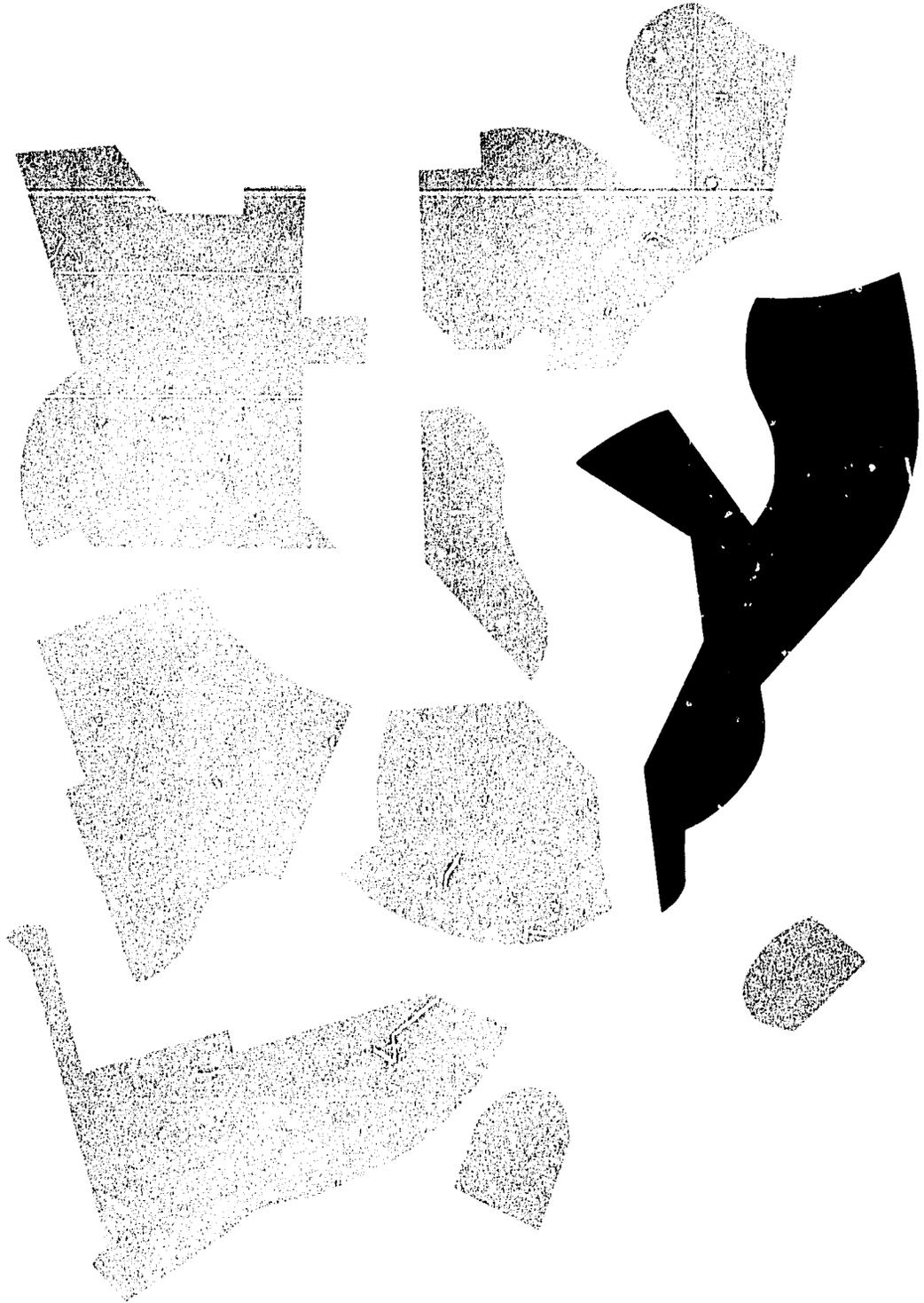


FNIAAF095
7323

This paper was prepared to provide background information on the issues and opportunities for economic assistance to the countries of Southern Africa thru and following the periods of transition in Zimbabwe and Namibia. It includes Social, Geographic, Economic, and Political information.



February 1977

Prepared by:

Southern Africa Task Force

Office of Southern and
East African Affairs
Africa Bureau, USAID

Transition in Southern Africa-----

MOZAMBIQUE

FD-111-15

A FRAMEWORK FOR U.S. ASSISTANCE
IN SOUTHERN AFRICA

COUNTRY RESOURCE PAPER

MOZAMBIQUE

Submitted by

THE OFFICE OF EASTERN AND SOUTHERN AFRICA AFFAIRS

BUREAU FOR AFRICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

February 1977

Prepared under Contract AID/afr-C-1141
Work Order 17

By: Harry Carr
Checchi and Company
Washington, DC

MOZAMBIQUE

Table of Contents

SECTION I - GENERAL BACKGROUND	I- 1
A. Physical Features	I- 1
B. Demography	I- 3
C. Culture	I- 6
1. Bantu Language	I- 9
2. Portuguese	I- 9
3. Ethnic Groups	I-10
D. Politics	I-10
1. The Political Structure	I-10
2. The Influence of Geopolitics	I-11
3. The Influence of Politics after Independence	I-13
SECTION II- ECONOMIC OVERVIEW	II-1
A. Introduction	II- 1
B. Gross Domestic Product	II- 1
C. Employment	II- 2
D. Price Data	II- 4
E. Sector Summary	II- 5
1. Agriculture	II- 5
2. Minerals and Mining	II- 5
3. Transportation	II- 5
4. Industry	II- 5
F. The Public Sector	II- 6
1. Military and Security	II- 6
2. Social Services	II-11
3. Infrastructure	II-11
G. Balance of Payments	II-11
1. Balance of Trade	II-11
2. Invisible Accounts	II-17
3. Capital Accounts	II-19
4. Direction of Trade	II-19
H. Transition and Independence	II-19
I. Priorities of the 1975 Budget	II-23
SECTION III-FOREIGN DONOR ASSISTANCE	III- 1
A. Foreign Donor Assistance History	III- 1
B. Foreign Assistance in 1976	III- 1
C. Projected Short-Term Assistance Needs	III- 3
1. Water and Power Supplies	III- 3
2. Telecommunications	III- 3
3. Transport	III- 3
4. Food Production to Replace Imports from Rhodesia	III- 6
D. Projects for the Normal Development of Mozambique	III- 6

31

Table of Contents Continued

SECTION IV - SECTOR ANALYSES	
A. Introduction	IV- 1
B. Agriculture	IV- 2
1. The Setting	IV- 2
2. Production	IV- 3
3. Structure of Production	IV- 6
4. Constraints on Production	IV- 9
C. Minerals and Mining	IV-10
1. The Setting	IV-10
2. Prospecting and Exploitation of Major Resources	IV-14
3. Constraints to Production	IV-14
D. Transportation	IV-16
1. The Setting	IV-16
2. Adequacy of Communications	IV-16
E. Energy, Power and Communication	IV-26
1. The Setting	IV-26
2. Communication	IV-27
F. Health	IV-28
1. Living Conditions	IV-28
2. Health Organization and Infrastructure	IV-29
3. Constraints to Improved Health Care	IV-34
G. Population Problems	IV-35
H. Education	IV-35
1. The Setting	IV-35
2. System Coverage	IV-41
3. Constraints	IV-42
I. Industry	IV-42
1. The Setting	IV-42
2. Principal Industries	IV-44
3. Industrial Growth Patterns	IV-44
4. Constraints to Growth	IV-47
J. Tourism	IV-47
1. The Setting	IV-47
2. Tourism since Independence	IV-48

MOZAMBIQUE

List of Tables and Figures

FIGURE I - 1	Land Forms and Drainage and Annual Rainfall in Mozambique	I- 2
FIGURE I - 2	Broad Soil Regions of Mozambique	I- 4
FIGURE I - 3	Mozambique Arable Land Density	I- 5
FIGURE I - 4	Geographic Distribution	I- 7
FIGURE I - 5	Population Age Distribution	I- 8
FIGURE I - 6	Government Organization in Portugal and Mozambique	I-12
TABLE II - 1	Gross Domestic Product	II- 3
TABLE II - 2	Government Revenues and Expenditures (1971-1975)	II- 7
TABLE II - 3	Structure of Mozambique National Budget	II- 8
TABLE II - 4	Mozambique: Revenues and Expenditures of Autonomous Agencies, 1970-73	II- 9
TABLE II - 5	Detail for Selected Government Expenditures	II-10
TABLE II - 6	Balance of Trade, Mozambique	II-13
TABLE II - 7	Main Imports: Composition of Imports in Detail	II-14
TABLE II - 8	Main Exports: Composition of Exports in Detail	II-15
TABLE II - 9	Distribution of Main Imports by Product Group	II-16
TABLE II -10	Balance of Payments: Major Elements	II-18
TABLE II -11	Principal Partners - (Percentage)	II-20
TABLE III- 1	Official Development Assistance	III- 2
TABLE III- 2	Bilateral Assistance for 1976	III- 4
TABLE III- 3	Multinational Assistance for 1976	III- 5
TABLE IV - 1	Estimated Agricultural Production by Volume and Area Selected Crops	IV- 4
FIGURE IV- 1	Aggregate Crop Production	IV- 7
TABLE IV - 2	Role in the World Mineral Supply	IV-11
TABLE IV - 3	Production and Export of Principal Minerals, 1970-1971	IV-12
FIGURE IV- 2	Commodities	IV-13
TABLE IV - 4	Production and Export of Coal, 1958-1970	IV-15
FIGURE IV- 3	Major Road and Rail Networks of Mozambique	IV-17
TABLE IV - 5	Freight Handled by Mozambique Ports	IV-24
FIGURE IV- 4	Health Facilities of Mozambique, 1964	IV-31
TABLE IV - 6	Educational System of Mozambique by Category, 1964-1965	IV-38
TABLE IV - 7	Industrial Production, 1969-75	IV-45
TABLE IV - 8	Manufacturing Industry Production Estimates	IV-46



I

GENERAL BACKGROUND

- **Physical Features**
- **Demography**
- **Culture**
- **Education**
- **Politics**

I. GENERAL BACKGROUND

A. Physical Features

Mozambique is 303,073 square miles in size, approximately equal to the size of Nigeria. It has a coastline which extends 1,737 miles in length and, to the west and north, borders on South Africa, Swaziland, Rhodesia, Zambia, Malawi, and Tanzania. It lies on the Tropic of Capricorn with the Malagasy Republic directly off its coast. The major river of Mozambique is the Zambezi River flowing in from Zambia and Rhodesia cutting the country approximately in half. The northwestern border with Malawi runs along the elongated Lake Nyasa. The rivers of Mozambique, particularly the Changane, Save, Pungoe, Zambezi, Lurio and Lugenda, represent internal geographic barriers and have, historically, formed the boundaries for many ethnic groups. Although there are no excessively high mountain ranges, the highlands of the Western spur of Mozambique and the highlands of the Northwest have presented geographic impediments to population flows.

Topographically two-fifths of Mozambique consists of coastal lowlands. (See the drainage map of Figure I-1.) Between the coast and the western borders of Mozambique lies a transitional zone of hills and low plateaus ranging between 200 and 2,000 feet above sea level. A third topographic zone is formed by the eastern section of the Rhodesian highlands in western Mozambique averaging about 3,000 feet above sea level. The northwest of Mozambique has the highest elevation with an extensive plateau averaging 4,000 feet above sea level. The extremes of elevation are the Namuli Highlands in northern Zambezia District reaching an elevation of 8,000 feet, the Gorongosa Highlands in central Mozambique reaching 6,125 feet, and the Libombo Mountain Range along the southwest border.

The climate of Mozambique is subtropical in the south and tropical in the center and north. The influence of the summer monsoon and the Mozambique Current provide the entire country with an average annual rainfall of over one meter. This creates favorable, although varied, conditions for agriculture. Although the subtropical regions of the south are favorable to certain crops, they are not attractive to human settlement which, combined with the prevalence of malaria in the central and northern coastal plain and the Tsetse Fly north of the Save River, have tended to discourage large-scale settlement in the interior of Mozambique by Europeans through most of the country's history.

Average temperature ranges for a variety of areas of Mozambique are given below:

Porto Amelia (Pemba)	70.5 - 80 ^o F
Beira	70 - 82.5 ^o F
Maputo	65 - 80 ^o F
Tete	68.5 - 89 ^o F

Relative humidity follows the same pattern as rainfall, shown in Figure I-1 along the coast with the highest humidity year-round being the central coastal region. The humidity in Beira is about 77 percent and in Porto Amelio (Pemba) it is 81 percent. Humidity decreases to the north and south.

Inland there is considerable variety in the climate largely because of variations in the topography and the presence of large natural features, such as the Rhodesian Highlands and Lake Nyasa. Figure I-1 graphically shows the rainfall pattern in Mozambique.

North of the Save River practically the whole country is covered with deciduous open woodland of the Miyombo type and undergrowth of grasses. There are small areas of closed forest in the higher, wetter mountain regions. South of the Save, particularly in the inland areas, is a wooded steppe in which both the tree and grass species become progressively shorter as one moves inland from the coast. More than half of Mozambique's livestock population is concentrated in this dry inland area which is associated with the absence of tsetse fly, as noted above, and the abundance of palatable grasses. Figure I-2 shows the distribution of soils in Mozambique.

B. Demography

Mozambique has undertaken three national censuses: in 1950, 1960, and 1970. Based on these, the following table gives national population figures, in millions, from 1955 to 1975.

<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	Mid <u>1976</u>
6.08	6.58	7.26	8.09	8.27	8.46	8.65	8.85	9.06	9.30

Mozambique presently has a birth rate of forty-three per thousand and a death rate of twenty per thousand, resulting in a growth rate of 2.3 percent. Infant mortality is estimated at 152 per thousand live births with a life expectancy of forty-four years. Population doubling time is estimated at thirty years. Population density to arable land, from 1970 projected for 40 years, is given in Figure I-3.

International migration patterns are somewhat important in the case of Mozambique. The primary cause of outmigration is for contract labor in the mines of South Africa and Rhodesia. Recent estimates put the number of contract laborers in South Africa at 150,000 with another 80,000 in Rhodesia. Since independence, there has been emigration of Europeans. Immigration, particularly in the last five years has come from Portugal in an effort to settle hinterland areas. At the time of independence the number of Portuguese expatriates was put at 250,000 of which approximately 52,000 have remained in Mozambique as of June 1976.

Since 1950, the African portion of the population has remained a fairly constant 98 percent of total population. Making the estimate that this proportion remains constant today, after independence, the African population could be estimated at 9.114 million. The second largest group is European, mostly Portuguese and the next largest group is defined as mixed, meaning persons having a European as a direct patrilineal ancestor. After these groups, roughly .3 percent of the population is of Indian origin and .1 percent is Chinese.

FIGURE I-2

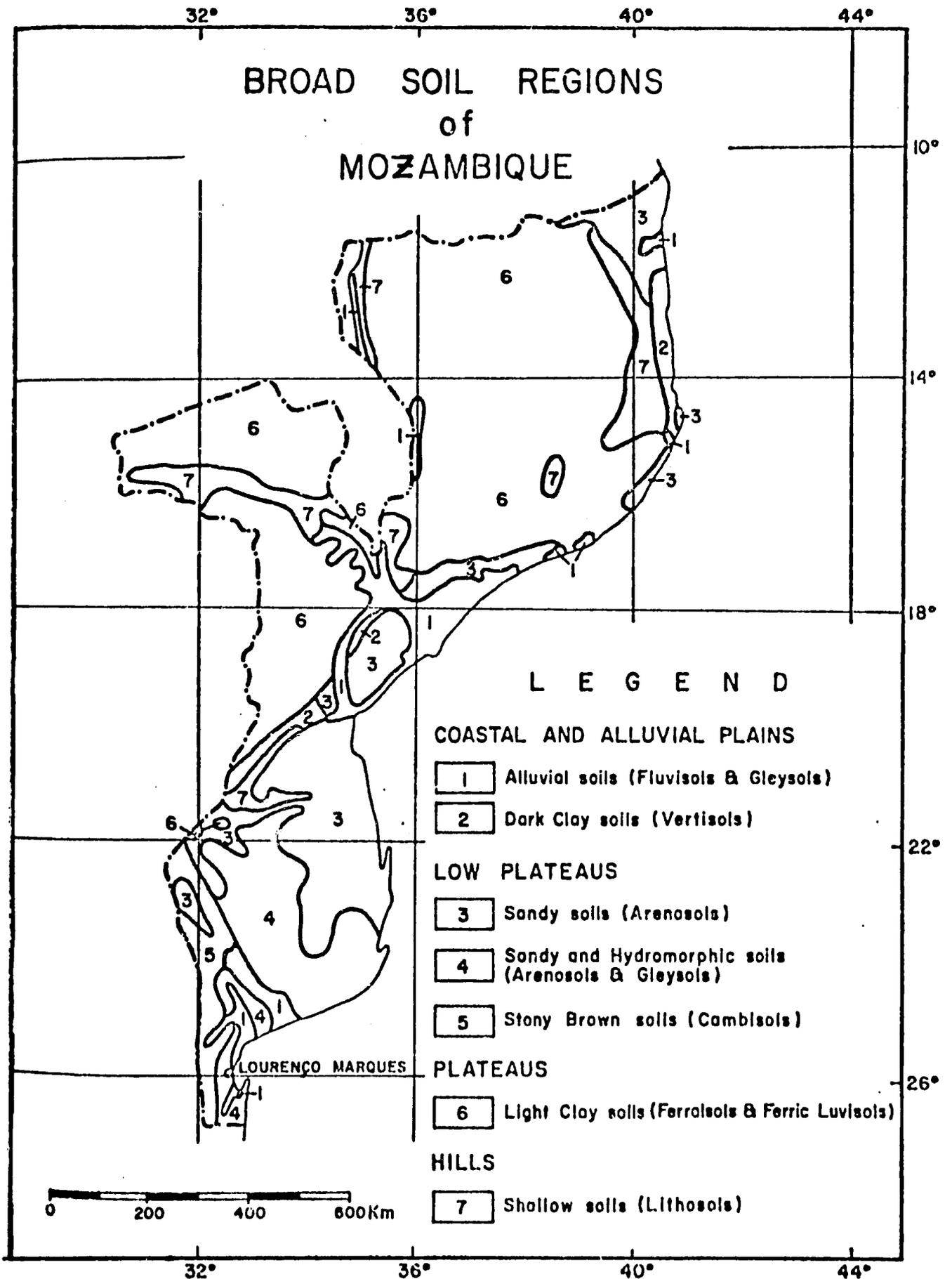
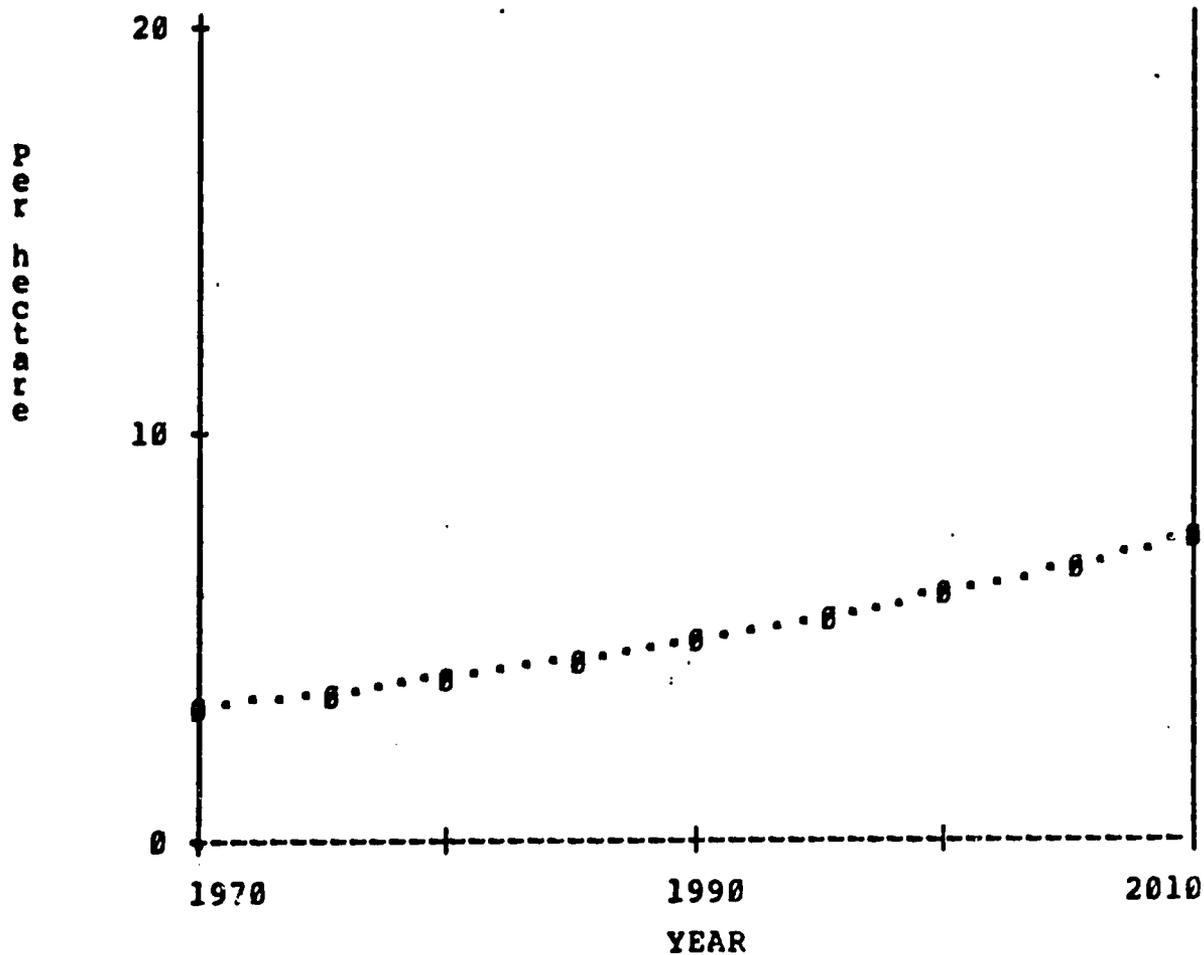


FIGURE I-3

Food Program

11/22/76

Mozambique
Arable Land Den.



	1970	1980	1990	2000	2010
0	3.33	4.07	5.00	6.14	7.55

0 = REF

Source: PLATO, Population Dynamics Group, University of Illinois, 1976.

The population is generally concentrated along the coast of Mozambique and in the major river valleys. Overall population density is estimated at 30 per square mile. Figure I-4 shows a density mapping of Mozambique. Although the map reflects the 1960 census the distribution is still approximately the same. Population density for each district is given below. (Again, these figures are based on the 1960 census):

Maputo	68.1 persons per sq. mile
Gaza	20.4 persons per sq. mile
Inhambane	22.1 persons per sq. mile
Manica e Sofala	15.5 persons per sq. mile
Tete	12.2 persons per sq. mile
Zambezia	34.4 persons per sq. mile
Mozambique	47.6 persons per sq. mile
Cabo Delgado	18.1 persons per sq. mile
Niassa	6.0 persons per sq. mile

The total population is only six percent urban. Of all population groups, the European and Chinese tend to predominately live in urban areas.

The Mozambique population is relatively young, with 50.1 percent being below the age of twenty. Figure I-5 provides the Mozambique population pyramid for the 1975 estimated population. Of Mozambique's total population, the female element is just slightly above half, at 50.6 percent.

