u>	<u>% of total</u>
Agriculture, forestry and fishing	193	23.7	1,100	37.2
Mining	1	0.1	3	0.0
Manufacturing	124	15.0	545	18.4
Construction	49	5.9	190	6.4
Energy and water	30	3.6	55	1.9
Transport, storage and communications	102	12.3	200	6.8
Commerce and banking	108	13.1	325	11.0
Ownership of dwellings	66	8.0	87	2.9
Government services	44	5.3	120	4.0
Other services	<u>110</u>	<u>13.3</u>	<u>335</u>	<u>11.3</u>
	<u>827</u>	<u>100.0</u>	<u>2,960</u>	<u>100.0</u>

Source: Central Statistical Office

#### IV. POPULATION

In the late 1950s, after the eradication of malaria, the Mauritius population was growing at more than 3% annually. By 1968 an extensive birth control program had reduced the rate to less than 2%. Under the current program, which disseminates information to a wide audience via television, the growth rate has continued to drop.

A national Family Planning Program began in 1970 building on the work by PVO's. By 1975 there were 80 clinics and 45 supply centers, enabling most women to have easy access to family planning services. A mobile clinic went into operation in 1976. A UN fund covered 80% of the recurrent costs initially, and there is fear that as this is phased out some of the early impetus may go as well.

The results of the program have been significant. It is estimated that 30% of women in the reproductive age group are now practicing some form of contraception. This is attributed to the high level of adult literacy and to the large proportion of the active population in wage employment; there are few if any subsistence farmers.

Since 1962 the gross reproduction rate has declined from 2.9 to 1.67 (1972) one of the fastest declines in fertility observed in a developing country; birth per thousand are 22.7; the death rate has been low for years, 78/1000. The dependency ratio (numbers of persons below 15 and above 45 per 1000 in the economically active group) has fallen from 943 to 781 reflecting a shift in the shape of the population pyramid toward that of a mature economy.

The rate of decline has been assisted by emigration: between 1962-72, 28,000 Mauritians emigrated, mainly to Britain and France. In recent years this rate has averaged nearly 4,000 annually, women are more than proportionately represented and include many trained nurses. Recent emigration restrictions in both countries may reduce overall emigration in the future.

Internal migration is occurring as well with some 30,000 persons moving to urban areas in recent years.

The birth rate appears highly and positively correlated with world sugar prices; good income years see a growth in families.

The four year plan (1971-75) aimed at reducing the gross reproduction rate from 1.92 (1969) to 1.2 by 1980-5. Over the same period the crude birth rate was to be reduced to 6/1000. The 1976/80 plan has adjusted these targets marginally; for the mid-1980's the gross reproduction rate is set at 1.1 and the net at unity, implying that the women of reproductive age will then be exactly replacing themselves.

## V. PROFILE OF THE POOR MAJORITY

An analysis of Mauritius from the point of view of making a case for development assistance on conventional terms poses a problem of justification on at least two grounds: per capita income and the PQLI index. By either measure the island is rather well off, certainly by African standards, yet a case can be made for sharply focused assistance.

The per capita income is relatively high, estimated at \$680 (1976) which, even with deductions for foreign transfer payments, would put it above the IBRD poverty line. This is an average figure; it will be argued below that substantial elements exist well below this level who can be reached by assistance programs. The distribution of income on Mauritius is typical of LDC's being quite unequal, (Chart I, Gini coef. of .50, where zero equals perfect equity). It is more unequal than some, due to the importance of sugar estates in the economy and equity is a function of sugar prices which is structurally inequitably distributed; a good sugar year sees the Gini ratio rise a point or two. Mauritius is slightly more evenly distributed than the Philippines but much more unequal than Taiwan (0.30). As the dependence upon agriculture lessens equity should improve. In terms of the AID target group, the bottom 40% commands 14% of the income (comparable with Seychelles 17%; USA 19.7% Tanzania 13%).\* This lower group earns a per capita income slightly over \$200 annually.

An alternative measure, the physical quality of life index (PQLI), attempts to rank countries by their ability to satisfy basic needs and is an index based on average life expectancy, infant mortality and literacy levels. By this measure as well Mauritius is well off, having a PQLI of 75 (Seychelles 78; Rhodesia 42; Kenya 40; Tanzania 28; Ethiopia 16).

The high PQLI indicates that Mauritians enjoy a long healthy life on the average; mortality, already low, is declining; basic education reaches most people (and especially the young). In recent years population per physician has doubled (to 1:2010), population per hospital bed has increased (1:270), levels of nutrition are gradually rising, the adult literacy rate is 80% and services are reaching an increasing number of homes (70% have electricity, 28% water).

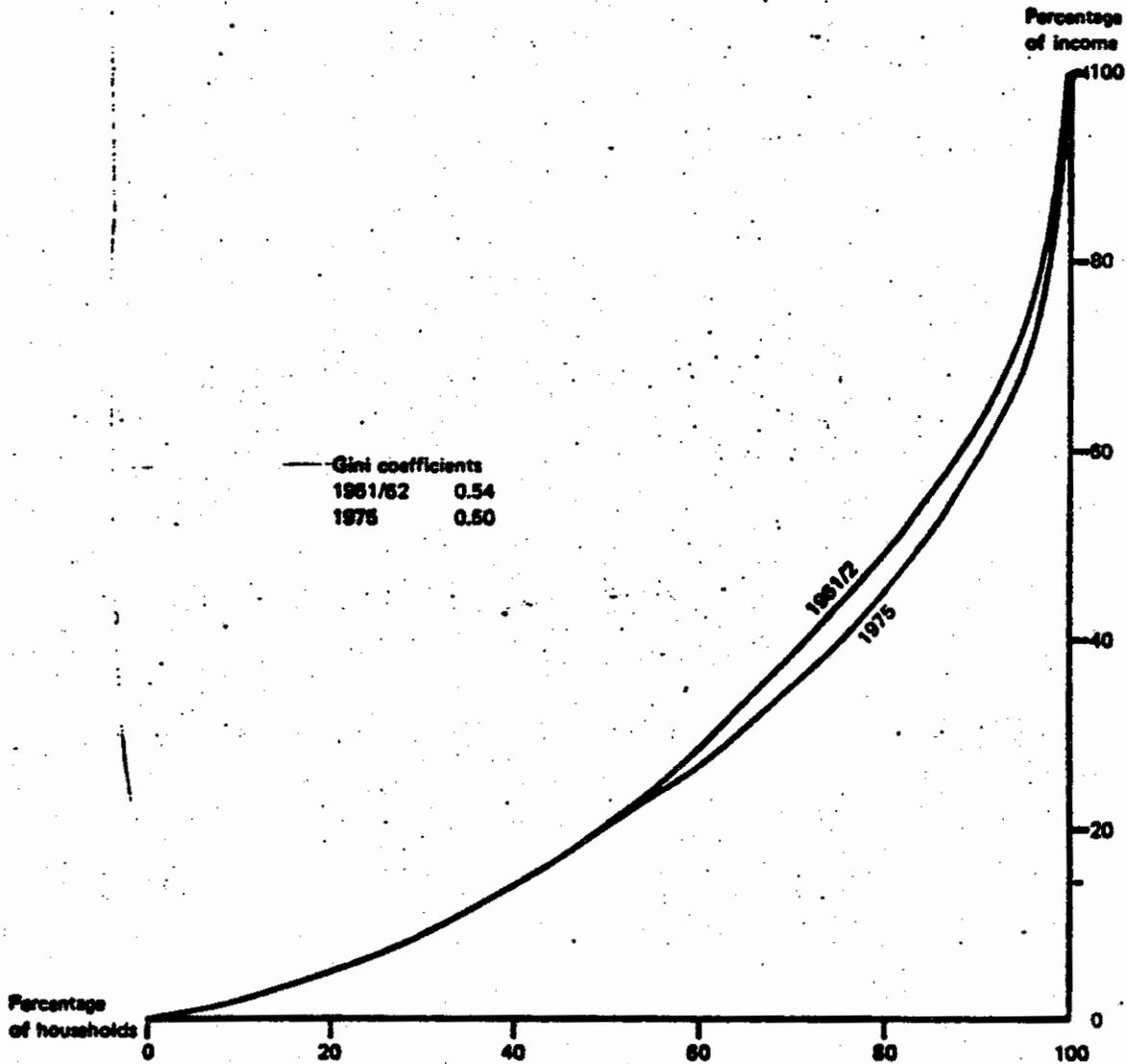
Primary education is free. The government spends over \$5,000,000 annually maintaining free health services. A limited social welfare system operates, under which 40,000 families with three children and

