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HEALTH AND DEVELOPMENT IN SOUTHERN AFRICA

Volume VI

A Review of Health Care in Mozambique:
Issues, Analyses, and Recommendations

This sector assessment was undertaken in conjunction with the Southern Africa Development Analysis Project and has been used extensively, but not totally, in the Main Report and Country Papers

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I. INTRODUCTION

A. Background and Acknowledgements

This study is based largely on secondary source materials available in the United States, much of them prepared several years ago. Validation of the data through a visit to Mozambique was not possible under the contract financing of the study. Certain important aspects of the research and writing of this review should be noted:

Statistics collected in the research for this assessment should not be considered absolutely reliable. Data were often found to be contradictory, with differences, according to source, sometimes of considerable variance. A great deal of the material collected contained figures which were too old to be relevant to the current, altered situation. In general, a selection had to be made, and the most recent statistics available were used.

Original sources should be referred to for particulars on compilation of figures, methods of calculation, projections, and so on. In addition, because of the amount of research material collected, original sources may be referred to for additional relevant information which may not be contained in this report.

Another aspect which posed certain difficulties for the author was the problem of objectivity in the assessments. Some sources reflected clearly the "Western" standpoint; many reflected a particular political bias or ideology. While it is not possible for any researcher to prepare a "value-free" analysis, efforts were made to be as objective as possible.

The content of the report is largely descriptive; some of the information was obtained from travel notes and interviews from which observations were selected as illustrations to make a specific point. The format or outline of the study differs somewhat from that of the reports on the countries which were visited.

It will be seen that the introductory section on political, economic, and social structures is relatively lengthy. This was felt to be necessary, given both the current complex historical, political and economic situations as well as the strong interrelationship between health and more macro political-economic policies and events.

For Mozambique, it was found that the FHC/Africare analysis of the major acute health issues agreed with the significant health priority areas which have been targeted by foreign donors. For this reason, recommendations and priorities for assistance are directly linked to the descriptive section on external assistance. Reliance on donors' assessments of priorities was, in addition, felt to be relevant for the recommendations because these countries were not visited by an FHC/Africare team nor was there contact with representatives from these countries. Reports from donors, however, were often based on visits or direct government input and may therefore be assumed to be relevant to the process of determining priorities.

The principal author of this desk study is Carol Carp. In preparation of this report in Washington, D.C., William J. Bicknell, M.D., M.P.H., Health Policy Institute, Boston University, participated in the technical review process.

B. SUMMARY STATISTICAL PROFILE OF MOZAMBIQUE

	<u>Most Recent Estimate</u>
<u>General</u>	
Per Capita GNP (U.S.\$) at Current Prices	> \$200 ⁽⁶¹⁾
Per Capita GNP (K) at 1964 prices at current market prices	Well > \$200 ⁽⁶¹⁾
Population (mid-year, in millions)	11*
Land area (sq. km.)	784,961
Population density per sq. km.	c.14*
Urban population (% of total)	6 ⁽⁴⁴⁾
Labor force in agriculture (%)	75 ⁽³⁴⁾
Age structure (%):	
0-4 years	N/A
5-14 years	N/A
15-59 years	N/A
60 years and over	N/A
Adult literacy rate (%)	15 ⁽¹⁵⁾
Electrical energy generated (millions kwh/year)	627.7 ⁽⁵¹⁾
Electrical energy generated (kwh/year/cap.)	51.1 ⁽⁵¹⁾
Kilometers of all roads	23,000 ⁽¹⁵⁾
Kilometers of paved roads	2,000 ⁽¹⁵⁾
<u>Health Status</u>	
Life expectancy at birth (years):	44 ⁽⁴⁴⁾
Male	-
Female	-
Crude birth rate (per 1,000 population)	43 ⁽³⁵⁾
Crude death rate (per 1,000 population)	20 ⁽³⁵⁾

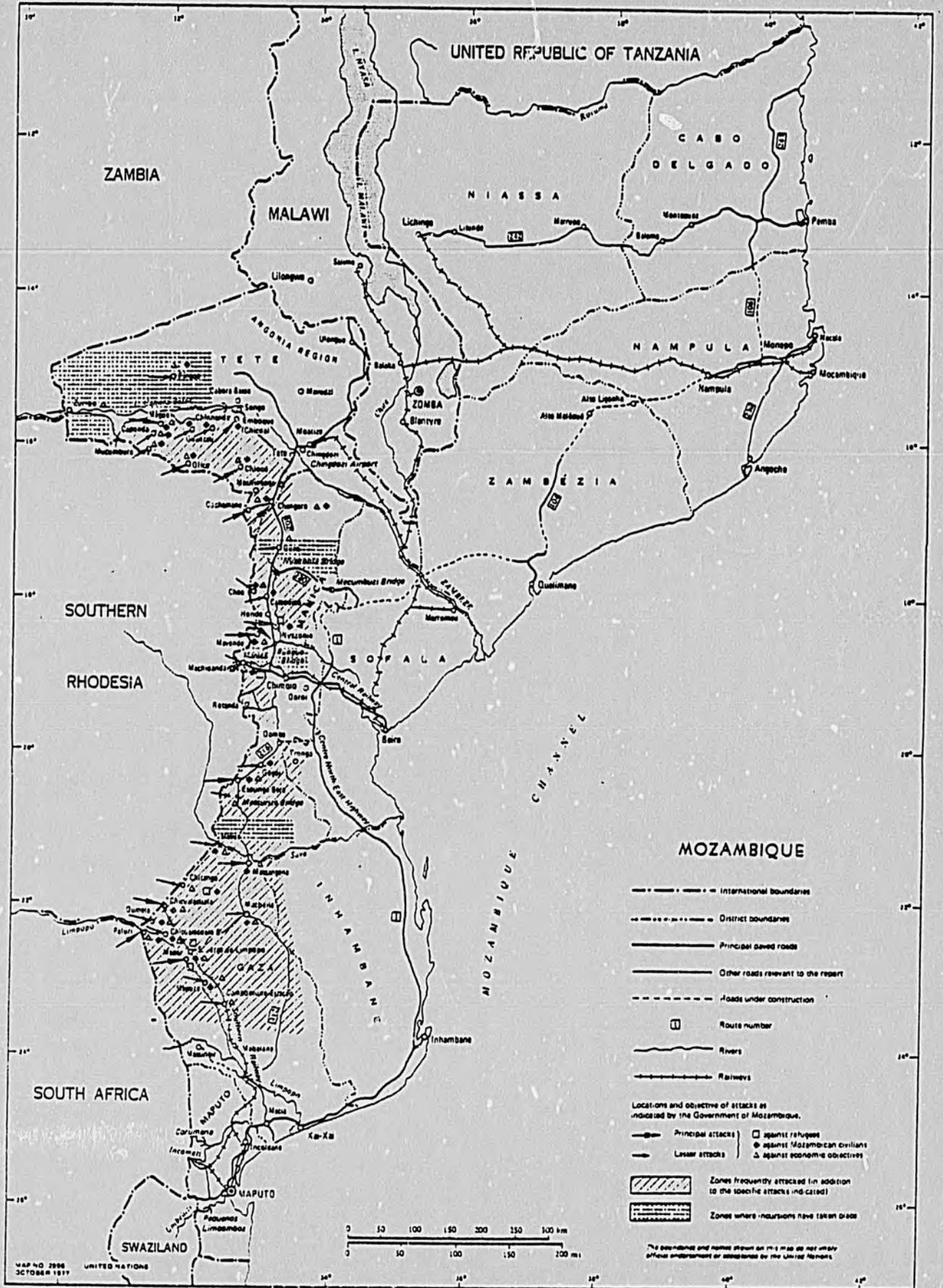
* Based on vaccination campaigns conducted by the Ministry of Health (39, p. 18).

<u>Health Status (Continued)</u>	<u>Most Recent Estimate</u>
Total (natural)	
Urban	
Population growth rate (% per year):	2.3 (44)
Number of years for population to double	
Infant mortality rate (per 1,000 live births)	165 (59)
Maternal mortality rate (per 1,000 live births)	N/A
Protein intake (% FAO requirements)	97 (34)
Immunized population	By August 1977 more than 4 million Mozambicans had been inoculated against basic infectious diseases and another 5 million will be vaccinated by early 1979 (i.e., more than 90% of the population). (71, p. 76)
Dependency ratio	.78 (34)
<u>Health Resources</u>	
Government health expenditures:*	
Recurrent only	-
Total (millions of US\$)	-
As % of all government expenditures (1977)	11 (15)
Per Capita (\$)	-
Population per physician (1974)	15,520 (70)
Population per nurse	N/A
Primary health worker (population per worker)	
Hospitals (population per bed) (1972)	636 (70)
Community water supply (% population served)	N/A
Urban	
Rural	

Units of Valuation

The official unit of currency in Mozambique is the Escudo (E) which is divided into 100 Centavos. Also 1,000 Escudos equal 1 Conto. Current value of the Escudo is U.S.\$1 = 32.95 E.

* Most recent source on government health expenditures reports on the approved 1978 government budget of \$362 million. Of this total, \$83 million was to be allocated to health and education (31).



II. A PROFILE OF MOZAMBIQUE: THE CONTEXT OF HEALTH AND DEVELOPMENT

A. PHYSICAL FEATURES

Mozambique, approximately the size of Nigeria, has a coastline which extends north-to-south about 1,737 miles. The major river of the country is the Zambezi, flowing in from Zambia and Rhodesia and cutting the country approximately in half. The other rivers present internal geographic barriers and have, historically, formed territorial boundaries for many ethnic groups. Extensive flooding often occurs during the rainy season when many small, shallow lakes are formed. During the dry season (May - October), however, many water sources dry up and even the larger rivers are greatly reduced in size. (59, pg. 1) Although there are no excessively high mountain ranges, the highlands of the Western spur and those of the Northwest have presented geographic impediments to population flows.

The climate 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 of 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.

(44, pg. I-1)

B. DEMOGRAPHIC PROFILE

Based on the three national censuses of 1950, 1960 and 1970, the following table gives national population figures, in millions, from 1955-1976:

<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>	<u>Mid</u> <u>1976</u>
6.08	6.58	7.26	8.09	8.27	8.46	8.65	8.85	9.06	9.30

(44, pg. I-3)

The current population total is estimated to be over 11 million.

Since 1950 the African portion of the population has remained a fairly constant 98 percent of the total population. The second largest group has been European, mostly Portuguese, and the next largest group those of mixed heritage. (44, pg. I-3)

In 1974 and 1975, the white population decreased dramatically after the change in Portuguese overseas policy. There was an abortive coup in September, 1974, by hard-core whites in Lourenco Marques (the capital city, which has since been named Maputo). Then Mozambique declared its independence on June 25, 1975, and subsequently nationalized all land, schools, hospitals, businesses and property. By the end of 1975, the white population was estimated at less than 20,000--an 8 percent decrease from 1973 (38, pg. 598). This loss has created an acute shortage of technicians and professionals.

International migration patterns are important in the case of Mozambique. The primary cause of outmigration has

been contract labor in the mines of South Africa, Zambia, and Rhodesia. Estimates in 1976 put the number of such laborers in South Africa at 150,000, and in Rhodesia at 80,000.