C. Culture

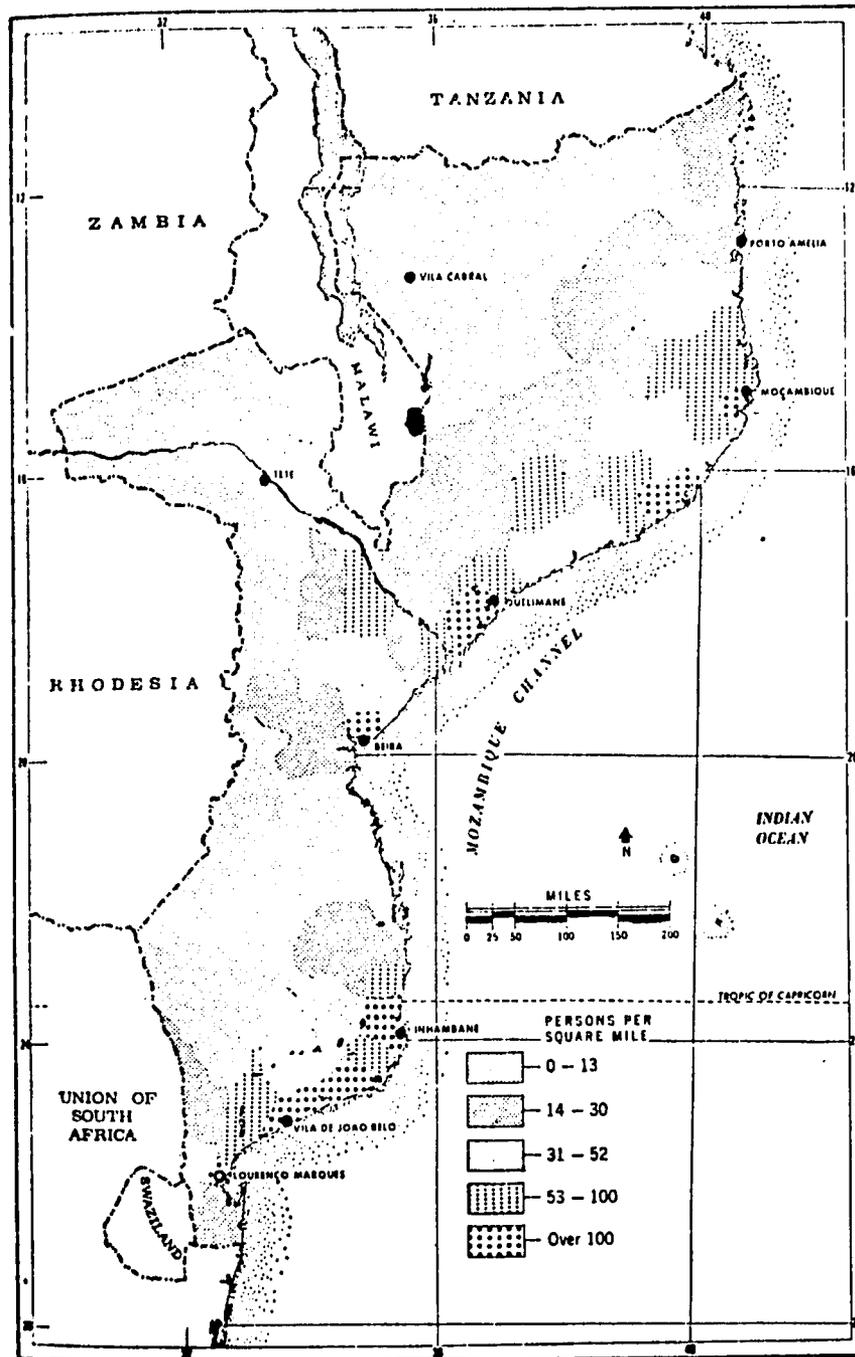
The Africans, who form the overwhelming majority of the Mozambique population, consist of 10 major ethnic groups related culturally and linguistically to other peoples of eastern and central Africa. Most of 10 groups extend across international boundaries, and along some borders there is considerable movement back and forth. Within each group is a number of tribes in which the members tend to intermarry and share a sense of common identity. Each tribe speaks a Bantu language as mother tongue. Communication between groups and tribes in a group is difficult because of variations in spoken language.

The three non-African ethnic groups represent 1.8 percent of the total population. These include Europeans, the politically and economically dominant group until independence, speaking mainly Portuguese; a small community of persons of Indian descent, primarily from the former Portuguese Indian province of Goa.

The Portuguese have had a relatively recent policy (since 1933) of creating a single Portuguese nation which would include white Europeans, black Africans, and persons of mixed parentage. Portuguese social scientists, using Brazil as an example of successful mixing of peoples and cultures, emphasized what they considered to be the particular adaptability of their countrymen to tropical climates and their tolerance of other races and cultures.

FIGURE I-4

GEOGRAPHIC DISTRIBUTION

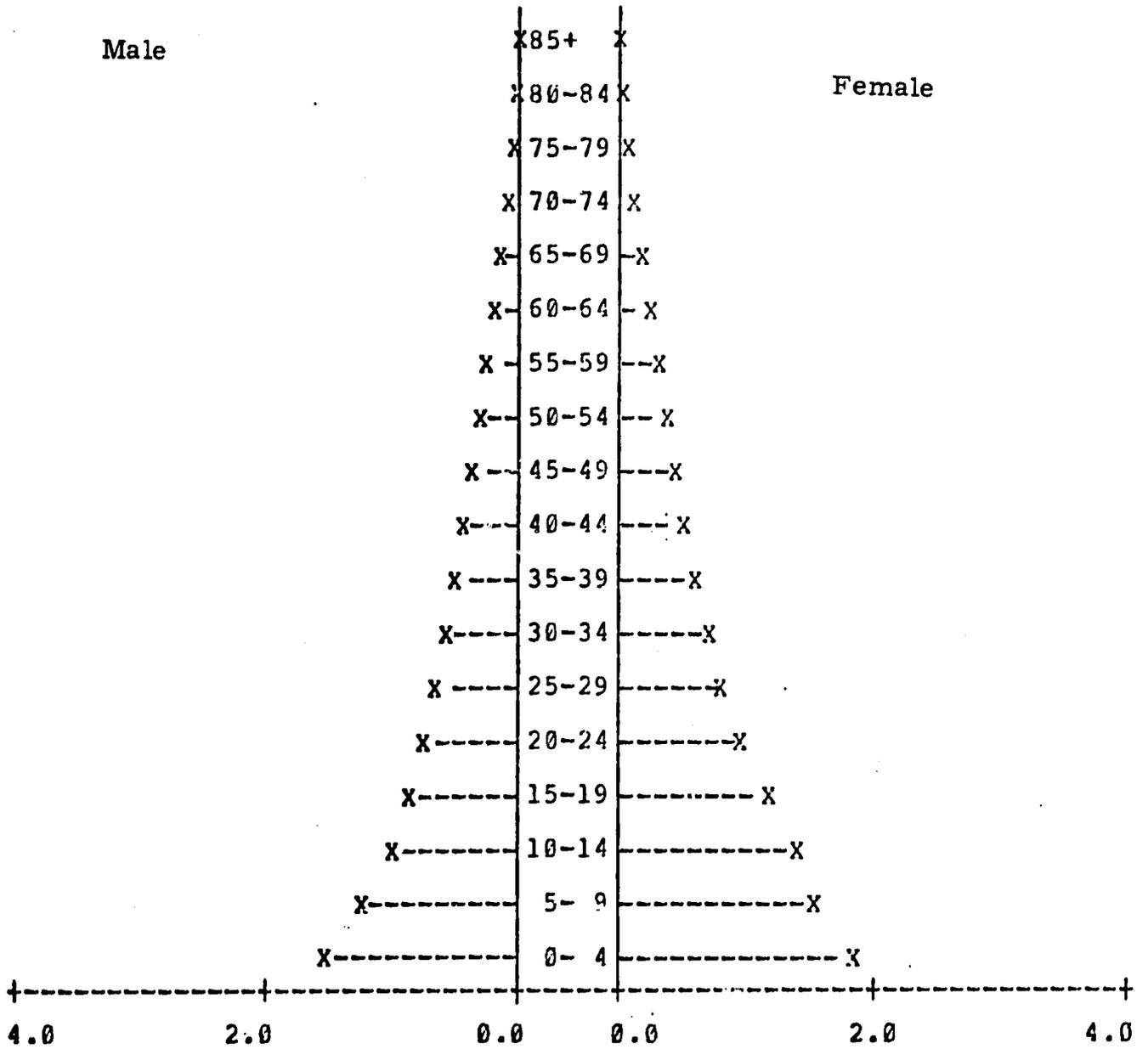


POPULATION DENSITY OF MOZAMBIQUE

134

FIGURE I-5

Population Age Distribution



1. Bantu Language -- Bantu languages are spoken as the mother tongue by all Africans. Linguistic divisions among them correspond in general to ethnic divisions and are one of the major criteria for defining an ethnic group. Although the languages spoken by some African groups are related in structure and vocabulary to others, most languages are mutually unintelligible or intelligible only with difficulty.

Five zones of Bantu speech can be distinguished. Within each of these, the various languages show more characteristics in common with each other than with those in adjacent zones. The zones extend into neighboring Tanzania, Zambia, Rhodesia, and South Africa.

The Makonde language, spoken by the Makonde tribe of northern Cabo Delgado district and by a related group of speakers north of the Rovuma River in Tanzania, is usually classified as a separate linguistic zone. Compared to the other linguistic groups, the Makonde speakers of Mozambique are relatively few in number. In 1950, there were an estimated 136,225.*

From the Rovuma River south to the Zambezi is a linguistic zone which includes the languages of the Makua, Lomwe, Yao, Maravi, and the Lower Zambezi Complex. In 1950, the more than 2 million Makua speakers were the largest linguistic group in the province.

The Swahili zone extends along the coast from Moma at the mouth of the Ligonha River north into Tanzania. West of the coast and north of the Zambezi, Swahili is the trade language and lingua franca of various ethnic groups. It is easily learned by non-Africans, and traders in the region commonly use it in their transactions.

The central zone includes most of Manica e Sofala and part of Tete district. It includes a relatively large number of separate dialects which share certain characteristics and are known collectively as the Shona language.

The zone to the south of the Save River includes several languages. Swazi and Hguma have characteristics more common to South African languages than to those to the north. The Thonga language is spoken by the second largest linguistic group, which was reported in 1950 to be over a million. Tswa is spoken throughout most of the Inhambane district. Hlengwe, closely related to Tswa, predominates in northern Gaza and Inhambane districts. In southern Gaza are Shangana speakers, and around Lourenco Marques Ronga is common. Finally, the Chopi language is spoken in the coastal region near Inhamband.

2. Portuguese -- Portuguese, the official language, is used as the medium for administration, commerce, education, and public information. Use of the

*Since that census, demographic information has not distinguished between groups.

language was part of the policy to bring Portuguese civilization of the Africans. The form of the language is kept as close as possible to that of the best educated people of Portugal.

Official bulletins are in Portuguese. Most books, newspapers, and radio broadcasts are also in Portuguese, but regular programs in English, Afrikaans, and African languages are scheduled. Education, as conducted by the authorities and by Catholic missions, has regularly been in Portuguese. (See Education.)

It is less common for women to know Portuguese than for men, who, because of work experiences, have had more contact with Portuguese speakers.

3. Ethnic Groups -- The 10 Bantu-speaking African groups share a similar cultural base, characterized by subsistence farming (corn and manioc being the staples), a kinship-oriented social system, and a traditional religion which attaches importance to maintenance of good relations with ancestral spirits as well as a host of spirits believed to control natural phenomena.

Physical differences between members of different ethnic groups are small. In the past, members of different groups were distinguishable by their manner of dress, hair arrangement, and facial and body decoration. A simplified European style of dress has now been adopted by all but the more remote peoples, except in the north, where Arab-style robes have long been worn, and European dress has been slower in acceptance.

The Africans can be grouped into two major cultural regions--a northern region and a southern, with the Zambezi River roughly forming the boundary between them.

The principal ethnic groups in the Northern region are the Maravi, Yao, Makua, Lomwe, and Makonde. Agriculture is very important to these people who have no tradition of cattle keeping, the presence of the tsetse fly making it all but impossible. Generally, the population is settled in scattered hamlets of round, conical, or rectangular wattle-and daub houses.

Most of the South is inhabited by tribes which are, to some degree, part of the East African Cattle Complex, a culture area which extends over much of eastern Africa. The Shona, Thonga, Chopi, and Nguni are the principal groups in this region. It is primarily from the Thonga and Chapi that men have been drawn to work in the mines of South Africa.

D. Politics

1. The Political Structure -- Mozambique was officially defined as an overseas province of Portugal, as were Angola, Cape Verde, and Guinea Bissau, in the Colonial Act of 1930. This status effectively proclaimed these provinces as an integral part of the Portuguese Empire. The status of overseas province was further legitimized in the Portuguese Constitution of 1933. This status went unchallenged until 1961 in Angola and 1964 in Mozambique.

In 1954 Portugal passed what became known as the Native Statute (Estatuto dos Indigenas Portuguesas das Provincias de Genine, Angola, e Mozambique) which defined a separate political and legal status for Africans and defined the terms and requirements for these peoples to obtain Portuguese citizenship. The uprising in Angola in 1961 made the Portuguese authorities think better of the Native Statute and by January 1, 1964 the Organic Law of the Portuguese Overseas Provinces was passed, giving all Africans full Portuguese citizenship and rights as well as decentralizing the administration of the colonies granting more power to local authorities.

All Provinces took on a unitary political system with a strong appointed executive (the Governor General) and a relatively weak, indirectly elected legislative branch (The Legislative Council) which represented a variety of established, European institutions and groups. The Governor General was answerable to the Prime Minister and Overseas Minister in Lisbon and responsible for carrying out their directives and policies.

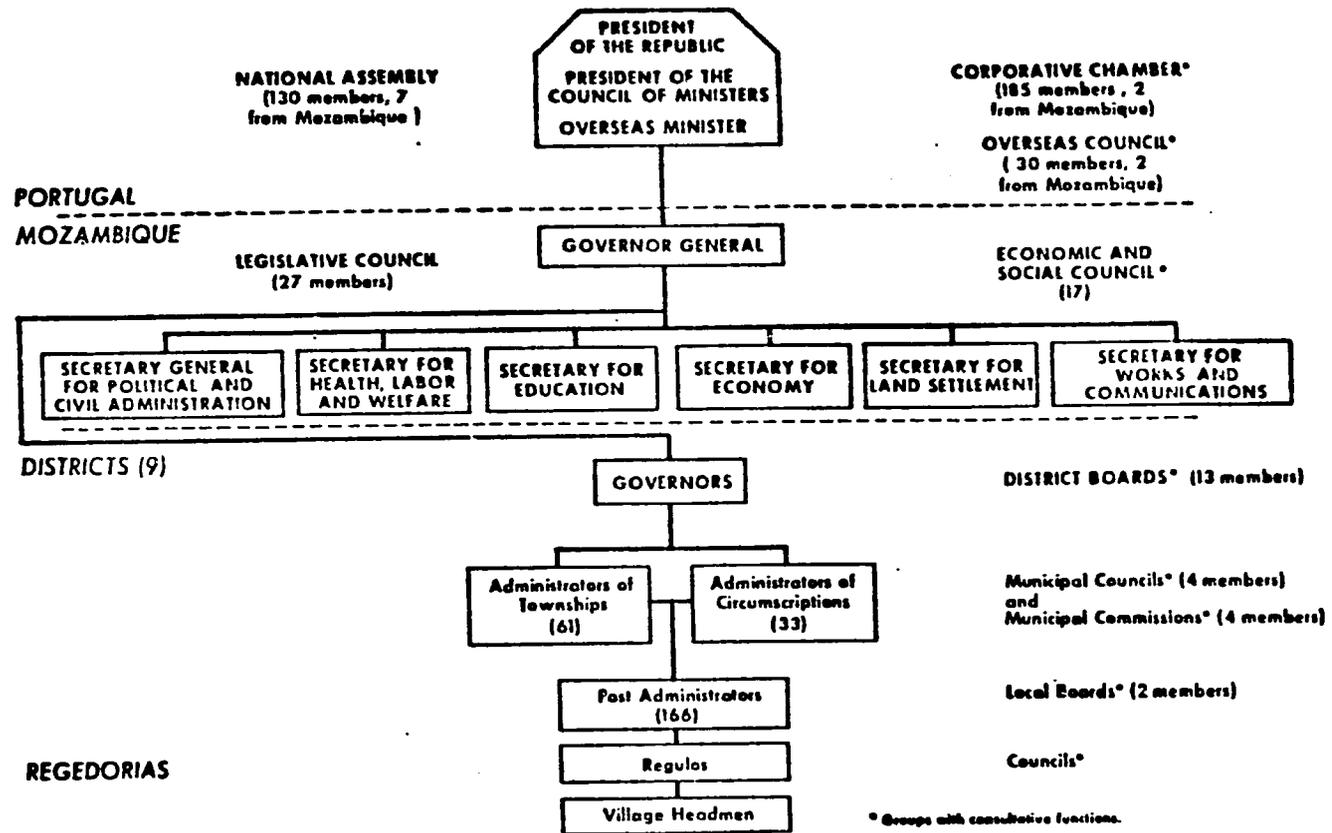
The primary powers of the Governor General were over the administration of finances and the civil service. He had both executive and legislative power (by decree for the nine months the Legislative Council was not sitting). He had a veto power over legislation, by not publishing it officially, but any legislation not published had to be sent to the Overseas Minister in Lisbon who could order its publication. Figure I-6 shows the organizational structure of government over Mozambique prior to independence.

There were also a variety of autonomous agencies which had jurisdiction over the administration of certain public services such as roads, communications, welfare, electrification, and land settlement. These agencies had budgets of their own as well as policy, regulatory, and administrative responsibilities.

With independence, many of these autonomous agencies continued to function. It is uncertain to what extent the governmental executive structure remains since there are still changes being made.

2. The Influence of Geopolitics -- The geopolitical situation of Mozambique has a considerable influence on the country's foreign relations as well as its economic structure. The fact that Mozambique has a long coastline (1,737 miles) and deep-water ports has largely determined the dominance of the transport sector of the economy as well as its political and economic relations with the neighboring countries of Rhodesia and Malawi which are land-locked. The heavy investment in the transport services sector for transit freight of foreign nations cannot be seen as a function of colonialism. It is probable that any government ruling a nation with the borders and location of Mozambique would similarly develop a strong transportation sector in its economy. This geopolitical factor makes for heavy dependence by land-locked neighbors on Mozambique. Moreover, because of favorable port sites, South Africa exports many goods and commodities through Mozambique.

FIGURE I-6



Government Organization in Portugal and Mozambique

* Groups with consultative functions.

15

3. The Influence of Politics after Independence--Politics presently plays a major role in the development of Mozambique. In a very real sense, Mozambique is a revolutionary society. It entered a transition period in 1975 from a colony to an independent nation and in 1976, Mozambique achieved full independence.

Mozambique leaders are conscious that the country's economy had been designed to serve the interests of Portugal and not the interests of the Provinces' population. The present government has made an active decision to restructure the economy. Yet the government sees, as an equally important priority, the restructuring of the nation's political system. Often the efforts in restructuring the economic and political systems have been compatible. Recent experiments in land reform are examples in which abandoned lands have been earmarked for redistribution into smaller parcels and agricultural production has been politicized. However, there are examples in which the two restructuring efforts have not been compatible; the closing of the Rhodesian border for political reasons has had severe effects on the nation's economy. Yet Mozambique has chosen to maintain amiable relations with South Africa for purely economic reasons. Generally it can be said that when the two efforts come into conflict, political restructuring will take precedence over economic improvements.

In this sort of arena, economic development and even improvements in health and education, have not just technical components but very strong political elements as well.

The politics referred to above apply to domestic developmental efforts. Similarly, on the international level, politics have a strong influence on action. The fact that Mozambique was, for five centuries, ruled by a completely foreign people has left the heavy impact one might expect. Like many post-colonial nations, Mozambique is determined to control its own destiny. It appears to be taking a Socialist road in its internal and external politics. Yet it often acts on its perceived national interests rather than ideology. The relations it has maintained with Rhodesia on one hand, and South Africa on the other, which were described above, are examples of the shifts of which Mozambique is capable. Similarly there are areas in which there is considerable cooperation between Mozambique and Portugal. Development of the Cabora Bassa Dam is a good example of this. Although the project was planned between the Portuguese and South African governments prior to independence, the project has continued in such a way that Portugal provides loans for the dam's completion and retains ownership of the dam for ten years agreeing then to release it for Mozambique-South African ownership. The agreement provides that Mozambique will then be given favorable conditions with which to repay the loans to Portugal.

II

ECONOMIC OVERVIEW

- **GDP**
- **Balance of Payments**
- **Other**

II. ECONOMIC OVERVIEW

A. Introduction

It is necessary to introduce this section on the economic background of Mozambique in order to inform the reader how the various subsections flow. The section first deals with Mozambique's gross domestic product, historically up until independence. This is followed by employment and price information, again prior to independence. Then there is a summary subsection describing briefly the major sectors of the economy. This is followed by a description of the public sector and the sources and destinations of public spending prior to independence. Then there is a subsection which deals with the nation's balance of payments until the transitional period and independence. Finally there is a subsection which describes the principal economic effects of transition and independence in Mozambique and what caused them. This section also describes the new policy directions for development that the new government is undertaking.

Since independence has come to Mozambique only recently, the focus of this economic overview section is to describe the economy prior to independence in greater detail than the state of the economy after independence. It attempts to show the major trends, followed by a brief description of what happened with independence and what the economic effects were.

Prior to independence the economy of Mozambique could be characterized as a balance between the agricultural and service sectors. Agricultural production was primarily on the subsistence, small-farm scale. Approximately a quarter of the production was derived from plantation scale farming with most of the product destined for export. The service sector was dominated by transport and port services for international freight transit from Mozambique's neighbors. Tourism also had a relatively large portion of the service sector followed by government services. The direction of the development of Mozambique's economy was fundamentally determined by two factors: its colonial status and its geopolitical situation.

Since independence the service sector has declined considerably, due primarily to political considerations. The new government has closed its borders with Rhodesia, thus cutting transit traffic. Most of the transportation and administrative skilled manpower, being European, has left Mozambique, further cutting service productivity. Finally, the new government has decided to end its nation's role as a tourist center. Agricultural production has also declined, but not as precipitously. This decline can be attributed to the flight of European plantation owners and managers.

B. Gross Domestic Product

The growth of the Mozambique economy over the ten years prior to independence was extremely rapid. Real growth in the gross domestic product averaged 7.5 percent per year between 1965 and 1970 and 7.4 percent per year between 1971 and 1974. Over each time period there were only eight countries in Africa

which averaged higher rates of annual economic growth. Mozambique's average annual growth was well above the African average of 5.7 percent and 5.8 percent, including and excluding South Africa respectively.

Table II-1 shows Mozambique's gross domestic products for the nine years prior to independence as well as the contribution of the primary, secondary and tertiary sectors of the economy to GDP. Over the nine year period there has been a shift from agriculture to a predominance of services in the Mozambique economy. Of these services the primary contributors are transportation and port services as well as tourism related services. Agriculture grew at an annual rate of 4.9 percent, which was less than the national average rate of growth. The industrial sector grew at an average annual rate of 8.8 percent while services grew at a rate of 9.0 percent annually.

Thus, for the nine year period prior to independence, Mozambique was achieving high rates of growth in the secondary and tertiary sectors, bringing industries and services into greater balance with the agricultural sector. By 1974 the service sector dominated Mozambique's economy.

Economic growth has well outpaced population growth over these periods. The table below shows per capita income and rates of growth in per capita income since 1960. It should be noted that these measures of real economic growth were attained during a period of civil strife in which the northern portion of the country was under the control of FRELIMO.

	1960	1965					
	<u>1964</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Per Capita Income (US\$)	197*	223*	289	302	312	336	350
Rates of Increase in Per Capita Income		2.6%*	5.8%*	4.4%	3.3%	7.6%	4.1%

*Annual Average

In 1970 it was estimated that the monetized sector of the economy accounted for about 75 percent of GDP while the subsistence sector contributed the remaining 25 percent of GDP.

C. Employment

The labor force, defined as economically active population, is 35 percent of the total population or an estimated 3.2 million persons in 1975. A breakdown of this portion of the population is provided in the 1970 census which shows a total labor force of 2.9 million persons of which 73 percent were male. Broken down by industry yields the following distribution of labor:

20

TABLE II-1
Gross Domestic Product
(at constant 1973 dollar equivalents)

	1966		1967		1968		1969		1970		1971		1972		1973		1974	
	amount	%	amount	%	amount	%	amount	%	amount	%	amount	%	amount	%	amount	%	amount	%
Total GDP (million \$)	1,727	100	1,879	100	2,020	100	2,181	100	2,334	100	2,495	100	2,641	100	2,905	100	3,100	100
Agriculture	821	47	868	46	935	46	963	44	1,014	44	1,064	43	1,127	43	1,222	42	1,302	42
Industries	237	14	262	14	292	15	330	15	353	15	382	15	403	15	446	15	465	15
Services*	669	39	749	40	793	39	888	41	967	41	1,049	42	1,111	42	1,237	43	1,333	43

*Includes public sector

Source: Economic Growth Trends, Statistics and Reports Division, AID, 1976. (major source)

Note: These figures are approximate due to some confusion within sources between GNP and GDP.

23X

Agriculture	74%
Mining*	4%
Manufacturing	5%
Construction	3%
Electricity	1%
Commerce	3%
Communications	2%
Services	8%

Thus, roughly 74 percent of the population contributed 44 percent GDP in 1970, 18 percent contributed 15 percent of GDP, and 8 percent contributed 41 percent. Even allowing that some services included under GDP may appear under census industrial categories other than "services," labor in the tertiary sector appears to be considerably more productive than labor in any remaining sectors.

D. Price Data

The general price index, using 1963 as the base year, increased at an average annual rate of 6.2 percent up to 1973. Major increases appeared, however, between 1970 and 1972. Food prices increased at about the same rate, increasing annually at 6.3 percent. A breakdown of the price index is given in the table below:

	Price Index (1963 = 100)								
	1965	1966	1967	1968	1969	1970	1971	1972	1973
General	104	107	111	116	119	124	144	154	162
Food	102	109	113	116	121	128	146	166	163
Clothing	106	106	104	113	113	114	138	---	---
Fuel & Light	100	99	103	104	106	107	116	---	---
Rent	110	118	126	134	138	151	173	---	---

Although the average annual inflation rate was 6.2 percent between 1963 and 1973, the greatest jump came in 1971, as can be seen in the table above. It is uncertain precisely what caused this relatively high increase.

A ten-year time series of the escudo-to-US dollar exchange rate is given below:

1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
28.83	28.98	28.86	28.77	28.65	28.75	27.56	27.00	25.85	24.60	27.47

The Mozambique escudo was tied directly to the Portuguese escudo. Following world exchange rate fluctuations in 1971 brought on partially by the devaluation

*Does not include migrant labor to South Africa or Rhodesia

of the US dollar, Portugal revalued its currencies, including that of Mozambique. This revaluation might explain the slight stabilization of the rate of price inflation between 1972 and 1973.