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\*Chenery, H. etc., Redistribution with Growth, IBRD by Oxford University Press, 1974, pp. 8-9

CHART 1

**ESTIMATED INCOME DISTRIBUTION CURVES  
1961/2 and 1975**



Sources: Mauritius Family Budget Inquiry, 1961/2  
Mauritius Family Budget Inquiry, 1975 (preliminary results)  
Mission estimates

more and with low incomes receive a government subsidy of Rs. 18 per family per month; some 50,000 low income people (over 60) receive an old age pension of Rs. 35/mo., while around 30,000 people benefit from a relief scheme including a payment of Rs. 35/mo. to destitute people unable to work. In addition a substantial government subsidy on essential foodstuffs like flour, rice and potatoes exists. This amounts to 1/6 of the recurrent budget and Rs. 650 per family annually.

The population, increasingly urban, has use of an extensive paved road network, although poor public transport is looked upon as a serious problem for the growing army of commuters.

The official unemployment figures are often questioned: there is undoubtedly much concealed unemployment and women do not register. Unemployment was officially put at 16% of the labor force in 1972; the total of registered unemployed in June 1976 was 21,000, some 4% less than a year earlier. Another 11,000 were in the role as relief workers for whom various government projects are devised.

The lack of employment opportunities is in part structural; the growing redundancy of the increasingly skilled labor force in an economy still dependent in large measure upon agriculture and sugar. The problem is intensifying: Between 1962-72 the labor force grew by 70,000 persons of whom 50,000 found full time jobs. However, unemployment is skewed toward adolescents; heads of households tend to find employment. Over half of the unemployed are between 15-19.

The participation of women in the workforce is low (20%), reflecting perhaps the reluctance of Indian women to work away from home. However, as family sizes diminish home needs will as well and female interest in employment will likely increase accordingly.

The Mauritius Export Processing Zones (MEPZ) were established in 1971 in the hopes of creating 14,000 new jobs by 1975. Generous incentives to investors were allowed. By 1974 employment in these zones had reached 8,000, but favoring males and skilled persons (textiles, electronics, diamonds, etc.). The availability of an adaptable and effective labor force have been prime incentive to investors, working at wage rates below those prevailing in Hong Kong, Korea and Singapore. Nevertheless the MEPZ have been successful in recruiting female workers, to the degree some fear is expressed for the jobs of male heads of households in the future. Since wages for female labor are lower than male and the work especially suited to them, many jobs have tended to go to women (Rs. 9-12 per man, Rs. 7 per woman per day).

A recent growth industry, also benefiting women, has been tourism. Since 1970, 2,000 new jobs have been created, plus an estimated 4,000

indirect jobs benefited by the new market. There is a limit to this industry which depends to such a great degree upon many variables in the world economy.

Given the size of the employment problem, Mauritius has set itself a high goal by 1980, 98% of the work-force employed; the balance including unavoidable structural unemployment. Female participation is expected to increase. As this goal is approached, in large part, a function of investment climate, shortages of skilled craftsmen and technicians will become critical. The output of this class of persons has lagged.

Critics of the Mauritius program argue too little is going to increase the productivity of the poor. A shift in the direction and purpose of government expenditure is needed to support the redistributive objective. For example, rather than pursuing an increase in secondary education in some of the better-off areas, greater emphasis could be placed on giving appropriate practical skills to the poor through vocational training programs. Expenditures on road transport might be reconsidered to give more attention to improving access in remote areas. Public transport could be encouraged to increase the mobility of the labor force.

The poor majority, is to be found in all sectors but especially in rural areas where populations depend upon an increasingly mechanized sugar industry which is mechanizing in part because better educated poor no longer wish such difficult employment. Poverty, however, can be found elsewhere in urban areas where the unskilled poor are at a competitive disadvantage but especially upon the island dependency Rodrigues. Here 30,000 persons live at standards significantly below those found on Mauritius: Indeed many now emigrate to the main island. The Rodrigian population survives on 27,000 acres of degenerate crop land which produces maize and onions. This poverty of resources is reflected in the low per capita level of income, \$120. The only cash crop is onions which are exported to the main island. Since Rodrigues has assumed pivotal political importance \$3,500,000 has been allocated in the 1977 budget administered through a Ministry for Rodrigues. In addition the GOM subsidizes port fees, air transport, electricity and trade. It is argued below that this is the area where US attention could be most usefully directed, an area in which is contained a mass of poor people which have been traditionally neglected by the main island and donors as well. (See Annex II, Rodrigues).

## VI. KEY PROBLEM AREAS AND POSSIBLE INTERVENTIONS

Socio-economic conditions on Mauritius itself are comparatively good by LDC standards and as such are probably higher than would justify direct attack by AID if viewed in the aggregate. Nevertheless,

poor groups exist which can be identified and may be growing in size as a consequence of increased demand for skills on the one hand and an inadequate mechanism for teaching skills on the other. As the structure of the economy changes, as agriculture becomes more mechanized (encouraged in part by an increasing disinclination by young men to work in cane fields) and as industry grows in importance and demands higher skilled persons, those with an unsuitable education, likely the rural young for the most part, will be increasingly disadvantaged. The problem is bound to grow. Long-term employment is seen as the major issue facing government in the decade to come. Yet little evidence can be detected towards the preparation of a long-term response to the problem on the part of the government. Although new jobs are being created as a consequence of the MEPZ, rather little is being done to provide for long-term work force needs to keep the economy competitive abroad while providing opportunities for more persons at home.