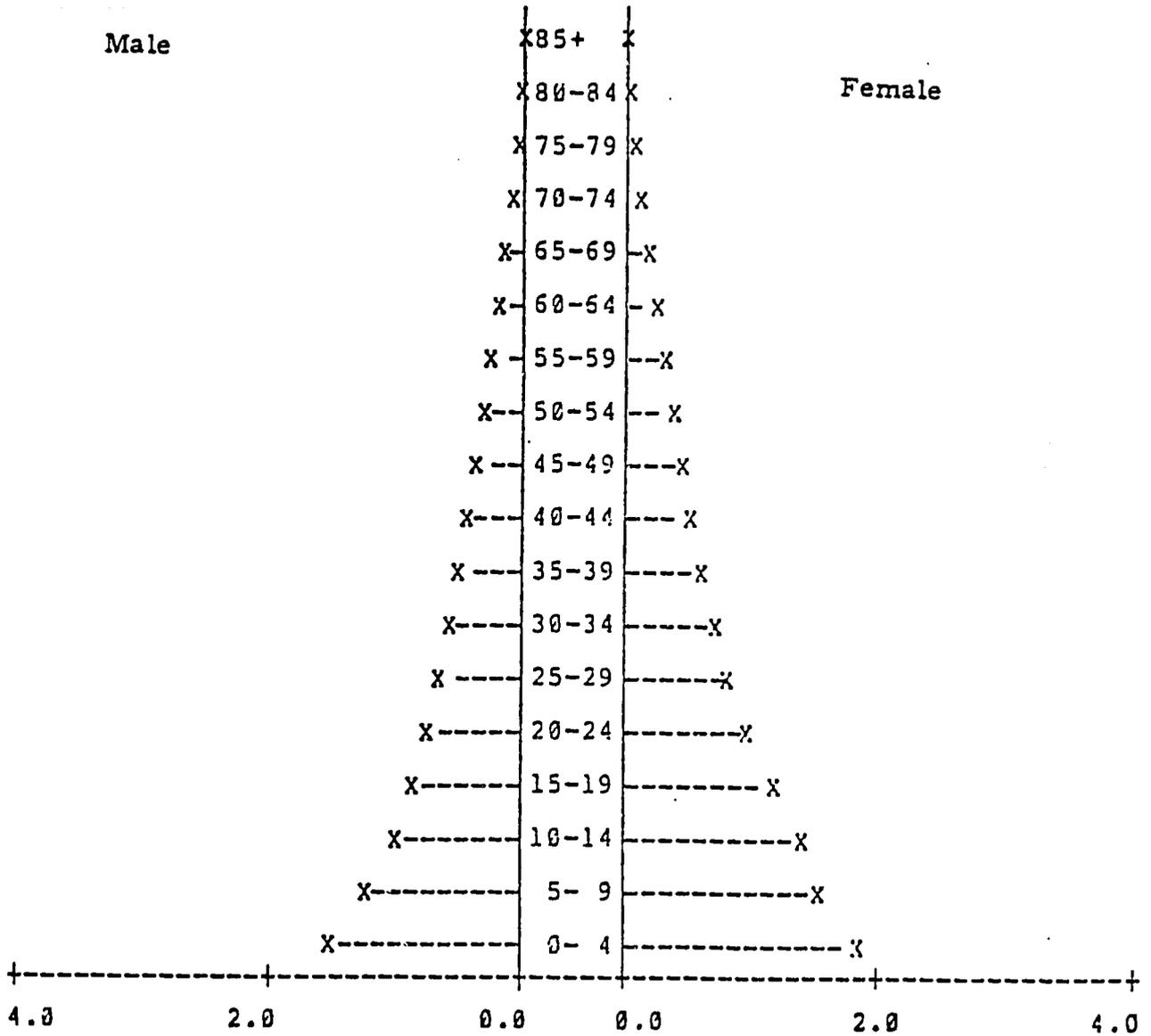
The age/sex distribution of the population is shown in Figure 1. A recent source estimates that in 1977, 50.1 percent of the population was below the age of 20. (44, pg. I-6)

C. HISTORICAL AND CULTURAL CHARACTERISTICS

For almost five centuries, Mozambique was administered by Portugal as one of several overseas provinces having no political, administrative or economic autonomy under the law. In recent years, the awakening of national consciousness led to armed confrontation between the Portuguese authorities and the liberation movement seeking independence. The conflict continued until 1974 when, following a change of government in Portugal, negotiations were undertaken with the liberation movement, and agreement was reached for a peaceful transfer of government and for independence in June, 1975. (55, pg. 196)

Led by the Front for the Liberation of Mozambique (FRELIMO), which in 1962 was formed out of the merger of three nationalist organizations, the Mozambican people had seen many social, political, and economic changes come to the liberated areas in northern Mozambique long before the

Figure 1
ESTIMATED AGE POPULATION DISTRIBUTION
MOZAMBIQUE
1977



SOURCE: (44, pg. I-8)

formal declaration of national independence. Even during the struggle, FRELIMO had begun to confront the legacy of Portuguese colonialism. Under Portuguese rule, Mozambique's illiteracy rate was well over 90 percent and rural health care virtually nonexistent. By April 1974, FRELIMO had liberated one-fourth of Mozambique's territory and one-eighth of its population. "Within these liberated areas, over 30,000 young Mozambicans were attending FRELIMO primary schools, a well-organized network of FRELIMO mobile health clinics existed, and People's Stores and Cooperatives had been set up to enable Mozambican peasants to exchange their small agricultural surplus. "The experience gained by FRELIMO in organizing and operating these basic services and popular structures provided an initial direction for the tasks of national reconstruction and decolonization of social, political and economic relations now taking place." (22, pg. 12)

At the time of independence, FRELIMO faced the reality of near bankruptcy and astronomical debts inherited from the colonial era. In April, 1975, The Economist gauged Mozambique's debt to Portugal at £850 million, including £500 million in unpaid loans for the Cobora Bassa Dam. (22, pg. 7)

After independence, a beginning was made with restructuring of the economy and social services. Priority in respect to both of these areas was placed on agriculture and the rural areas where a consistent drive towards communal and cooperative forms of production and exchange was launched. These

priorities confirmed the policies followed during the anti-colonial war in areas liberated from Portuguese control. Reorganization of medical and educational services was begun. Initial nationalizations included all private clinics; private medical practice was forbidden. A variety of agreements, whether economic or cultural, were entered into with many foreign states, while a multi-state United Nations' program of aid was organized.

In 1976, Mozambique took on the heavy responsibility of active support of the mainstream of Zimbabwean nationalism, committed as this now was to guerrilla warfare, if the white-minority Rhodesian government would not dismantle itself. Mozambique applied full economic sanctions against Rhodesia and closed its frontiers. This action received full UN support. Training and rear-base facilities for the units of the Zimbabwean guerrilla forces were openly provided and refuge given to many civilians escaping across the frontier from Rhodesia.

At the end of 1976 the Third Congress of FRELIMO took place. It concerned itself with the further democratization of structures and in extending the network of participatory committees, as well as with the reorganization of the OMM--Organization of Mozambican Women. (38, pg. 599-600)

The new government was faced with problems of staggering proportions: the massive European exodus, droughts

in the north and floods in the south, the destruction created by the war, the problems associated with resettlement of refugees, the closing of the border with Rhodesia, South Africa's reduced demand for labor, and the effects of the world economic crisis.

1. Ethnic and Cultural Aspects

The ethnic composition of Mozambique is approximately 98 percent African, with Asians, mulattoes, and a few Europeans making up the remainder. Estimates of the number of African tribes in Mozambique range from 70 to 100. The largest tribe in the north is the Makua (1.78 million) while the largest tribe in the south is the Thonga (1.26 million). (59, pg. 2)

Each tribe speaks a Bantu language as mother tongue. Communication between tribes is difficult because of variations in spoken language.

The Africans can be grouped into two major cultural regions--a northern and a southern region--with the Zambezi River roughly forming the boundary between them. (44, pg. I-9, 10)

2. Religion

A 1976 source estimated that the population was 65 percent animist, 22 percent Christian, and 11 percent Moslem (61). Generally, the northern tribes have been more isolated from European influences; the majority of them are animists

or practice fetishism, although Islam also has some influence. Catholic and Protestant missionaries have been active for some time in Mozambique.

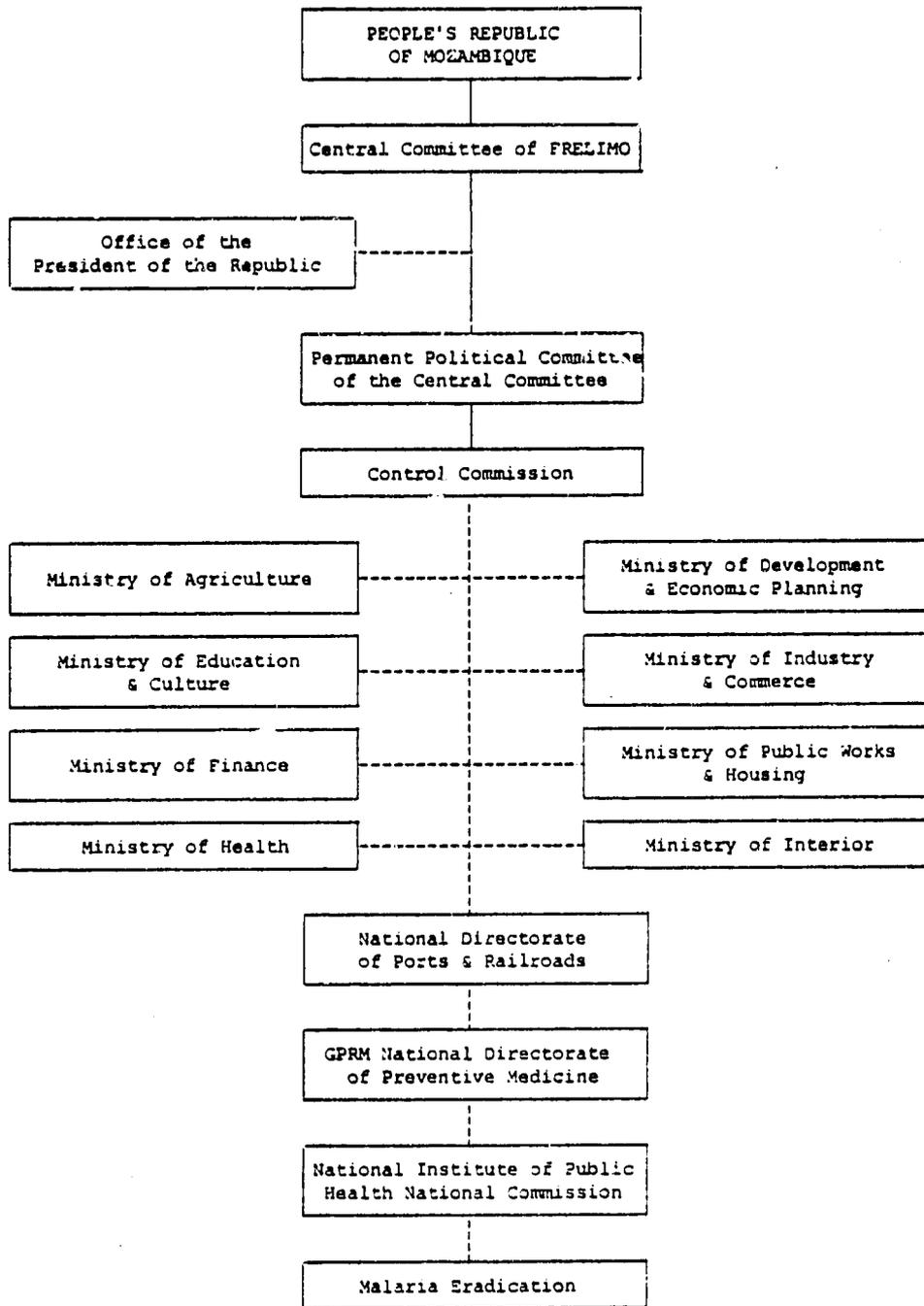
Although FRELIMO leadership is hostile to the Roman Catholic Church, due to its close ideological and economic ties with the Portuguese colonial regime, the independence Constitution "guarantees the freedom of citizens to practice or not to practice a religion."

D. THE POLITICAL SYSTEM

In February 1977, President Samora Machel was unanimously re-elected leader of FRELIMO. Mozambique's supreme political authority is the Permanent Political Committee. All except one of its members have been members of FRELIMO since its inception in 1963. (13, pg. 18) Figure 2 shows the organization of the new government, as of March, 1977.

As has been mentioned, in March, 1976 Mozambique imposed sanctions against Rhodesia and has been engaged in a struggle with the white regime since then. Rhodesia in turn has been giving support to RNM, an anti-FRELIMO resistance organization which has been carrying out a guerrilla campaign inside Mozambique from bases in Rhodesia. FRELIMO troops are currently supporting the Zimbabwe liberation struggle. This is consistent with its stated goals of the development of an international-socialist state.

Figure 2
ORGANIZATION OF THE NEW GOVERNMENT
OF THE PEOPLE'S REPUBLIC OF MOZAMBIQUE



---- Lines of authority unknown

(59, p.31)

In 1977, a Program Coordinating Commission was set up, with responsibility for coordinating the actions of government agencies. In enterprises around the country, both state-owned and those still under private ownership, workers' "production councils" took their first steps in planning production goals and guidelines at the factory level.