E. Sector Summary

1. Agriculture -- Prior to independence, the Mozambique economy was predominantly agricultural. By 1973, however, the service sector began to out-produce agriculture in terms of contribution to GDP. In 1974 agriculture represented 42 percent of GDP. In the same year agriculture contributed 74 percent of all export earnings. Cash farms and plantations covered approximately four million acres as compared to seven million for subsistence farming. And of the four million in 1974, it was estimated that only 800,000 acres were actually under production. The primary plantation crops were cotton, copra, sugar, tea, sisal, bananas, citrus fruits and tobacco. The major subsistence crops included maize, sweet potatoes, rice, groundnuts, and cassava. As was shown above, the agricultural sector employed approximately 74 percent of the work force.

2. Minerals and Mining -- Mineral production in 1973, including refined petroleum products, contributed two percent of GDP, and employment in these industries was approximately 7,000 persons. (These figures do not include those employed in mining in South Africa or Rhodesia.) The value of exported mineral products represented 2.6 percent of all export earnings in 1974. Columbite, petroleum products, and coal are the major products of the mining sector, and within these categories all Columbite, 75 percent of petroleum products, and 21 percent of coal are exported. Mozambique has 220 million tons of iron ore reserves, but these have not been exploited for lack of sufficient power. With the completion of the Cabora Bassa Dam, it was expected that exploitation might get underway.

3. Transportation -- Transportation was, prior to independence, the strongest element of Mozambique's service sector. Because of its geopolitical situation, the nation's highways and railways were designed to serve neighboring nations for transit to Mozambique's ports. In 1973, transport services contributed \$114 million to GDP, or approximately nine percent. Defining the agricultural sector to be comprised of various agro-industries, the transport industry was, prior to independence, the primary industry in terms of contribution to GDP. Roughly half of Mozambique's transit freight trade, sent in 1974, came from South Africa, which represented 19 percent of all its seaborne exports. Rhodesia sent approximately 60 percent of its external trade through Mozambique; Swaziland sent 85 percent of its exports through Maputo; and Malawi sent 80 percent through Mozambique in 1974.

4. Industry -- In 1974, industrial output represented 14 percent of GDP. Between 1966 and 1974, the value of industrial output almost doubled. Within the manufacturing industries, food processing was the strongest element, representing approximately 41 percent of all output value. The next strongest industry was textiles, contributing 17 percent of industrial output, followed

by beverages, approximately six percent, oil refining at six percent, and clothing and shoes, representing five percent of the value of industrial output. Manufactured goods represent approximately 22 percent of all Mozambique exports.

F. The Public Sector

A summary table of the budgets of Mozambique for the last five years is shown in Table II-2. (Table II-3 shows the categories of revenues and expenditures under each major classification shown in Table II-2.) More detailed time series for selected revenues and expenses are given in Tables II-4 and II-5. Ordinary expenditures generally represent government administrative costs while extraordinary expenses are for the most part, resources expended on Development Plan activities.

As part of the Escudo Area, bank notes were issued by the Lorenzo Mouques branch of the Banco Nacional Ultramarino (BNU), a Portuguese commercial bank which acts as the official bank of issue and government depository. Based on studies and government authorization, the BNU can expand currency and credit. There were, as of 1975, five commercial banks, a development bank, and two savings banks. One of the commercial banks was the BNU. Operations of the commercial banks and other credit institutions were subject to only minimal control. Control functions were, in reality, limited to verifying whether or not reserve requirements (from 20 percent for short-term demand and time deposits, to eight percent for time deposits of more than 90 days) and other liquidity ratios were being observed.

In the early 1960s and by 1964, two events occurred which have influenced public sector activity from that time until independence. First was the emergence of the liberation movements of all Portuguese colonies, and, second, decree of the Organic Law of the Portuguese Overseas Provinces which became effective for Mozambique on January 1, 1964. With the growing militancy of the liberation movements Portugal responded by increasing its military presence and activities in the colonies, and by taking a relatively new developmental approach to the provinces, making it possible for Africans to become Portuguese citizens and devoting more resources to development projects. These policies have been reflected in the Mozambique budgets by increased military and police-related expenditures, increasing social service expenditures, and increased infrastructure expenditures. These new fronts of governmental emphasis are not mutually exclusive and they are briefly described below.

1. Military and Security -- With the increase in military activity in 1961, it became necessary to raise greater amounts of revenue for military expenses. Although these additional sources are not, on the surface, visible in the national budget, they can be described. By virtue of a decree enacted in 1963, Mozambique contributed a minimum of 10 percent of the revenues of each autonomous service, shown in Table II-4, to help cover defense expenditures. Anticipated increases from those sources alone represented approximately 3.3 percent of the total national budget in 1967. Similarly, in 1965, a new national defense stamp tax was intro-

TABLE II-2

Government Revenues and Expenditures (1971-1975)
(In million Mozambique Escudos)

Revenues ^{1/}	1971	1972	1973	1974 ^{2/}	1975 ^{2/}
Direct Taxes	1,560	1,813	2,165	2,047	2,348
Indirect Taxes	1,906	1,900	2,040	1,748	1,868
Consigned Receipts and Autonomous Ag.	5,141	5,829	6,166	5,566	6,691
Refunds	418	437	697	437	480
Other	778	1,055	828	1,357	1,616
Total	9,803	11,034	11,896	11,155	13,003
Expenditures					
Ordinary Expenditures	8,946	10,125	11,350	11,155	13,003
Extraordinary Expenditures					
Development Plan	914	1,456	2,247	4,646	5,681
Other	322	443	542	--	--
Total	10,182	12,024	14,139	15,801	18,684

^{1/} Does not include Extraordinary Receipts

^{2/} Budget estimates rather than actuals

Sources: Contas da Gerencia e do Exercicio, 1970-1973;
Mozambique National Budget, Maputo, 1975.

TABLE II-3

Structure of Mozambique National Budget

EXPENDITURES

Ordinary Expenditures:

Public Debt
 Government
 Retirement and Pensions
 General Administration
 Treasury
 Justice
 Armed Forces
 Maritime Services
 General Expenditure
 Interest
 Other

Extraordinary Expenditures:

Development Plan:

Agriculture and Forestry
 Livestock
 Settlement
 Irrigation
 Energy
 Roads
 Ports
 Airports
 Telecommunications
 Schools
 Health Services
 Urban Affairs and Housing
 Other

Other

REVENUES

Ordinary Revenues:

Direct Taxes:

Company Income
 Personal Income
 Complementary (Surcharges on individuals & corporations)
 Real Estate
 Other

Indirect Taxes:

Import
 Export
 Stamp Duty
 Sales
 Excise
 Other

Consigned Receipts: (Special taxes earmarked for special expenditures)

Defense
 Social Security
 Unemployment Insurance
 Lotteries and Games

Autonomous Agencies:

Harbors, Railways & Transport Administration
 Autonomous Roads Administration
 Post, Telegraph & Telephone Administration
 Inspectorate of Credit & Insurance
 Provincial Welfare Commission
 Rural Settlement Council
 Autonomous Electricity Administration
 Other

Refunds (and Reimbursements)

Other:

Fees and Fines
 Profits, Dividends & Interest
 Extraordinary Receipts

Extraordinary Revenues:

National Development Plan
 Other

TABLE II-4

Mozambique: Revenues and Expenditures of
Autonomous Agencies, 1970-73
(In millions of Mozambique escudos)

	1970	1971	1972	1973
Harbors, Railways & Transport Administration				
Revenue	2,630	2,952	3,224	3,290
Expenditure	2,311	2,576	3,013	3,124
Surplus	319	376	211	166
Autonomous Roads Administration				
Revenue	--	280	423	550
Expenditure	--	275	390	525
Surplus	--	5	33	25
Post, Telegraph & Telephone Administration				
Revenue	404	340	381	478
Expenditure	379	338	357	477
Surplus	25	2	24	1
Inspectorate of Credit & Insurance				
Revenue	88	121	187	184
Expenditure	57	87	132	165
Surplus	31	34	55	19
Provincial Welfare Commission				
Revenue	42	50	70	184
Expenditure	33	40	61	165
Surplus	9	10	9	19
Rural Settlement Council				
Revenue	157	153	174	150
Expenditure	144	139	173	150
Surplus	13	14	1	--
Autonomous Electricity Administration				
Revenue	45	60	69	68
Expenditure	37	41	52	52
Surplus	8	19	17	16
Other				
Revenue	41	40	41	139
Expenditure	30	27	31	11
Surplus	11	13	10	27
Total Autonomous Agencies				
Revenue	3,407	3,996	4,569	5,043
Expenditure	2,991	3,523	4,209	4,770
Surplus	416	473	360	273

Sources: Contas da gerencia e do exercicio, 1970-73; and data provided by the Direccao dos Servicos de Financas.

TABLE II-5
Detail for Selected Government Expenditures
(In Million Mozambique Escudos)

	1968	1969	1970	1971	1972
Selected Government					
Expenditures:					
Ordinary Expenditures					
Education	288	341	450	549	695
Health	223	248	283	304	346
Armed Forces	1,023	1,015	1,026	1,066	1,163
Extraordinary Expenditures					
Development Plan:					
Agri-Forestry	168	225	214	242	520
Livestock, Settlement,					
Energy	4	-	8	11	29
Roads	193	184	236	296	458
Ports	9	7	4	4	12
Airports	46	43	47	66	98
Telecommunications	9	15	30	33	33
Schools, Health	114	150	177	209	247
Urban Affairs	-	2	-	17	27

Source: Contas da Gerencia e do Exercicio

duced to cover further expenses. These sources plus increases from normal defense-earmarked revenues represented eight percent of the 1967 budget.

On the expenditure side total direct military and security expenses represented approximately 20 percent of the total budget in 1967. This trend continued, with some fluctuations, such that in 1974 defense and security-related expenses in Mozambique accounted for 41 percent of the national budget. There is the following observation about the 1974 budget which demonstrates the point.

"The 1974 budget was, of course, prepared under the previous colonial administration; it had two main aims, viz., to combat inflationary trends...through increased taxation, and that the greater revenues thus resulting should be used for the escalating war effort against FRELIMO."^{1/}

2. Social Services -- The most directly developmental expenses of the Mozambique national budget are found under Extraordinary Expenditures for fulfilling the Development Plan. In 1967, these expenses plus certain other Extraordinary Expenditures accounted for 16 percent of the national budget. Expenses in the area of social services, from 1962 until independence, increased as a percent of total budget. The overall increases in spending for social services can be seen in Table II-2 under Development Plan Expenditures, while detail on where these increases occurred can be seen in Table II-5. Within Ordinary Expenditures, the government spent approximately 355 million escudos in 1967 for health, sanitation and education which represented eight percent of the national budget. Table II-5 shows the increases received by the health and education for the years 1968 to 1972. Similarly, certain social services are reflected in the activities and budgets of autonomous agencies. These are shown in Table II-4, with increases for the Provincial Welfare Commission showing a marked increase in 1973.

3. Infrastructure -- As was mentioned earlier, spending in the above areas is not mutually exclusive. Social services are advanced through new and improved infrastructure such as roads and building construction. Expenses on infrastructure are included under Extraordinary Expenditures which show marked increases. Detail on these activities can be seen in Tables II-4 and II-5 for Autonomous Agency and Development Plan activities. But much of the increased spending on infrastructure was destined for defense and security objectives rather than developmental goals. The increases shown for the Autonomous Roads Administration and under Roads for the Development Plan, are indicative of these priorities.

G. Balance of Payments

1. Balance of Trade -- The balance of trade for Mozambique, as shown in

^{1/} UNDP Mission, Mozambique-Country Brief, United Nations Development Programme, Lourenco Marques (Maputo), 1975, p. 27.

Table II-6, demonstrates that the country has had chronic trade deficits over a long period of time. The trade imbalance reached a maximum in 1973, the year prior to the Portuguese coup. Prior to independence, Mozambique could be classified as an importer of primarily manufactured goods, averaging 91.2 percent of the value of all imports, and an exporter of primarily agricultural products, averaging 73.6 percent annually of all exports.

The historical imbalance can loosely be attributed to the colonial status of Mozambique. First, Portugal was Mozambique's primary export recipient and many commodities were purchased at less than world prices. Since 1956, an average of 42 percent of Mozambique's exports per year went to Portugal or Portuguese colonies. Second, the dramatic increase in the trade deficit showing up between 1965 and 1966 has been generally attributed to increased revolutionary militancy on the part of the liberation groups and the methods with which Portugal reacted. As can be seen in Table II-7, imports of machinery and electrical equipment made a dramatic increase from a level of 13.9 percent of all imports in 1965 to 17.4 percent in 1966. From that time until independence, both that category of imports plus transportation equipment took on greater weight among Mozambique's imports. Many of these goods were oriented to internal security.

In the two years prior to independence, Mozambique's primary imports were among the following major product groups: machinery and electrical equipment, transportation equipment, and minerals. Within these groups the major sub-group of imports were heavy land moving equipment, road motor vehicles, and crude oil. As was mentioned above, it is generally believed that most of these imports were destined for increased internal security activities against the liberation movement. Machinery and electrical equipment increased almost three-fold from 1965 to 1974. (See Table II-9 for distribution of major import groups.) Road motor vehicle importation increased by 116 percent over the same period while transportation equipment, as a group, increased by 118 percent. Among agricultural imports, wheat was the predominant commodity representing three percent of all imports in both 1973 and 1974.

Among the agricultural exports of Mozambique, cotton, processed and unprocessed cashews, sugar and tea, were the major commodities in terms of earnings. Shelled cashew nuts have seen the greatest and steadiest increases since 1965, growing by more than eight and a half times through 1974. Sugar exports almost doubled between 1965 and 1973, with an even greater increase between 1973 and 1974. (See Table II-8 for details.) Cotton exports have increased somewhat over the 1965-1974 period while the export of unprocessed cashews and tea have remained relatively constant.

A ten-year series of Mozambique's terms of trade, using 1965 as the base year, is given below. In 1968 and 1974, the nation had greater export earnings for its trade balance than import costs. For the other years between 1966 and 1974, Mozambique had export earnings averaging 84 percent of import costs.

TABLE II-6
Balance of Trade, Mozambique
(in million escudos)

<u>Year</u>	<u>Exports</u>	<u>Imports</u>	<u>Balance of Trade</u>
1965	3,106	4,984	- 1,878
1966	3,223	5,976	- 2,753
1967	3,500	5,725	- 2,225
1968	4,420	6,740	- 2,320
1969	4,081	7,491	- 3,410
1970	4,497	9,363	- 4,866
1971	4,613	9,639	- 5,026
1972	4,768	8,911	- 4,143
1973	5,541	11,415	- 5,875
1974	7,560	9,544	- 1,984
1975 ^{1/}	4,855	10 744	- 5,889

Source: Data provided by the Ministry of Overseas Provinces, Lisbon, Portugal

^{1/} Partial Estimate

TABLE II-7
Main Imports: Composition of Imports in Detail
(Value in million escudos)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975 (Partial Est. on Ten Month Base)
Animal and Products	193.9	221.9	219.7	221.4	217.0	226.6	245.9	223.7	237.1	152.1	267.0
Fresh Fish	18.5	23.7	27.2	36.0	36.4	43.3	52.6	42.5	55.0	48.5	43.3
Dried and Other Fish	-0-	49.4	49.3	49.4	50.6	81.9	83.6	74.1	56.0	42.0	31.8
Milk, Butter, Cheese	95.4	107.6	103.1	95.7	84.3	82.8	82.1	91.9	106.4	110.3	153.9
Vegetable Products	252.1	278.2	327.5	326.4	375.2	423.2	441.8	405.7	530.1	529.3	1368.2
Wheat	77.1	105.2	127.6	99.6	119.4	145.9	174.1	159.9	336.1	313.9	722.8
Oil and Fats	55.3	60.5	67.0	65.6	72.1	71.3	88.3	77.5	96.1	79.4	150.0
Vegetable Oils (edible)	35.3	40.8	35.7	40.5	43.3	42.7	42.9	28.9	43.4	45.8	29.1
Manufactured Foods, Drinks,											
Tobacco	443.1	564.6	512.6	533.6	506.3	598.2	484.9	458.1	490.2	198.0	450.0
Liquors and Alcohol	240.1	264.8	233.2	269.5	238.1	221.2	152.9	178.2	200.9	181.5	143.2
Mineral Products	440.0	535.9	540.2	644.4	670.8	738.8	1010.0	832.4	836.9	1215.2	1490.4
Coal	43.0	34.3	32.6	46.7	60.1	58.2	67.8	41.1	45.1	52.7	53.6
Crude Oil	243.6	321.1	326.1	379.5	377.8	377.6	518.8	499.0	470.0	577.9	782.8
Petroleum Products ^{1/}	109.0	133.2	140.1	169.5	183.8	214.3	300.8	200.7	257.1	407.3	576.2
Chemical Products	334.0	349.7	373.3	444.8	557.0	656.8	726.7	687.4	863.4	867.6	845.9
Pharmaceuticals			108.1	129.6	150.2	172.8	193.6	225.7	318.7	262.1	258.0
Other Chemical Products	334.0	349.7	265.2	315.2	396.8	484.0	533.1	451.7	544.7	605.5	202.4
Plastic, Rubber, etc.	144.0	174.2	161.7	214.3	254.5	320.4	371.5	331.9	437.6	358.4	474.9
Tires (automobile)	64.1	80.3	48.1	70.3	86.5	97.1	125.1	101.4	120.1	127.0	172.3
Wood, etc.	47.3	39.4	41.6	54.3	60.2	88.4	58.8	34.8	35.4	15.2	29.1
Textiles and Products	816.9	834.2	800.6	1081.4	1068.7	1080.1	1011.2	892.2	1072.9	461.9	1149.5
Synthetic Fabrics	96.2	94.1	103.4	157.7	128.9	156.6	167.4	142.2	213.0	192.6	199.5
Cotton Fabrics	-0-	-0-	312.2	331.1	407.2	300.0	322.1	243.7	297.2	292.7	353.7
Clothing	-0-	-0-	170.5	-0-	298.7	295.1	207.8	158.6	172.8	97.9	135.2
Shoes	43.8	45.3	33.1	81.4	95.9	150.1	163.6	144.9	42.6	20.4	14.9
Paper and Products	116.9	121.9	145.2	167.7	196.8	237.0	257.5	239.1	308.9	219.9	373.6
Common Metals & Products	525.0	647.5	605.1	674.4	756.3	1054.9	1361.5	1219.3	1379.2	1153.7	1045.4
Iron & Steel Tubes, etc.	55.3	86.9	56.6	64.1	104.1	115.3	100.3	66.6	60.1	56.9	72.1
Railway Lines	23.6	54.0	8.1	70.2	47.9	56.0	12.8	-0-	48.5	47.5	30.0
Iron & Steel Sheets	-0-	-0-	88.6	81.4	95.9	150.1	163.4	144.9	250.1	201.8	75.2
Machinery & Electrical											
Apparatus	691.1	1044.2	942.5	1062.4	1209.7	1821.5	1744.1	1902.9	3118.7	2702.0	1952.6
Transportation Equipment	613.7	774.3	649.4	787.4	1063.8	1443.9	1280.8	1196.4	1533.5	1339.9	739.2
Tractors	66.8	78.4	61.7	80.3	171.5	180.8	176.5	165.5	175.9	184.5	70.4
Road Motor Vehicles	398.5	461.2	455.6	496.2	669.4	798.0	752.5	729.2	1003.3	857.9	428.7
Other Transport Equip.	148.4	234.7	132.1	210.9	222.9	465.1	341.8	301.7	354.3	297.5	240.1
Other	307.7	328.9	340.4	462.0	483.0	602.0	555.7	410.4	475.3	251.3	353.9
Total Imports	4981.0	5971.4	5726.8	6740.1	7491.0	9363.1	9638.7	8911.8	11415.3	9543.9	10743.6

^{1/} Petrol, Kerosene, diesel and lubricating oils and other combustibles.

Source: Estatístico Anuario, Mozambique; Boletim Mensal de Estatístico, Mozambique, October, 1975.

34

TABLE II-8
Main Exports: Composition of Exports in Detail
(Value in million escudos)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975 (Partial Est.)
Agriculture	(76%)2364.6	(74%)2400.4	(70%)2463.4	(70%)3373.9	(75%)3042.5	(69%)3120.7	(72%)3308.1	(76%)3644.9	(74%)4098.0	(74%)5588.5	(62%)3013.9
Cotton Lint	553.7	491.9	638.5	635.6	794.5	738.6	656.8	649.6	1116.6	840.7	336.7
Cashew Nut Almonds	110.8	161.1	222.8	329.7	380.4	413.4	660.4	817.0	1020.2	1072.3	816.0
Cashew Nuts (unshelled)	492.4	436.5	308.6	695.2	399.6	391.8	333.0	384.4	206.6	446.6	350.6
Sugar	291.8	466.1	329.1	411.3	547.7	555.2	687.4	603.1	554.5	1580.0	547.9
Tea	205.5	254.0	259.4	285.9	234.0	234.1	275.6	293.9	232.0	282.8	200.4
Other	710.4	590.8	705.0	1018.2	686.3	787.6	694.9	896.9	968.1	1336.1	762.3
SI-II											
Minerals											
Petroleum Products ^{1/}	243.7	277.3	368.4	325.7	285.6	286.8	338.7	222.4	241.1	320.8	254.1
Coal	20.0	17.2	15.3	16.5	22.3	28.0	22.1	14.9	56.7	38.8	137.1
Manufacture											
Parquet Blocks & Flooring	43.2	29.9	23.6	40.1	43.2	38.9	42.9	48.0	73.8	80.6	56.1
Other Exports	434.5	498.2	629.3	663.8	687.4	1022.6	901.2	837.8	1070.9	1531.0	1393.8
TOTAL EXPORTS	3106.0	3223.0	3500.0	4420.0	4081.0	4497.0	4613.0	4768.0	5540.6	7559.7	4855.0

^{1/} Petrol, Diesel and Fuel Oils (No Crude)

Source: Estatístico Anuario, Mozambique; Boletim Mensal de Estatístico, Mozambique, October, 1975.

25

TABLE II-9
Distribution of Main Imports by Product Group

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975 (Partial Estimate)
Animal and Products	3.8%	3.7%	3.8%	3.2%	2.8%	2.4%	2.5%	2.5%	2.0%	1.6%	2.4%
Vegetable Products	5.0	4.6	5.7	4.8	5.0	4.5	4.5	4.5	4.6	5.5	12.7
Oils and Fats	1.1	1.0	1.1	0.9	0.9	0.7	0.9	0.8	0.8	0.8	1.3
Man. Foods, Drinks, Tob.	8.8	9.4	8.9	7.9	6.7	6.3	5.0	5.1	4.2	2.1	4.1
Mineral Products	8.8	8.9	9.4	9.5	8.9	7.3	10.4	9.3	7.3	12.7	13.8
Chemical Products	6.7	5.8	6.5	6.5	7.4	7.0	7.5	7.7	6.0	9.1	7.8
Plastic, Rubber, etc.	2.8	2.9	2.8	3.1	3.3	3.4	3.8	3.7	3.8	3.8	4.4
Wood Products, etc.	0.9	0.6	0.7	0.8	0.8	0.9	0.6	0.3	0.3	0.2	0.2
Textile and Products	16.4	13.9	13.9	16.0	14.2	11.5	10.4	10.0	9.3	4.8	10.6
Paper and Products	2.3	2.0	2.5	2.4	2.6	2.5	2.6	2.6	2.7	2.3	3.4
Common Metals and Prod.	10.5	10.8	10.5	10.0	10.0	11.2	14.1	13.6	12.1	12.0	9.7
Machinery and Elect. Apparatus	13.8	17.4	16.4	15.7	16.1	19.4	18.0	21.3	27.3	28.3	18.1
Transportation Equipment	12.3	12.9	11.3	11.6	14.2	15.4	13.2	13.4	13.4	14.0	6.8
Other	6.1	5.5	5.9	6.8	6.4	6.4	5.7	4.6	4.1	2.6	3.2

Source: Estatístico Anuario, Mozambique; Boletim Mensal de Estatístico, Mozambique, October, 1975

Terms of Trade*
(1965 = 100)

	<u>Exports</u>	<u>Imports</u>	<u>Terms of Trade</u>
1966	104	120	87
1967	113	115	98
1968	142	135	105
1969	131	150	87
1970	145	188	77
1971	148	193	77
1972	153	179	85
1973	178	229	78
1974	243	191	127
1975	156	215	73

2. Invisible Accounts -- As has been shown above Mozambique's trade position has shown a chronic, relatively high deficit level. However, a complete view of Mozambique's foreign accounts, including the invisible accounts and capital accounts, along with trade accounts, shows a much more favorable situation. A five-year series of summary balance of payments data, given in Table II-10, shows that Mozambique actually had a net surplus in 1972 and that its deficits in other years prior to independence, were considerably reduced. Net positive invisible accounts contributed to these reductions.

The invisible element of current accounts consists primarily of services and transfers. A breakdown of the invisible accounts for Mozambique is given in Table II-10. Tourism turns out to have been a major sector in Mozambique's economy. Tourists come mainly from South Africa and also from Rhodesia and Swaziland. Similarly, under services, government services sold to Portugal under the colonial administrative system also have contributed to net inflows for Mozambique.