Lack of access to vocational training is only the apparent problem; the real problem derives from two interrelated factors of longstanding. First, education has remained oriented towards the production of skilled clerks for the civil service. Primary schools orient themselves to the preparation of students to pass examinations necessary for the entrance to secondary schools which in turn provide civil servants and white collar workers. There is no effective alternative open to students. This lack of access is a product of present education policy. Second, the number of seats in public secondary schools are the object of intensive competition. Enrollment in now free secondary education includes 30% of the relevant age group and the drop out rate is low. However, the orientation of these schools is not relevant to current or prospective employment opportunities; as a result the unemployment levels of secondary leavers are high. Recently more attention has been given practical subjects, but this is only a beginning. There is almost no alternative vocational training available apart from that offered by employers themselves.

Indeed, Mauritius spends only 1.4 percent of its education budget on vocational training, extremely low for a country attempting to attract investors with promise of a skilled labor force. This is low even by LDC standards! Most skills are now taught through apprenticeships, an inadequate system when many new skills are required. Worse, from the point of view of the poor, primary schools teach no manual arts and evidently little beyond the traditional "3 Rs." Hygiene, health and positive attitudes towards non-clerical work are particularly ignored.\*

No long-term manpower planning capacity exists on the island. This

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\* A University of Mauritius exists; however, less than 10% of secondary school graduates go on to higher education.

is not due to any lack of awareness. Donors have urged government on numerous occasions to take appropriate steps to remedy this situation. It is unclear why government has been so slow or loath to react.

What is particularly difficult for poor persons is to find opportunities for jobs other than clerical or white collar jobs for which they are at a comparative disadvantage in terms of background and orientation. This problem will grow as the nature of the economy changes and intensifies as more women begin to enter the job market. Male heads of households of poor families may well find it increasingly difficult to compete in years to come.

For the poor families on the second island, Rodrigues, the problem is yet worse. They must go to Mauritius itself for secondary education. There are few non-agricultural jobs on the island and no vocational opportunities exist for alternative training. As a consequence, Rodriguians must migrate to Mauritius to enter the unskilled work force where they are unlikely to be employed.

In sum, access to training and unavailability of appropriate training is the basic constraint to rising incomes of the poor majority of Mauritius, and this is particularly true of the outer islands.

Are there opportunities in agriculture? The reasons for the near-monoculture feature of Mauritian agriculture are: i) relative invulnerability of sugar to hurricanes; ii) the small arable land area of the island, which puts a premium on the optimum economic use of the scarce resource; iii) traditional availability of labor to meet seasonal needs; iv) favorable marketing arrangements under EEC and international sugar agreements. In recent years sugar has constituted an increasing portion of GNP growing to excess of 50 percent in good years, as compared with nine percent for the non-sugar portion of the sector. Only four percent of GDP is in food crops--rice, potatoes, beef, fish, ginger, etc. As a consequence, 40 percent of the imports by value are for food and the figure is growing. Some 15 percent of the labor force are small planters and tenant farmers; here is the bulk of the rural poor apart from the 36,000 hired laborers on large estates. Can better or alternative crop programs be found for these small holders? One can only admit experience indicates no easy alternative to sugar exists.

Agricultural diversification has been a favorite theme in Mauritius' economic life for 150 years now, and it has rarely proved successful. A private report not too long ago rather pessimistically listed the island's failures in this respect, amongst which were: coffee, cotton, rubber, vanilla, cloves, pineapples, geranium, wattle, date palm, cinchona, pyrethrum, tung, mulberry, chinna grass and sisal. Nothing daunted, efforts are currently being made with the sugar industry and the Chamber of Agriculture taking a lead to experiment with prawn

cultivation, production of exotic flowers and fruits and the expansion of vegetable cultivation. Construction of a freezing factory will give impetus to increased domestic vegetable production. The government has also imported 500 head of cattle from New Zealand to discover whether derinded sugar cane will prove, as is hoped, a satisfactory cattle food.

Ultimately, all talk, research and practical effort in the field of agricultural diversification boils down to the simple question: given the limited land available for cultivation, and given the soil and climatic conditions of Mauritius, can anything do better than sugar?

All this acknowledged, discrete technical inputs are possible by donors to address specific problems in the existing agricultural scheme.

The GOM has expressed interest (1977 REDSO Team visit) in AID assistance in the following areas:

- a) Food Production. Assistance in training of research and extension personnel in selected areas of expertise.
- b) Livestock Production. Assistance in research and implementation of a cattle feeding program, based on sugar cane byproducts and other local materials.
- c) Rodrigues. Assistance to agriculture, the only significant production sector in the island. Maize and onions are the only crops now grown of any significance. Conservation, crop screening and diversification, training of all sorts are needed to assist the island to raise its very minimum standards.
- d) Cooperatives. Cooperatives are important and are expected to play an increasingly important role. Their organization and management are weak; assistance in both of these regards is of interest. Cooperatives include savings, loans, marketing, consumers and producers. The GOM believes cooperatives to be an effective way to link the poorer elements to the growth potential in the economy.

A final sector, housing, must be noted. A large and growing shortage of housing for persons having incomes of less than Rs. 750/month exists. AID has selected this sector as the first to be addressed by its Mauritius program under a HIG program of \$10,000,000. Housing will be suitable, under this program, for the poorest economic group. (See 1979 Mauritius CP).

## VII. AID ASSISTANCE STRATEGY

The 1977 REDSO Reconnaissance Team recommended four options, not

mutually exclusive, for consideration. These included: (1) the existing self-help programs, possibly extended; (2) a PL 480 Title I program with particular reference to Rodrigues; (3) a housing guarantee program; and (4) a conventional AID program. Options 1-3 would require a minimum AID management for implementation. Option 4 could be designed for minimal support. Since 1977 a small \$500,000 annual program has been obligated or forecast. The Housing TA has taken at least one half that in 1979-80. In addition, Title I self help funds have become available, \$2,900,000 for both 1975/80. Finally, HIG has a 1980 allocation of \$10,000,000. What opportunities are left for conventional AID efforts?