Ministries, provincial governments, and major enterprises were asked to prepare 1978 plans. The combination of centralization and decentralized planning will have its first full-scale trial this year. Apart from strategic enterprises directly responsible to the Council of Ministers, some are to be the responsibility of particular ministries, while others are to fall under control of the provincial governors. Each province and each ministry is to work out a list of which enterprises are most strategic for their sector of the province and present the list to the national planning body. (39, pg. 14-19)

Dynamizing groups (DGs) are the basic political links between the people of Mozambique and the political party of FRELIMO, and as such must be briefly described. Organized in places of residence, work, study, and government, their function is to involve the people in discussion of national and local policy issues and programs, as well as of possible solutions to problems. To give an example from the health sector, in the summer of 1977, the Ministry of Health drafted a plan to nationalize health care in the

country. This was discussed by dynamizing groups at the local level throughout the country so that positive and negative criticisms could be collected and sent back to the Ministry for use in improving the second draft of the bill. (22, pg. 13)

E. THE ECONOMY

Mozambique experienced an acute economic crisis throughout 1976 which persisted into 1977 "and may drag on interminably." (24, pg. B-303)¹ The main causes were:

- the Rhodesian border closure and the inadequacy of international compensatory assistance;
- the fall in foreign exchange earnings under the Mozambique Convention and fewer Mozambican workers in South Africa's mines;
- a large fall in the production of agricultural export crops, plus a big rise in imports of subsistence foods;
- a complete halt to the tourist trade since 1974;
- a slump in industrial production due to the flight of skilled white workers and the abandonment of business by Portuguese owners and managements; and
- disadvantageous international economic conditions. (24, pg. B-303)

FRELIMO has had to continue economic links with South Africa, having inherited a situation in which nearly

1. At the end of 1975 there was an accumulated budget deficit of some \$22 million. The budget deficit in 1976 was \$36.5 million. The Government projected in 1977 a much bigger deficit of \$120 million for that year. "Thereafter, with the help of additional taxation and economic recovery, the budget is expected to be balanced by 1980." (52, pg. 8)

all economic power in Mozambique is concentrated in Maputo (previously Lourence Marques). The development of Maputo has always reflected the needs of Witwaters-Rand, the heavily industrialized urban area of Johannesburg where South African goldmines are concentrated. In the first two years of independence, Mozambique did not succeed in diminishing ties with South Africa, but indeed became more dependent than at any time previously, and a slightly reduced dependency remains today. (13, pg. 19)

The decision to apply UN sanctions against Rhodesia cost Mozambique more than \$125 million/year, and Rhodesian military attacks have not only taken a heavy loss in lives, but have caused serious economic damage. In one year alone, up to March, 1978, there were 349 attacks in which schools, hospitals, homes, shops, agricultural machinery, buses, boats, bridges, and thousands of bags of maize were destroyed.

According to President Samora Machel, the fundamental steps necessary for the economic development of Mozambique are the development of communal villages, the cooperative movement, and the state agricultural enterprises supported by bank credits. Current state plans are the extension of the Limpopo Valley irrigation system, the development of the agricultural complexes of Angonia in Tete Province and Matama in Niassa Province, as well as the completion of the Mapai Dam project on the Limpopo River.

In the industrial field, plans have been made for the establishment of a paper-making plant and a lorry factory and

an increase in the production capacity of the textile and coal sectors, as well as in light industry supporting the agricultural sector. The government reports "the involvement of thousands of Mozambican workers in the preparation of this year's production plans in agricultural and industrial enterprises." (29, pg. 17)

Agriculture, forestry, and fishing currently occupy 3/4 of the active labor force, but account for less than half of the gross domestic product.²

F. AGRICULTURE AND LIVESTOCK DEVELOPMENT

Since independence, Mozambique's agricultural development is for the first time aimed to benefit the majority of peasants, but it faces serious disruptions. More than 2,000 units have been abandoned by their previous owners; the majority of technicians and other trained staff have left the country. The infrastructure for distribution of agricultural supplies and services for collection of surplus production needs rapid restructuring to replace the numerous small and larger traders who have ceased to operate. This infrastructure is of particular importance to the many small farmers and villages using traditional agricultural methods. (42)³

2.	GDP	3,147 (millions of 1973 \$US)
	GNP	2,905 (millions of 1973 \$US)
	GDP per capita	\$364 (1973)
	GNP per capita	\$336 (1973) (34)

3. During the colonial period, important agricultural supplies were regularly imported from Rhodesia, and thus the border closure after independence has aggravated the supply situation.

In southern Mozambique, some areas are infested with the tsetse fly, while in general the swamps and low altitudes have not provided a healthy environment for domestic animals. Cattle-keeping competes directly with cultivation for good land and water (36, pg. 67), and livestock in general is of secondary importance.

Agricultural development is oriented towards collective fields and the concept of the communal villages, which was developed during the armed struggle. These are reportedly similar to the ujamaa villages in Tanzania. (62)

Within the last three years roughly 1,500 embryo communal villages have been started, in which Mozambicans live and work collectively. The more-developed villages have large, collectively-worked fields, schools, health posts, nurseries and consumer cooperatives.

Alongside the communal village project is a growing cooperative movement. In some cases cooperative production stems from the communal villages; in others, the villages grow out of the new cooperation among smallholders. By the beginning of this year there were 134 agricultural cooperatives with a total of 15,000 members in seven of the country's ten provinces. A third prong of the government's program has been the setting up of state farms, some of which are immense. (48, pg. 6).

Major subsistence crops grown include maize, sweet potatoes, rice, groundnuts, and cassava. Due to the large numbers of rivers in the country, there is a good opportunity

for irrigation of much of the land. In addition, the completion of the Cabora Bassa Dam should make possible irrigation of 3.7 million acres of land, for which plans are already developed. (38, pg. 602).

G. INDUSTRY AND MINING

The white settler exodus also wreaked havoc on Mozambique's weak industrial sector. Industrial production in 1976 was estimated to have fallen to 50 percent of pre-independence levels. Not only did most of the country's skilled workers, technicians, and managers leave, but in some cases, the departing Portuguese engaged in what FRELIMO described as "economic sabotage" to save what they could of their assets. (24, pg. V-305)

About 47 percent of Mozambique's manufacturing industries are located in Maputo. Most of the industries are consumer goods industries, which tend to favor a market-side location. Maputo also has several agricultural processing industries. FRELIMO has sought to bring about decentralization by encouraging new industries to be set up elsewhere in the country. Those manufacturing enterprises which have been nationalized after abandonment by their former owners are being taken over by workers and run as collectives. Production on the average is estimated to be running less than at previous levels. (13, pg. 26)

In mining there is the possibility of increasing the exploitation of coal; Mozambique has large amounts of reserves. It also has a well-developed petroleum refining capacity.

H. TRANSPORTATION RESOURCES

In an interview in September 1974, Prime Minister Chissano said that the Ministry of Transport and Communication of the Transitional Government would give first priority to the reconstruction and repair of the road network. Consideration next would be given to the completion of unfinished roads. (51, pg. 17)

Figures vary greatly on the number of roads and the number which are paved, but it is clear that the transportation system is highly inadequate. Some roads are impassable in the rainy season; many were destroyed or damaged in the war or in the ongoing warfare. The exodus of Europeans left the transportation services desperately short of technical staff; there is a severe lack of replacement parts and tires for vehicles.

Bridges too have been destroyed and the Limpopo railway line is frequently under attack. Communication links also have been badly hit.

There are three major ports and several smaller ones. In 1975, there were sixteen airports, of which three are international. Air transport is operated by the state-owned national airline DETA. (38, pg. 603)

I. HOUSING

Prior to independence, the urban housing available to most non-Africans was constructed of durable materials and contained most of the amenities to be found in European cities. Africans, however, generally lived under crowded circumstances in shacks constructed with materials they had found and collected.

After independence, survey teams were sent by the government into urban areas to determine which properties had been rented or abandoned. Tenants were generally permitted to stay; rents went to the state. As vacated premises were found, they were allocated through housing committees on the basis of need. Rents were determined by a family's ability to pay (2). Due to the migration of rural persons to the urban areas, a severe shortage of dwellings exists in the cities.

Fortunately, in rural areas there is a greater supply of indigenous building materials. The African rural dwelling is normally clustered into family compounds within each village. The structures, of stucco and thatched roof construction, afford minimal protection against the elements and insects. (59, pg. 2)

The national resettlement program of communal villages includes provision of housing, beginning with temporary shelters. This is to be followed by progressive upgrading

through self-help schemes and small loans in the form of building materials. (52, pg. 21)

Housing for refugees is a major problem, as is sanitation and water supply in urban as well as rural areas.

J. EDUCATION AND HUMAN RESOURCES

By and large, educational services prior to independence were geared to serving the needs of the wealthier segments of the population living in the major cities and urban areas. A 1979 estimate gave a literacy rate of 14 percent for people above the age of six years. Two percent of these had completed four years of primary education and only 0.2 percent had completed a professional course.

In July 1975, all private training institutions were taken over by the government, and all schools are now state-run and at no cost to students. In February 1976, there were 3,074 primary schools. (66, pg. 3)

Since independence, more than 2,000 primary school teachers have been trained and about 12,000 have taken refresher courses. Primary school attendances went from 690,000 in 1974 to 1,300,000 last year, and the number of secondary schools increased from 43 to 103 in two years. (48, pg. 7)

High priority is given to mass-literacy campaigns and reorientation of curricula on all levels, linking up

education with priorities of rural development and agriculture; the emphasis is on reading, vocational training, and teacher and student participation in food production, as well as political education. Expenditures for education accounted for more than 16 percent of the budget in 1977, second only to defense (15, pg. xi). Plans call for the training of 3,400 literacy teachers in a campaign that began earlier this year.

In 1967, the University of Lourenco Marques was established. Its enrollment in 1975 was 2,000 students, mainly in the areas of medicine, engineering, and law. Since independence and the loss of many lecturers, 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. (44, pg. IV-39-40)

III. THE HEALTH SECTOR

A. A PROFILE OF THE HEALTH SITUATION IN MOZAMBIQUE

1. Health Status and Patterns of Morbidity and Mortality

Reported morbidity and mortality statistics under the Portuguese regime covered only Portuguese residents and those Africans and others who appeared at health facilities for treatment or died there (15, pg. 74). In 1971, the reported data on leading causes of death were respiratory diseases such as pneumonia, tuberculosis, bronchitis and whooping cough, parasitic diseases, primarily malaria, and gastrointestinal ailments. (59, pg. 15)

The WHO reports the following disease figures:

Reported Cases and Deaths for 1973

CHOLERA.....	Cases	753
	Deaths	85
TYPHOID FEVER.....	Cases	64
	Deaths	3
TUBERCULOSIS, RESPIRATORY SYSTEM.....	Cases	2,708
BRUCELLOSIS.....	Cases	1
LEPROSY.....	Cases	783
DIPHThERIA.....	Cases	18
	Deaths	5
STREPTOCOCCAL SORE THROAT + SCARLET FEVER.....	Cases	9
MENINGOCOCCAL INFECTIONS.....	Cases	94
	Deaths	11
POLIOMYELITIS, ACUTE.....	Cases	49
MEASLES.....	Cases	2,752
	Deaths	8
INFECTIOUS HEPATITIS.....	Cases	1,382
	Deaths	19

Reported Cases and Deaths for 1974

CHOLERA.....	Cases	361
	Deaths	44
TYPHOID FEVER.....	Cases	45
	Deaths	1
TUBERCULOSIS, RESPIRATORY SYSTEM.....	Cases	4,527
	Deaths	22
BRUCELLOSIS.....	Cases	1
LEPROSY.....	Cases	491
DIPHTHERIA.....	Cases	18
	Deaths	1
STREPTOCOCCAL SORE THROAT + SCARLET FEVER.....	Cases	7
MENINGOCOCCAL INFECTIONS.....	Cases	60
	Deaths	3
TETANUS.....	Deaths	7
POLIOMYELITIS, ACUTE.....	Cases	25
MEASLES.....	Cases	4,548
	Deaths	8
INFECTIOUS HEPATITIS.....	Cases	1,362
	Deaths	5

Source: (67)

Table 1 provides reported information from 1975 on causes of death, according to age and sex.

Table 2 gives a listing of reported infectious diseases from the same year, showing numbers of diagnosed cases and deaths, by months.