By far, the largest net inflow to the invisible current account of Mozambique is in transportation services to neighboring nations. This accrues from a purely geopolitical advantage for Mozambique in that its long coastline blocks access to the sea for many Southern African countries. Mozambique provides transportation services and port facilities for South Africa, Swaziland, Rhodesia, and Malawi directly, and for Zambia, Zaire, and Botswana indirectly either through South Africa or Rhodesia. (Detail on these services is given in a following section under Transportation.) Earnings from transportation include ground services, port facilities, and port duties. These services generally average more than 50 percent of the value of all export earnings. A net of \$131 million accrued from South African and Rhodesian transit trade, of which about \$60 million is thought to have been attributable to Rhodesian traffic.^{2/}

*Based on value of exports and imports

^{2/} Mozambique Country Brief, UNDP Mission to Mozambique, September, 1975.

TABLE II-10
Balance of Payments: Major Elements
(Million US Dollars)

	1970	1971	1972	1973	1974	1975 ^{a/}
Trade Balance	-161	-175	-153	-240	-131	-164
Current Invisibles:						
Services (Net)	93	94	110	100	56	194
Transportation	69	82	105	110	NR	142
Tourism	6	4	-5	-20	NR	-47
Investment Income	-10	-5	-12	-24	NR	-18
Transfers	-6	9	-5	10	NR	9
Other	-73	-81	-42	-140	NR	109
Capital Transactions	-28	32	122	168	-5	-79
 Total Balance	 -55	 -17	 6	 -9	 -80	 -49

^{a/} Ten month base estimate from Boletim Mensal de Estatística, Mozambique, October, 1975.

NR: Not Reported

Source: IMF Mission to Mozambique, July, 1975.

3. Capital Accounts -- As can be seen from Table II-10, Mozambique's capital accounts were positive in 1971, 1972, and 1973, with only a small deficit in 1973. In 1972 and 1973, net capital accounts showed higher surpluses than invisible accounts. Net capital inflows for the years prior to independence, include financial receipts for the Cabora Bassa Dam project. These funds represent loans taken by the Portuguese Government on behalf of Mozambique. Over the years prior to 1972, Mozambique had accumulated increasingly large arrears in payments to the Metropole (Portugal). Portugal took budgetary control steps to decrease these arrears.

Until 1972, the balance of payments deficit was accompanied by a steady accumulation of payments arrears, which reached nearly M. Esc 5 billion at the end of 1971. These arrears were reduced by approximately M. Esc 1 billion in each of the years 1972-1974; at the end of 1974, an amount close to M. Esc 1 billion was still outstanding. Such a reduction in arrears was made possible by Mozambique's obtaining special loans for this purpose from Portuguese financial institutions.

4. Direction of Trade -- Historically, it can be seen from Table II-11 that Mozambique had a truly colonial dependence on Portugal. However, it can also be seen that Mozambique's imports from Portugal began to decrease at the close of the 1960s. Much of the decrease in imports from Portugal can be attributed to the increased level of payment arrears Mozambique accumulated for those imports. As was described above, the Portuguese Government placed strict controls over imports in 1971. At the same time, its imports from South Africa began to increase. This trend reflects a conscious effort on the part of Portugal and South Africa to shift Mozambique's trade.

Similarly, exports to Portugal also began to decline prior to independence. As can be seen, Mozambique's exports to the United States have been steadily increasing. More important, although not shown in Table II-11, is the fact that the overwhelming majority of Mozambique's trade, both in imports and exports, with other African countries has been with Rhodesia. Thus, Mozambique has not only developed a trading relationship with South Africa, which continues even after independence, but also has historical economic ties with Rhodesia.

H. Transition and Independence

In June, 1975, Mozambique entered a transition period of independent rule and in June, 1976, the nation achieved full independence. Transition on the political dimension was relatively smooth since there were no national factions competing for power. However, there were economic effects caused by the transition. Detrimental economic effects were caused by basically two categories of events: the fact of independence itself and other events which would not have occurred had independence not have been achieved. The most significant events which caused economic dislocations were the following:

TABLE II-11

Principal Partners - (Percentages)

	<u>Imports</u>				<u>Exports</u>			
	<u>1956-61</u>	<u>1966-68</u>	<u>1969-71</u>	<u>1973-75</u>	<u>1957-61</u>	<u>1966-68</u>	<u>1969-71</u>	<u>1973-75</u>
Portugal	28.8%	31.8%	28.9%	17.3%	45.5%	37.3%	38.9%	31.1%
Other port. terr.	4.7%	2.0%	2.4%	2.2%	3.6%	4.0%	4.5%	3.9%
USA	6.4%	5.6%	8.0%	5.6%	5.0%	8.3%	10.9%	13.6%
UK	14.2%	10.0%	8.1%	7.3%	7.5%	6.2%	4.7%	4.9%
EEC	19.0%	16.5%	18.1%	24.6%	8.6%	7.1%	8.3%	10.9%
South Africa		11.1%	15.3%	18.9%		11.5%	10.0%	8.9%
African Countries	13.0%			24.0%	8.8%			4.9%
Japan		4.3%	5.6%	5.6%				2.9%
Other countries	13.9%	18.7%	13.6%	16.0	21.0%	25.6%	22.7%	18.4%

1/5

- Mozambique decided to apply sanctions, resolved by the United Nations, against Rhodesia. The closing of the Rhodesian border affected Mozambique in three ways: halting bilateral trade; ending freight transport services; and disrupting internal telecommunications, railway and road systems which depended on links in Rhodesia.
- The majority of Portuguese population in Mozambique fled the country with independence. These people held key positions in the nation's public administration, industrial management, and agricultural production. Their flight has created a serious shortage in skilled and professional manpower.
- With independence, the new government of Mozambique has changed its priorities, giving greater emphasis to the improvement of education, health, and other social services. The previous administration put greater stress on industrial development oriented toward import substitution.
- With independence, Mozambique's trade relationships have changed. Portugal, of course, no longer plays the role it did, primarily for Mozambique's exports. Although relations have been maintained with South Africa, relations with Rhodesia have been cut. Similarly, the new government is attempting to reach trade agreements with India, for the export of tea, and with Tanzania for a cartel-like agreement in the export of cashews.

A fairly concise statement of the economic effects of the coup in Portugal and subsequent independence for Mozambique was given in the UNDP Country Brief for Mozambique in 1975.

"The economic down-turn in 1974 and early 1975 followed the political and commercial uncertainties consequent upon the establishment of a new government in Portugal in April 1974, the disturbances of September and October 1974, and Mozambique's upcoming independence. After April 1974, very tight control over import licenses and external credit transfers was imposed, a number of development projects were shelved, new investments dried up and some industries experienced raw material shortages. With accelerating inflation and a rising cost structure, commercial liquidity fell dramatically and a number of private companies went

bankrupt; the uncertain situation also resulted in a run on the banks and large amounts of currency were removed from the banking system into private hoarding, which further exacerbated the liquidity situation. Attempts to alleviate the tight liquidity situation by an increase in the money supply contributed to the inflationary process, as did the movement into durable goods by the many non-indigenous leaving the country. Economic performance also fell as a result of the departure of many classes of skilled personnel, and productivity was also affected."

There are no estimates of gross domestic product for 1975. However, it is possible to make certain observations. The volume of agricultural production for tea, sugar, cashew (almonds), and vegetable oils declined, between 1974 and 1975 by 17 percent. These are among Mozambique's primary agricultural products. Prices for these products may have increased as well, thus decreasing somewhat the loss to Mozambique's economy. However, the agricultural sector of the GDP probably had a net decrease. The value of industrial output showed a decrease of 20 percent between 1974 and 1975.

There were also decreases in the service sector of the economy for 1975 over 1974, particularly in tourism and transport services. However, these have not been estimated. For 1976 the United Nations has estimated direct losses of between 108 and 134 million dollars annually in the service sector simply from the closing of Mozambique's border with Rhodesia. These losses amount to between three and four percent of Mozambique's GDP in 1974. Losses in the service sector will be partially offset by receipts from South Africa for migrant labor under the Mozambique Convention. However, it is still not certain what terms the arrangement will have with the independent government.

Although Portugal continues to finance a portion of the costs of the Cabora Bassa Dam, with South Africa continuing to pay the remaining costs, it is uncertain what effects will appear in Mozambique's capital transactions.

Extremely rough estimates can be made to assess the decline in GDP between 1974 and 1975. These would probably be in the neighborhood of 12 to 14 percent. The state of Mozambique's gross domestic product for 1976 cannot be estimated. The UNDP Country Brief for 1975 estimated that the economy would probably recover in 1976. However, other reports on the economy suggest that this expected stability has not yet occurred.

It is also uncertain whether the escudo will continue to be tied to the Portuguese escudo, although it did continue through the transition period. There are no figures for the rates of price inflation which have occurred with independence although they have increased significantly with shortages being experienced for most consumer items and particularly foods. Using 1973 as a base year, it is known that the price index for 1974 was 110.5, a greater jump than Mozambique has experienced in recent history.

With the coup in Portugal, as well as growing resistance to the drain on Portugal's budget devoted to counterinsurgency prior to the coup, imports of machinery, electrical equipment, and transport equipment dropped. Also, the value of exports for 1974 increased substantially. As can be seen in Table II-8, these increases did not come from the agricultural sector. Rather, it might be supposed that there was considerable exportation of industrial goods, possibly from inventory and fixed assets, of companies preparing for expatriation. Preliminary figures for 1975, based on ten months performance, show declines in exports and increases in imports. The declines in exports fall in almost all major agricultural exports while increases in imports are, essentially, covered by flood and famine relief provided to Mozambique that year in wheat and clothing as shown in Table II-2.

I. Priorities of the 1975 Budget

The first priority for the 1975 national budget was to be in education. As expressed by President Machel when the Transitional Government was inaugurated:

Our schools should be real centers for divulging the national culture and political, technical, and scientific knowledge. The diffusion of this knowledge should aim at mobilizing the human nature and potential for the development and progress of society.

The second priority was to be the agricultural sector, including forestry and livestock, this sector being the basis for Mozambique's development. Third priority was given to health and social services. The fourth priority is the restructuring and widening of the Armed Forces for Liberation of Mozambique (FPLM) in order to enable them to take part in the national reconstruction. The organization of justice and other socio-economic infrastructure are the fifth and sixth priorities. Manpower training must be a high priority for the new government since the lack of qualified technicians and professionals is affecting all sectors of the economy. In education, the new government has indicated it will continue to contract for teachers from other nations.

More detailed effects of independence and the new directions in the present government is taking are in Section II-4, covering the various sectors of the Mozambique economy.

III

**FOREIGN DONOR
ASSISTANCE**

III. FOREIGN DONOR ASSISTANCE

A. Foreign Donor Assistance History

Until Mozambique's independence in June 1975, the only significant donor to the colony was Portugal. From 1962 through 1968, accounts show Gross Official Flows of \$15-\$16 million annually from Portugal, 100 percent of which were listed as loans. Other such flows, also 100 percent loans, were from DAC countries but were insignificant by comparison (\$.05 - \$.7 million annually). From 1969 - 1975, \$14 - \$28 million annually (generally rising over the period) in Official Development Assistance flowed from Portugal to Mozambique, still overwhelming the insignificant assistance from other DAC donors. No assistance came from the U.S. during these periods. With independence all this has begun to change, led by a \$59 million economic assistance flow from the People's Republic of China.

The net result is that the level of assistance to Mozambique over the period has been among the more rapidly growing in the region. During the last five years taken together (1971 - 1975), Mozambique received one of the larger portions (13 percent) of all aid to the region, although this translated into a relatively low \$5 per capita annually (only Angola and Rhodesia received less). Of this \$5, International Agencies provided a relatively very low 4 cent per capita annually (only Angola received less). Table III-1 shows all Official Foreign Assistance to Mozambique between 1967 and 1975.

B. Foreign Assistance in 1976

On March 3, 1976 the Government of the People's Republic of Mozambique announced the imposition of sanctions against Rhodesia in accordance with a UN Resolution. On March 10, 1976 Mozambique formally requested economic assistance to offset the detrimental consequences to Mozambique of closing its borders with Rhodesia. This was done in accordance with Article 50 of the United Nations Charter which states:

If preventive or enforcement measures against any State are taken by the Security Council, any other State, whether Member of the United Nations or not, which finds itself confronted with special economic problems arising from the carrying out of those measures shall have the right to consult the Security Council with regard to a solution of those problems.

Through Resolution 386 (1976) the Security Council made a request for assistance to Mozambique and determined to send a Mission to Mozambique with the purpose of estimating the type and value of the required assistance. The Mission found that "the direct financial costs of applying sanctions against Southern Rhodesia are in the region of \$108 to \$134 million annually." This

TABLE III-1

OFFICIAL DEVELOPMENT ASSISTANCE

		1962-65 (4 years)	1966-70 (5 years)	1971-75 (5 years)	1971-75 % distribution	1962-75 (14 years)
United States	-Total	0	0	0	0%	0
	-Dollar Economic Asst.	(0)	(0)	(0)	(0%)	(0)
	-Food Asst. (PL-480)	(0)	(0)	(0)	(0%)	(0)
		<hr/>				
		Gross Off	Percent	66 - 68	69-70	
		& Flows	Loans	G.O.F.	%L	ODA
Other DAC Donors		60.6	100%	50.0	100%	31.3
	-Former Colonial Power (Port.)	(60.4)	100%	(48.6)	100%	(29.2)
	-All other DAC	(.2)	100%	(1.4)	100%	(2.1)
						(1.1)
						(142.9)
						(141.8)*
						(4.8)
						(280.0)
						(70%)
						(0%)
Communist Donors	-Total	0	0	59.0	29%	59.0
	-USSR	(0)	(0)	(0)	(0%)	(0)
	-China	(0)	(0)	(59.0)	(29%)	(59.0)
	-Eastern Europe	(0)	(0)	(0)	(0%)	(0)
International Agencies		0	0	1.9	1%	1.9
		<hr/>				
TOTAL		60.6	81.3	(203.8)	100%	345.7
Approx. Avg. Annual \$ per Person (1971-75)				\$ 5		
Approx. Avg. Annual \$ as % of GNP (1971-75)				1.4%		

*1975 DAC proration derived by estimation based on 1971-74 experience.

cost is expected to range over the next two years, assuming a rapid transition of governments.

In response to the UN Resolution request for foreign assistance thirty-four nations and five multinational organizations have made either pledges or contributions totalling \$68,623,000 from bilateral sources and \$50,037,500 from multinational organizations. Tables III-2 and III-3 show breakdowns of this assistance by source and nature of assistance as well as the nature of the other.

Most of this assistance has been in response to and designed to offset the consequences of imposing sanctions against Rhodesia; some has been directed at overcoming flooding and famine in 1975.

C. Projected Short-Term Assistance Needs

The UN has also identified other assistance projects for Mozambique over the next two years. Certain projects are necessary as indirect consequences of closing the Rhodesian border. These projects are estimated at \$31 million in financial and technical assistance. These are briefly described below. For more detail the reader is directed to the Assistance to Mozambique Report and Addendum 1 by the UN Economic and Social Council, May 1976.

1. Water and Power Supplies--As a result of sanctions, the supply of electric power to the region of Manica and Espungabara bordering on Rhodesia has been cut off. This has affected both the rural and, especially urban areas including the city of Manica whose demands for power have not been satisfied by emergency measures. Similarly, Manica depends for its water supply on the Nunene River in Rhodesia. There is a need to draw up feasibility studies and undertake implementation of an alternative water supply system.

2. Telecommunications--Communication between Beira and Nairobi passed through Salisbury, Rhodesia. This has been cut with sanctions. Similarly the link between Mozambique and Lusaka and into the Pan African Telecommunications System passed through Salisbury and has also been cut. Moreover, communications between Maputo and Beira and through to the north depends on a major relay station at Chicoalacoala which is practically on the Rhodesian border. If the functioning of this station were to be interfered with, possibly through border incursions, the capital of Mozambique would lose its major communications link with the rest of the country.

3. Transport--Road transportation between agricultural centers in Manica e Sofala and the rest of Mozambique depended on road links through Rhodesia. These road links have been cut. Similarly, rail links between northern and southern Mozambique used the Rhodesian railway system. This has been cut with sanctions. Much of the heavy freight previously sent by rail must be transported over roads which were not designed for heavy traffic. These roads as well as bridges and culverts must therefore be reinforced.

TABLE III-2

Bilateral Assistance for 1976

Country	Amount (000 US\$)	Nature of Pledge	Nature of Assistance	Country	Amount (000 US\$)	Nature of Pledge	Nature of Assistance
Australia	\$1,240	-Offer	-2,500 tons powdered milk	Malta	\$ 16	Pledge	Commonwealth Fund
	100	-Pledge	-Commonwealth Fund	Mauritius	20	Pledge	Commonwealth Fund
Barbados	5	Pledge	Commonwealth Fund	Netherlands	4,000	-Donation	-Unspecified
Canada	3,000	-Offer	-Food Aid		200	-Donation	-Medical Aid
	400	-Grant	-Commonwealth Fund	New Zealand	150	-Pledge	-Powdered Milk
Cyprus	1	Pledge	Commonwealth Fund		Unspecified	-Pledge	-50 tons anhydrous milkfat
Denmark	2,500	Pledge	Wheat		27	-Pledge	-Commonwealth Fund
Egypt	100	Contribution	Unspecified	Nigeria	1,600	-Pledge	-Unspecified
Ethiopia	50	Contributed	Unspecified		150	-Contributed	-Commonwealth Fund
E. Germany	Unspecified	-Signed Agree- ment	-Agriculture, Educa- tion & Fisheries	Norway	2,200	Pledge	Unspecified
	530	--Delivered	-Medical Equipment	Pakistan	110	Pledge	Purchase (Pakistan goods)
W. Germany	Unspecified	Offer	Unspecified	Sierra Leone	27	Pledge	Commonwealth Fund
Ghana	20	-Pledge	-OAU	Swaziland	9	Donated	80 tons of maize
	20	-Pledge	-UN	Sweden	7,400	Contribution	-1500 tons of wheat
	10	-Pledge	-Commonwealth Fund				-600 tons of canned fish
	50	-Pledge	-Direct, unspecified	Switzerland	41	Grant	-Other unspecified UN high power for refugees
India	110	Pledge	Commonwealth Fund	Syria	50	Pledge	Unspecified
Iraq	1,000	Donation	Crude Oil	Trinidad & Tobago	35	Offer	Food & material assist- ance
Italy	Unspecified	Grant	Health Assistance	UK	- 540	-Pledge	-Commonwealth Fund
Jamaica	57	Pledge	Commonwealth Fund		- 180	-Pledge	-Direct technical assistance
Kenya	325	Donation	3,000 tons maize		- 9,000	-Loan	
Lesotho	20	Delivered	Dried beans		- 18,000	-Loan	-For future envisioned
Liberia	50	Contributed	Unspecified	USA*	12,500	Offer	Food and financial assistance
Libya	1,000	Grant	Unspecified	<u>Zambia</u>	1,500	Donation	10,000 tons of maize

*Unauthorized by Congress

Source: UN Economic and Social Council, Assistance to Mozambique, July, 1976

TABLE III-3

Multinational Assistance for 1976

Commonwealth Fund	\$1,800	Special fund for technical assistance
European Economic Community	1,500	Emergency assistance
		-5,000 tons of wheat
		- 200 tons of butter oil
		- 300 tons of skim milk powder
	87.5	Donated through UNICEF for medicine
Arab league/OAU	-6,000	Arab Loan Fund for Africa
	-20,000	OAU pledge
United Nations:		
UNDP	-100	Increase of 1976 funding ceiling
	-4,000	Funding ceiling for 1977
	-16,000	Recommended for 1978-81
WFP	2,400	Powdered milk and maize flour
UNHCR	450	Refugee relief
UNICEF	2,500	Health, education and rural water supply

Source: UN Economic and Social Council, Assistance to Mozambique, July 1976

4. Food Production to Replace Imports from Rhodesia--Mozambique formerly imported quantities of foods from Rhodesia. These imports can no longer be expected until normalization. In order to offset these needs for imported foods projects estimated at \$6 million, not included in the \$31 million given above, are necessary to increase food production. The projects are for major irrigation efforts and for increasing area cultivation.

5. Manpower--The UN Mission recognized that the greatest technical assistance needs are in the area of manpower. For immediate professional and technical assistance the Mission identified the following broad categories of needs. The manpower requirements so far identified may be broadly classified as follows:

- Public works and housing, 147 (of which 10 relate to projects listed in addendum 1);
- Transport and communications, 412 (of which 11 relate to projects listed in addendum 1);
- Agriculture, 87 (of which 61 relate to projects listed in addendum 1); and
- Finance, 6.

D. Projects for the Normal Development of Mozambique

Although the country's first development plan has not yet been designed, the Government of Mozambique has identified a number of development projects for normal development. The recent UN Mission to Mozambique reports: "In selecting projects and programmes...the government had the following objectives:

- To utilize excess capacity in the sectors and areas most affected by the application of sanctions. The projects include basic infrastructure such as railway, port and trunk-road construction and repair; the provision of transport, earth-moving and cargo-handling equipment, and the training of technical and maintenance personnel. Some of these projects require feasibility studies before they can be implemented;
- To provide substitutes for imports from Southern Rhodesia and to expand the output of and seek new markets for goods previously exported to Southern Rhodesia. A substantial increase in food and cash crop production and the development of the livestock sector is required. Projects include major irrigation and drainage schemes, including the construction of several dams in key crop areas, dams and improvements designed to provide flood control, and the provision of agricultural implements and equipment;

- To provide alternative employment for the labour in such activities as the railways, ports and tourism made redundant as a result of applying sanctions. The major projects included under the first bullet point above are intended to serve this purpose. Other projects, particularly those mentioned in following items below will provide additional employment opportunities and assist in absorbing the workers in danger of losing their jobs as a result of sanctions;
- To make an early beginning on providing the population with necessary social, cultural and environmental services. This objective is being pursued by a programme for village water supplies, through the provision of equipment and basic facilities for the Aldeias Comunas through which the rural population will be provided with education, housing and social services. Equipment and materials for schools, and projects to complete the school construction programme have been proposed;
- To make a beginning on programmes to exploit more fully the natural resources of the country, particularly in agriculture, fisheries and forestry. This objective calls for projects to expand the area under cultivation, the development of the livestock and fisheries sectors, and the establishment of programmes and projects for reforestation and commercial forestry plantations. Some of the irrigation projects also contribute to this objective. Major effort is also to be devoted to the local production of need to replace imports. Feasibility studies will be required for some of the major undertakings which are envisaged; and
- To make an immediate beginning on the creation of supporting infrastructure for these sectors such as a trunk transport system feeder roads and national and local grain storage facilities. Substantial road and improvement work is needed to connect areas of agricultural production and potential with markets and with consuming centers. A number of storage depots are envisaged at the village and district levels as the first step towards a national food storage programme.

IV

SECTOR ANALYSES

- **Agriculture**
- **Mining and Minerals**
- **Transportation**
- **Energy**
- **Health**
- **Education**
- **Population**
- **Industry**
- **Other**

IV. SECTOR ANALYSES

A. Introduction

This section provides a detailed description of the Mozambique economy by sectors. Some sectors, such as mining, are given less detail than others since they are not significant within the economy. Within each sector description the "setting", first prior to independence followed by the situation now, is provided followed by description of significant trends or events and concluding with a statement of the major constraints within the sector.

The sectors described within this section are as follows:

- Agriculture
- Mining and Minerals
- Transportation
- Energy and Communications
- Health
- Population Problems
- Education
- Industry
- Tourism

The agricultural sector is certainly dominant in the Mozambique economy. Although domestic production and food processing has increased over the last ten years, the importation of commodities has increased even more. With independence there has been a decline in both agricultural production and food processing. There is a need to increase production, expanding the marketing system, improve government agricultural services, and decrease Mozambique's dependence on imported commodities.

In mining, there is the possibility of increasing the exploitation of coal, in which Mozambique is blessed with large amounts of reserves. Coal is not only consumed domestically, but is also a strong export earner. Similarly, Mozambique has a well developed petroleum refining capacity. Many refined products are exported.

Transportation, including rail, road, air and port and water transportation, is the second most important sector in the Mozambique economy. Although Mozambique's road infrastructure is directed toward its neighbors, it is still one of the best developed internal systems in Africa. Its airline is one of the oldest on the continent. As with roads, there is need to further develop the railway system internally. Yet the infrastructure which exists is well developed. Mozambique's ports and port facilities are among the finest in Africa. With independence, international events and the flight of skilled manpower have had serious impact on the transportation sector.

Although rural and urban infrastructure in health appear to be adequate, undeveloped secondary and tertiary roads hinder improvements. With independence the flight of professional and technical manpower has led to the deterioration of health care in Mozambique.

Educational facilities, as in the health sector, are well developed. In both sectors religious and commercial organizations built some of the existing infrastructure. However, similar problems prevail in education; a lack of skilled teachers and professionals in support of education.

Industrial output has, in the recent past, been relatively stable in terms of contribution to GDP. With independence, output fell although not as much as agricultural output. Industrial production is largely centered in major cities and the relatively poor internal transportation system makes extended distribution of output limited. As in the sectors described briefly above, the flight of skilled manpower--technical and managerial--has caused what may be extended periods of decline in output.