Several programmatic arguments have been advanced; these together with existing Mauritian expressions of interest constitute the nucleus of a small country program.

a) Health/Family Planning. Interest exists on the island for long-term and other training in MCH/FP. There is a lack of trained persons at the graduate level in communications, administration and education. There is interest in training middle level staff for higher level roles in this area. The same appears to be true for the Ministry of Health as a whole. Although an extensive network of public health dispensaries exists, usually attached to rural post offices (whose clerk dispenses medicines supported by a weekly visit by a doctor, the system is especially weak in overall management. Follow-through, maintenance, supply, for example, are all particularly poor. Rural ambulances are in terrible condition. Scope exists for middle-level training of all sorts in this sector.

b) Cooperatives. There is a desire to widen existing cooperative contacts between US and Mauritian organizations (for example the AALC has been active in this regard) and various types of cooperatives, within unions and as separate organizations, exist. These groups have potential of reaching large numbers of lower and middle level income persons.

c) Post Primary Training. Vocational training is a sectoral opportunity which may be more apparent than real. The record of aid to vocational training elsewhere is decidedly mixed. More often than not, donor-assisted training produces persons who are either mistrained for available jobs or trained for non-existent jobs, or both. Investors themselves may provide training for specific tasks required in their production operation. Experience elsewhere suggests school curriculum cannot easily be changed to produce a better worker. What is needed is a literate person with reasonable manual dexterity and a desire to work. The Mauritius system satisfies the first condition. There could very well be a substantive and productive opportunity for an AID input into training. However, before any project could be developed, inquiry would have to be made to learn what is lacking in present Mauritius curriculum that is needed to produce a work-oriented, manually skilled worker that does not now exist. It must also be clear that demand for such an input exists. Clearly it would be unadvisable to attempt a U.S. curriculum or other radical restructuring;

likely small and discrete changes are needed, are possible, and could be identified by an exploratory team examining this problem.

It is unclear why the government of Mauritius (which is well aware of the need for trained persons) has not acted on recommendations from other donors to support either training or workforce planning. Discussions must be held with government to get better understanding of its position, certainly before any project determinations are made by AID. It is possible government would solicit or be responsive to AID participation in workforce planning: either TA assistance or participant training, or both.

In sum, training and employment are an appealing project sector with direct implications for unskilled youth and poor groups generally. However, a sector inquiry is a pre-condition to further consideration for AID involvement.

d) Agriculture. This is well trodden ground. Mauritius is a leader in sugar technology and research. Considerable history exists of examinations into alternative crops and crop programs; it is unlikely we can add much to this. However, the government of Mauritius has identified specific problems where a U.S. technical assistance could be of real value. Indeed, representatives from AID/W, DSA, have spoken in recent years with GOM officials regarding various aspects of research management and plant and animal health. In addition to this, Mauritius is interested in American assistance to cope with the fruit-fly which is responsible for the virtual annihilation of Mauritius' fruit industry. Once again, technical talks have occurred with AID. Nevertheless, there are grounds for optimism that small technical assistance activities will flow from these discussions and that additional requests may be forthcoming for similar assistance.

e) Rodrigues. A case can be made to view the island as a whole as a sector; a description is included as an annex. The island is devoid of resources, prone to erosion, as a consequence of almost total removal of cover, vulnerable to hurricanes, over-populated and dependent upon subsistence agriculture. Many people migrate to Mauritius. So far, other donors have ignored the island; indeed it is rarely mentioned, even in IBRD reports. If AID were to consider becoming involved, it will be necessary to mount a reconnaissance of the problem with a well-balanced rural development team to explore the situation first hand. One idea, raised in 1977, was to install windmill power to supplement the island's diesel-electrical system. There seems to be scope for new energy sources for water pumping. Other opportunities can be supposed to exist. Problems certainly do. Just what an AID responsibility might be, given our budget, will have to await first-hand judgment.

f) Health. No information has been found regarding the quality of

Mauritian health delivery systems in training of persons working in all aspects of such systems. Health must be regarded as a potential area to be considered, AID having skills to offer in both training and management.

AID Options. The above indicate opportunities exist in at least three areas but that these cannot be detailed, or PID possibilities identified without additional review. This is particularly important in that almost no contact has existed between AID and Mauritius so that no backlog of experience is in existence. One could imagine a series of AID projects successively addressing various sectors, involving training supplemented with limited technical assistance, each costing less than \$500,000; separate initiatives being attempted annually. In the case of Rodrigues, a case for commodity inputs, equipment of various sorts, could be made. In the absence of knowledge it is difficult to imagine how much AID management or on the ground representation would be required. If, for example, a power unit were to be put on Rodrigues or particular local training initiative were attempted, short term TA residency may be required. REDSO would be expected to provide strong backstop to any AID activities.

Once an AID presence is established it is likely Mauritian requests for assistance would begin. The Mauritius planning Ministry is fully competent to identify and develop project requests. They have been interested in additional participant training, regional seminars, linkages with international agricultural organizations, technical assistance in fisheries and marine planning, and technical agriculture assistance noted above. A strong donor presence exists; requests will be directed to several donors depending on known areas of competence. AID's problem, as a new actor on the scene, will be to establish areas of known expertise where TA and training are of particular importance but where absolute levels of assistance will remain small.

## ANNEX I

### MAURITIUS

#### The Poor Majority

##### Introduction

Mauritius is an exceptionally diverse country from the social perspective, particularly given its geographic location and size.\* Populated over time by immigrants from Europe, Africa, India and China, it remains a mosaic of different, interlocking ethnic, language, religious and cultural groupings. There is some association between various groupings and levels of income on the islands but the fit is by no means simple. In this section, the basic groupings will be discussed in relation to the factors contributing to rural and urban poverty and to the constraints relevant to reducing poverty on the islands.

##### I. Profile

###### A. Ethnic groups, language, religion

According to the 1971 census, there are 830,606 people on the islands. The largest category according to the census was Indians, subdivided by Muslims and Hindus, comprising 51% and 16% of the total population, respectively. The other distinct categories were White Mauricians of a predominantly European (French and English) background 2%; and Chinese 3%. The remaining 28% of the population falls within the general category of Creole, referring to a Mauritian of mixed Indian, African or European descent. This latter category embraces a

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\*This section based on Benedict '65 & Tinker '77

particularly wide range of socio-economic subgroupings, from the typically dark-skinned rural Afro-Creoles who are fishermen, general laborers and peasant farmers to the urban, lighter-skinned Creoles who until recently formed the main element in the middle class.

According to a 1972 study (Baker) there are 16 spoken languages on the tiny island. Mauritian Creole and/or Hindi (Bhogpuri), however, are spoken by the majority. English is the medium of instruction in the schools, French is the language of many of the island's newspapers; French manners and culture set the tone for the society as a whole. The bulk of the non-Indian population (including almost 1/2 of the Chinese) is Roman Catholic; about 1/4 of the Indians are Muslim and 3/4 belong to a variety of Hindu sects, organized on a local group basis. Castes are not corporate groups in Mauritius, and they have no relevance to occupation except in the field of ritual.

B. Occupational differentiation (from Benedict 1965: 25-28)

While no occupation is exclusively confined to members of a single ethnic category, there is a tendency for certain occupations to be associated with certain ethnic categories. Chinese predominate as the proprietors and shop assistants in mixed retail business. There is a predominance of Indians in agricultural pursuits and of members of the general population among craftsmen and artisans. The extent to which corporate groups are formed around an occupation varies with the occupation. Chinese retailers form small corporate groups within the shop and may form trade associations with other retailers and wholesalers.

Such groups are usually reinforced by kinship ties. Creole domestic servants, on the other hand, usually work in isolation or with only a few others and do not form groups with other domestic servants. Though most agricultural laborers are Indians, they do not form a single corporate group, but many different corporate groups.