Table 3, from an October, 1977 source, gives information on selected diseases of importance, the causative agent and incubation period, mode of transmission, geographic distribution, reported incidence/prevalence, and period of high risk.

TABLE 1
DEATHS ACCORDING TO AGE, SEX, AND CAUSES OF DEATH
December 1973

CAUSES OF DEATH (Abridged List)	AGES (IN YEARS)																					
	TOTAL		LESS THAN 1 YEAR		1 TO 4 YEARS		5 TO 9 YEARS		10 TO 14 YEARS		15 TO 19 YEARS		20 TO 29 YEARS		30 TO 49 YEARS		50 YEARS & OVER		NOT KNOWN			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
TOTAL	953	565	368	117	78	96	67	21	22	13	9	10	10	47	32	94	57	147	94	40	39	
Cholera																						
Typhoid Fever																						
Bacillar and Amebic Dysentery																						
Enteritis and Other Diarrhetic Diseases	51	37	14	18	6	13	4	1	2	1	1			1				3		1		
Tuberculosis of the Respiratory System	66	44	22	2		1	3	1	1			1		1	5	1	12	6	22	6	1	3
Other Types of Tuberculosis including Late Effects	2	1	1					1			1											
Plague																						
Diphtheria																						
Whooping Cough	3	1	2				2									1						
Angina Streptococcica and Scarlet Fever																						
Meningococcal Infections (cerebro-spinal meningitis)																						
Acute Poliomyelitis																						
Smallpox																						
Measles	21	12	9	2	1	10	6		1								1					
Typhus and Other Rickettsias																						
Malaria	48	24	24	4	4	9	7	2		1			2	1	3	4	5	2				4
Syphilis and its Sequelae																						
All Other Infectious and Parasitic Diseases	62	40	22	21	16	5	1			2	1			2	6	4						4
Malignant Tumors including Tumors of the Lymphatic System and of the Hematopoietic Organs	44	28	16						1	1	1	1	1	2	1	2	7	6	14	5	3	
Benign Tumors and Tumors of Nonspecified Nature	4	2	2	1	1					1												1
Diabetes Mellitus (Sugar Diabetes)	5	3	2													1		2	2			
Avitaminosis and Other Nutritional Deficiencies	8	5	3	1	1	4	2															
Anemias	18	11	7	1	1	4	2	1		1			1		2	1	2					2
Meningitis	14	6	8	3			2		3	1	1			1	1	1	1					
Acute Rheumatoid Arthritis of the Joints (= Acute Articular Rheumatoid Arthritis)																						
Chronic Rheumatic Diseases of the Heart	3	3						1						2								
Hypertensive Diseases	1		1														1					
Ischemic Disease of the Heart (Ischemia = Local Anemia)	3	3																3				
Other Heart Diseases	13	7	6										1	1		2	2	4	2			1
Cerebral Vascular Diseases	26	16	10											1	1	1	1	12	7	3		
Influenza	4	2	2		1	1																1
Pneumonia	63	38	25	11	5	17	13	1	2					1	1	1	2	4		3	2	
Bronchitis, Emphysema, and Asthma	15	11	4	1	4		1								2				4	3		
Peptic Ulcer	3	1	2													1	1	1				
Appendicitis																						
Intestinal Obstruction and Hernia	3	2	1		1															2		
Cirrhosis of the Liver	8	8				1				1				2		1		3				
Hepatitis and Nephrolysis	4	2	2	1										1				1	1			
Hyperplasia of the Prostate Gland																						
Abortion	2		2														1					1
Other Complications Derived from Pregnancy, Childbirth, and Puerperium Normal Childbirth	6		6											1	4							1
Congenital Defects	5	2	3	2	2		1															
Injuries Due to Contortions During Delivery and Anoxic and Hypoxic Conditions	10	4	6	4	6																	
Other Causes of Prenatal Mortality	46	29	17	29	17																	
Symptoms and Morbid Conditions Badly Defined	280	170	110	11	11	22	16	10	9	2	3	4	1	20	14	33	20	49	21	19	15	
All Other Diseases	59	36	23	6	3	4	7			2		2		2	3	7	3	12	3	1	4	
ACCIDENTS, POISONINGS, AND VIOLENCE (External Causes of Injury)																						
Motor Vehicle Accidents	24	20	4						1	1		2		7		9	2				1	1
All Other Accidents	25	14	11		2	1	1	1	1			1		3	2	2	1	3	1	3	3	
Suicide and Self-Inflicted Injuries	1	1													1							
All Other External Causes	3	2	1												2							1
NATURE OF INJURY																						
Fractures, Intracranial Traumas and Other Internal Traumas	16	28	8		1				2	1		3		8	1	12	2	1		3	2	
Burns	8	2	6		1		1							1	1		1		1		1	2
Harmful Effects from Chemical Substances	4	3	1			1									1		1		1		1	
All Other Traumas	5	4	1			1								1	1		1					1

SOURCE: (11)

TABLE 2
REPORTED CASES AND DEATHS OF MAIN INFECTIOUS DISEASES
IN MOZAMBIQUE, MAY-DECEMBER, 1975

<u>Infectious Diseases*</u>	<u>Cases</u>	<u>Deaths</u>
TOTAL	10,951	48
Cholera	-	-
Typhoid Fever	11	-
Tuberculosis	1,499	19
Undulant Fever	-	-
Leprosy	416	2
Diphtheria	4	-
Angina Streptococcica and Scarlet Fever	3	-
Meningococcic Infection (Cerebro-spinal meningitis)	74	1
Tetanus	84	8
Poliomyelitis (= Infantile paralysis = Polio)	4	-
Smallpox	17	-
Measles	8,025	8
Infectious Hepatitis	804	6
Other Virus Diseases	4	4
Trypanosoma (= Sleeping Sickness)	6	-

* Intermediate list according to a new table of OMS (International 8th Revision).

SOURCE: (11)

TABLE 3
SELECTED DISEASES OF IMPORTANCE

NAME OF DISEASE	CAUSATIVE AGENT/ INCUBATION PERIOD	MODE OF TRANSMISSION	GEOGRAPHIC DISTRIBUTION	REPORTED INCIDENCE/ PREVALENCE	PERIOD OF HIGH RISK
Amebiasis (Ame- bic dysentery)	<u>Entamoeba histoly-</u> <u>tica</u> /21-28 days	Contaminated food and water	Countrywide	High incidence	April, May, June
Boutonneuse fever (African tick typhus)	<u>Rickettsia conorii</u> / 5-7 days	Tick bite	Countrywide	N/A	N/A
Dengue fever	Arbovirus, Group B/ 3-15 days	Mosquito bite	Countrywide	Low incidence	October through April
Hepatitis, in- fectious	Ungrouped virus/ 15-50 days	Contaminated food and water; fomites	Countrywide	1204 cases, 1974	April, May, June
Influenza	Myxovirus/1-3 days	Direct contact; droplet spread; fomites; airborne	Countrywide	N/A	None
Malaria, benign tertian	<u>Plasmodium vivax</u> / 14 days	Mosquito bite	Along coast and river valleys	Moderate incidence *	April, May, June
Malaria, malign- ant tertian	<u>P. falciparum</u> /12 days	Mosquito bite	Along coast and river valleys	N/A	April, May, June
Malaria, other	<u>Plasmodium spp.</u> / variable	Mosquito bite	Areas below 1,350 meters	Low incidence	April, May, June
Meningococcal meningitis	<u>Neisseria meningi-</u> <u>tidis</u> / 2-10 days	Direct contact; droplet spread	Countrywide	60 cases, 1974	
Paratyphoid fever	<u>Salmonella para-</u> <u>typhi</u> /1-10 days	Direct contact; contaminated food and water; fomites	Countrywide	See under typhoid fever	See under ty- phoid fever

TABLE 3, PAGE 2

NAME OF DISEASE	CAUSATIVE AGENT/ INCUBATION PERIOD	MODE OF TRANSMISSION	GEOGRAPHIC DISTRIBUTION	REPORTED INCIDENCE/ PREVALENCE	PERIOD OF HIGH RISK
Relapsing fever, tick-borne	<u>Borrelia recurrentis</u> /3-12 days	Tick bite; coxal fluid of tick	Countrywide	N/A	N/A
Salmonellosis	<u>Salmonella</u> sero- types/4-2 days	Direct contact; contaminated food and water; fomites	Countrywide	Low incidence	N/A
Shigellosis (bacillary dysentery)	<u>Shigella</u> spp./1-7 days	Contaminated food and water.	Countrywide	See under amebiasis	April, May, June
Trypanosomiasis, African	<u>Trypanosoma rhodesiense</u> /14-21 days	Tsetse fly bite	Scattered foci through- out northern Mozambique	N/A	N/A
Typhoid fever	<u>Salmonella typhi</u> / 7-21 days	Direct contact; contaminated food and water; fomites	Countrywide	Typhoid and para- typhoid fevers, 87 cases, 1972	
Veneral Diseases:					
Chancroid	<u>Hemophilus ducreyi</u> / 3-5 days	Sexual contact	Countrywide	Low incidence	None
Gonorrhoea	<u>Neisseria gonorrhoeae</u> /3-9 days	Sexual contact	Countrywide	N/A	None
Lymphogranuloma venereum	Ungrouped virus/5- 12 days	Sexual contact	Countrywide	Low incidence	None
Syphilis	<u>Treponema pallidum</u> / 10-70 days	Sexual contact	Countrywide	N/A	None

TABLE 3, PAGE 3

NAME OF DISEASE	CAUSATIVE AGENT/ INCUBATION PERIOD	MODE OF TRANSMISSION	GEOGRAPHIC DISTRIBUTION	REPORTED INCIDENCE/ PREVALENCE	PERIOD OF HIGH RISK
Filariasis	<u>Wuchereria bancrofti</u> /3-9 months	Mosquito bite	Coastal regions	Low incidence	None
Helminthiases:	<u>Ancylostoma duodenale</u> /6 weeks	Larval form penetrates skin	Countrywide	High incidence	None
	<u>Ascaris lumbricoides</u> /2 months	Ingestion of embryonated ova	Countrywide	High incidence	None
	<u>Necator americanus</u> /6 weeks	Larval form penetrates skin	Countrywide	High incidence	None
	<u>Trichuris trichiura</u> /12 weeks	Ingestion of embryonated ova	Countrywide	High incidence	None
Leishmaniasis, visceral	<u>Leishmania donovani</u> /60-120 days	Sandfly bite	N/A	Low incidence	N/A
Histoplasmosis	<u>Histoplasma capsulatum</u> /5-18 days	Inhalation of spores	Countrywide	Low incidence	None
Rabies	Myxovirus/14-42	Animal bite; contact with animal saliva	Countrywide	9 cases, 1971	None
Schistosomiasis	<u>Schistosoma haematobium</u> /28-42 days	Larval form enters body from fresh water	Countrywide	High incidence	None
	<u>S. mansoni</u> /28-42 days	Larval form enters body from fresh water	(Original not readable)	Low incidence	None

TABLE 3, PAGE 4

NAME OF DISEASE	CAUSATIVE AGENT/ INCUBATION PERIOD	MODE OF TRANSMISSION	GEOGRAPHIC DISTRIBUTION	REPORTED INCIDENCE/ PREVALENCE	PERIOD OF HIGH RISK
Tuberculosis	<u>Mycobacterium tu- berculosis</u> /4-6 weeks	Airborne; direct contact; fomites; contaminated milk	Countrywide	N/A	None
Brucellosis	<u>Brucella spp.</u> /5-21 days	Contact with ani- mals; contaminated milk	Countrywide	Low incidence	None
Chickenpox	Herpes virus/14-21 days	Direct contact; fo- mites; droplet spread; airborne	Countrywide	N/A	None
Diphtheria	<u>Corynebacterium diphtheriae</u> /2-5 days	Direct contact; fo- mites	Countrywide	N/A	N/A
Leprosy	<u>Mycobacterium leprae</u> /indefinite	Direct contact	Countrywide	N/A	None
Measles	Myxovirus/10-14 days	Direct contact; droplet spread	Countrywide	N/A	None
Mumps	Myxovirus/12-26 days	Direct contact; droplet spread; fomites	Countrywide	N/A	N/A
Poliomyelitis	Poliovirus/3-21 days	Direct contact; contaminated food and water; flies	Countrywide	25 cases, 1974	
Smallpox	Poxvirus/7-16 days	Direct contact; fo- mites	Countrywide	No cases reported in several years	N/A

TABLE 3, PAGE 5

NAME OF DISEASE	CAUSATIVE AGENT/ INCUBATION PERIOD	MODE OF TRANSMISSION	GEOGRAPHIC DISTRIBUTION	REPORTED INCIDENCE/ PREVALENCE	PERIOD OF HIGH RISK
Staphylococcal disease	<u>Staphylococcus aureus</u> /4-10 days	Direct contact; fomites; airborne	Countrywide	Low incidence	N/A
Streptococcal disease, hemo- lytic (scarlet fever)	<u>Streptococcus pyogenes</u> /1-3 days	Direct contact; fomites; airborne	Countrywide	7 cases, 1974	None
Tetanus	<u>Clostridium tetani</u> / 2-50 days	Wound contamination	Countrywide	Moderate incidence	None
Trachoma	Ungrupped virus/ 5-12 days	Direct contact; fomites	Countrywide	Low incidence	None
Treponematoses: Yaws	<u>Treponema pertenuae</u> / 14-90 days	Direct contact; fomites	Countrywide; primarily in Districts of Cabo Delgado, Mocambique, & Zambezia	Moderate incidence	None
Whooping Cough	<u>Bordetella pertus- sis</u> /7-21 days	Direct contact; droplet spread; fomites	Countrywide	N/A	None

N/A = Data not available.