Tourism was, prior to independence, a major sector in the Mozambique economy. With independence, however, tourism declined drastically for two reasons. First, the uncertainties of conditions in independent Mozambique caused tourists to go to other areas. Secondly, and most important, the present government has recently decided not to issue visas for tourism; thus, sending the sector's contribution to GDP to nothing.

B. Agriculture

1. The Setting -- Prior to independence, agriculture was the major contributor to the economy of Mozambique, both in terms of GDP and employment. (In 1973 and 1974, agricultural production was slightly overshadowed by the service sector in contribution to GDP.) Since independence, agriculture still dominates the economy and can be expected to continue in a dominant position certainly for the next five years at least.

Over 40 percent of the GDP is generated in the agriculture sector (US \$1,302 million in 1974) and approximately three fourths of the economically active population (of an estimated 3.2 million in 1975) is employed in agricultural pursuits. Additionally, 94 percent of the total population of Mozambique is rural, relying primarily upon agricultural production for income and subsistence.

Agriculture is also the major contributor to exports, supplying approximately three-fourths of all export earnings, with a total value of US \$227 million in 1974. Further, it provides over 90 percent (US \$1,000 million of a total of US \$1,075 million in 1974) of internally consumed agricultural products.

The sector is blessed with a relatively good land resource base and generally adequate rainfall as compared with many of its neighbors. Rainfall averages 40 inches annually in the country as a whole, and the rainy season extends for

a seven-month period (October to April).

Available information indicates that nearly two-thirds of the total land area is cultivable, as compared with less than one-fourth for many of its neighbors. With over 120 million acres of cultivable land, Mozambique has a comfortable 13 acres of potentially cultivable land per capita. Only 8.5 million acres of this land presently is in crops (permanent and annual), leaving more than 90 percent still unused. In addition to the large cultivable land base, there are more than 15 million acres of range land and another 25 million acres classified as uncultivable, but apparently conducive to some grazing.

There are some serious limitations on the full utilization of this rich land resource base. Two thirds of the country, north of the Save River, is infested with Tsetse Fly, thus not permitting livestock production on much of the rangeland. Furthermore, malaria is prevalent in the coastal plains of these areas, and many areas have a high-humidity tropical climate, which has discouraged settlement.

Production is characterized by a large number of small, subsistence farms (estimated at 1.5 million) operated by African families, under a tribal usufruct system of holding, using traditional technology, and some 3,000 freehold-type commercial farms using modern techniques. (The majority of commercial units are not on a plantation scale, but are predominantly European family holdings.)

2. Production -- Table IV-1 shows agricultural production volume, acreage, and number of units for Mozambique's primary crops. These figures are also broken down by commercial and traditional methods of production. Below is given significant descriptive information and trends by major crops and by traditional and commercial sectors of agricultural production.

Sisal - At one time the cultivation of sisal contributed heavily to Mozambique's overall agricultural production. Cultivation remained relatively steady until 1968, after which it began to decline owing to lower crop prices. Sisal was grown wholly on 12 plantations. There is no traditional production of sisal. Commercial production averaged 5,336 kg./ha. in 1973.

Cotton - Cotton has been cultivated in Mozambique for a very long time. It is now one of Mozambique's primary crops and there were an estimated 500 enterprisers cultivating cotton seed prior to independence. Ginning is done locally. The FAO Country Development Brief for Mozambique states the following as of 1974:

"The purchase and ginning of cotton seed within a zone (producing more or less the equivalent of 2,000 tons of cotton seed) was the monopoly of a concessionary company at prices set by the government. These measures were abolished in 1964, but the subdivision of the territory into

TABLE IV-1

Estimated Agricultural Production
by Volume and Area
Selected Crops^{1/}

Crop	Volume (000's tons)			Area (000's acres)			Number of Units Producing		
	Trad- ition- al	Commer- cial	Total	Tradi- tional	Com- mer- cial	Total	Tradi- tional	Commer- cial	Total
Cassava	2,150	--	2,150	1,100	--	1,100	700,000	--	700,000
Maize	359	31	390	790	75	865	430,000	1,500	431,500
Cotton	108	22	130	800	40	840	450,000	500	450,500
Sorghum & Millet	225	--	225	593	--	593	360,000	--	360,000
Rice Paddy	46	57	103	98	62	160	200,000	--	200,000
Sugar Cane	25	2,675	2,700	--	114	114	1,200	5	1,203
Sisal	--	27	27	--	124	124	--	12	12
Bananas and Citrus Fruits	30	35	65	--	25	25	600,000	550	600,550
Tea	--	17	17	--	37	37	--	35	35
Copra	21	36	57	NA	173	173	230,000	500	230,500
Cashews	173	17	190	284	124	408	800,000	470	800,470
Other ^{2/}	NA	NA	597	NA	NA	427	NA	NA	NA

^{1/} Figures represent average estimates for 1969 - 1973 period.

^{2/} Includes wheat, groundnuts, tobacco, and tubors

Sources: Economia de Mozambique, 1969; Boletim Mensal de Estatística; Economia de Mozambique en Numeros, 1973; and FAO Production Yearbooks.

cotton zones (22) remained, with a bidding procedure excluding Africans from applying on economic grounds. Seven companies appear to have monopolized the ginning industry. Cotton production averaged 398 kg./ha. in 1973."

Sugar - Sugar cane is, by far, Mozambique's primary agricultural product, in terms of production and contribution to export earnings. Prior to independence, five estates were responsible for almost all sugar cane production. Most of the sugar produced was exported to Portugal under a quota system among Portuguese territories. Prices received by Mozambique were lower than world market prices, yet its market was guaranteed. Each of the five producing enterprises had its own sugar factory and refinery. Capacity as of 1974 was estimated at approximately 500,000 tons per year. The average yield for sugar cane in 1973 was 61,403 kg./ha.

Cashew Nuts - Cashew nut trees grow wild along the coast of Mozambique. They are, and have always been, harvested by Africans on an unsystematic basis. Cashew nut processing--shelling and processing of oil from the shells--started in 1962. In 1969 the government ordered all manual shelling plants to convert to mechanization.

Tea - Tea was entirely produced on large European-owned plantations along the Malawi border, in the western part of the Zambezi district, and in the highlands bordering Lake Nyasa. The value of exported tea rose steadily until 1968-69 when world prices began to fall after saturation of the market. Mozambique participated in two meetings of tea-exporting countries and later attended the first session of the FAO Consultative Committee on Tea. Arrangements were set which gave Mozambique approximately 2.4 percent quota of world tea export.

Types of Production Units - Before independence, about 3,000 cash farm and plantation units operated in the country and they occupied a total area of over 4 mn acres, of which about 800,000 acres were under effective cultivation. The main plantation crops are: cotton, copra, sugar, tea, sisal, bananas, citrus fruit, and tobacco. In contrast, subsistence farmers work over some 7 mn acres at any one time. Subsistence crops grown include maize, sweet potatoes, rice, groundnuts and cassava. During the colonial era, subsistence farmers in northern Mozambique were compulsorily required to cultivate 1.25 acres of cotton as a form of taxation payment. In the rest of the country, the cashew nut is the subsistence farmer's sole exchangeable commodity and is used to purchase foods which he cannot grow himself and other essential commodities.

Agricultural production by traditional methods grew at an average annual rate of 2.5 percent between 1965 and 1973, while commercial crop production grew at an annual rate of 17 percent. Overall production by traditional techniques increased by 20 percent, while commercial crop production increased by 136 per-

cent overall. Figure IV-1 shows graphical aggregate production figures for commercial and traditional crops for the nine-year period ending prior to the Portuguese coup in 1974.

Clearly commercial crop production increased more dramatically than that of traditional crops; the latter increasing at the same rate as Mozambique's rate of population growth. Among the commercial crops, sugar cane, bananas, and citrus fruits made the greatest contribution to growth. These averaged approximately 160 percent growth over the nine-year period. The production of sisal was the only cash-crop to decline in production. (Commercial crops do not include cashews since production figures do not break out traditional from modern methods of cultivation. Thus, commercial figures are underestimated.)

Post-Transitional Production - Since independence, there has been a serious decline in agricultural production. The decline has been attributed to two main factors: many white farmers have abandoned their farms, and as agriculture is collectivized, output per acre has declined. The decline has been particularly serious in the hinterland of Quelimane, which is Mozambique's breadbasket, and where 40 percent of the population lives. It is not possible to estimate the extent of the decrease in agricultural production since independence. Export of agricultural commodities decreased by 40 percent between 1974 and 1975. It can be imagined that commercial crops suffered greater declines than traditional crops.

3. Structure of Production -- Prior to independence, there were two forms of land holdings and land use: the colonial system, characterized by large, generally plantation sized, holdings granted to Portuguese settlers and European commercial interests which used modern techniques of agricultural production; and traditional African land holdings, generally cultivating subsistence crops on communal lands with traditional methods of production.

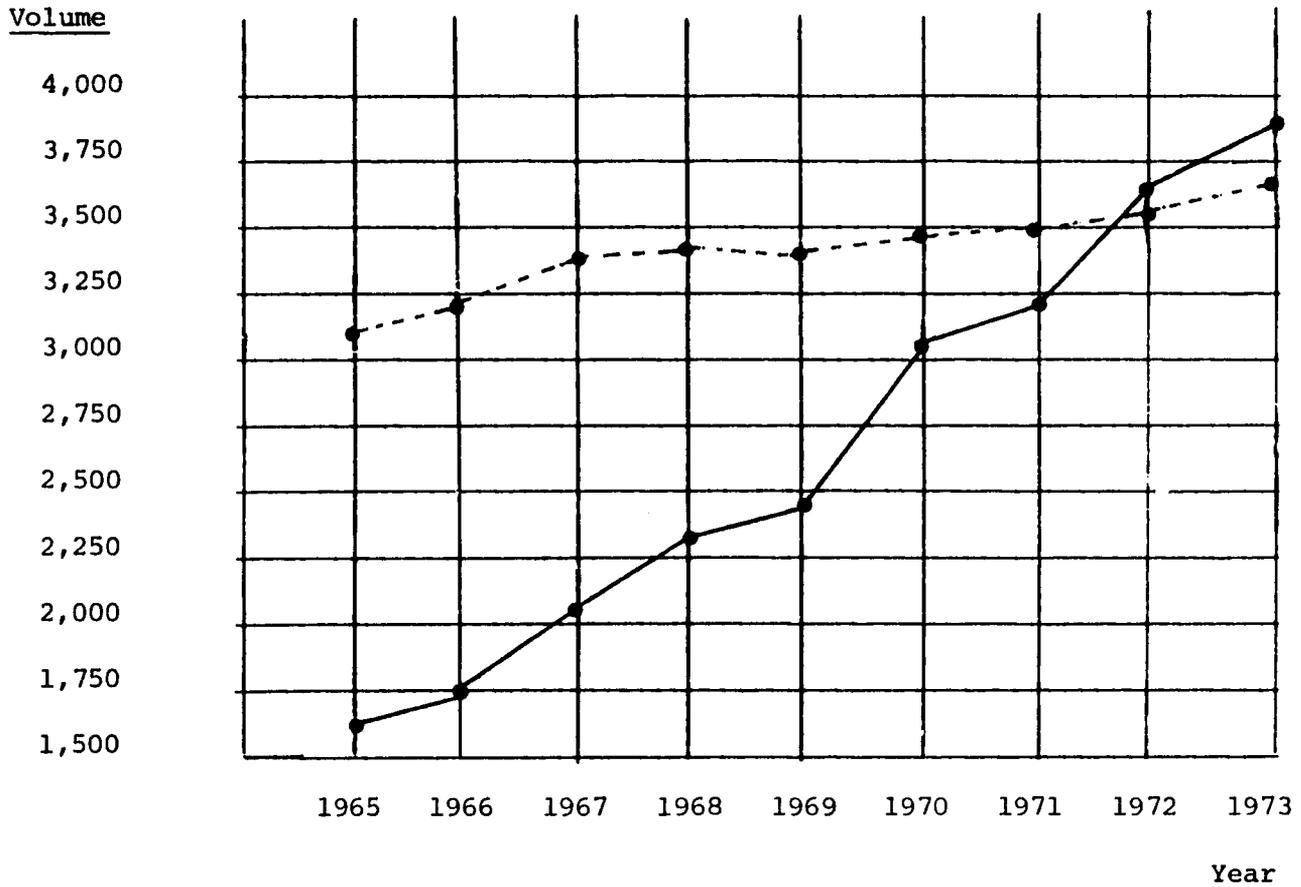
The colonial system was based on Portuguese ownership of lands with grants to individuals and companies. The grants generally did not carry rights of ownership but had long leases which were renewable. In the mid-twentieth century until 1963, less than plantation sized grants were made in an attempt to attract Portuguese settlers. Approximately 3,000 of these grants were made. Fourteen percent of these concessioners, with holdings over 1,000 hectares, cultivated about two-thirds of the total settlement grants.

The traditional system of African land tenure is based on the principal of working common tribal land. Rights to the use of the land are allocated among tribal members. The Portuguese Government passed laws which safeguarded the rights to possession and disposal of land by Africans.

Since independence, many European settlers have left Mozambique. All these unoccupied lands have, by government decree, reverted to state ownership. Some commercial farms are still operated with the consent of the new government. The present government is in the process of establishing a system of collectivized

FIGURE IV-1

Aggregate Crop Production
(000's tons)



Key: Traditional crops - - - -
Commercial crops _____

Traditional crops include:

- Maize
- Rice
- Cassava
- Potatoes
- Groundnuts
- Coconuts
- Cashews

Commercial crops include:

- Tea
- Sugar Cane
- Citrus Fruits
- Bananas
- Sisal
- Cotton
- Copra
- Tobacco

59X

farms on traditionally African land as well as abandoned commercial farms and plantations.

The Mozambique Cotton Institute, established in colonial Mozambique and continuing today, is the main government regulatory agency responsible for regulating the processing and trade of cotton. It is also responsible for encouraging the expansion of cotton growing, assisting farmers in technical matters, and undertaking research. It has an independent budget, financed mainly from taxes of cotton production.

It was reported also that an institute similar to the Cotton Institute would be established to regulate production and marketing of cashews. This, however, has not taken place since independence. It is uncertain which government agency is presently regulating the industry as the Direcção Provincial dos Serviços de Economia did prior to independence. Reports in 1974 suggest, as reported by the FAO, that processing facilities may be excessive for current production. Since independence the export of cashew nuts has been placed under the full government control of the Department of Commercial Services. Only the export of raw cashew nuts to India has been nationalized. Mozambique is acting in concert with Tanzania in the export of cashews to India, but, as of March 1976, India refused to pay the price demanded by the two countries.

In the production and marketing of other crops, sugar production is still undertaken primarily by five commercial estates. The Citrus Exchange of South Africa is still marketing Mozambique's citrus fruit, as it has been doing for many years.

Land use patterns are shown in the table below.

	<u>Land Distribution</u>	
	<u>000's acres</u>	<u>%</u>
A. Arable land, including:	121,652	63
- land in annual crops		
- land in permanent crops		
- land in rational fallow		
- virgin lands		
B. Non-arable land, including:	40,258	21
- range land		
- other non-arable		
C. Other, including:	31,974	16
- forests		
- game parks and reserves		
- urban and transport		
Total	193,884	100%

6/5

4. Constraints on Production -- As has been described above, Mozambique has relatively large amounts of arable land for both cultivation and grazing, the majority of which is not presently being utilized. One reason is the prevalence of malaria which acts as a constraint to settlement. The other is the presence of the Tsetse Fly north of the Save River, which renders between 25,000 and 35,000 acres of potential grassland unusable for grazing. Disease and pest control programs could free much of this land for livestock production and increased settlement.

Much of the internal transportation system, and particularly farm-to-market roads have been constructed for use by commercial enterprises. These plantations by and large produce solely for export and not internal consumption. Most agricultural production destined for local consumption is either produced on a subsistence basis or, at best, for local markets. Lacking an adequate system of tertiary and secondary roads for distribution of commodities to wider markets has led to under-production. An expanded system of rural feeder roads would have the potential of expanding production for wider marketing and less dependence on the importation of commodities for internal consumption.

Similarly, government services such as agricultural credit, coops and extension services are lacking. Because of the transportation constraint described above, there is not much incentive for increasing farm yields through these services since local consumption could not absorb the excess production.

Traditional African agricultural organization, through the cultivation of communal lands, is based on local consumption. The present establishment of communal villages, which appear to be designed to be self-sufficient, similarly do not present opportunities for excess production beyond local consumption. Thus, some form of motivational education appears to be necessary in order to stimulate farmers to increase their production.

With the new government's policy for the development of communal villages, there is some doubt as to land ownership or rights to the use of individual holdings. Reports indicate that in the north, where FRELIMO established control prior to independence, all lands have been "collectivized" while in the south, there remain individual holdings or gardens along with communal lands. The uncertainty of rights to the use of the land, rights which obtained even under traditional tribal organization, may create a constraint to increased production.

There appear to be several limitations on the availability of agricultural inputs such as fertilizers and insecticides as well as farm equipment. Local economies are certainly not capable of heavy equipment maintenance. There are some reports that the present government plans to establish tractor stations in the communal villages which might relieve this problem. Still, there will be the need to chemical and equipment inputs.

One of the most severe constraints to increased production is the availability of manpower, such as technical and professional agricultural experts, management experts for the required government services described above, and experts or, preferably, organizations specializing in such areas as irrigation, seed and production research, equipment maintenance, and farm credit systems. Put briefly, the organizational supports needed for increased output must be staffed with skilled technicians and professionals which are not presently available in Mozambique.

There must be a rational and integrated policy of production for expanded internal markets and importation of commodities for internal consumption. Unless the present government hopes, somehow, to develop self-sufficient food production, Mozambique will continue to import certain commodities. There must be decisions made as to which commodities to import and which should be concentrated on for national production and marketing.

C. Minerals and Mining

1. The Setting -- While under Portuguese administration all mineral deposits in Mozambique belonged to the state. Thus, prospecting and exploitation had to be applied for, resulting, generally, in the issuance of a license and exemption from most taxes.

In 1965, output from the extractive industries was valued at approximately 50 million escudos of which 47 million escudos worth were exported. This represents 1.6 percent of all exports. In 1974 mining plus refined products represented 2.6 percent of all export value. Large-scale mining is carried on by relatively few companies in a limited number of sites. These companies extract coal and beryl, columbo-tantalite, and microlite. Other materials exploited on a small-scale were (prior to independence) bauxite, montmorillonite, asbestos, lepidolite, mica, gold, copper and rare earths. In 1948, an exclusive concession was granted to the Mozambique Gulf Oil Company for oil prospecting. It was extended in 1958 as a joint venture with the Mozambique Pan American Oil Company. The Concession was extended again in 1968. Up to 1967, approximately 700 million escudos had been spent on prospecting only to yield two deposits of natural butane gas. Prospecting for diamonds is undertaken by the Mozambique Diamond Company (Companhiade Diamontes de Mozambique). Finally there are large deposits of titaniferous iron located in the Tete district but technical difficulties in separating titaniferous titanium oxide from iron as well as transportation problems discouraged exploitation.

Overall production and export statistics for Mozambique as well as its impact on world markets can be seen in Tables IV-2 and IV-3. Figure IV-2 shows the geographic distribution of mineral resources throughout the country. Mineral production, including refined petroleum products, contributed 2 percent to 1973 GDP. The extractive industries employed in 1971, 6,400 persons.

TABLE IV-2

Role in the World Mineral Supply
(Thousand metric tons, unless otherwise specified)

Map Symbol	Major Commodities	1974 Production	Estimated Share of Production Exported (%)	Share of World Output (%)	Reserves	Share of Total World Resources (%)
Al	Aluminum, bauxite	3	0	(1)	60,000	(1)
Be	Beryl concentrate	-	100	(1)	150	2
Cem	Cement	470	7	(1)	NA	NA
Cly	Clays, bentonite	1	24	(1)	15,000	(1)
C	Coal, bituminous	430	21	(1)	400,000	3
Cb	Columbite--tantalite concentrate	90	100	(1)	Medium	10
Cu	Copper ore, metal content	0.6	0	(1)	Small	(1)
Fel	Feldspar	1	0	(1)	Small	(1)
F	Fluorite	-	0	(1)	660	(1)
Ls	Limestone	5	0	(1)	Small	(1)
M	Mica, scrap	0.8	0	(1)	Small	(1)
Salt	Salt	21	17	(1)	Small	(1)
	Petroleum products (thousand 42-gal.bb1)	3,500	75	(1)	NA	NS

NA Not applicable. (1) Less than 1\$.

Source: U.S. Department of Interior, Bureau of Mines

TABLE IV-3

Production and Export of Principal Minerals, 1970-1971

<u>Mineral</u>	<u>Production (tons)</u>		<u>Export (tons)</u>		<u>Value of Exports (million escudos)</u>		<u>Principal Countries of Destination^{a/}</u>	
	<u>1970</u>	<u>1971</u>	<u>1970</u>	<u>1971</u>	<u>1970</u>	<u>1971</u>	<u>1970</u>	<u>1971</u>
Asbestos	228.0	1,430.5	228.0	287.1	0.5	0.8	Fed. Rep. of Germany, France	Fed. Rep. of Germany, France, Italy, United States, Japan
Bauxite	7,146.0	7,713.0	7,138.0	7,776.0	0.4	0.5	Southern Rhodesia	Southern Rhodesia
Beryl	32.9	12.7	6.2	42.9	0.07	0.4	United States, Southern Rhodesia	United States
Bismutite	1.4	1.5	0.4	--	0.01	--	Netherlands, United Kingdom	
Coal	351,015.5	328,673.1	102,089.9	80,248.0	27.5	22.3	Kenya, Japan, Angola, Malawi	Japan, Kenya, Malawi, Angola
Columbium- tantalite	97.2	58.6	54.0	69.3	23.1	18.4	Netherlands, United Kingdom, Fed. Rep. of Germany, United States	United Kingdom, Fed. Rep. of Germany
Copper	--	1,654.4	--	1,676.3	--	7.9	--	Japan
Fluorite	1,136.4	8,218.4	4,104.3	3,143.5	1.2	3.0	Fed. Rep. of Germany, Australia	Fed. Rep. of Germany, Japan, Portugal
Mica	252.8	950.0	759.0	505.0	0.9	0.6	United Kingdom, Australia	United Kingdom
Microlite	63.6	15.0	116.0	69.8	31.5	18.8	United Kingdom, Fed. Rep. of Germany, Netherlands	Fed. Rep. of Germany, United Kingdom
Montmorillonite (bentonite)	5,492.8	5,453.9	5,039.3	4,821.6	3.9	4.0	United Kingdom, South Africa, Australia, Madagascar, Portugal, Sweden, Angola	South Africa, United Kingdom, Australia, Portugal, Angola, Sweden, Japan
Tourmalin	6.2	3.5	5.5	2.2	1.0	1.3	Fed. Rep. of Germany, Switzerland, South Africa	South Africa, Southern Rhodesia, Switzerland, Fed. Rep. of Germany, Australia
Others	17,251.3	16,673.9	1,162.9	3,322.6	<u>7.5</u>	<u>11.6</u>		
					97.5	89.6		

^{a/} In descending order of importance.

Source: Mozambique, Boletim Oficial, Series III, No. 70, 2 September 1970 and No. 112, 26 September 1971.