Where occupations are confined to members of a single ethnic category we find that it is not the ethnic category per se which is the relevant factor in giving access to certain jobs but something much less comprehensive such as kin ties, friendship networks or economic association. The sugar industry is controlled by Franco-Mauritians, but not all Franco-Mauritians control it. Only certain families are in this position and they recruit new managers from their kin and friends. As they have wealth, they can train recruits for managing the sugar industry. One can make the same point for Gujerati Muslims in the import trade or Chinese in retailing. The relevant factor governing access to such jobs is not being of Franco-Mauritian, Gujerati Muslim or Chinese but being part of the kinship or friendship network of those in control of jobs. This does not apply to the civil service, where access to jobs is based on educational qualifications and a civil service commission.

The occupations to which access is most restricted in Mauritius are usually those which require the most capital: the sugar estates and the trading and commercial concerns. Other jobs are easier of access and it is clear that there is a good deal of occupational

mobility in the island. The pattern and nature of immigration to Mauritius produced a system of social stratification in which certain occupations tended to be the province of certain ethnic categories. The French were the estate owners. The British were the senior civil servants, the Creole were the junior civil servants and artisans, the Chinese were the retailers and the Indians were the labourers. Yet such a system is a gross oversimplification. From an early date there were some opportunities for social mobility both up and down. Within each ethnic section of the population there grew up class differences, based on wealth and occupation, and followed by differences in behavior.

This does not necessarily diminish the pluralism of Mauritius. It can create an upper, middle and lower class for each ethnic section rather than single classes cutting across all sections. Yet in certain economic and political contexts, Franco-Mauritian estate-owners and Indian importers have more in common than either does with the poorer members of its own ethnic category. At the other end of the scale, Indian labourers and Creole dockers have also found that they have common interests. It is in the middle range and particularly in the civil service that the greatest rivalry between upwardly mobile Indians, Creoles and Chinese is to be found.

C. Residence patterns & kinship (from Benedict 1965: 25  
et passior)

Approximately one half the population lives in a series of towns between Port Louis, the capital on the sea and Curepipe in

the highlands and villages throughout the remainder of the island. Although Mauritius is plural society it is not faced with the correlation of ethnic or cultural differences with territorial divisions as are many of the new African nations (for instance, Nigeria or Kenya). Residential interspersion is a unifying feature of the plural society of Mauritius. When disputes and factions arise in a village, people may align themselves on a territorial basis, particularly if the dispute has something to do with a local amenity such as priority in building a road or the location of a school or village hall. In such disputes the area which people live outweighs considerations of ethnic, linguistic, religious or cultural loyalties and Muslims, Hindus or Christians will side with their neighbors against their co-religionists in another part of the village. A factor promoting village development is the large number of highly developed youth, cultural, religious and social organizations.

In Mauritius kinship operates differently in different ethnic categories. The Franco-Mauritians are highly endogamous and take spouses only from other Franco-Mauritian families, in which there is reputed to be no taint of African or Asian ancestry, or from families from Europe. The elite form a relatively closed community in which French is spoken. However, not all Franco-Mauritians are well-to-do; many spend lives of precarious gentility close to the poverty line. Most Britons, both those in government service and those representing large British firms, are temporary residents in Mauritius. They do not have extensive kinship networks of the Franco-Mauritians, but form small

nuclear families living in houses which are either rented or tied to their jobs.

Among the Chinese the patrilineal joint family is the ideal type. Many large families can be found in Port Louis, some comprising three generations. Beyond the family the Chinese have patrilineal clans. Kinship ties are important in organizing labor for the retail shops which Chinese run. For the Indians, both Hindu and Muslim, the patrilineal joint family is also an ideal. Some joint families become family corporations in which labor is pooled and there is a pool of cash to run the household, though individuals may keep part of their earnings for themselves. Joint families are economically advantageous in rural areas. Where a family owns a small plot of sugar-cane land or a market garden, family labor is used to work it. Indeed without unpaid family labor, it is hard to see how many of these small holdings could remain economically viable. Even in towns, joint family living may be an economic advantage in that members can share a common residence and a common kitchen.

The Creole are the most heterogeneous of any ethnic category in Mauritius. The upper-class Creoles have kinship networks very much like those of the Franco-Mauritians. The nuclear family is basic, but there are often other relatives living in the household. In choosing spouses, light skin-color and education play a large part. Creoles do not control access to jobs in the way that Franco-Mauritians do. The Creole use their kinship networks to help them attain jobs on estates or in commerce, but such networks do not form corporate groups controlling jobs. The lowest stratum of Creoles are among the poorest inhabitants

of the island. Many are fishermen or unskilled laborers. Among them one frequently finds what Smith has termed the 'matri-focal' family. These are families composed chiefly of a mother and her children in which the husband/father role is peripheral. During the course of her child-bearing years a woman may have children by several different men. These men may provide some financial support, especially when the children are young. As the children get older they may begin to earn and help support the household, or a woman may be helped by her mother. In this sort of family the major ties of an individual are with his mother, his siblings and his matrilinear relatives. Ties with the father and patrilinear relatives may be very weak.

D. Physical Quality of Life Index (PQLI)

The PQLI for Mauritius is 75 out of 100. It is ranked highest of the 19 countries in East and Southern Africa listed in the Overseas Development Council Agenda 1977. Annex A. Mauritius boasts a per capita income of \$580 (for 1974); an overall literacy rate of 61%; life expectancy at birth of 66 years and infant mortality rate per 1000 live births of 46. In the 1950's a rapid population growth was identified as one of the most serious threats to the socio-economic well-being of the island's population. Since then, a number of factors including out migration and the gradual establishment of a national family planning program has contributed to a remarkable downswing in population growth, making Mauritius unique among Sub-Saharan African nations.

E. Access to education

In general, access to education has been an important factor promoting integration and mobility among the many groups making up Mauritius society. Approximately 90% of the adult population have completed primary school; one person in ten owns a radio; outdoor television (offering educational programs) is available in a number of sugar plantations and villages; and secondary education is offered to 31% of the relevant age group. However, there are several constraints to the fullest range of participation. These include, at the primary level, the use of English as the medium of instruction; at the secondary level, the predominance of private schools (over 90%) over government (10%) which tends to restrict entrance for certain groups; e.g. children of fishermen and laborers, and at the University level with its emphasis on middle-level manpower training the relative predominance of Indo-Mauritians over other groups, particularly Afro-Mauritian Creoles. It should be noted, however, that attempts are being made to introduce non-English curriculum at the primary level, that access to secondary education is increasing, and that increasingly scholarships are being provided for students at the higher levels.