Table 4 lists significant animal diseases in Mozambique which are transmissible to man.

The high incidence of infectious and parasitic disease in Mozambique is related to widespread malnutrition, climactic conditions favoring animal and insect vectors of human diseases in certain regions, and general lack of sanitation and safe water. Epidemics of population-ravaging diseases do not generally occur. Major diseases include yaws, cholera, typhoid and parathyphoid fever, sleeping sickness, malaria, trypanosomiasis, schistosomiasis, onchoceriasis, intestinal diseases, tuberculosis and other respiratory diseases, leprosy, measles, and infectious hepatitis. Climate particularly is a major factor. In the northern tropical belt, climate and the river basins in the area are conducive to diseases such as malaria, sleeping sickness, schistosomiasis, leprosy and hookworm. Yaws also occurs in the north.

Among the most serious causes of infant mortality are gastroenteritis and tetanus. Conditions caused by malnutrition include pellagra, scurvy, and rickets.

The Inhambane district of Mozambique has the highest known liver cancer incidence in the world. Research relates this to the level of aflatoxin intake, which also is very high; aflatoxin contamination may occur in certain prepared foods when fungal growth occurs.⁴

4. Source 63 provides results of research carried on in Mozambique on this problem.

TABLE 4

SIGNIFICANT ANIMAL DISEASES TRANSMISSIBLE TO MAN

NAME OF DISEASE	CAUSATIVE AGENT/ INCUBATION PERIOD	MODE OF TRANSMISSION	GEOGRAPHIC DISTRIBUTION	REPORTED INCIDENCE/ PREVALENCE	PERIOD OF HIGH RISK
Anthrax	<u>Bacillus anthracis</u> / 1-7 days	Contact with ani- mals; fomites; contaminated food, water, soil	Countrywide	Low sporadic incidence.	None
Brucellosis	<u>Brucella spp.</u> /5-21 days	Contact with ani- mals; contaminated milk	Countrywide	High incidence in cattle; low spor- adic incidence in goats, horses, sheep and swine.	None
Rabies	Myxovirus/14-42 days	Animal bite; con- tact with animal saliva.	Countrywide	High incidence in dogs.	None
Salmonellosis	<u>Salmonella sero-</u> <u>types</u> /4-2 days	Direct contact; contaminated food and water; fomites	Countrywide	Low sporadic incidence.	Data not available
Tuberculosis	<u>Mycobacterium tuber-</u> <u>culosis</u> /4-6 weeks	Airborne; direct contact; fomites; contaminated milk.	Confined to certain regions; exact loca- tion data not avail- able.	Data not available.	None

In addition to diseases, certain poisonous insects and animals are found in Mozambique, such as centipedes, scorpions, spiders, ants, bees, beetles, mollusks, and certain fish and reptiles.⁵ Finally, there are five poisonous or allergenic plants known to grow in Mozambique.

(59, pg. 14)

2. Food and Nutrition

As has been stated, adequate food was a major problem in Mozambique directly after independence. A survey in January 1975 revealed that approximately 250,000 people were at risk of starvation, mainly in Cabo Delgado, Manica and Sofala (66, pg. 12). A drought in the north in 1976 reduced the low level of food production, and lack of transportation complicated distribution of imported foodstuffs. Then came the floods in southern Mozambique the following year--the Limpopo Valley, a major food producing center, was hit the hardest. Many abandoned European estates were in the process of being transformed into state farms or communal villages, and were totally inundated. As a result, the major urban centers, especially the capital, Maputo, suffered severe shortages of basic staples. To meet minimum consumption requirements, the government had to ration food and import

5. For a complete listing of these insects and animals see source 59, pg. 11-14, including their medical importance and distribution.

rice and maize. The problems of food acquisition were exacerbated by Mozambique's decision in 1976 to support UN sanctions and, moreover, to close the border with Rhodesia, traditionally a source of grains and other staples. (22, pg. 19).

The government has been compelled to import large quantities of food, due to the following contributory factors:

- reduced agricultural production;⁶
- damage to fields and equipment;
- restructuring of the entire agricultural sector;
- problems associated with the conflict situation;
- natural catastrophes;
- international economic factors such as prohibitive fuel and fertilizer prices and general inflation.

In the urban areas, special measures have been taken to help low income groups through subsidized canteens in schools, hospitals, and places of work. This too increased the demand for food stuffs, as did the changed consumption habits of people who moved into the towns from the surrounding areas. Emergency food relief was also given to the rural areas, particularly critical to the masses of displaced persons and refugees. This food aid is likely to be needed for some time to come (52, pg. 32).

6. The potato crop dwindled from 15,000 t. harvested in 1974-75 in the Manica and Sofala districts, to 3,000 t. in 1976. During the same period, the onion crop dropped from 41,000 t. to 7,000 t., and citrus from 265,000 crates to 11,000 crates. From 1976-78 one source estimates agricultural production to have decreased as much as 75 percent. (21, pg. 6).

The diet of the rural population consists almost exclusively of carbohydrates from staple food crops such as cassava, peanuts, sorghum, beans, and sweet potatoes.⁷ 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. (44, pg. IV-29)

Mention has already been made of the high incidence of liver cancer in Mozambique. In 1972, of 2,191 hospital deaths, there were 368 cases of cancer, 153 cases of liver cancer. WHO reports that research shows aflatoxin to be a major cause of liver cancer, due to consumption of contaminated groundnuts, cassava, and maize (66, pg. 9). It appears to occur twice as commonly in males as in females. (63)

A discussion of nutritional problems of children can be found in a later section.

3. Environmental Impacts on Health

In the towns and cities of Mozambique there is a general lack of safe water supply and sanitation.⁸ Inade-

7. See 25, pg. 233-297 for a comprehensive description of food resources and diets in Mozambique in the last decade.

8. 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 (44, pg. IV-28). Public fountains are still the only source of water in Maputo barrios. (10)

quate sewage disposal facilities contribute to unsanitary living conditions, causing a high incidence of hepatitis and other infectious diseases. Town and city dwellers generally use pit latrines. Urban housing conditions tend to be more crowded than those of the rural population. Often there is no electricity and inadequate drainage is also a major problem.⁹ Flooding caused by heavy seasonal rains in densely populated suburban areas presents the threat of outbreaks of malaria, typhoid and hepatitis. (44, pg. IV-28)

In the rural areas these problems are even more severe, and, of course, have been worsened by the unstable conditions. Rural dwellings are inadequately ventilated and provide excellent breeding places for disease vectors (59, pg. 2). Waste is either buried or carried away and pollution is a major concern in rivers and streams, which are also used as sources of water for drinking and washing and thus pose a major health hazard. (10)

Throughout Mozambique, water supply, distribution, and storage systems have been destroyed or damaged by

9. It was reported that the Maputo municipal drainage systems in 1967 presented a danger to the population's health. (44, pg. IV-28)

Southern Rhodesian attacks (52, pg. 17). In a recent interview, Dr. Ramos, Head of Public Health in Maputo, stated that he sees the provision of water in urban and rural areas "as one of the highest priorities for health and production." (10)

Finally, environmental health problems are particularly severe in refugee camps and settlements for displaced persons.

4. Population and MCH/Family Planning

Nothing can be found among the available literature on the policies of either colonial or present administrations concerning population problems and family planning. The 1977 Transition in Southern Africa report on Mozambique put out by the Africa Bureau of AID presents the following analysis:

"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 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 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." (44, pg. IV-35).

Organization and liberation of women has always been stressed by the FRELIMO government. The first congress of the Organization of Mozambican Women was held in 1973. Its work is directed both to the peasants and to women in urban areas, and includes political and general education, changing social practices and attitudes, and the setting up of child care centers and work centers for women (22, pg. 25). It is too early to tell what effect this focus will have on questions of family planning and maternal child health care issues, but clearly the organizational base is being constructed for the implementation of possible future policy and planning decisions which could affect mothers and working women and their children.

A UN source from 1975 estimated that children under the age of 15 years constitute at least 45 percent of the total population (49, pg. 11). Malnutrition among these children is a major problem--a WHO report from 1976 estimated it to be a cause of 12.5 percent of all deaths in children aged 1-4 years. A survey which was published in 1974 compiled systematic data on PEM (protein-energy-

malnutrition) in children for one suburban area of Maputo.

This survey showed:

- 48 percent of all children seen had some form of PEM;
- 83 percent had biochemical signs of vitamin A deficiency;
- 86 percent had biochemical signs of vitamin C deficiency; and
- 60 to 78 percent had some form of anemia.

"If these data are representative for the whole of Mozambique, and assuming a population of \pm 9 million of which approximately 23 percent are under five years of age (typical age structure for a developing country), then at any given point of time, a number of nearly 1,000,000 children under five years are malnourished." (66, pg. 11)

A doctor in the 21-bed pediatric ward of the provincial hospital in Cabo Delgado reported in 1976 that over 50 percent of the children he saw had serious malnutrition, plus various other diseases, such as tetanus, whooping cough, and measles. (10) Infections such as diarrheal diseases, broncho-pneumonia, and measles are commonly associated with and seriously aggravated by childhood malnutrition.

5. Mental Health Problems

No information is available on mental health issues in Mozambique, nor on government health policy in this area. It appears logical to assume, however, that the unstable conditions in the country, the persistent conflicts and the attendant destruction, the changes in traditional social and cultural institutions, including the family, the floods and displacements of population, on-going trends of urbanization and industrialization, as well as the generally difficult living conditions, would all have some substantial impact on the mental health of the people.

6. Special Problems

One particular problem which has already been mentioned and which is highly relevant to an assessment of health needs in Mozambique is that of population displacements caused by the military operations. At independence, some 50,000 Mozambican refugees were still living in rural settlements established with UNHCR assistance in the south of Tanzania. However, during 1975, about 23,500 were repatriated both from Tanzania and Zambia. A second phase saw 3,626 refugees repatriated from Tanzania during the 1976 dry season.

Between March 1976 and March 1977, a total of 143 attacks by the forces of the Rhodesian regime were reported in three western provinces, and were directed against the

civilian population as well as vital economic and social facilities. In addition to use of armoured vehicles, use has been made of aircraft, including Mirage jets, artillery, napalm, and 500-kilogram fragmentation bombs.

By the end of June 1977, about 1,500 persons had been killed; a great many of them were Zimbabwean refugees. The towns of Mapai, Chioco, Massangena, and Mavonde were leveled, leaving some areas without hospitals, schools, generating plants, and other public facilities. Homes, factories, transport, and communication facilities were destroyed and livestock was killed. Large numbers of people were dislocated (52, pg. 14).

Thousands of refugees have been fleeing Rhodesian troops and pouring across the border into Mozambique; the medical needs in these refugee camps are immense. The Zimbabwe African National Union (ZANU) is providing these camps with personnel, equipment, and supplies, but recurrent attacks on these camps have caused continual destruction of equipment and supplies. Malaria and typhoid are particular disease problems here; food shortages are acute. (19, pg. 19-20) 19-20).