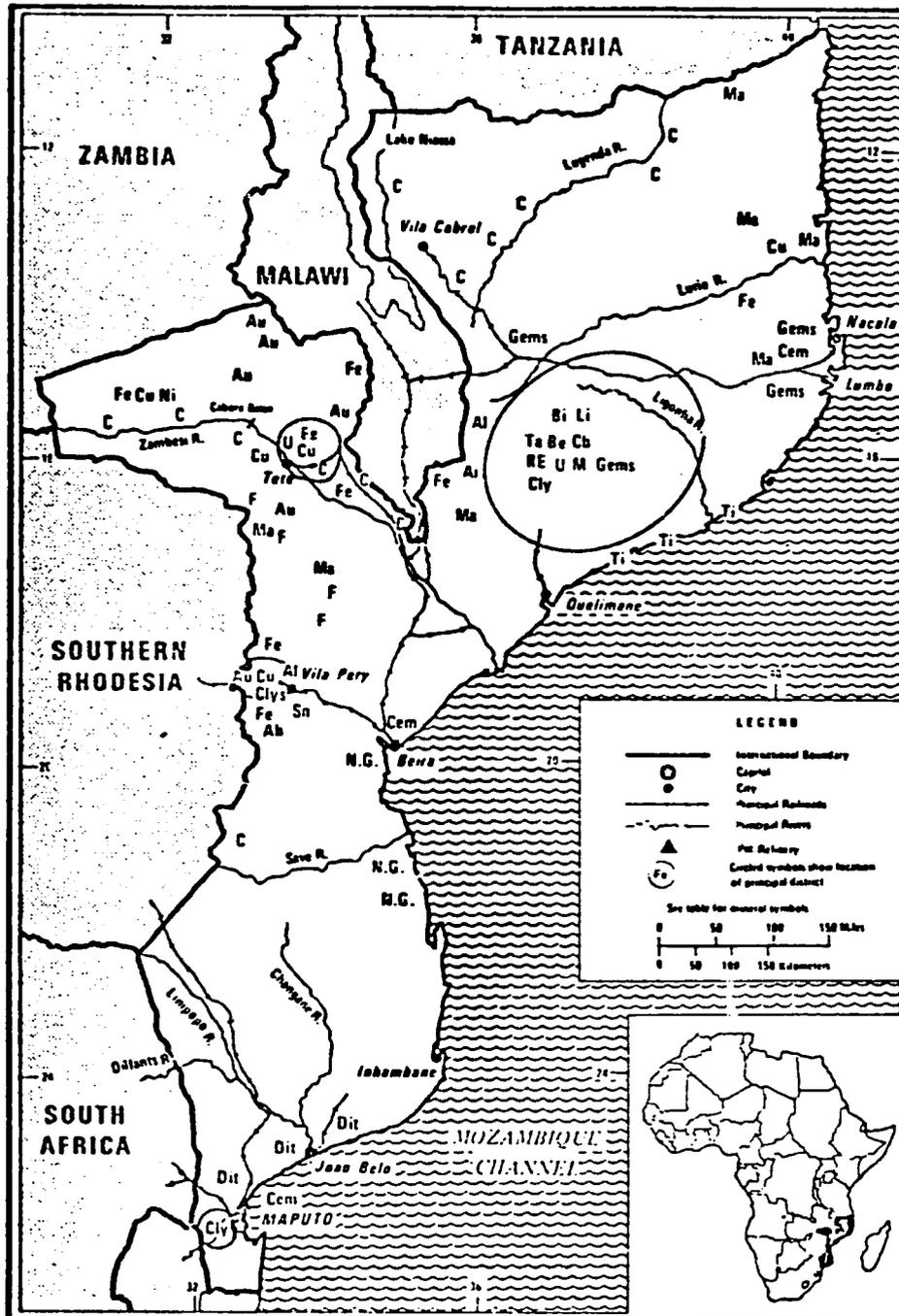
FIGURE IV-2

MAP SYMBOLS

Abbreviations

Commodities

Ala	Alabaster
Ab	Asbestos
Asp	Asphalt
Ba	Barite
C B	Carbon black
Cem	Cement
Cly	Clays
C	Coal (bituminous and anthracite)
Cry	Cryolite and chiolite
Dm	Diamond
Dit	Diatomite
Dias	Diaspore
Dol	Dolomite
Fel	Feldspar
Gr	Graphite
Gy	Gypsum
Ky	Kyanite
L	Lignite
Ls	Limestone
Ma	Marble
M	Mica
N G	Natural gas
Nit	Nitrates
Pe	Peat
Pet	Petroleum
Pig	Pigments
Pm	Pumice
Py	Pyrite
Pt	Platinum group metals
Gem	Precious and semiprecious stones
Pyrp	Pyrophyllite
Qtz	Quartzite and quartz
RE	Rare earths
SS	Sandstone
SP	Sepiolite (meerschaum)
S A	Soda ash
S S	Sodium sulfate
Tro	Trona
Vm	Vermiculite



IV-13

2. Prospecting and Exploitation of Major Resources -- Coal is Mozambique's most important extracted resource. Table IV-4 shows production and export figures for coal. There is only one company which extracts coal--the Mozambique Coal Company (Companhia Carbonifera de Mozambique). Until the early 1970s, it worked one region in Mozambique--Moatize. The figures in Table IV-4 reflect production from the Moatize mines. Production was reported to have reached 500,000 tons for 1975, but its reserves are estimated at 400 million of which 250 million are extractable. In the early 1970s, the company announced it would begin operations in newly discovered mines in Chupanga, Tete district. It was expected that production from the Chupanga mines would reach approximately 700,000 tons per year. About known coal deposits in general, the UNDP Mission to Mozambique said, in 1975:

"Mozambique's coal reserves are among the largest in Africa; deposits are distributed throughout the provinces of Tete, Niassa, and Manica. Studies undertaken in 1973 considered that expansion up to around 10 million tons per year is feasible."

Coal production reached a maximum in 1974 at somewhat more than 800,000 tons.

Total iron ore reserves in the provinces of Tete, Manica and Nampula are estimated at 220 million tons. As of 1975, however, mining activity was insignificant. During the colonial period there were plans for the establishment of a steel mill which was to have a capacity of 250,000 tons per year. With the completion of Cabora Bassa Dam for the provision of the large amounts of energy required as well as the large reserves of coal, it is estimated that conditions are good for exploitation of iron ore in Mozambique. This would be particularly advantageous since the ore is of high grade.

Energy from the Cabora Bassa Dam would also make possible the development of an aluminum industry in Mozambique based on its known reserves of bauxite. Deposits are estimates at 20 million tons of high grade ore. As can be seen from Table IV-3, almost all of Mozambique's bauxite is for export.

3. Constraints to Production -- The major constraint to the full-scale exploitation of Mozambique's minerals appears to be transportation. As will be described in Section IV-D, the transportation network of Mozambique makes internal ground communication very difficult. The system was primarily designed by the Portuguese administration for external trade and travel, thus capitalizing on its geopolitical situation but hindering internal development.

The availability of sufficient quantities of power for mining has historically been a problem. Now, however, with the establishment and functioning of the Cabora Bassa Dam (see Section IV-E on Energy) and possible increased exploitation of coal reserves power no longer appears to be a barrier to increased production.

TABLE IV-4

Production and Export of Coal, 1958-1970

<u>Year</u>	<u>Production</u> (thousand metric tons)	<u>Export</u>
1958	250	050
1959	260	040
1960	270	060
1961	321	061
1962	298	053
1963	283	064
1964	245	062
1965	237	088
1966	295	086
1967	282	073
1968	414	068
1969	277	095
1970	351	108

Source: World Energy Supplies, 1958-1961 (United Nations publication, Sales No. 63-XVII.4) and ibid., 1961-1970 (United Nations publication, Sales No. 73.XVII.2).

Availability of technical skills in Mozambique is certainly a problem for greater exploitation of mineral resources. Although there is a surplus of skilled mine labor, trained in the mines of South Africa and Rhodesia, middle and upper level administrative and technical personnel are not to be found. Thus exploiting companies would have to use foreign nationals. The extent of manpower flight with independence is unknown.

D. Transportation

1. The Setting -- The importance of Mozambique to neighboring countries for foreign trade has already been discussed. This importance is reflected in the role played by services among Mozambique's current accounts in substantially overcoming a rather large trade deficit. This essentially geopolitical factor in Mozambique's development is manifested in its transportation system, so highly geared to the transit trade of its neighbors. A statement in the 1975 Mozambique Country Brief of the UNDP Mission to Mozambique is given below:

"Independent Mozambique inherits a communication system more developed than in probably any other African country at the time of independence. Lourenco Marques (Maputo) is the second busiest port, after Durban, on the African coastline, and the national airline, DETA, is one of the oldest on the continent and is well equipped. The tarred road network, amounting to 4000 km, is one of the longest in independent Africa.

However, closer examination of the communications network shows that it has been dominated by the requirements of the neighboring countries of South Africa, Swaziland, Southern Rhodesia and Malawi, and the requirements of the (Portuguese) settler population of Mozambique, and thus the existing network is unsuitable for the type of rural development now envisaged."

The map of Mozambique given in Figure IV-3 shows the road and rail networks of Mozambique as of April, 1976. Communications east to west are good, while communication north to south are relatively poor.

2. Adequacy of Communications -- Railroads -- There are three major railroad networks in Mozambique. All are owned and run by the Mozambique Administration of Harbors, Railways, and Transport Services.

The southern network is comprised of four lines from Maputo, one running to Swaziland, one to South Africa, one to Rhodesia and an internal line connecting

the capital with an agricultural district north of Maputo. This network is 844 km long within Mozambique and the three international lines connect with other systems in Swaziland, South Africa and Rhodesia.

The central system consists of two lines, one running from Beira to Manica on the Rhodesian border and then to Salisbury and another running north from Beira to Vila Fontes and then northwest to Tate and the Moatize mines. A spur off of this line runs to the Malawi border. It consists of 995 km of track within Mozambique.

The northern system extends from the port of Nacala to the Malawi border south of Lake Nyasa with a spur running north to Lichinga (formerly Vila Cabral). This system runs a total of 800 km.

The Sena Sugar Estates own and operate a non-commercial line for their own use. Of the smaller internal lines, there is planned (and possibly as of this writing, completed) a spur planned from the Moatize branch of the central system to the Cahora Bassa Dam. There are a total of 66 km of railroad used for miner traffic from mines to loading quays. There were 88 km of railway built in 1969 between Marroweu and Inhanti Tanga. The table below shows relevant railroad data for Mozambique.

	<u>National Railroad Data</u>									
	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	
Length of Railways (km)	3,585	3,562	3,522	3,589	3,599	3,703	----	3,733	----	
Lines in use (km)	2,600	2,673	2,696	2,696	2,764	2,843	----	2,751	----	
Rolling Stock:										
Locomotives	274	270	271	284	289	288	296	301	----	
Carriages	366	370	369	373	369	386	466	421	----	
Wagons	6,220	6,457	6,666	7,181	7,193	7,677	8,197	8,257	----	
Traffic										
Passengers ('000)	----	----	4,220	4,392	4,941	5,281	----	5,524	5,300	
Passengers (mil)/km	216	238	253	256	380	315	359	346	----	
Freight ('000 tons)	12,463	13,433	14,490	15,175	15,530	16,874	----	19,728	18,790	
Freight ton/km (mil)	2,400	2,408	2,719	2,676	2,758	2,957	3,137	3,455	----	

Source: Economic Commission for Africa, African Statistical Yearbook 1974, UN, and for 1973, Quarterly Economic Review, Annual Supplement, 1976.

The 1974-1979 (Fourth) Development Plan called for approximately 1,000 km of railway to be built, most of which would be internal. Of this, 467 km would have linked Maputo with Beira. It is doubtful, but unknown, if any of this rail construction was undertaken.

Roads - Mozambique roads are administered by the Autonomous Road Board. Roads in Mozambique are classified by function rather than by quality of surface. First class roads constitute the principal network; they are those which establish connections between the borders of neighboring countries, district capitals, and major population centers and those which lead from such points to major ports. Second class roads link major industrial, commercial, and agricultural centers, ports and main railroad stations, and establish connections between these and first class roads. Third class roads are regional, linking less significant production and population centers and considered principally of local importance. Finally, there are unclassified roads which are dirt tracks, partially passable by four-wheel driven vehicles. North-south road construction, of whatever quality, is made particularly difficult in Mozambique because of the number of east-west rivers which must be bridged. The table below shows road lengths for selected years by road class.

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1972</u>
	(length in kilometers)					
First Class Roads	4,011	4,022	3,620	3,599	3,833	3,978
Second Class Roads	7,811	7,811	7,797	7,802	7,472	7,445
Third Class Roads	14,844	14,762	14,613	14,621	14,285	14,584
Unclassified Roads	<u>11,495</u>	<u>11,495</u>	<u>11,495</u>	<u>11,495</u>	<u>11,495</u>	<u>12,553</u>
Total	39,161	38,090	37,525	37,517	37,085	37,560

Source: Economic Commission for Africa, 1975.

The table below gives the number of motorized vehicles in Mozambique between 1964 and 1969:

	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
Light Vehicles	47,300	51,183	55,779	59,857	64,222	70,733
Lorries	8,500	8,741	9,019	9,386	9,826	10,575
Tractors	----	3,724	4,179	4,559	5,050	5,836
Motorcycles	----	<u>3,550</u>	<u>3,610</u>	<u>3,624</u>	<u>3,614</u>	<u>3,729</u>
Total	55,800	67,198	72,587	77,426	82,712	90,873

Source: Economic Commission for Africa, 1975.

The number of vehicles registered in 1975 was down considerably from expected vehicles registration for any given year. There were approximately 3,200 vehicles registered which represented about 28 percent of the number that might have been expected. The approximate annual rate of increase in registered vehicles for the five years shown above of 7 percent, is primarily accounted for in passenger vehicles, rather than commercial vehicles, which would represent capital investment.

Air Transport - Air transportation services first started in Mozambique in 1936 and have expanded remarkably since then. By the 1960s, flights served all major administrative and commercial centers in Mozambique. The Mozambique national airline is DETA (Direccao e Exploracao de Transportes Aereos). The Administration of Harbors, Railways and Transport Services operates the airlines and the Civil Aeronautical Services provides and maintains airports and airfields, inspects the aircraft, tests and licenses pilots, and provides related services. DETA's flights are supplemented by feeder services operated by nine private air transport services. These provide service between secondary cities.

DETA provides international flights in conjunction with South African Airways and Central African Airways. Also in combination with the Portuguese airlines, TAP, there were, prior to independence, flights to Portugal, South Africa, Angola, Swaziland, Zambia, Kenya, Tanzania and Malawi.

There are fifteen airfields in Mozambique's cities and numerous air strips. There are three major airports in Maputo, Beira and Pemba (formerly Porto Amelia) which can serve jumbo jets. DETA's fleet consists of Boeings 737, and Fokker Friendship aircraft. The 737's were added since 1971.

The table below shows passenger freight handled at Mozambique airports in gross figures over time:

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Freight (tons):								
Loaded	1,105	1,533		2,603	3,481	4,078	5,829	6,098
Unloaded	1,184	1,644	3,980	2,800	3,552	3,951	4,904	5,464
Passengers ('000's):								
Arrived	83	111		132	163	195	267	316
Departed	82	109	238	129	163	196	265	315

Source: Economic Commission for Africa, 1975.

By 1976, a fourth major airport, in terms of volume of passengers and freight, was developed in Quelimane. For the last decade Maputo has received approximately 37 percent of all volume of Mozambique's air transport services. In the mid-1960's, Beira's airport had almost as much volume as Maputo. But with increasing use of Pemba in the north, which is a primary central place to the northern road network, and Quelimane and Nampula, the first of which has port facilities recently developed and the second being the hub of a road network, Beira's relative share of air transport passengers and freight has declined since 1965. Maputo still, in 1976, carries approximately 37 percent of all passengers and 42.5 percent of all freight in Mozambique. Air transport services also carry mail.

Among recent developments in air transport, TAP suspended flights to Mozambique on January 1, 1976 because the Mozambique Government insists that the flights be excluded from Maputo and go only to Beira. Prior to suspension, TAP provided, through agreements, certain after sales services for DETA as well as pilot and technician training. These services have also terminated. Talks continued after January's break-off but Mozambique began to look elsewhere. It was later reported that a contract has been signed with a British company, Tempair International. The company specializes in services for airlines in developing countries and will provide a Boeing 707 flying DETA's colors for international flights, as well as aircrew, ground support, engineering staff, and cabin service management. The contract means that DETA can now open the Maputo and Beira to Luanda and Lisbon routes formerly held by TAP. An agreement has also been signed with the Ethiopian Airlines to start an air service between Addis Ababa and Maputo. The service would have begun in the spring of 1976. It was also reported that on July 5, 1976, Aeroflot of the Soviet Union initiated a service between Maputo and Moscow.

Ports and Water Transport - Port facilities for ocean-going vessels have been important in the development of Mozambique for two reasons. First, and most important, is the geographic advantage Mozambique has in coastline, which includes many natural and deep-water harbors. Second, prior to air transport in 1936, the major means of north-south communication in Mozambique was along the coast. (Colonial Mozambique, similar to colonial Brazil, was highly developed along the coast with only limited settlement inland. Consequently, coast transport was primary.)

Through most of the country's development there were two major ports in Mozambique: Maputo and Beira. (Very early in the colonial era the Harbor of Mozambique Island in northern Mozambique was important because of the Portuguese fortress capital being located on the island.) These ports are major terminals for the rail and road transportation systems and provide the export facilities which are so important to the nation's GDP. Later the port of Nacala was developed (beginning in the 1960's) for export from Malawi via the northern rail system. Also there are a number of ports which are important for coast shipping which include Pemba (formerly Porto Amelia), Quelimane and Inhambane. There are a great many secondary coastal ports as well.

All port facilities and activities are managed by the Administration of Harbors, Railways and Transport Services.

Maputo, located in the deep, well-protected Delagoa Bay, is one of the finest harbors in Southern Africa. It has had deep-water facilities since 1903. It serves for the export of goods from South Africa (the Transvaal), Swaziland, and Rhodesia through direct rail links as well as from Zambia, Botswana and Zaire via Rhodesian links.

In 1973, the total ship tonnage calling at Maputo amounted to 16.4 mn tons, more than half the total Mozambique figure of 26.5 mn tons. Total cargo landed was 4.6 mn tons and cargo shipped 9.6 mn tons. The port is also important for Botswana. Before the closure of the Rhodesian border Maputo was the source of part of its oil supply and it is used for the exportation of minerals via South Africa, particularly for copper matte from the Selibe-Pikwe mines.

Since the Portuguese coup Maputo port capacity has dropped considerably. This caused a log jam of Rhodesian exports and added to congestion at Southern Africa's other ports. The position improved during 1975, but by early 1976, port efficiency had dropped seriously owing to the exodus of skilled Portuguese manpower. The prospect that Mozambique might have been unable to handle all Rhodesian traffic on offer could have affected the timing of the closure of the border with Rhodesia.

South Africa is Maputo's main customer. In the year 1973/74, South African rail traffic to Maputo amounted to 4.6 mn tons, most of which was shipped from Maputo; this constituted 19 percent of South Africa's total seaborne exports. Of the 14 mn tons Maputo handled in 1973, approximately 32 percent was South African and Botswanan traffic and 21 percent came from Swaziland. The rest, previously handled by Beira, shifted to Maputo after UDI. The fall off in productivity of Mozambique ports and railways in the political uncertainty following the Portuguese coup, had serious results for Mozambique's neighbors. The train accident rate increased as the result of a shortage of skilled manpower and a breakdown in the signalling system. Traffic shipped by the CFM dropped to below 5,000 tons a month in the latter part of 1974. South African Railways subsequently mounted a successful rescue campaign and with the loan of staff and signalling equipment, traffic levels were running at about 30,000 tons a month by mid 1975.

Both Swaziland and Rhodesia were seriously affected by the port and railway troubles. Swaziland's exports through Maputo were 2.7 mn tons in 1973, and Rhodesia's were 1.3 mn. Swaziland's use of the Matola iron ore wharf at Maputo is vital for the continued viability of its iron ore mines. The mines require at least seven trains a day. In the latter part of 1974, they were getting only half this amount.

Maputo's port facilities are in two locations: Gorjao which abuts the city's center for general cargo and Matola for bulk handling and petroleum unloading and storage. The port of Gorjao has 3,036 metres of quay with 90 cranes, 22 warehouses with a capacity of 240,000 tons, a cereals handling shed with a discharge/loading rate of 800 tons per hour (prior to independence) and a sugar terminal with a loading capacity of 750 tons per hour. Matola has storage facilities for 250,000 tons of petroleum, several lumber wharves, and an ore terminal with a loading speed of 3,000 tons per hour.

The port of Beira does not have as good a harbor as Maputo. It suffers from shallow coastal and harbor waters, a wide tidal range, sandbanks, silting, and an unstable land surface which makes building construction difficult. It serves for the export of goods from Rhodesia and Malawi via direct rail routes and Zambia via Rhodesian routes.

Beira never recovered from the loss of traffic caused by UDI, and in 1974, total traffic was still over a quarter below the 1965 level. The opening of the Nacala rail link to Malawi in 1971, and the closing of the Zambian border with Rhodesia in 1973, further reduced traffic to Beira, which was diverted to Nacala as did the closing of the Rhodesian border with Mozambique in February 1976. Zambian traffic through Beira dropped from 781,527 short tons in 1972, to 166,000 short tons in 1973. Combined with Beira's natural disadvantages as a shallow water port, these problems have put a question mark over its long term future.

Beira has 1,514 metres of quay with nine berths and 22 warehouses and 450 metres of quay for lighter vessels.

The port of Nacala, located in Nacala Bay, has a fine (reputed to be the finest along the East African coast) natural deep-water harbor. Being the terminus of the northern Malawi oriented rail system, Nacala serves as Mozambique's third ocean-going export facility. The Malawi rail system was finished in 1967, and it was this expectation plus the decision not to develop the harbor at Mozambique Island which led to the recent development of Nacala and its port facilities. Since its opening, Malawi has diverted much of its exports from Beira to Nacala. There is a possibility that Zambia may connect its rail system to Mozambique's northern system and this would have a tremendous impact on Nacala. Its usefulness as a deep-water port has also increased with the re-opening of the Suez Canal. Another possibility is that the spur of the northern system beginning at Nova Freixo running west, is approximately 125 km from the Moatize spur of the Beira system. If a rail link were established then coal could be shipped to the north of Mozambique and out the port of Nacala.

However, the development of Nacala is still in the early stages. As of 1975, it had one berth of 150 metres but work was underway to extend it to four berths. There were four warehouses covering an area of 12,000 square metres and twenty cranes. Plans had been developed to construct a new quay of 480 metres to accommodate vessels of up to 100,000 tons. The extent or realization of these plans is uncertain.

Traffic at major Mozambique ports from 1965 to 1975 for selected years, was as follows in Table IV-5.

Inland Water Transportation - There is some transport by water in Mozambique partly on Lake Nyasa and on the lower reaches of the Zambezi. It is believed that the Cabora Bassa Dam will increase inland water transport since the

TABLE IV-5

Freight Handled by Mozambique Ports
(ooo tons)

	<u>1965</u>	<u>1966^{a/}</u>	<u>1972</u>	<u>1973^{b/}</u>	<u>1974</u>	<u>1975</u>
<u>Beira</u>						
Landed	2,338	1,494	1,682	1,330	1,187	654
Shipped	<u>2,009</u>	<u>1,778</u>	<u>2,094</u>	<u>1,653</u>	<u>1,848</u>	<u>1,031</u>
Total	4,347	3,262	3,776	2,982	3,035	1,685
<u>Maputo</u>						
Landed	3,287	3,320	4,646	4,602	4,076	2,479
Shipped	<u>5,528</u>	<u>6,065</u>	<u>9,200</u>	<u>9,565</u>	<u>8,974</u>	<u>7,382</u>
Total	8,815	9,385	13,846	14,167	13,050	9,861
<u>Nacala</u>						
Landed	139	282	452	449	457	378
Shipped	<u>202</u>	<u>214</u>	<u>266</u>	<u>344</u>	<u>325</u>	<u>242</u>
Total	341	496	718	793	782	620

^{a/} Change in traffic in 1966 reflects influence of UDI, November 1965.

^{b/} Change in traffic reflects influence of Zambian-Rhodesian border closure, January 1973.

Source: Portos, Caminhas de Ferro e Transportes de Mocambique, February 1974; Mozambique Economic Survey, Special Independence Issue, published by Department of Foreign Trade, 1975; Boletim Mensal, October 1975.

Zambezi is now navigable up to the dam and above the dam there should be the possibility of navigation to near the borders of both Rhodesia and Zambia. Below are given figures on inland water traffic in Mozambique.

	1964	1965	1966	1967	1968	1969	1970	1971	1972
Passengers carried ('000)	117	170	177	180	190	193	232	1,008	880
Freight carried ('000 tons)	145	179	160	169	189	162	170	101	105

Recent Developments Affecting Transportation - The Quarterly Economic Review, Number 2, of 1976, reported on the potential impact of the planned opening of a port facility in South Africa, south of Maputo. The opening of Richard's Bay port in South Africa on April 1, poses another long-term threat to Maputo's future. As The Star put it: "Although the export orders won by the Transvaal Coal Owner's Association spurred the harbour's development, work is advanced for berths for clean cargos, and the harbour will offer an alternative to politically unstable Maputo and ease port congestion at Durban." Mr. Vorster in his opening address, said that the export of coal which began on April 1, would be at the rate of 5 mn tons a year by October 1 this year. There would also be another 3 mn tons a year coming from the Transvaal, giving a total of 12 mn tons. This tonnage is almost as much as Maputo is handling at the moment. It seems more than likely that mining companies in the Transvaal will come to prefer Richard's Bay to Maputo. At present, the mining companies are shipping coal, chrome, iron ore and vermiculite through Matola wharf.

The Quarterly Economic Review, Number 3, for 1976, reports the following as of September:

In June, the port of Maputo's ability to cope with the already considerably diminished South African traffic was also being jeopardized by the exodus of Portuguese dockers. Mr. J.G.H. Loubser, the general manager of the South African Railways (SAR), acting with the approval of the South African Government, offered Mozambique an airbridge of South African technicians to keep Maputo going after the exodus. At that time, the harbour was working at about 60 percent of its capacity compared with last year. The Mozambique Government assured the South African authorities that they could cope with the problem despite the exodus and invited Mr. Loubser plus 37 top SAR officials and South African businessmen to Maputo. They were met and escorted around Maputo by an official sent personally by President Samora Machel. On his return to Johannesburg, Mr. Loubser urged South

African business interest to back the "impressive job" the Mozambique Government is doing to maintain operations at the port of Maputo.

The application of UN sanctions by Mozambique on Rhodesia, requiring the closure of its border and airspace, will have an impact on Mozambique's port and rail activities and revenues. A UN Mission to Mozambique reported in July that effects would be felt on five types of international traffic:

- All Southern Rhodesian traffic to Mozambique
- All traffic from Zaire, Zambia and Botswana, except something less than 100,000 tons arriving by other routes
- Traffic which moved by rail between Malawi and Southern Rhodesia and South Africa
- Traffic which moved by rail from northern Mozambique to southern Mozambique and South Africa via Rhodesia, and
- Traffic which moved by rail from southern Mozambique to northern Mozambique and Malawi via Rhodesia.