## ANNEX II

### R O D R I G U E S

#### General Description

Rodrigues is situated 375 miles to the east of Mauritius and covers 42 square miles or about 27,000 acres. Rodrigues consists essentially of a central ridge which runs along most of its length, and one of the more conspicuous consequences of this topography is the almost complete absence of flat land. All the valleys are actually beds of streams, but owing to the almost total removal of the forests, the climate is dry and only in the rainy season is there any fast moving water. The introduction in recent years of a vast program of soil and water conservation now tends to regulate the flow of streams to some extent. The coastline is very indented and there is an extensive flat coral reef surrounding the island. Port Mathurin is the only year-round practicable harbor, which lies on the northern side of the island. The climate is mild and there is no disease of any seriousness presently existing on Rodrigues. Until 1968 when Mauritius gained its independence, Rodrigues was administered as an island dependency. Since the day Mauritius attained the status of an independent nation, Rodrigues has shed its status of a dependency. Under the new constitution, the smaller island is now a "part" of Mauritius. Politically, it is fully integrated, physically it cannot be. Economically, however, if the destiny of Rodrigues is to remain linked with that of Mauritius, the Rodriguan problem must be studied in greater depth and in more detail than has been done in the Mauritian Five-Year Development Plan.

Rodrigues, with its 30,000 inhabitants, can hardly be considered a non-essential part of the Mauritian economy. This section of the report will attempt to establish some possibilities for U.S. assistance for Rodrigues that would be in coordination with the plans already in existence for the development of Rodrigues by the Mauritian Government and other external donors.

#### Economic Background

The population of Rodrigues stated in the 1972 census was 24,770, and the rate of increase from 1963-1972 was 3.3%. Total population at the end of 1975 was estimated to be 26,603 and it has almost certainly reached 30,000 at the end of 1978. The Government's Five Year Plan shows that with optimum land use development, there will be, by 1980, 10,000 acres (36%) suitable for crops and 8,500 acres (29%) of improved grasslands with the remaining (35%) made up of forest plantations, reserves, bush and built-up areas. The Agricultural Census of January 1975 showed there to be 2,422 cattle, 5,911 pigs and 5,695 sheep and goats on the island; these figures show a dramatic decrease from the 1974 figures due mainly to a serious drought during this time. There was a 59% loss in cattle, a 34% loss in pigs and a 32% loss in sheep and goats in 1975 from 1974 levels. There are no ranches or commercial farmers and all of the livestock (apart from the Government breeding centers) belong to smallholders. Similarly, all the crop production, apart from the Government demonstration plots, is in the hands of smallholders. There are no valuable mineral resources and virtually

no skilled manpower of any type.

An important adverse influence in agricultural production in Rodrigues now is the level of relief work, although this work may have been important in the past as a solution to unemployment during lower rainfall conditions. The main stimulus to growth has been the absence during the last three years of good rains and the consequent deterioration in the profitability of traditional agriculture. At present, approximately 3,000 workers are employed in relief work (40% of adult male workforce, at a cost to the Government of Mauritius of Rs. 1 million per month). This situation only exacerbates the effects of the shortfall in rains on total agricultural production.

Trade

In 1974 (the last year for which complete figures are available), exports to Mauritius from Rodrigues amounted to Rs. 3.44 million. Of this total amount, Rs. 2.85 million was livestock (mostly pigs and cattle), and Rs. 0.56 million was dried fish and octopodes. In the same year, Mauritius exported to Rodrigues Rs. 16.80 million, of which the most important categories (accounting for 88% of total) were:

Food and Live Animals	Rs. 6.74 million
Beverages and Tobacco	Rs. 2.72 million
Machinery and Transport Equipment	Rs. 1.65 million
Manufactured Goods	Rs. 1.38 million
Animal and Vegetable Oils	Rs. 1.07 million
Other Commodities	Rs. 1.30 million

The most important individual items were rice (Rs. 3.00 million), alcohol and tobacco (Rs. 2.37 million), excavating machinery (Rs. 0.62 million), motor cars (Rs. 0.42 million), cement (Rs. 0.44 million), and vegetable oils, powdered milk and sugar (Rs. 1.78 million). Most machinery and building materials were wholly financed from the Central Mauritius Budget, while other items such as rice were heavily subsidized by Mauritius.

#### Relief Work

The Government of Mauritius is currently providing approximately Rs. 1 million per month for employment of relief workers. The number of these workers is now about 3,000 or over 40% of the total male workforce. As mentioned before, this has had a serious effect on agricultural production and has accentuated the effects of three years without heavy rainfall. Thus in 1973, for example, 610 tons of onions were exported from Rodrigues to Mauritius, whereas in 1974 this fell to 32 tons, with 60 tons in 1975, and 125 tons in 1976, compared with a Plan target of 1,400 tons per year by 1980. Exports of livestock have not suffered so dramatically as domestic animals are largely self-foraging and receive little attention from their owners. The livestock exports have suffered mainly due to the shortage of rainfall. However, it remains clear that relief work seriously hampers whatever agricultural activities would have been possible with any given rainfall. It remains unlikely that there will be a move away from relief work back into farming unless the returns from farming can be made more attractive.

Agriculture

Farming in Rodrigues is mainly of a subsistence type based on limited cash cropping supplemented by livestock and poultry. The holdings are small with the average less than one acre. About 90% of the land is leased from the Government. The rent is nominal based on the agricultural potential of the type of farm. Apart from the fertile valleys which are intensely cultivated, the crops are grown on widespread terracing of the steep hillsides. By terracing, the danger of soil erosion in rainfall has been stabilized. The soils are low in basic nutrients and are derived from basalt lavas. There is a low amount of available phosphate, yet a problem exists in that fertilizers are not used even when distributed free of charge because of the disinclination of the farmer to use it and the low input of extension work.

A local variety of maize is cultivated on an estimated 85% of the 7,500 - 8,000 acres presently available for cultivation. Sweet potatoes are grown mostly for pig feed and a small amount of cassava is grown for human consumption. Onions, garlic and a small amount of chilies are the main cash crops produced for export to Mauritius.

At present, no research or investigation work is done in Rodrigues to determine whether high yielding varieties of maize or any other crop would be suitable for cultivation on the island.

Cattle, a local breed improved somewhat with Brahman blood, graze heavily on the natural grasslands which comprise 29% (approximately 8,500 acres of total land area). Sheep also graze on the same pastures,

sometimes in the company of goats. Attempts have been made to improve the pastures with high quality grasses and legumes, particularly around the Government breeding stations. But these efforts have been rendered ineffective due to heavy overstocking, low rainfall, and no use of rotational grazing. As a consequence of the low rainfall in the past three years, the number of cattle has been considerably reduced. This situation provides an opportunity to regenerate and improve the grass-land areas and introduce a different system of grazing.

Pig production is based on a Berkshire type which has been found suitable for Rodriguan conditions. Improved stock are sold from the Government breeding stations. Poultry is kept for home consumption and for exporting live to Mauritius.

Reafforestation of catchment areas and other slopes is in progress under the relief works program. Nursery facilities are able to produce seedlings in adequate numbers but the rate of planting out is limited by the infrequency of sufficient rain to insure establishment.

Commercial fishing in the large lagoon surrounding the island is restricted by license and controlled net size. Fish are now said to be plentiful off Rodrigues but any expansion of the industry would have to depend on catches from the deep water beyond the reef. This will require an investment in boats larger than the ones used traditionally.