In addition to assistance provided by ZANU, the UNHCR and Mozambique also make large contributions, especially in terms of food supplies (48). Besides the refugees from Rhodesia, there are also refugees from South Africa and Namibia.¹⁰

10. Sources differ on exact numbers of refugees. See (24, pg. B296), (40, pg. 4745), (28, pg. 8), (48) and (52, pg. 19).

In 1977, the UN reported that the immediate need was for relief supplies to satisfy the basic requirements of the displaced population, estimated at about 50,000 persons of 10,000 families. This included food and clothing, temporary shelter, and health care items. The policy of the Mozambique government was to resettle and reconstruct the affected communities in their original localities. (52, pg. 19)

A second crucial "special" health problem has arisen as a result of the flooding in 1977 and in March 1978, which left thousands homeless and caused a great deal of human suffering and economic loss.¹¹ These floods had an enormous health impact from several aspects:

- a total of 61,494 hectares of land under cultivation were ruined, wiping out cotton, maize, sugar, groundnuts, and other crops;
- huge amounts of livestock were drowned; the total cost in loss of cattle, goats, and chickens is estimated at more than \$1.5 million;
- already limited national economic resources were put into rescue operations and supplies to victims, as well as reconstruction of losses;
- a serious health hazard emerged as the waters subsided. In the Zambezi Valley, which has always been the worst malarial zone of the country, as the river returned to its course, pools of stagnant water remained, forming ideal breeding grounds for mosquitoes;
- transportation services were destroyed; and

11. Another natural disaster, an ice storm, occurred in October 1977 which did great damage to the capital, Maputo. (48)

- environmental health hazards associated with the problems of resettlement of the homeless have been heightened. (3, pg. 28-29)

According to the Africa Fund, the following health-related materials were requested by the Mozambique government this year for flood victims in the Zambezi Valley:¹²

- foodstuffs, such as dried fish, tinned meat and fish, condensed milk, vegetable oil, beans, maize and rice
- seeds
- clothing
- soap
- hoes, machetes, and axes
- Hudson reverse pumps
- Fontana insecticide application instruments and insecticides
- chloroquine/amodiaquine antimalarial tablets; chloroquine syrup
- first aid kits
- aspirin, penicillin, sulfaquinidine, tetracycline, and anti-tetanus serum. (3, pg. 29)

A third "special" problem with health implications is that of Mozambican workers in the mines of South Africa. In 1973, there were 127,198 Mozambican migrant workers in South Africa. At the end of 1975, the official figure for mine workers from Mozambique in South Africa was an estimated 100,000, and 150,000 in 1976 (66. pg. 2). In 1977, there were approximately 106,000

12. This detailed listing is included as it gives information on current needs, as expressed by the Mozambique government itself, and thus provides the basis for better determining priorities and recommendations in the last section of this report.

Mozambicans working in South African mines (43, pg. 232). Although very little can be said definitely about the possible health hazards associated with work in the mines, as sources are contradictory in their assessment of South African safety standards, it is an aspect deserving attention. Few studies appear to exist on the consequences of out-migration to family structure, traditional roles and customs, and the related issues of maternal/child health. But information from other countries would suggest that the out-migration and subsequent return of large numbers of (mainly young) males could be associated with certain diseases, such as respiratory infections and venereal diseases, nutritional problems,¹³ mental stress associated with dislocation, and substantial changes in traditional social structures and practices, particularly as this affects division of labor between the sexes.

13. A research investigation was carried out in 1974 in South Africa using population groups from Botswana and Mozambique. A relatively high incidence of sub-clinical vitamin C deficiency was found and, "although there was no evidence of widespread vitamin A deficiency, there was sufficient evidence of subclinical deficiency to warrant further investigation." (64)

B. THE HEALTH DELIVERY SYSTEM

The present character and direction of the Mozambique health delivery system is described fully in "Resolutions of the 8th Session of the FRELIMO Central Committee on Health Conditions in Mozambique" of 1976. It is presented as Appendix 1, and gives perspective to the events of recent years outlined below.

1. The Colonial Health Legacy

The Portuguese did not produce a single African doctor in Mozambique and health care was geared to serve the privileged few. There were more doctors in private practice in the capital than in the whole of the rest of the country (33, pg. 62). Africans received health care only when whites tried to create disease-free zones around their own communities (15, pg. 75).¹⁴

When the transitional government took over from the Portuguese in September 1974, health facilities were inadequate and medical personnel scarce. Of six relatively new hospitals, five had never been able to open because they had no funds for staff or medicine. So little maintenance money had been given to other hospitals that they had deteriorated beyond repair.

According to one account, within a few months of the founding of the transitional government, starvation and disease accounted for as many casualties as in ten years of

14. For a more detailed description, see (20, pg. 54-56), (15, pg. 75) and (44, pg. IV-31 ff.) Appendix 1 also contains information on FRELIMO's medical activities during armed struggle.

guerrilla warfare with the Portuguese. In April 1975, there were fewer than 100 doctors (compared with nearly 300 in 1973 and more than 500 in 1971) to serve a population of about nine million; in Zambezia Province alone there were only three doctors for 1.8 million people, in Manica more than 600,000 people had only one doctor, and in Maputo, which had the best medical service and the densest population, there were between 50 and 70 doctors. (15, pg. 75)

FRELIMO had already established a system of health care services in Tanzania and throughout liberated Mozambique, including training of paramedic teams and preventive health campaigns. In an important speech on health care given during the years of struggle, President Machel insisted that hospitals and other medical facilities should be centers of education and production as well as of treatment. Literacy, hygiene and political education must all be given, and the staff must be "instructors, teachers and political commissars." (44, pg. IV-33)

2. Steps Following Independence¹⁵

On July 25, 1975, within a month of independence, FRELIMO nationalized health care and declared that all Mozambicans had a right to proper medical treatment. Already in April it had drawn up an emergency program that

15. In September 1975, Dr. Malcolm Seqall toured the newly independent Mozambique, visiting health facilities throughout the country. See source (41) for a report of his findings and impressions. See also Appendix 1.

provided for the repair of existing facilities, the training of medical assistants and the establishment of sanitary stations, small-town health clinics and rural maternity clinics. The UN helped to fund these efforts. (15, pg. 75)

Ninety percent of the doctors residing in Mozambique emigrated within six months of independence (18, pg. 7). By May 1976, the number of doctors for the entire population had decreased to 20, and the shortage of auxiliary medical personnel was equally severe.

The government quickly recruited almost 500 medical workers from abroad. The goals of the new national health program focused on preventive rather than curative medicine, development of accessible rural health services, and restructuring of existing hospitals. The program for the delivery of health care was largely redesigned during the transitional year of administration. The new plan called for functional positions of health promoters at the lowest level. They are to 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 are to 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 89 being planned. At a minimum these would be staffed by a nurse. Nurses in Mozambique can write prescriptions and make referrals. (71) Rural hospitals would form the next tier in the health care system, with 21 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 10 district capital hospitals, which were supposed to have surgical, obstetrical, dental, and pediatric facilities. (44, pg. IV-34)

In 1976, FRELIMO released a communique containing the resolutions from the 8th Session of FRELIMO's Central Committee concerning the health situation in Mozambique. The communique, which has two parts, is included in Appendix 1. Part I describes the development of FRELIMO's medical policy during the period of the armed struggle; Part II describes the state of medical practice at the time of independence, as well as FRELIMO's general health orientation. In addition, the communique describes the reasons for the nationalization of health services.

In the 1977 Third Congress Economic and Social Directives, the following policy was approved regarding health:

"The nationalization of health has opened up perspectives that will enable this sector to be organized at the service of the working class.

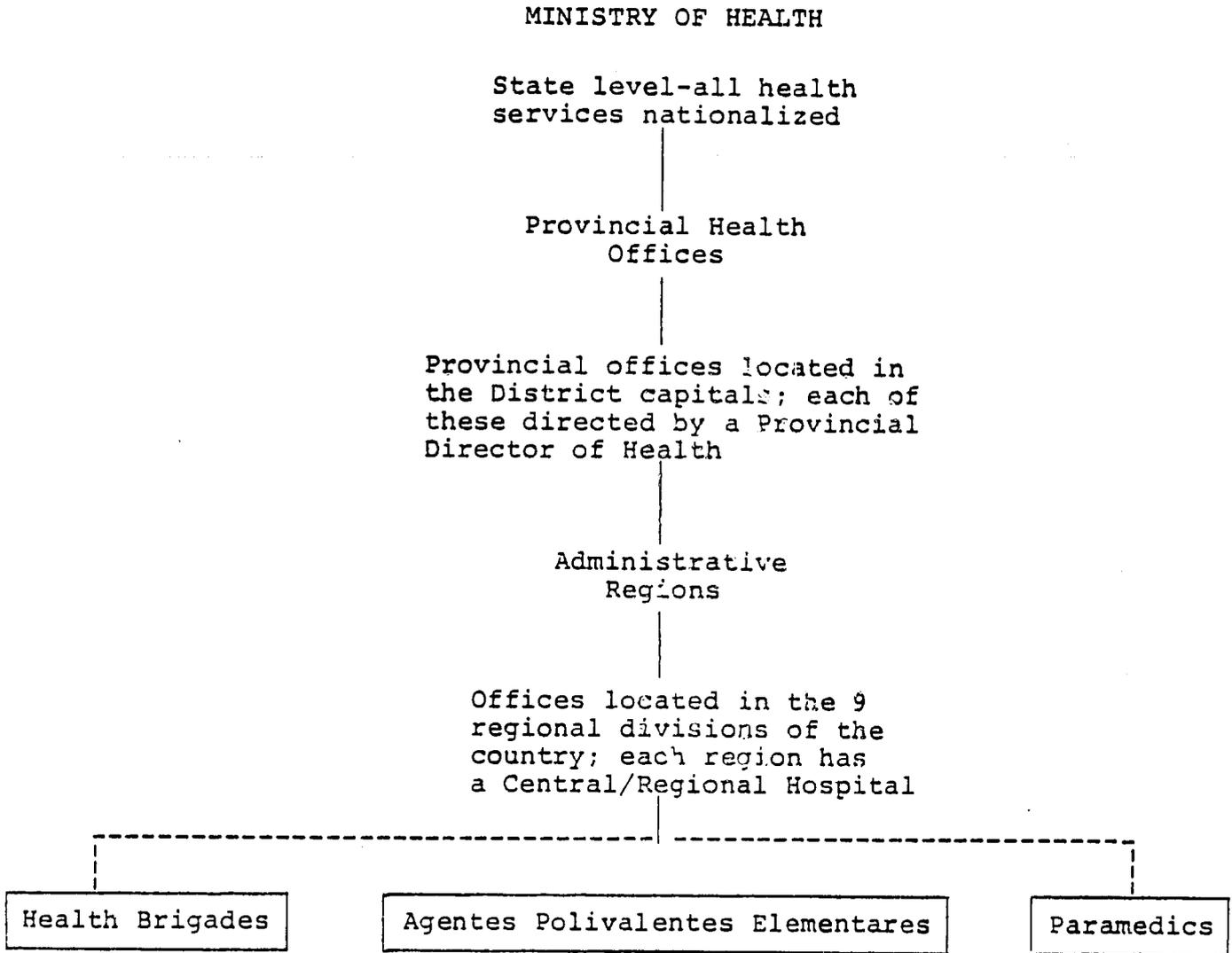
Taking advantage of the experience in the liberated areas, preventive medicine must be given more importance than curative medicine and the broad masses should themselves be involved in protecting their own health, giving priority to sanitary and social coverage of the organized centers of production in the country.

Materializing the people's right to health demands the continuation and intensification of the fight against divisionism, elitism, racism and opportunism that characterize the structures and colonial working methods in the health sector." (47, pg. 52)

3. Organization and Administration

The Ministry of Health is responsible for the total supervision and coordination of all health services in the country. The Ministry is headed by the Minister of Health, who possibly is a member of the Central Committee or of the Permanent Political Committee of the Central Committee. In April 1977, the Minister of Health was Dr. Helder Fernando Brigido Martins (38, pg. 608).