The Mission estimated the losses annually from this traffic to Mozambique to be between 63 and 85 million dollars.

E. Energy, Power and Communication

1. The Setting -- Electric power is supplied both by privately-owned and government owned generating plants. As the supply is unevenly distributed, industrial development has, to some extent, been hindered. In 1962, a centralized power agency, Autonomous Electricity Services (Servicos Autonomos de Electricidade-SAE) was set up in an effort to expedite the planned electrification of the entire nation and to guarantee power supplies at reasonable prices for all consumers. Its operations were, however, hindered by a shortage of qualified technical personnel.

As of the end of 1975, coal was the most important source of power for Mozambique. By 1976, power began to be generated from the Cabora Bassa Dam although it is uncertain how much energy was produced in that year. Projections indicate, however, that with full production this will be the greatest source of power in Mozambique.

There has been continual prospecting for oil in Mozambique, but so far without much success. Natural gas has been found in Mozambique and in 1968, a nitrous ammonia plant was built with processing based on natural gas. In 1974, nine companies requested permits for exploitation of solid liquids and gaseous

hydro-carbons. The production of butane and propane gas went from 3,2 thousand tons in 1966 reaching a high of 13,2 thousand tons in 1972, and declined to 6.8 thousand tons in 1975.

The following table shows a breakdown of energy production and installed capacity:

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>
<u>Installed Capacity</u>	210	244	270	274	332	355	365
Hydro-electric	66	66	66	66	114	114	116
Thermal	144	178	204	208	218	241	249
<u>Production</u>	425	427	455	433	502	558	563
Hydro-electric	209	188	194	124	251	273	242
Thermal	216	239	261	309	251	285	309

Source: Economic Commission for Africa, African Statistical Yearbook, 1974, UN.

The Cabora Bassa Dam, run by the Portuguese-owned Companhia Hidroelectrica de Cabora Bassa which will, over time, be purchased by Mozambique, has recently been completed and energy has just begun to be produced. South Africa has started to receive power from Cabora Bassa on an irregular basis at a rate of 500 mw per day. Until power is available on a steady basis, South Africa will pay only 0.1 cents per kwh. When South Africa receives 720 mw, it will pay 0.3 cents per kwh. It has been estimated that this first phase will have a capacity of 1,350 megawatts going to a maximum capacity of as much as 4,000 mw. (It should be noted that not all of this capacity will be consumed by Mozambique as the project is a joint venture with South Africa.)

As of 1973, the UN Committee Report referred to above found that Mozambique "is equipped with thermo-electric stations and small hydro-electric schemes which cover adequately its present needs."

2. Communication -- All postal facilities and public telephone and telegraph facilities are owned and operated by the Post, Telegraph and Telephone Services (Servicos dos Correios, Telegrafos e Telefones-CTT). In 1972, there were 49,100 telephones in use and in 1971, 14.5 million domestic letters were handled and 37,8 million foreign letters. Thus, as in the case of transport described above, communication to Mozambique appears to be primarily directed outward rather than internally.

The following table gives more detail to domestic and international communication in Mozambique:

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Letter Mail (millions)								
Domestic	8.6	9.1	11.6	11.7	12.7	13.8	14.6	----
Foreign:								
Received	8.6	17.5	19.5	20.4	25.0	25.4	25.8	26.4
Sent	8.5	8.1	10.0	9.3	10.0	11.6	20.1	22.7
Telephones in use ('000)	19.6	20.7	21.4	22.6	24.4	27.0	30.2	49.1
Radio receivers	60	75	78	85	85	90	100	----

Source: Economic Commission for Africa, African Statistical Yearbook, 1974, UN.

F. Health

1. Living Conditions -- The majority of Africans living in towns and cities generally lack sanitation, a safe water supply, and modern urban amenities. Their housing conditions tend to be more crowded than those of rural Africans. Their standard of living is higher because wages earned by urban workers enable them to purchase consumer goods beyond those of bare necessity.

For rural Africans in traditional communities, conditions remain essentially as they have been in the past. Shelter is adequate and comfortable, as traditional designs are well adapted to local conditions. Sanitation and health conditions are frequently poor, however.

As of 1967, average life expectancy was between 25 and 33 years, for the entire population. Stillbirth and infant mortality were in the neighborhood of 33 percent at that time. This is attributed to widespread malnutrition and endemic diseases.

Climate is a major factor for diseases in Mozambique. The climate of the northern tropical belt and river basins is conducive to diseases such as malaria, sleeping sickness, bilharziasis (schistosomiasis), leprosy, and hookworm. Programs for the eradication of the endemic diseases has been sporadic and relatively unsuccessful. These include malaria, smallpox and cholera.

Drainage and Water Supplies - Inadequate drainage in urban areas is a problem. It was reported of the Maputo municipal drainage systems in 1967, that they presented a danger to health. Flooding caused by heavy seasonal rains in densely populated suburban areas presents the threat of malaria, typhoid, and hepatitis outbreaks. In 1967 the beaches of Maputo were reported to be in danger of severe pollution.

Inadequate sewage disposal facilities contributed to unsanitary living conditions, causing a high incidence of hepatitis and other infectious diseases. Poorer town and city dwellers generally use pit latrines. Waste in rural areas is either buried or carried away.

26

Water supplies are inadequate throughout the country and urban areas frequently suffer water shortages. A 1962 WHO report found that 65 percent of the urban population was without piped water. In 1964, approximately 40 percent of the urban population was served by municipal or other community networks either to residences or communal faucets. The water supplies of the three major cities--Maputo, Beira and Pemba--had, in 1967, only reasonable adequacy even though a new reservoir and water treatment plant in Maputo was still unable to meet the city's full demands for water.

Nutrition - The diet of the African population consists almost exclusively of carbohydrates from staple food crops such as cassava, peanuts, sorghum, beans and sweet potatoes. It lacks protein sources such as meat or fish. Fish is consumed as a supplement to diets of peoples along the coast while meat is unavailable altogether in the north of Mozambique because of the Tsetse Fly.

Diseases - The high incidence of disease in Mozambique is related to widespread malnutrition, climatic conditions favoring animal vectors of human diseases in certain regions, and general lack of sanitation. Epidemics of population-ravaging diseases do not occur, but severely endemic diseases are a problem, among them malaria, trypanosomiasis, intestinal diseases, tuberculosis and leprosy. Among the most serious causes of infant mortality are intestinal parasites and tetanus. Conditions caused by malnutrition include pellagra, scurvy and rickets.

Disease control measures by authorities over time have not succeeded in controlling completely the incidence of these major diseases. Cases of smallpox are recognized and reported each year even though there have been periodic oral vaccination programs. Yaws, which occurs in the north, is treated by penicillin when outbreaks are recognized. Typhoid and paratyphoid fever are still problems though their incidence has been reduced in urban areas somewhat. Malaria is the most serious communicable disease which has not been controlled. A major eradication program jointly undertaken by WHO and the Mozambique administration in 1960 was terminated in 1966 because the government curtailed the budget. Schistosomiasis is higher in Mozambique than in any other African nation with the exception of Egypt. The highest infection rates are recorded in the north. Leprosy is most prevalent in the Zambezia and Mozambique districts where 80 percent of all recorded cases occur. But the disease is seriously under-reported. Sleeping sickness carried by the Tsetse Fly is most prevalent between the Rovuma and Zambezi Rivers although most of the nation is infested. The only regions thought to be reasonably free from infection north of the Zambezi were the Angonia Plateau and parts of Quelimane.

2. Health Organization and Infrastructure -- Since independence, there have been rather major changes in government handling of health in Mozambique. Consequently the organization of health-related activities will first be described prior to independence followed by the changes. The reason is that health care as is presently provided, can best be seen in the context of what had been offered prior to independence.

Prior to Independence - The traditional African response to disease and health problems in Mozambique has been the tribal diviner in a local community. He is thought to be the primary source of information on the prevention and cure of disease. He also acts to cure a disease once it has been diagnosed. Remedies include both magical and medicinal treatments. The diviner possesses a practical knowledge of herbs and treatments taught to him by his predecessors. Relief from the tribal diviner is, of course, still in practice after independence as before. It is noted here as the primary response to disease in rural areas.

Aside from the tribal diviner, there were three categories of organized health care delivery in Mozambique: governmental, religious institutions, and private companies. Government medical facilities are supervised by the Public Health Service of the Secretariat of Health, Labor and Welfare. The colonial province was divided into four health regions and nine districts coinciding with political districts. Figure IV-4 shows the distribution of health facilities run by the government in 1967. Central hospitals have the full range of health services as well as outpatient facilities. They also serve regional hospitals, with in-patient facilities but with more limited personnel and equipment than central hospitals. Central hospitals also serve, through supplies and receipt of special cases, health delegations which consisted of a hospital or infirmary with a number of outlying first-aid stations for each delegation. In 1967, there were twelve regional hospitals and eighty-two delegations.

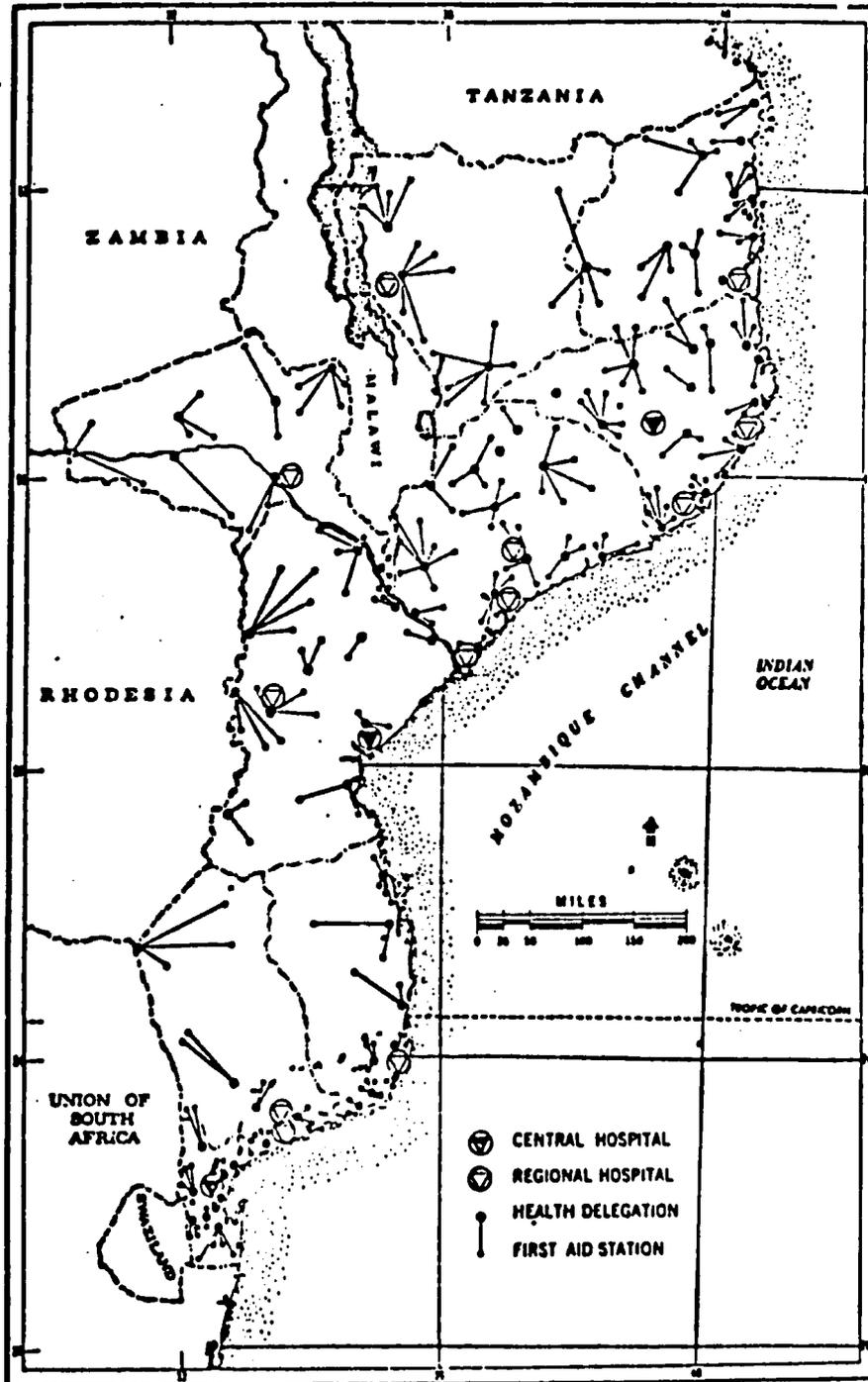
Three institutions served people with serious mental disorders; all three being in Maputo. For the care of leprosy there were seven leper villages served by delegation infirmaries and 172 leper stations which were government run. There were eight hospitals for sleeping sickness and 179 maternal homes.

Medical personnel were always in extremely short supply. Doctors and nurses were sent from Portugal to serve the colony. But there was also a short supply of these persons in Portugal, cutting down the number available to Mozambique. To overcome the problem of a Faculty of Medicine, which as of 1967 was not degree awarding, was set up in the University of General Studies in Maputo. Similarly, students went to study in Portugal and to a large extent, South Africa. Scholarships were awarded both by the government and private industry including the Pfizer Corporation of Mozambique. Nurses were trained at the main central hospital of Miguel Bombarda in Maputo.

According to labor laws, large enterprises were required to provide free medical assistance to workers and their families if nearby government facilities were not available. Firms with 100 or less employees could delegate their responsibilities by paying a prescribed amount of money. In 1965 there were twenty-four hospitals and twenty-one infirmaries as well as 342 aid stations maintained by eleven industrial and agricultural organizations.

FIGURE IV-4

Health Facilities of Mozambique, 1964



SEX

Private medical facilities were operated by Catholic and Protestant missionaries. These included seven hospitals, nineteen maternity homes, and 132 institutions of varying function and size. They employed eighteen doctors and seventy-two nurses.

For emergency services there was the Portuguese Red Cross and the Cross of the East, which maintained two emergency treatment centers in Maputo.

As the liberation movement consolidated around FRELIMO and stronghold areas came under its control in the north military-trained paramedical personnel also undertook public health functions prior to independence.

Below are given the rather sketchy statistics on health-related resources in Mozambique prior to independence:

	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>
Medical Personnel:				
Physicians	319	439	439	498
Pharmacists	62	67	67	63
Dentists	20	20	NR	NR
Nurses, Midwives, and Paramedical	1,783	1,701	1,701	1,859
Medical Facilities:				
Hospitals	110	164	116	116
Health Centers and Delegations	636	633	635	643
Mental Hospitals	3	3	3	3
Leprosy Hospitals	7	7	7	8
Maternity Centers	182	184	241	184
Hospital Beds	9,703	NR	13,102	NR

NR Not Reported

Source: African Statistical Yearbook, 1975 and Economic Commission for Africa, 1975.

Government spending on health activities between 1965 and 1972 are as follows:

(million escudos)							
<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
167	193	205	223	248	283	303	346

Post-Independence Health Care - The following is a report from the UNDP Mission to Mozambique on health care since the Portuguese coup and independence:

The period following 25 April 1974 has been marked by a considerable deterioration of existing health services due to the exodus of qualified personnel and shortages of basic medicines. Thus, the total number of doctors in Mozambique, estimated at 550 in 1973, has decreased to 85 in May 1975 according to a statement by the Minister of Health. It is unknown how many of qualified nurses remain (those were about 900 in the beginning of the seventies.)

In addition to the state medical infrastructure, there had been mission hospitals, private hospitals and medical installations operated by private enterprises and some state enterprises. There had also been a variety of private clinics. As of 25 July 1975, this whole set-up is changed, the Government taking over all missionary health institutions and private clinics, which will be integrated in a National Health service now to be built-up. Private medical practice (including doctors' consulting rooms) has ceased to exist.

The Government has decided that a special medical tax shall be introduced to cover the expenses of medical care. The size of the fee is yet unknown.

The future health policy of Mozambique will be directed towards the previously neglected rural areas and to preventive medicine. The nutritional and hygienic aspects of the health policy will be integrated into the educational system, as will be mass vaccination campaigns. Formerly a few immunization campaigns were organized; in 1973 a cholera epidemic brought several deaths.

In formulating health policy, FRELIMO draws on past experience from organizing health care in the liberated areas, based on paramedical personnel. In an important speech on health care given during the years of struggle, President Machel insisted that hospitals and other medical facilities should be centres of education and production as well as for treatment. Literacy, hygiene and political education must all be given and the staff must be "instructors, teachers and political commissars."

The program for the delivery of health care was largely redesigned during the transitional year of administration. The new plan calls for functional positions of health promoters at the lowest level. They will be selected by local communities and probably work part time. They will receive paramedical training and also have responsibilities in disseminating sanitary and nutritional educational information. At the next highest level will be sanitary posts and maternity clinics. These will probably be at the municipal level. In 1975 there were 280 sanitary posts planned, to be staffed by a full-time medical person who would probably have outreach functions as well. There were 186 maternity clinics anticipated. The next highest level would be health centers, with eighty-nine being planned. At a minimum these would be staffed by a nurse. Rural hospitals would form the next tier in the health care system, with twenty-one planned. These were supposed to have surgical and pediatric facilities and were to be staffed by a part-time doctor and supporting full-time staff. At the highest level would be the ten district capital hospitals, which were supposed to have surgical, obstetrical, dental and pediatric facilities.

It is impossible to tell just how much of this plan has been implemented. Most of the infrastructure called for exists as part of the colonial system. Much equipment, however, would have to be replaced or renovated. Supplies would surely have been needed during transitional implementation. The major problem, however, would be the training of medical personnel. The plan called for the use of existing medical training facilities in Maputo, Beira and Nampula, with the addition of two more institutions in Tete and Quelimane. Also there was a plan for a pilot program in the training of promoters for rural health care delivery. It was anticipated that there would still be a need to employ foreign nationals for the positions of doctors for some years to come.

Preventive medicine appears to be a major element of the new health care plan. Promoters at the community and collective village level will have primary responsibility for educating people in sanitation and nutrition as determinants of health. Similarly, the plan calls for massive inoculations against smallpox and measles. There is also a malaria eradication program included in the plan.

3. Constraints to Improved Health Care -- The major problem in the implementation of the new health care plan described above is, of course, the availability of qualified medical personnel. This not only includes doctors, but also, and possibly more important within the organization of public health envisioned, nurses and paramedical staff. This leads to the inadequacy of teaching and training facilities, the former being the most pressing. As noted above, the University of General Studies had started a Faculty of Medicine. But it is uncertain just how well it is functioning presently; indeed, if it is functioning at all.

Similarly, medical equipment is in some undeterminable state of disrepair or lack.

To a large extent the success of the new plan, which has a clearly rural emphasis, will depend on the development of secondary and feeder roads for emergency evacuation and supplying remote health posts.

Medicines and preparations are not produced in Mozambique and must be imported. Given the critical nature of the countries balance of payments unless health receives a very high priority, the importation of needed supplies will probably not keep pace with the planned program.

G. Population Problems

Nothing can be found among the literature on the policies of either colonial or present administrations on population problems and family planning. Lacking specific information, the best that can be done is to place rough probabilities on the importance of population programs in a developmental strategy for Mozambique. First, the population growth rate of Mozambique (2.3 percent) is lower than the average growth rate for African countries (2.8 percent). There are only thirteen out of a possible forty-three African countries which have lower growth rates. Thus, Mozambique's growth rate is also below the African median. Second, the present administration places a great political importance on children as the primary beneficiaries of liberation and the primary long-term promoters of the values of a revolutionary Mozambique. A lengthy and highly publicized national conference was held in January 1976, in which the President of the Republic participated, which dealt with the role of children in Mozambique society and the types of programs, particularly in education and health, which should be undertaken in their behalf. This fact and the low growth rate of the country's population suggest that family planning programs would not be of high priority to the present administration. The influence of Catholicism on the question is probably small since the country is approximately 11 percent Catholic and, during colonial times, the Catholic hierarchy tended to oppose independence.

H. Education

1. The Setting--Educational Policy - Prior to independence the primary objective of education in Mozambique was Portuguese acculturation of the African population. All courses were taught in Portuguese and the Portuguese language and history were of primary importance. Educational policy emphasized the creation of a sense of identity with the Portuguese nation among Africans. As stated officially, the objective was "to form citizens capable of feeling the full imperatives of Portuguese life, knowing how to interpret them, and making them a constant reality in order to secure the continued existence of the Portuguese nation."

Also of importance, particularly in the 1960s, was the development of technical skills. Consequently vocational and technical training schools were established. In 1962 legislation created the first center for higher learning which started

functioning in 1963 in the University of General Studies,

Partly as a result of international pressure but primarily resulting from the growing independence movement during the sixties, Portugal introduced important changes in the curriculum and an unprecedented expansion of educational facilities especially at the secondary school level. But the basic objective remained the same.

The FRELIMO educational policy, as implemented in the liberated areas, is based on the objective of creating "a new man." Great importance is attached to political training and to the linking of the educational structure to productive activities.

Within this policy, primary school teachers were "recycled" during the transition period in six-month courses in Mozambique's four major cities. Reporting on the first of these courses in which 2,000 teachers were to be retrained the national newspaper Noticias described the role of the teacher in the following terms:

"To the teacher, who has the greatest contact with the new generation, falls the task of restoring...the eyes of children and the world to the true face of Mozambique...and to form a new mentality in the student within the principles established by the Government of the People's Republic of Mozambique."
(January 13, 1976)

This role of education in society was described in President Machel's book To Make the School a Base for the People to Take Power. High priority is attached to an adult mass literacy campaign and to a re-orientation of the curricula at all levels, so that they to a larger extent, meet the needs of the country.

The Transitional Government mounted a policy of reform and re-orientation of the educational system, the main emphasis being on mass literacy and strengthening the primary school level through intensified teachers' training.

On the 24th of July, 1975, one month after the attainment of independence, the government declared an immediate takeover of all private teaching institutions, including schools run by missionaries and other religious groups.

Primary Education - Academic primary education was offered, prior to independence through escolas primarias (primary schools) and escolas de adaptacao. Vocational training was offered through escolas elementarias de artes e officios (elementary vocational schools). Primary schools were defined in an educational reform act of 1964 as those offering a minimum of one preprimary grade and at least three of the four primary grades; rural schools not able to meet

these qualifications were called escolas de adaptacao (acculturation schools) and they formed the bulk of the primary level. Primary schools consisted of official, private, and missionary schools providing education comparable to that of Portugal. The purpose of the preprimary grade was to make African students fluent enough in Portuguese to be able to continue on to primary education. The final (fourth) year of primary grades was meant to be a preparatory year for secondary education.

In the primary grades emphasis was placed on the Portuguese language and culture, and, in rural areas, on practical education in agriculture, animal husbandry, and handicrafts for boys and the domestic arts for girls. The major academic subjects introduced were arithmetic, religion, history and geography. Together with other courses such as natural sciences, drawing and moral values, primary school courses accounted for an average of 17 hours weekly.

In 1963/1964, Africans represented 52 percent of the 44,725 persons enrolled in primary schools. Europeans represented 25 percent; persons of mixed race, 16 percent; Indians, 6 percent; and Chinese under 1 percent. There were 7,700 students attending government or church operated vocational schools at the primary level. These were designed to produce semi-skilled labor. Acculturation schools, formerly called rudimentary schools, had easily the greatest enrollment of all primary forms of education. (See Table IV-6 for breakdown of enrollment.) The purpose of these schools was to teach rural Africans a working knowledge of Portuguese as well as the rudiments of reading and some hygiene. They served as the first point of contact between Africans with the European culture as well as with formal education. Teachers in these schools were mainly Africans. The level of education offered was substantially below that offered in primary schools and was geared to improving the student's condition within his own environment. There were also 16,055 students attending adult and adolescent primary schools in 1963-64. These were designed for people working during the day and getting a part-time education at night. Most of these schools, like primary schools, were located in urban areas.

The regular primary school cycle of four grades was attended by an estimated 40 percent of the relevant age group, but a significant drop-out was found after the first two years.

With independence, the government has declared that the curricula will be changed. Efforts will be made to relate education more to the rural and agricultural environment and to shift the academic bias - particularly in primary schools - in favor of more vocational and science training. At all levels of education political education will play a vital role. It is hoped that within this vaguely defined participatory political framework the colonial authoritarian system will be displaced.

Secondary Education - Secondary education in Mozambique has always been highly exclusive to non-African persons. There have been essentially two reasons for this exclusivity. First, the cost of technical and vocational secondary

TABLE IV-6

Educational System of Mozambique
By Category 1964-1965*

Primary Schools			
Primary	727	2,150	59,565
Adaptation	3,246	3,715	363,385
Vocational	53	177	3,954
Total	4,026	6,042	426,904
Secondary Schools			
Academic	44	540	7,967
Technical-Professional			
Commercial-Industrial	32	558	11,009
Teacher Training	10	52	734
Agricultural	1	26	51
Total	87	1,176	19,761
Median Schools			
Commercial	1	12	222
Industrial	1	16	125
Teacher Training	1	11	88
Total	3	39	435
Higher Education			
University of General Studies	1	39	329
School for Social Work	1	14	28
Total	2	53	357
Grand Total	4,118	7,310	447,457

*Statistics are for December 31, 1964.