#### Infrastructure

The present road system in Rodrigues is adequate for the intensity of traffic and cannot be considered a particular constraint on development. Certain sections of the road network are being improved and

surfaced under the Relief Works scheme in conjunction with the Ministry of Works Development Program, and while these activities produce useful tasks with which to associate relief employment, the economic justification for some of them is difficult to see.

The present route to the airport is tortuous and crosses the high land in the center of the island. It is possible to shorten and considerably improve the journey time between the airport and the capital by constructing a new road of some 4-5 miles in length from La Ferme to Baie aux Huitres from where a recently improved road already exists to Port Mathurin. Under the Relief Program it is intended to build such a road to a relatively high standard, although there is unlikely to be sufficient economic benefit to justify a high capital aid input, as it is definitely intended to build the road under relief work.

The present airstrip is unsurfaced and a DHC 6 flies to Rodrigues from Mauritius five times a week. Proposals have been made and local funds provided to lengthen and surface the strip and to construct a terminal building. A contract for the work has been let and construction should commence very soon. This will allow larger aircraft to be used.

Local finance has been provided to carry out improvement works on the harbor at Port Mathurin. These have been designed and construction is being supervised by a British firm. The project comprises the widening and deepening of the approach channel (dredged material being used for land reclamation), the construction of a quay with an alongside depth of water of 25 feet. A contract has been let covering the quay while the dredging and reclamation works are being undertaken

by direct labor by the Marine Department. Also, the facilities for repairing and servicing vehicles are to be improved by the construction of a new building which is being locally financed. This is not an area for priority U.S. assistance.

The main public supply of electricity on the island is operated by the Central Electricity Board whose present expansion program is well under way. An extension to the power station has been completed with French aid. There is no opportunity for U.S. involvement here.

There is no public or satisfactory administrative telecommunications link for voice communication between Rodrigues and Mauritius. The Police Department has a periodic radio link and Cable and Wireless have their own connection as well as a telegraph/telegram service. None of these are, however, suitable or satisfactory for efficient administrative communication with the capital in Port Louis or as a public service. There is considerable need for this facility to be improved but in view of past experience of other foreign donors in telecommunications projects in Mauritius, this is not a highly recommended field for involvement in Rodrigues.

The water supply for both domestic and agricultural purposes, is one of the major problems in Rodrigues. In the past, surface water has been the principal source and present plans for improvement also concentrate on surface water. A report published by a Mauritian company (John Taylor and Sons) recommended that, in future, ground water should be developed for domestic use thereby freeing all surface supplies for agricultural purposes. The Canadian government

is at present financing a water supply development program for Rodrigues including the preparation of a "water budget". Although work is already being done in this area, it is a possible area for U.S. enhancement of this much needed project, especially for enlarging the supply for domestic use.

#### Social Infrastructure

The difference between the quality of the buildings of Government primary schools and other externally aided schools is marked. The Government schools are made of fairly modern concrete block construction but the others are of old corrugated iron and wood. This is due mainly to the fact that the Government schools are newer in comparison to the aided schools. The qualifications of the staff of the schools are questionable and especially at the primary levels the teaching standards are quite low. All schools suffer from a lack of books and have no libraries. This is an area of great need and a particular sector of Rodriguan society that could benefit greatly from U.S. aid and assistance.

There are existing buildings in Rodrigues which have not been in use for some while but are reported to be in fairly good condition. There has been a proposal put forth to reform these buildings into the new Trade School. There is an undoubted need for courses in carpentry and other building trades as well as for mechanics and electricians. One suggested goal might be to train Rodriguans to a level where they could be able to come to Mauritius for further

training and then return to teach their newly acquired skills. That level could be obtained without making it a very expensive operation in terms of staff, equipment and recurrent expenditure. By training native Rodriguans to go to Mauritius it expands the possibilities for Rodriguans to increase their skill levels and vocational abilities.

#### Health

There is a general hospital with 68 beds in Port Mathurin and two rural clinics at Mont Lubin and La Ferme with 23 and 16 beds, respectively. Proposals have been made for the rebuilding and equipping of the two rural clinics and are subject to the Medical Advisor's confirmation of the suitability of the equipment for clinics of this size. This is an area in which British aid has already been given, but one in which further aid is greatly needed; especially in the area of rural clinic development and the provision of qualified personnel.

The rate of population increase is a major constraint to successful development in Rodrigues. Population increased at an average of 3.3% per year from 1963-1972 compared with the 1.9% for the rest of Mauritius. Family planning advice is available at the hospital and the two clinics, but the number of women taking advantage of this facility is probably only on the order of 10% of the females in child-bearing age in Rodrigues. The poor accommodation and lack of staff trained to give the much needed advice contributes to the very low rate of acceptance in both of the clinic areas. Another contributing factor is that the population is predominantly Roman Catholic and although Action Familiale (of Mauritius)

runs its normal type of program, it probably only reaches about 10% of potential child-bearing females in the population. This is an area which needs assistance which could be met effectively if the more dynamic Mauritius Family Planning Association could institute a program there. This is a field that could utilize some assistance as over-population contributes a great deal to many problems existing in Rodrigues.

#### Proposed Projects

Suggested projects presented by the Resident Commissioner for development in Rodrigues are an abattoir/fish and meat freezing/cold storage project and an associated hides and skins preparation project. Although these were not in the Rodrigues chapter of the 1975-1980 Five Year Plan, they have considerable prima facie attractions.

The basic attraction for an abattoir/cold storage/by-products project for Rodrigues is that a greater proportion of the benefits from the exportation of livestock from Rodrigues, and of the value added to both the meat and the by-products would remain in Rodrigues, which is relatively much poorer and less developed than the island of Mauritius. If this is found to be feasible, this should enable the smallholder to be paid more for his livestock than would be the case for live export, and this higher price to the producer should be the basic aim of the project.

At the present time, individual buyers go to Rodrigues to buy live beasts (most importantly cattle and pigs) from individual small holders. The belief in Rodrigues is that advantage is often taken by

the buyers of the relatively infrequent visits of the boat and the fact that small holders will usually have brought their livestock considerable distances with intent to sell to offer lower prices than they could obtain if a more regular market was operating. Two changes in this system are presently envisaged: (1) on the selling side the cooperatives section in Rodrigues (which supports the cold storage project) is intending to handle all livestock exports for small holders in the hope that this will give them a stronger collective position than they presently have in individual dealings with the buyers; (2) on the buying side, the Mauritian Meat Authority (MMA), which has exclusive powers to license abattoirs, plans to take over all purchases of meat, among other functions, throughout Mauritius, including Rodrigues. The present Five Year Plan envisages a 150% increase in the numbers of cattle exported to Mauritius from Rodrigues by 1980 and a 100% increase in the number of pigs. Significant numbers of both will continue to be exported live to Mauritius to cater for local tastes for freshly killed meat, but it seems reasonable to suppose that a good proportion could possibly be profitably exported frozen. This is an extremely feasible project in view of: (1) the great proportion of benefits accruing to Rodrigues from such exports; (2) the possibility of creating productive employment by increasing GDP through by-product enterprises; (3) the lower transport costs likely to be incurred for the meat; (4) the slowly changing pattern of taste in Mauritius away from the previous prejudice against frozen meat.