A 1977 source shows the organization of the Ministry of Health, as of April 1975¹⁹:



16. This source, (51), was unclear as to where the three divisions in boxes fit into the organizational structure.

The regional and local health care services are provided by provincial health offices located in the district capitals and by the regional administrative offices. A Provincial Director of Health directs the health care services in the province. Each regional administrative area (9 regions) has a central regional hospital. (59, pg. 29)

Health care services are basically free to all and cover preventive care, rehabilitation and recuperation, as well as in-patient treatment, drugs, and food. Only out-patients are charged for consultations (22 cents, or 7 escudos), and the sliding fee cannot exceed fifty cents. If an individual cannot make the payment, the government will assume the cost. (18, pg. 8)(71)

4. Health Expenditures

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

(millions of 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

(44, pg. IV-32)

Figures from 1972-73, showed the health budget to be 4.9 percent of the national budget and 0.9 percent of GNP; government health expenditures per capita were \$2.47. (70, pg. 74)

To help finance programs under the Fourth National Development Plan during 1974, the Transitional Government of Mozambique approved an additional special allocation of 229 million escudos under the extraordinary budget. Of these 229 million, 212 million were to be allocated to health.

(51, pg. 22)

The budget for 1975 was set at 12,800 million escudos. The biggest item was, as before, transport and communications. Priority allocation was made for education, agriculture, and health, this expenditure being higher by 745 million escudos than in 1974. Defense expenditures were cut by half and amounted to about 600 million escudos. (13, pg.

28)

A substantial expenditure increase was forecast for the 1977 budget, with health spending rising from 498,000 contos in 1976 to 1.2 million contos in 1976 (24, pg. B306) Health expenditures accounted for more than 11 percent of the budget in 1977. (51)

The Government approved a budget of 12,600 million escudos (\$362 million) for FY 1978 with an expected deficit of 2,600 million escudos. The biggest allocation was given to defense and security (3,650 million escudos, \$91 million), followed by education and health (3,320 million, \$83 million). The next largest item of expenditure was for increased capacity for economic production by the state sector (2,577 million escudos, \$64 million). (4)

5. Human Health Resources

The most complete listing of health personnel is from the year 1971, as reported in a recent WHO annual:

WHO 1974 statistics show the beginning of the attrition: 15,520 inhabitants per physician; 26,740 inhabitants per nonphysician primary health worker; 3.1 support personnel per physician (70, pg. 79). In 1975, before independence, it was estimated that the ratio of doctors to population ranged from one physician to 14,000 persons in the province of Lourenco Marques, to only one physician to 250,000 persons in Nampula Province. There were only about 360 nurses in government service. (49, pg. 12)

After the large-scale emigration of physicians caused by the prohibition of private practice, physicians were provided by several Eastern Block nations. By June 1976, the distribution of physicians by cities was as follows: (59, pg. 45)

<u>CITIES</u>	<u>PHYSICIANS</u>
Nampula	12
Quelimane	5
Ilha	1
Nacala	4
Vila Cabral	1
Beira	22
Tete	3
Cabora Bassa	2
Luabo	1
Marromeu	1
Vila Pery	1
Sul do Saue	4
Maputo	100
TOTAL	<u>167</u>

By late 1976, such countries as the People's Republic of China, the Soviet Union, the Democratic People's Republic of Korea, and Zambia had sent a total of at least 40 doctors and more than 10 medical specialists, some of whom may have been doctors, to Mozambique. (15, pg. 78)

The Ministry of Health reported at the beginning of 1977 that doctors of 25 nationalities were working in Mozambique, and that 16 other countries would shortly be represented in Mozambique's medical program. The group of several hundred included medical personnel from socialist, African, and Western countries. (22, pg. 47)

Crash training programs have been instituted to confront the problem of shortage of trained personnel. Mozambique has introduced a variety of one- and two-year training courses in addition to the long courses which produce doctors and nurses. Four centers are operating, in Maputo, Beiera, Quelimane, and Nampula. A fifth was planned for Tete in 1977. In 1976, between 300 and 500 students were being trained. The aim was to graduate 1,000 students as medical assistants each year; the need for equipment, educational material, and personnel is great. (10)

In mid-1976, Mozambican nationals were reportedly being sent abroad in great numbers to be trained as doctors and nurses. (15, pg. 78)

In 1977, under a UN project "Health Manpower Development", syllabi and teaching materials for five technical institutes for medical and paramedical sciences were being developed (66, pg. 13). At regional training centers throughout the country, paramedics or Agentes Polivalentes Elementares (basic multi-purpose agents) learn simple preventive and therapeutic skills which enable them to return to their communities and teach the peasants to protect themselves from the most common diseases. These health workers are chosen democratically by the villagers to ensure a high degree of popular confidence. The person selected must be 17 or older and literate, although in some cases individuals who have the confidence of their community but lack sufficient education can take an intensive preparatory course. In return for his or her services, the local community provides the health worker with housing, food, and other material support. By the middle of this year it was expected that several thousand of these health agents would be trained. Ultimately, government plans call for one local health worker for every 1,500 people. Additionally, FRELIMO is retraining health workers who were employed during the colonial period as all-purpose medical personnel to travel between communities providing back-up support and advice to the local health worker. (18, pg. 8)

The Eduardo Mondlane University in Maputo offers a major program experimenting with different ways to solve problems in rural Mozambique. Students are sent to villages to understand their problems, and villages send representatives to take a two- or three-month intensive course at the University. The program includes experiments in ways to purify water, to construct latrines, to make building materials, to construct better houses and day care centers, and to preserve food by smoking and drying--all experiments using local materials and techniques. (72)

Little information is available on the traditional medical healers or their present role. The tribal diviner still appears to have considerable influence, according to one source. Besides diagnosis, he also acts to cure diseases; remedies include both magical and medicinal treatments. He possesses a practical knowledge of herbs and treatments taught to him by his predecessors (44, pf. VI-30). The strongly secular FRELIMO government has consistently condemned "unethical" practitioners of witchcraft. (15, pg. 106)

6. Health Facilities and Services

Statistics differ widely on exact numbers of facilities and equipment.¹⁷ WHO lists the following numbers of medical establishments, type of administration and beds for 1972:

	Type of Administration	¹⁸ Establishments	Beds
General and Rural Hospitals -	T	106	6,740
	A	87	5,511
	B	7	606
	C	12	623
Medical Centers -	A	283	317
Specialized Hospitals -			
Maternity Hospitals -	A	179	1,977
Dermato-Venereology Hospitals -	A	1	48
Trypanosomiasis Hospitals -	A	8	134
Tuberculosis Hospitals -	A	1	216
Mental Hospitals -	A	3	1,130
Leprosy Hospitals -	A	7	479
Totals -	T	588	11,041
	A	569	9,812
	B	7	606
	C	12	623

For all hospitals, there were 770 inhabitants per bed, or 13.0 beds per 10,000 inhabitants. For general hospitals, there were 7.9 beds per 10,000 population. (No figures available on rural hospitals). In 1972, there were 0.4 government medical and maternity center beds per 10,000 inhabitants. For government maternity hospital beds the ratio was 2.3 beds per 10,000 populations. Source: (69, pg. 76ff.)

17. See 59, pg. 36-41 for a listing of pre-independence general hospitals, beds and services and selected medical laboratories.

18. T = Total establishments
 A = Government Establishments
 B = Private, non-profit establishments
 C = Private, profit establishments

WHO statistics from 1973 show 636 inhabitants per hospital bed (70, pg. 79). In the government's Economic and Social Directives from the Third Congress in 1977, it was projected that by 1980 there would be 1.25 beds for every 1,000 persons, "ensuring an equitable geographic distribution." (47, pg. 54)

A visitor to Mozambique's hospitals in 1976 reported on the shortage of drugs, personnel, basic equipment, and spare parts. Hospital wards in rural areas are often open and huts, with wooden beds made out of branches. (10) Accessibility of rural health services has been made even more difficult due to the damage done to transportation services in the country.

"Within the hospitals...the better accommodations are now allocated to those with more serious problems, and not on the basis of class or skin color. The government, through 'dynamizing groups' at the various hospitals, has also encouraged patients to organize themselves and elect a representative council which meets with the state-appointed hospital commission. The monthly meetings permit the ill not only to point out serious problems such as the insensitivity of doctors or the poor quality of the food, but to acquire a sense of confidence and self-respect... Patients are also expected to participate in hospital health education and nutritional classes, which provide them with basic information to disseminate within their communities." (18, pg. 9)

Blood banks are located in the central hospitals and plasma needs are imported. In the Third Congress Directives it is projected that "the Medicines and Medical Articles Center in Beira should be finished by the end of 1977, and by 1980 a pharmaceutical industry must be created with a

capacity to ensure our needs in essential products." (47,
pg. 54)¹⁹

The Zimbabwe African National Union (ZANU), a part of the Patriotic Front, has founded a hospital and training facility, the Zimbabwe Institute Hospital, in Manica Province, Mozambique. ZANU has issued an international appeal for medical supplies, books, and other training materials.(8)

In the ZANU refugee camps, a series of self-reliance schemes have been initiated, including agricultural projects so that people can grow their own food. (Many of the projects were destroyed during attacks in which crops were also poisoned). The camps in May 1978 had five doctors and some state registered nurses. They have an extensive program for training medics and a group of public health workers who assist in organizing the location of wells and digging of latrines. They also train psychiatric advisors, nutritional assistants, first-aid workers, and laboratory assistants. They receive assistance from the government of Mozambique (19 pg. 19). Their medical system is decentralized--their outreach includes people in the liberated and semi-liberated zones, the contested area and the 'protected villages.' They also run schools through secondary school levels. (19, pg. 19-21)

19. The application of sanctions and the closing of the borders with Rhodesia have made it necessary for the government to maintain larger inventories of food, medicines, and items of machinery and spare parts previously obtained from Rhodesia. (52, pg. 8)

Rehabilitation centers have been established for persons injured in the war. One such center in Nangade was initiated by FRELIMO in 1972 in Tanzania; it was moved inside Mozambique soon after independence. Centers were severely limited by the lack of doctors, physiotherapists, teachers of braille, wheelchairs, and other resources. The Nangade center had its own farm where the handicapped worked, a literacy program, and a craft center. A machine workshop had been left by the Portuguese but the machines were broken. Water came from a stream at the bottom of a steep hill and was being fetched by the disabled patients.(10)

The Social Action Program under the Ministry of Health is charged with responsibility for all pre-schoolers, orphans, handicapped children, and older people. In 1976, there was only one worker in the department trained in pre-school education, who was beginning to train others.(10)

A visitor to an orphanage or children's village reported that it had 32 infants, 73-pre-school and 155 school-age children. The trained staff consisted of two persons responsible for health, three persons from the Social Action Program and four teachers. People were assigned to do carpentry, tailoring and building and to teach these skills. A group of women, substitute "mothers", were caring for the children, whose parents had either been killed, were ill, or who had abandoned them. Children stay at the infantario

until they are 12 or 13 and are then sent to FRELIMO high schools. In this particular infantario two medical assistants were responsible for the children there, as well as for the surrounding population. A doctor came once a month.

(10)

7. Preventive Health Measures

In June, 1976, Mozambique's first national vaccination campaign was launched in three northern provinces most affected by the war against Portugal; these areas also have had large numbers of returning refugees. The campaign was organized by a central administration in the Ministry of Health and supported by the political, administrative, and health structures throughout the country, as well as by the active participation of the people.²⁰ In addition, financial and technical support was provided by UNICEF, WHO, and the UNDP.

A 1978 source reports that more than six million persons have been vaccinated so far. The intent of the three-year campaign is to vaccinate all Mozambicans against smallpox, all children between 6-15 years against tuberculosis, and those between six months and three years against measles (30, pg. 17). This year WHO declared smallpox nonexistent in Mozambique (48, pg. 8)

20. In a speech in June 1976, President Machel urged all Mozambicans to kill thirty tsetse flies every day, in an effort to reduce the numbers of that disease-carrying insect. (15, pg. 76)

A recent visitor to one of the vaccination centers set up as part of the vaccination program reported that there were three vaccination teams in a unit, each with seven vaccinators and one driver. Vaccinators are not medical personnel, but have been given a special 36-day training course by WHO. Charts were kept of all the vaccinations given and of the work done by the paramedical support structure. Before each team moved into an area, two people were sent ahead to make contacts with the regional "chief responsables" and with the local FRELIMO people in the village, which enabled the village to understand the need for vaccinations before the team arrived.(10) The "dynamizing groups" explain to the people what the vaccines are, what their effects are and what the dangers of the diseases are. (17, pg. 60)

Each team visited approximately two villages every day, averaging between 1,300 and 2,000 vaccinations daily. (From June 14 - August 20, 1976, 222,435 vaccinations had been given). Each person vaccinated is given a small card which indicates the date of the vaccination and the vaccines given. School children in each village are mobilized to fill in the cards, since the bulk of the population cannot read or write.