Source: Adapted from Boletim Geral do Ultramar, No. 49, May 1966, facing p.232.

training. Second, the entrance requirements, particularly in the Portuguese language, were particularly difficult for Africans to attain. For rural Africans, secondary education was almost out of the question. To demonstrate the point, in 1964, there were only six secondary academic schools in all of Mozambique.

Academic secondary education was taught at schools offering a seven-year course of study composed of three cycles: of 2, 3 and 2 years respectively. The first two cycles together comprise the general course of study. The third cycle serves as a preparatory course for those wishing to continue into higher education. Examinations were mandatory at the end of each cycle, except for students with a grade average of fourteen or more out of a possible twenty points. Before admission to the first cycle, students were required to have successfully completed primary school. Those who had successfully completed the final cycle were given a diploma and were qualified for entrance to institutions of higher education.

The first two cycles offered a general program of Portuguese language, history, geography, mathematics, science and a modern language, usually English, Afrikaans, or French. Graduates generally entered the civil service. Only 10 percent, including very few Africans, continued on to the third, college preparatory cycle (see Table 1 for enrollment figures).

Secondary professional and technical training was comprised of three cycles. The first two, called escolas tecnico-profissionais, and the third cycle was completed in escolas medias (middle schools). Duration of studies depended on the courses and fields taken. More than half of the enrollment in these schools and a third of the schools themselves were in Maputo in 1964. Of the 10,388 students attending these schools in the 1963-64 school year, 51 percent were European, 18 percent were African, and 17 percent were of mixed descent. At the four commercial and industrial schools where the best training was received, only three out of the 225 students enrolled were Africans in 1964. Entrance to the middle schools was dependent upon completion of the second cycle of either academic or vocational secondary schools. Students completing middle school courses were granted diplomas and eligible for entrance to the University of General Studies or the Technical University of Lisbon. All these schools were in urban areas.

Higher Education - The old institution of higher learning in Mozambique is the University of General Studies, established in 1962. In 1966, it had an enrollment of 540 students of which only one was Mozambique African. The University did not offer a full four years of higher education. Rather, it offered the first three years with the fourth year to be completed in Portugal. Admission was dependent upon receipt of a diploma from a secondary school or middle school.

The curriculum emphasized vocational and technical studies. Students were required to enter specific fields of study and the taking of outside electives

was severely limited. The fields of study included teacher training (for secondary teachers), medicine, engineering, agronomy, forestry, and veterinary medicine. Students wishing to continue on to higher education chose to attend schools in Portugal or South Africa as well as the University of General Studies in Mozambique.

In 1967, the University of Lorenzo Marques was established. Its enrollment in 1975 was 2,000 students. In 1973 there were only fifty African students attending the University of which thirty were from Swaziland. Its biggest fields in terms of numbers of students, are medicine, engineering and law.

Since independence, many lecturers have left for Portugal. The University has re-oriented its curriculum in order to better meet the country's needs. In order to meet these needs and break away from a purely academic environment, students have been organized into what are called University Brigades. These groups of students serve teaching roles during vacation months in the rural areas of Mozambique.

Teaching Training - An important element of a nation's educational system is the extent to which it trains teachers. Mozambique has not been able to establish a strong teacher training program or institutions. This has led to a chronically weak educational system overall and particularly weak since independence because of the dependence on European, mainly Portuguese teachers who have left.

One of the reasons for weak teacher training programs in Mozambique is the fact that the African population has been unable to attain the educational levels necessary for entrance into the field. Consequently, expatriates have been relied upon. But these have always been less than the demand and attainable only at great cost, particularly when they are brought in from Portugal. The establishment of the pedagogical teaching faculty in the University of General Studies was expected to alleviate the shortages, particularly among secondary level teachers. But this was never attained and, with the transition and exodus of teachers already in Mozambique, the shortages have worsened since independence.

Primary school teachers were trained in two types of schools: the escolas magisterios primarias, which trained teachers for the primary schools, and the magisterios primarios de adaptacao, for teaching the acculturation schools. In addition, the system allowed for the hiring of part-time teachers who had a sufficient level of educational attainment, but did not have certification. The primary teachers' schools were tuition-free and consisted of a two-year cycle. Candidates for these teacher training schools had to have completed the full three cycles of secondary education. In 1963-64, there was only one such institution which was in Maputo, and had an enrollment of sixty-eight students. Compared to the 727 primary schools in which they were to teach, the level of inadequacy is obvious.

Teachers trained for rudimentary escolas de adaptacao were the least well trained in the system. In 1963, there were eleven schools for this training and they were all run by Catholic Missions. (Non-Catholic mission schools were forbidden to train teachers.) In the eight schools for which there was information, there were a total of 551 students of which 80 percent were African. In the same year, there were 3,246 rudimentary schools in which they were to teach.

There is no information on the situation of teacher training in Mozambique after independence.

2. System Coverage--The tables below give statistics on education in Mozambique between 1965 and 1969 and projections from 1975 to 2015:

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
Teaching staff					
1st level	5,514	5,781	6,274	6,274	6,607
2nd level	1,466	1,544	1,660	2,078	-----
General	676	705	720	1,188	695
Vocational	725	753	836	770	-----
Teacher training	65	86	104	120	120
3rd level	125	134	192	213	-----
Students enrolled					
(000's)					
1st level	423	469	485	485	496
2nd level	23	24	29	31	-----
General	9	10	13	17	17
Vocational	13	13	15	15	-----
Teacher training	1	1	1	1	-----
3rd level	1	1	1	1	1

	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>2000</u>	<u>2010</u>
PRIMARY EDUCATION (age 6-10)					
Number of Students (thousands)	499.5	631.7	753.3	936.1	115.2
Total Costs (US \$ millions)	47.9	53.6	68.2	84.4	103.3
SECONDARY EDUCATION (age 11-18)					
Number of Students (thousands)	40.1	51.8	61.1	75.7	94
Total Costs (US \$ millions)	6.51	8.38	9.86	12.26	15.12

92Y

Government spending on education between 1965 and 1972 are as follows;

(million escudos)

<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
188	207	242	288	341	450	549	695

Expenditures on education by the private sector and Catholic missions cannot be estimated.

3. Constraints--A fundamental constraint in education is the fact that it depends on a knowledge of Portuguese. Since Portuguese does remain the official language, the very first step in the educational process must be its mastery. Yet African literacy in Portuguese is extremely low; the nation has a 7 percent literacy rate, yet this includes many Europeans who have probably left Mozambique since transition. Thus, estimating the African literacy rate at about 6 percent, there is probably a tremendous shortage of people with this fundamentally necessary skill to the teaching of Portuguese to preprimary aged children.

A second major problem area lies in educational infrastructure. It is impossible to give the number of schools throughout Mozambique. But the heavy probability is that there is tremendous inadequacy of schools in rural areas. This assertion cannot be supported, but textual reports and Portuguese colonial policy tend to lend it strength.

The most striking problem in the educational system of Mozambique, however, is the inadequacy of teachers, both in numbers and qualifications, available for schools of all levels. It is probable that the Catholic missions still train rudimentary school teachers. But this level was not sufficient to cover that educational level's needs in 1967 as has been shown above. Secondary teachers were, for the most part, Portuguese -- either ex-patriates or under contract. This was completely true for higher education. Since independence, many, although an undetermined number, of these teachers have left the country. As was noted above, government sponsored teacher-training schools are seriously lacking.

1. Industry

1. The Setting--As can be seen from Table II-1 above, industries contribute a relatively small amount to Mozambique's gross domestic product. For the five years prior to independence, industrial output represented between 15 and 16 percent of GDP. During those years, the composition of industrial output has changed somewhat due to Portuguese pressure. Since 1971, when the external payments to Portugal problems led the Portuguese authorities to introduce severe restrictions on the importation of non-essential goods, there was growing import substitution. This substitution occurred primarily in

textiles and their products, In 1971, textiles represented 13.9 percent of industrial production and clothing and shoes represented 2.9 percent, By 1974, just prior to independence, textiles were at 17.0 percent of industrial output, while clothing and shoes had reached 5.0 percent. (In 1975, almost all categories of manufacture declined abruptly with the exception of clothing and shoes which continued to rise,relatively,to 5.6 percent and remain, absolutely, at about the same level.)

In 1974, industrial output began to decline. In 1975, the decline was much more precipitous, representing only 10 percent of GDP. The drop, of course, was due, in general, to independence, but in particular to the flight of Portuguese owners of the factors of production and subsequent nationalization. It is reported for 1976 that although FRELIMO says it is obtaining fair results, production on the average is running at only a third of previous levels.

From 1965 until 1974, industrial production represented between 24 and 28 percent of all exports, with the exception of 1970, when they were 31 percent. In 1975, they represented 38 percent of all exports. This figure is somewhat fictitious since it reflects a relatively greater decline in raw agricultural exports which, for the same year, showed less of a decline in production. Thus, a greater portion of agricultural output was retained for domestic consumption than was retained from industrial production for domestic consumption during the year of transitional rule. As was mentioned in a previous section, industrial output declined in 1975, continuing in 1976, because of the flight of Portuguese owners and nationalization of abandoned factors of production.

In 1970, the industrial sector was estimated to employ approximately 43,500 persons while in 1975, the estimate was at about 100,000 persons, or 3 percent of the population. Moreover, approximately 47 percent of Mozambique's manufacturing industries are located in Maputo. The Annual Supplement, 1976, of the Quarterly Economic Review, reported:

This strong concentration in Maputo is partly accounted for by the high purchasing power derived from services to the hinterland (of the sub-continent), specifically: port revenues, minors' remittance, and, until recently, earnings from tourism. Most of the industries are consumer goods industries, which tend to favor market-side location. There are some industries favoring port-side location, e.g. imported crude oil for the oil refinery, imported sulfur for the sulfuric acid plant, imported phosphates for the fertilizer complex. Maputo also has several agricultural processing industries...and textile plants.

2. Principal Industries--Table IV-7 shows recent industrial production value in Mozambique, and Table IV-8 shows production volume.

Certainly food processing is Mozambique's predominant industry. In 1960, food processing represented approximately 32 percent of the nation's industrial output. In 1970, it was at about 39 percent, holding at approximately that level until 1975, when it is estimated to have represented 45 percent of all industrial output. Cashew nut processing (shelling, producing cashew nut almonds and cashew oil from shells) has also been a growing industry among foods. Mechanized processing, on a national basis, was completed by 1970 and for 1971, there was almost a 50 percent increase in production.

Mozambique's textile industry is its second major producer, averaging 15 percent of industrial production between 1969 and 1974, then dropping to 10 percent during the transitional period. The industry includes cotton fabrics, clothing and shoes. Shoe manufacture, as can be seen in Table IV-8, has had steady growth and suffered relatively small decline with the transition dislocations.

Refining and crude oil products also represent one of the nation's stronger industries, being third in value of output in 1975, among other industries and contributing to 7.4 percent of all output value. The growth in value of output from 1974 to 1975 is certainly due to price fluctuations as crude product volume actually decreased somewhat during this period. (Detail on products by volume is given in Table IV-8.)

The beverage industry is probably the fourth strongest in Mozambique. The industry's strength lies almost entirely in the manufacture of beer. As in the case of shoe manufacture, the beer industry suffered only slightly during 1975. (See Table IV-8.)

3. Industrial Growth Patterns--As reported by the UNDP Mission to Mozambique in 1975:

Over the last few years, in the face of tighter import controls (from Portugal) the importance of industries oriented to the domestic market have increased relative to those oriented towards the external market.

These industries have already been discussed. It should be noted, however, that many food processing products, which represent the strongest and most growing industries in Mozambique, have been primarily export oriented and their direction has been mainly to Portugal. Shelled cashew almonds have already been discussed in terms of growth in output and value in Section IV-B above. This is also the highest valued export of Mozambique, representing 27 percent of the value of all agricultural products exported in 1975. The same can be

TABLE IV-7
Industrial Production, 1969-75
(In millions of Mozambique escudos)

	1969		1970		1971		1972		1973		1974		1975	
	Value	Percentage of total	Value	Percentage of total	Value	Percentage of total	Value	Percentage of total	Value	Percentage of total	Value	Percentage of total	Value	Percentage of total
Food processing	3,624	38.1	3,109	39.5	3,339	39.8	4,235	40.7	4,621	37.3	6,195	40.7	5,551	45.4
Textiles	1,352	19.6	1,330	16.9	1,169	13.9	1,482	14.2	1,871	15.1	2,591	17.0	1,298	10.6
Beverages	369	5.4	454	5.8	528	6.3	635	6.1	805	6.5	859	5.8	770	6.3
Oil refining	617	9.0	593	7.5	705	9.4	662	6.4	783	6.3	869	5.7	900	7.4
Chemicals	461	7.7	525	6.7	679	8.1	639	6.1	729	5.9	694	4.6	606	5.0
Metal products	114	1.7	178	2.3	210	2.5	526	5.0	708	5.7	663	4.4	302	2.5
Clothing and shoes	205	3.0	207	2.6	239	2.9	337	3.2	491	4.0	729	5.0	686	5.6
Tobacco	312	4.5	380	4.8	436	5.2	458	4.4	480	3.9	608	4.0	628	5.1
Cement	226	3.3	288	3.7	322	3.8	344	3.3	463	3.7	363	2.4	258	2.1
Wood, cork, & furniture	199	2.9	232	3.0	244	2.9	293	2.8	336	2.7	369	2.4	343	2.8
Transportation equipment	175	2.5	223	2.8	172	2.0	145	1.4	231	1.9	230	1.5	112	0.9
Paper	61	0.9	88	1.1	116	1.4	148	1.4	185	1.5	249	1.5	197	1.6
Other ^{1/}	168	2.4	155	3.3	235	2.8	512	4.9	677	5.5	764	5.0	588	4.7
Total	6,883	100.0	7,862	100.0	8,394	100.0	10,416	100.0	12,380	100.0	15,213	100.0	12,239	100.0

Source: Mozambique, Monthly Statistical Bulletin.

^{1/} Includes leather, rubber and plastic products, glass, nonmetallic minerals (excluding cement), and machinery and equipment (excluding transportation equipment).

IV-45

97X

TABLE IV-8

Manufacturing Industry Production Estimates
(Volume of selected products in '000 tons unless otherwise shown)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974 (Partial Est. on Ten Month Base)	1975 (Partial Est. on Ten Month Base)
Agricultural Products											
Raw Sugar	165.0	176.0	220.0	215.0	228.0	286.0	326.6	328.0	294.0	268.0	234.0
Wheat Flour	42.0	46.0	46.0	51.0	45.0	64.0	71.0	76.0	89.0	108.0	75.0
Edible Oils	31.0	23.0	19.0	19.0	18.0	23.0	17.0	23.0	26.0	19.0	15.0
Tea	10.7	14.0	13.2	14.2	16.3	17.8	16.3	17.8	17.2	21.2	14.1
Cashew Nut Almonds	4.4	5.4	6.0	12.2	13.1	14.7	21.5	27.3	29.2	26.6	14.5
Drinks and Tobacco											
Beer ('000 litres)	14630.0	19237.0	22080.0	26405.0	35259.0	43735.0	50610.0	61954.0	77062.0	82378.0	60417.0
Tobacco Products	1.5	1.6	1.9	2.0	2.3	2.5	2.5	2.5	2.8	2.7	2.4
Textiles											
Cotton Ginning	NR	NR	NR	42.0	43.0	39.0	36.0	39.0	68.0	78.0	12.4
Yarns Cotton	1.8	2.0	2.1	2.3	3.0	2.7	3.7	2.7	3.2	4.4	3.9
Fabric Cotton	1.3	1.7	1.8	1.5	1.9	1.9	2.6	2.4	3.3	3.5	3.4
Jute Products	7.6	6.8	7.2	8.5	9.5	7.7	5.6	4.8	6.3	6.7	2.3
Knitware ('000 doz.)	271.0	223.0	246.0	323.0	305.0	241.0	233.0	NR	NR	204.0	22.0
Shoes ('000 pairs)	184.0	176.0	265.0	375.0	403.0	NR	448.0	NR	NR	458.0	419.0
Wood Products											
Plywood (cubic metres)	1783.0	1800.0	2026.0	2446.0	4703.0	5995.0	3250.0	2583.0	NR	2176.0	179.0
Veneers ('000 m ³)	NR	2750.0	2104.0	4577.0	4625.0	4505.0	1054.0	NR	NR	3090.0	1822.0
Chemical Products											
Paints, etc. (Kilolitres)	1677.0	1917.0	2252.0	2508.0	2967.0	3769.0	3122.0	2977.0	NR	1988.0	872.0
Soap	11.2	16.5	16.1	15.4	16.0	16.9	17.0	19.3	19.7	15.7	22.6
Oil Cake	44.5	40.6	42.5	48.0	54.3	61.1	76.1	86.5	87.5	NR	NR
Petroleum Products											
Gasoline	104.0	132.0	133.0	140.0	143.0	134.0	131.0	120.0	NR	74.0	63.0
Gas Oil	127.0	212.0	224.0	247.0	218.0	192.0	195.0	231.0	NR	130.0	96.0
Fuel Oil	NR	299.0	348.0	362.0	353.0	331.0	357.0	328.0	NR	236.0	165.0
Butane Gas	..5	5.6	4.8	6.4	7.5	10.3	13.0	NR	NR	6.4	5.5
Common Metals and Transport Products											
Barbed Wire ('000 metres)	5761.0	5815.0	5993.0	6805.0	7703.0	7179.0	13303.0	14894.0	NR	19747.0	5980.0
Nails	1.1	1.1	1.3	1.4	1.4	1.7	NR	NR	NR	2.3	1.1
Aluminum Holloware	0.4	0.5	0.6	0.8	0.8	0.7	NR	NR	NR	NR	NR
Iron and Steel Plate	NR	NR	NR	24.3	22.8	33.6	48.4	49.7	NR	41.6	NR
Elec. Cables ('000 metres)	3806.0	3795.0	5074.0	6251.0	6991.0	8801.0	8150.0	9219.0	NR	10451.0	2104.0
Railway Wagon Assembly (No.)	NR	360.0	391.0	360.0	390.0	414.0	334.0	211.0	NR	355.0	114.0

NR: Not Reported

26

said for sugar which, in 1975, contributed to 16 percent of all agricultural export earnings. Petroleum products represented approximately 5 percent of all export earnings in 1975,

From 1976 on there should be a dramatic effort to regain growth in the domestic consumer goods which started in 1971, and were disrupted with independence. In 1975, approximately 11 percent of all Mozambique's imports were accounted for in textiles, synthetic as well as cotton fabric and footwear which are produced locally. This would indicate the need to strengthen these industries and develop a synthetic industry.

In capital formation products, Mozambique's cement industry is probably strong enough not to require additional heavy investments. However, Mozambique is a heavy importer of machinery and electrical apparatus, as was described in Section II-G, representing 18 percent of all imports in 1975.

4. Constraints to Growth--In post-independent Mozambique, clearly the greatest constraint to growth lies in manpower. During the colonial administration, Portuguese held positions of management and technical know-how. Most of these resources have left Mozambique without qualified replacements.

Another major constraint, of course, is the priority of international politics over national economic development among decision-makers. Mozambique is extremely dependent on the trade of other nations. The decision to close the Rhodesian border certainly had political efficacy, but it also brought tremendous economic dislocations. (A recent UN Mission to Mozambique estimated the total costs of closing the border at between \$139 and \$165 between March 1976 and March 1977. This is roughly equivalent to all of Mozambique's net invisible earnings in 1974.) Trade relations with South Africa have tended to remain as in colonial times, thus saving some export earnings. However, it is not only important for Mozambique to concern itself with export earnings, but also the direction of its trade. If Rhodesia is to be replaced, for whatever reason, as a long-term trading partner, new partners must be found and a period of economic decline will prevail until these links can be developed.

J. Tourism

1. The Setting--As can be seen within the balance of payments structure of Mozambique, tourism has been an important element of the national economy. Not only does it have a generally positive effect on foreign exchange earnings, but it is also a good provider of service employment. Until 1958, tourism was left to the private sector with no government support or regulation. In that year, the Center for Information and Tourism of Mozambique was established with the task of promoting, coordinating, and supervising all aspects of tourism in Mozambique.

The main tourist attractions in Mozambique include beaches, fine hotels, night clubs, restaurants, and "the general continental flavor" of Beira and Maputo. There are also game reserves for hunting and camping and fishing. Most tourists have come from South Africa and Rhodesia, while many have also come from Portugal. Prior to independence, there was an effort just getting under way to attract tourists from Europe and the United States.

In the ten years before independence, the tourist account within Mozambique's balance of payments showed net positive earnings in all years except 1972 and 1973. A maximum of \$6 million were earned in 1971. The following table provides some statistics indicative of the tourist element of the Mozambique economy:

	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
Hotels )	)	)	75	71	56	61	68	68	67
Pensions )	) 179	) 193	200	191	208	205	210	214	216
Rooms	4,596	4,002	---	3,552	4,092	4,131	4,766	5,195	---
Visitor arrivals (000)									
at hotels and pensions	172	158	161	212	227	250	269	292	229
at camping sites	---	---	47	79	110	109	---	88	69
Touist Origins: (000)									
Portugal	---	---	118	127	147	133	184	---	---
Africa	---	---	<u>135</u>	<u>167</u>	<u>216</u>	<u>208</u>	<u>284</u>	---	---
Total (incl.other)			316	372	443	415	547		

2. Tourism since Independence--It was reported that in the first quarter of 1976, tourism had fallen off sharply from past years. November and January tourist arrivals were minimal during a season which is usually at peakload capacity. Previously, the South African Railway put on extra trains for the season's vacationers to Maputo. This year there were none. A large hotel in Maputo, the Polana Hotel, which is usually booked for the Christmas season months in advance, was only 40 percent filled this season and many of these people were government or business guests.

Later in the year there was an official discouragement to tourists. Visas for the purpose of tourism were and still are being refused by the new administration. It was also reported that the luxurious Four Seasons Hotel in Maputo has been taken over by FRELIMO as its new headquarters. The hotel has 350 rooms. The owner was not compensated.

Thus, not only has the austerity and militancy of a young socialist society tended to discourage visitors to Mozambique, but the government has also made a decision that tourists are not welcome.

110

SELECT BIBLIOGRAPHY

UN General Assembly, Report to the Special Committee on the Situation with Regard to the Implementation of the Declaration on the Granting of Independence to Colonial Countries and Peoples: Territories under Portuguese Administration: A/8023/Add. 3, October, 1970; A/8723/Add. 3, September, 1972; and A/023/Add. 3, September, 1973.

A relatively good general source of economic conditions existing in Mozambique in the years prior to independence.

UN Economic and Social Council, Report on Assistance to Mozambique: E/5812, April, 1976; E/5812/Add. 1, May, 1976; and E/5872, July, 1976.

Although specific to the effects of applying sanctions against Rhodesia, source contains general developmental needs of Mozambique as well as great detail on areas and sectors affected by the closing of the Rhodesian border.

FAO, Report of the FAO Reconnaissance Mission to Angola and Mozambique, 1963.

FAO, Mozambique Country Development Brief, November, 1974.

FAO, Statistical Yearbooks, 1960 to 1973.

All FAO sources tend to use official data, obtainable from other sources, and only general descriptive information on the Agriculture Sector of Mozambique.

UNDP, Mozambique Country Brief, Lorenzo Marques, September, 1975.

One of the best recent general sources on the economy of Mozambique.

Economic Commission for Africa, Summary of Economic Data for Mozambique, for years 1965 to 1975.

Largely contains time-series data which are official rather than primary but selection of economic and social indicators is good and time periods are sufficient to suggest trends.

AID, Africa-Economic Growth Trends, March, 1976.

Department of State, Foreign Economic Trends and Their Implications for the United States, released by the Department of Commerce, December, 1975.

US Bureau of Mines, Mineral Industries of Africa, Department of Interior, 1976.

One of the most detailed and recent sources for mineral industries in Mozambique.

International Monetary Fund, The Economy of Mozambique, (internal memorandum) July, 1975.

Although a recent source on Mozambique, it focuses on public and private finance only.

Instituto Nacional de Estatística, Boletim Mensal de Estatística: Series B - Provincias Ultramarina, Lisbon, 1968 to 1973.

Direccao dos Servicos de Estatística, Estatístico Anuario and Boletim Mensal de Estatística, Lorenzo Marques (Maputo), 1965 to 1975.

Both official sources, one published in Portugal and the other in Mozambique, are extremely comprehensive in detail and recognized to provide relatively accurate information.

Foreign Area Studies, Area Handbook for Mozambique, GPO, 1969.

Although dated, general, and somewhat lacking in detail, this source provides probably the most comprehensive view of economy, politics, society, and culture of Mozambique.

Senate Foreign Relations Committee, The Political and Economic Crisis in Southern Africa, GPO, September, 1976.

Almost entirely a representation of the UN Sanctions Mission of 1976, noted above.

Economic Intelligence Unit, Quarterly Economic Review--Angola and Mozambique, Nos. 1, 2 and 3, 1976 and Annual Supplement, 1976.

The primary advantage of the QER publications is the timeliness of its economic and political reports as opposed to detail.

Burgess, Julian, Interdependence in Southern Africa, Economic Intelligence Unit, 1976.

Source provides a relatively detailed view of Mozambique's transport links with neighboring nations.

Crocker, Chester A., The International Relations of Southern Africa, Georgetown University, 1974.

Apshire, David M. and Samuels, Michael A., eds., Portuguese Africa: A Handbook, Praeger, 1969.