Another project economically feasible for Rodrigues would be to develop the by-products of a livestock project which could include hide curing and tanning, a small leatherwork industry utilizing those hides which are not exported directly, a poultry feed mill utilizing bone meal mixed with local maize, and possibly a poultry project utilizing the output of such a mill to produce some of the 350,000 fowls which it is expected to export by 1980 and eggs, which are currently in short supply for domestic consumption in Rodrigues. This is a project also suggested by the Resident Commissioner as feasible for an area of international assistance.

It is known that exports of frozen beef and pork would require the local livestock to be substantially upgraded in quality and this would probably increase the costs of production to the Rodriguan owner from their present very low level.

If the Government of Mauritius should decide that the sale of frozen beef, pork, chicken and fish from Rodrigues is acceptable in principle, the need for a consultancy to investigate the commercial, economic and technical feasibility of implementing such a project could be supplied by a U.S. agency.

#### AID and Development

From the research done on Rodrigues and the report by the Resident Commissioner of Rodrigues, certain additional projects have been identified as priorities for the development of the island. Before noting these areas it is necessary to point out the areas in which

international and domestic aid have been given in the development of Rodrigues. The tables at the end of this report offer a concise list of the donors, projects and type of aid given to date.

In addition to the aforementioned projects, the Government of Mauritius has stated some additional objectives in aiding the development of Rodrigues. Some of the priorities are to improve internal and external communications, increase adequate water supplies, and provide for more social benefits for the inhabitants. Provisions have been made in the approved budget for 1977-78 for the improvement and extension of the present road network, the improvement of the airstrip at Pointe Corail and the harbor and quay facilities at Port Mathurin. The water supply program is designed to maximize the exploitation of available sources and to tap new ones for domestic and irrigation purposes. Small farming projects are also planned.

The State Insurance Corporation of Mauritius is financing the construction work for the 420-foot quay which will accommodate 5,000-ton vessels; this project is already under way. Reclamation of marshy land is progressing satisfactorily and over three acres of reclaimed land are available for development.

#### Recommendations

Based on the aforementioned information describing the conditions on Rodrigues and the areas of assistance in which substantial international or domestic aid is being given, and suggestions by the Ministry of Rodrigues, certain areas seem quite suitable for U.S.

involvement. With GDP per head at Rs. 800 a year in Rodrigues (compared to Rs. 4,000 a year in Mauritius), Rodrigues is an area of great need both in technical and capital assistance. Rodrigues cannot continue to be ignored in major international aid schemes. The following areas are recommended for possible U.S. assistance:

- (1) The construction of an abattoir for fish and meat freezing-cold storage
- (2) Technical and capital assistance in developing a small scale leather industry for hides and skins preparation. (The DBM has already financed one but additional technical assistance in training and technique is needed.)
- (3) Development of an extension service to enhance farming so as to reabsorb some of the labor in relief work back into farming. This service could encourage farmers to make better use of fertilizers which is presently a serious problem in expanding farming efforts.
- (4) Technical assistance in agricultural research to discover new crop varieties possible for cultivation in Rodrigues. For example, higher yielding corn and vegetable crops.
- (5) Technical assistance (possibly through an extension service) to encourage improved grazing practices in cattle and goats.
- (6) The enlargement of the water supply for domestic and agricultural use. This project could be in coordination with the small efforts made by the Development Bank of Mauritius.
- (7) Capital assistance in building better educational facilities - schools, libraries, etc. Assistance in training teachers

both for primary and secondary levels.

- (8) Technical assistance in training teachers in Trade Schools for small scale, semi-skilled vocations suitable to Rodrigues' development priorities.
- (9) Technical and capital assistance for rural clinic development and staff training; family planning assistance in coordination with Government agency plans.
- (10) Technical assistance in aiding cooperatives in exporting livestock and research in methods of increasing the quality of livestock exported.

ANNEX 3

It is impossible to estimate annual concessional inflows to Mauritius with the information in hand; however, a general reading is possible on a sector-by-sector basis. Of particular interest to U.S. programs are the following grants:

a. Agriculture

<u>Source</u>			<u>Area of Effort</u>
UK	1973-79	\$ 7,000	Forestry
UK	1975-79	6,400	Agriculture machines
France	1977-78	65,000	Agriculture research, irrigation
USA	1977	6,000	Fellowships
India	1975-77	unk	Coops, fisheries, farm planning, sericulture, forestry
China	1974-77	unk	Rice and vegetables, fruit
Egypt	1977	unk	Animal production and health
UNDP/FAO	1973-80	216,380	Milk and dairy
WFP	1972-77	2,916,000	Agriculture development of Rodrigues
UNDP/FAO	1978-79	30,000	Aquaculture, fisheries

b. Education

<u>Source</u>			<u>Area of Effort</u>
France	1977	\$1,900,000	Fellowships, teachers training, documentation, secondary education
UK	1977	unk	English language, teachers training, University of Mauritius
Russia	1977	unk	Fellowships
India	1973-77	unk	Technical assistance, fellowships
Egypt	ongoing	unk	Fellowships

c. Health/Population

<u>Source</u>			<u>Area of Effort</u>
France	1977-79	\$ 140,000	Technical assistance
India	unk	unk	Technical assistance
UK	continuous	6,000	Technical assistance
WHO	1977	unk	Training
UNFPA/ UNICEF/ UNDP/WHO	1974-77	137,000	General assistance
USA	1977	50,000	Exchange programs

Mauritius has received considerable loan assistance from agreements signed and capital aid granted in 1977. This includes:

France- \$ 99,000 - Material for teachers training  
 400,000 - Medical equipment  
 202,000 - Young farmers training center  
 400,000 - Assistance to public works  
 600,000 - Irrigation  
 370,000 - Development works training  
 340,000 - Study for creation of technical high school  
260,000 - Hotel school  
 \$5,676,000

UK - \$10,000,000 - Various projects

Lloyds Bank - \$37,000,000 - To Government

## ANNEX 4

## TABLE 3

## EMPLOYMENT

Employment by Economic Activity

	<u>March ('000)</u>		
	<u>1968</u>	<u>1975</u>	<u>1976</u>
Agriculture & fishing	56.4	58.2	59.5
of which:			
Sugar +	51.2	50.6	52.6
Tea	3.9	5.5	4.7
Mining & quarrying	0.2	0.1	0.1
Manufacturing	7.7	21.1	26.4
Construction	2.3	5.4	6.8
Electricity	1.3	2.9	3.1
Commerce	3.2	6.9	8.1
Transport & communications	4.4	9.2	8.9
Government services	46.0	45.1	47.2
of which:			
relief workers	17.8	10.2	10.7
Other services	3.2	15.9	17.0
Total	<u>124.7</u>	<u>164.8</u>	<u>177.1</u>

+ With seasonal variation the September figure is 7,000 higher.

Source: Central Statistical Office.

TABLE 4

Organization Chart of Relevant Ministries