In addition to the vaccination campaign, another major national preventive health campaign begun in 1976 was

to build pit-latrines. Radio, newspapers, visual models, posters and pamphlets were all used to mobilize the populations.²¹ Latrines were dug and built collectively in each village. (10)

Dr. Helder Jose DaSilva, the current Joint National Director of Preventive Medicine, has been developing health education materials, particularly for use in areas where people read very little or not at all. Hygiene courses are given for teachers and hygiene instruction is part of the education program for grade-schoolers. (10)

In the Ministry of Health, the Nutrition Section is part of the Division of Preventive Medicine. In the past a Mozambican Nutrition Committee existed, whose functions were the coordination of research. The Ministry of Development and Economic Planning has entered an agreement with UNDP on a project "Nutrition Policy and Programme Advisor." (66, pg. 13)

Teachers and students participate in food production activities in the schools. (15, pg. xi)

The Organization of Mozambican Women (OMW) is active in informing women about MCH services and their importance for both mothers' and infants' health. As in many aspects of life in the new Mozambique, health services are linked

21. Beliefs, such as one commonly held in Cabo Delgado that women who use public latrines will become sterile, hamper acceptance of such campaign. (18. pg. 8)

to political mobilization and the educative work of political organizations. Pregnant women must show evidence of a monthly check-up, recorded on a national health card on which vital statistics, records, or inoculations, diseases, and check-ups are listed. If they cannot show regular visits, these women risk not being admitted to the maternity clinic when the time comes to deliver the baby--a strong incentive employed by the government to encourage consistent utilization of provided services.(71)

8. Industrial Health Measures

Little information is available on the government's policy toward occupational health issues, but a recent article provides some indication. In the coal mines of Moatize, two major mine accidents occurred: one in September 1976, and a second in August 1977, in which some 250 Mozambican miners died, trapped underground by gas explosions.

Both the miners and the government accused the privately-owned company of indifference to safety precautions, following a doubling of production between 1973 and 1976.

A serious drop in output followed the two accidents, as reopening mine shafts proceeded slowly, and miners refused to work without major changes in safety and living conditions. Rescue operations in both 1976 and 1977 were dependent on specialized teams flown in from South Africa, as the company itself had no trained rescue workers.

In late 1977, with the aid of technicians from the German Democratic Republic, work began on setting up a mine rescue center and on instituting new safety procedures. The government, which already held 10 percent of the company's shares, was also active in programs to improve the living condition of miners. Mozambique's Minister for Development and Economic Planning chose Moatize to announce a program of planning in which private enterprises must be subordinate to national objectives. Finally, the government reached the decision that only with nationalization could the miners' problems be solved; the company was nationalized and state-owned operations were set up. (18, pg. 11)

V. FOREIGN ASSISTANCE

Assistance from other governments and organizations has been substantial in Mozambique, particularly in the areas of refugee and flood relief, health, and food supplies. Some of this assistance has already been mentioned in this report.

Because it is not possible to give a comprehensive listing of health-related assistance to Mozambique,²² in part because of lack of exact information and in part because some assistance cannot be broken down as to sector, the following summary is given. It should provide a good basis for determining priority needs and recommendations.

Health-related assistance to Mozambique has been mainly in the following areas:

- supply of physicians and auxiliary health personnel
- medicines, vehicles, and hospital equipment
- general food supplies, agricultural production, and nutrition-related support
- training assistance for health manpower
- vaccination campaign support assistance
- water supply support

22. The reader may refer to (44, pg. III-3III-7) for a listing of all assistance projects to Mozambique for 1976, including bi-lateral and multi-national assistance. Source (58) provides comprehensive background data on external donor assistance to Mozambique, as of January 1978. UN documents, particularly (49), (52), (54) and (55), provide excellent, detailed information showing UN assessment of health-related priority areas and kinds of assistance offered. Sources (6) and (7) give 1977-78 assistance from the International Red Cross.

- environmental health and sanitation aid
- support to mobile health clinics.

Major donors in health-related assistance are the Soviet Union, Cuba, certain Eastern European socialist countries, Sweden and other Scandinavian countries, Zambia, the International Red Cross, and a multitude of UN agencies.

VI. OPPORTUNITIES FOR HEALTH ASSISTANCE: AN ANALYTICAL PERSPECTIVE

A. HEALTH NEEDS AND THE PROSPECTS FOR DEVELOPMENT

While most newly independent African nations have had to contend with severe political and economic difficulties upon achieving independence, probably none has been faced with problems of the magnitude and character of those faced by Mozambique. The legacy of several centuries of colonial rule is an overwhelmingly illiterate population subsisting largely in rural areas on low-yield peasant agriculture and on wage labor in the mines of South Africa. When the Portuguese left in 1974-75, they took with them many of the assets they had developed in Mozambique and the technical capacity to manage what little productive assets they left behind. At independence, Mozambicans faced the monumental task of nation-building saddled with a massive debt to Portugal and possessing few physical or human resources needed to develop the infrastructure and productive capacity that are the fundamental prerequisites for development.

The bitterness of the colonial legacy, which differed only in degree from that facing other new nations of Africa, has been compounded in Mozambique, however, by its support of the struggle for majority rule in neighboring Rhodesia. While this involvement may be the logical outgrowth of its own long struggle for independence, the social and economic

cost to Mozambique is staggering, and would probably be impossible to continue without substantial external aid from the international community. The economic loss resulting from the closing of the border with Rhodesia in 1976 (estimated at \$125 million annually), as significant as that is, is really only a part of the total cost of Mozambique's support of ZANU on its territory. Increasing numbers of refugees from both sides of the border are an added burden to a woefully inadequate government capability to provide services, which in many border areas have been impaired or destroyed by attacks from across the border. Furthermore, the struggle has increased Mozambique's dependence on South Africa for wage employment and essential commodities. At the same time, other factors have worsened the country's trade situation, with exports falling and imports rising, a fall in agricultural production in particular requiring large-scale imports of food. Recent devastating floods caused additional suffering and loss where these had already been almost too much to bear.

The complexity and uncertainty of the political struggle in which Mozambique is involved makes it somewhat difficult to assess its prospects for development. If one can assume, however, that there will be an end to armed conflict (at least within Mozambique) within the next few years, and a period of relative political stability in which development

proceeds along the lines so far followed by FRELIMO, Mozambique's long-term prospects are good.

FRELIMO's development strategy is centered on the development of communal villages throughout the country, similar to Tanzania's ujamaa villages. While developmental progress will emphasize agricultural production, there is an ideological commitment to the concept of decentralized, integrated, multi-sectoral development of communities which decide their own priorities and implement projects themselves.

The FRELIMO health policy is a good example of this holistic approach to development. As can be seen from the resolutions of the 8th Session of the FRELIMO Central Committee (see Appendix I), better health for the people is seen both as a service all have a right to receive, but also as an element and outcome of an overall social/cultural organization, and a precondition to economic advancement.

The broad, community-based approach to health care delivery, the emphasis on preventive care, and the deprofessionalization of medical care are manifestations of what is apparently a thoroughly revolutionary approach to developing a health system in a developing country. The key elements of the approach seem to be as follows:

- Organizing and providing disease care services and preventive activities, and supporting health promotive activities throughout the country, are the exclusive responsibility of the government;

- Better health is a collective responsibility, not the responsibility of medical care professionals providing or "producing" cures or treatments to individuals;
- Health workers are to consider themselves in service to the masses, having been selected from among the people they serve; and
- The organization of health prevention, promotion, and treatment services will have a central political function of diffusing the new social concepts of equality and service.

The elimination of all private health care activities in Mozambique followed by the articulation of the above approach presents a setting for the development of health services that is rather unique in a developing country. There has been general agreement among development theorists that poor health can be a significant factor restraining economic advance, and it appears that the health status of Mozambicans being among the worst in all of Africa has certainly been a factor in keeping the country poor. However, although there has been increasing theoretical speculation that improved health can yield substantial economic returns, there are as yet few instances of empirical evidence satisfactorily supporting the theory. The possibility does exist that Mozambique may show health outcomes as a result of its health policies that will clarify the value of the theory.

While the promise of Mozambique's health strategy appears to be great, there are potential factors, some

tending to promote positive results, others tending to inhibit them, that will impact the ultimate long-term outcomes. On the positive side, many of the theoretical postulated "optimal" elements have been included in the approach. Costs are minimized relative to potential impact through to emphasis on community-based preventive and promotive care and on low-cost personnel drawn from the village. Curative care, hospital-based technology, and professional expertise are explicitly de-emphasized. Moreover, a broad definition of health underlying the decentralized and integrated community development approach to its promotion will help to take advantage of local resources that can be mobilized when they might not otherwise be available.

On the negative side, the immediate effects of improved health (to the extent they are reflected in reduced infant and child mortality) can increase the number of dependents (non-productive children) in the population causing an increase in consumption without a concomitant increase in production. Moreover, improved adult health can increase the supply of available labor and militate against labor productivity advances. Both effects of improved health can be overcome by the positive impacts of improved population health status over the long-term. The question pivots on the ability of the nation to finance the negative

medium-term impacts until the positive effects start to dominate.

In any event, there are few if any countries which have as decisively and as definitively reorganized their approach to health in as revolutionary a fashion as has Mozambique. None has been faced at the same time with the magnitude of health problems, not to mention the uncertainties and dangers in the wider developmental context, at the start of a nation-building effort. The progress of the effort will be watched closely by the international community for the results of the experiment.

B. THE SOCIETY AND THE ECONOMY: NEW STRUCTURES AND PROCESSES

Now in its fourth year of independence, the Government of Mozambique, led by the Marxist-Leninist revolutionary party FRELIMO, is continuing to establish and develop totally new political structures and processes that will provide leadership of what is now a mixed economy evolving toward state-led, decentralized communal development. Many of the ideas and methods being put into practice by the top leadership had their genesis in the period of guerrilla warfare against the colonial regime; during the latter years of the conflict, FRELIMO was in control of most of the northern part of the country and was able to begin the long process of political development within an illiterate and

largely impoverished population. FRELIMO's approach assumed social, political, and economic development to be inseparable elements of one process, which required for its success the active participation of all the people.

The procedural emphasis on equal participation by all in societal and economic enterprises in fact appears to have been given higher priority than restructuring the organization of the society and the economy. Practical necessities have required the government to maintain some private enterprises and to take an evolutionary approach toward decentralization of planning and governmental functions.

Two of the most important structural innovations of the government are workers' "production councils" and "dynamizing groups." The former have assumed authority in all enterprises for deciding on production standards and guidelines for work management; the latter are a more-or-less formalized method used by the government to promote and elicit popular participation in all sectors and at all levels--the dynamizing groups serving as the principal link of the party with the people. A full discussion of what is known of the political system was presented in section II.D. While it is beyond the scope of this paper to analyze the political and economic structure of Mozambique, it is important in the consideration of possible assistance to the health sector, to recognize the significance of these new structures and attendant processes in determining the way

the health system is likely to be developed and the manner in which donor assistance is likely to be viewed and handled. Some of the major aspects of such consideration should include the following.

Because of the fact that the new structures and processes may be as underdeveloped as the people's participatory capacities and inclinations, there may be good reason to expect that administrative practices, lines of authority and communication, and relationships among various health personnel will vary greatly from one locale to the next and from one level of the system to the next. Moreover, there are likely to be highly varied interpretations of the party's statement on health development, e.g., the circumstances and manner in which politics can be legitimately presumed to take precedence over technique. It is easy to imagine serious confusion arising over this particular tenet, although it is possible that consensus on the implications of this ideology has already been achieved. It must be remembered that FRELIMO would quite likely view diverse and varied health care management styles and emphases to be reflections of what they hope decentralization will achieve. At any rate, conventional Western principles of health planning and administration are unlikely to be of much practical applicability now and for the foreseeable future in Mozambique.

On the other hand, it is conceivable that "Western-trained" health planners could be of considerable assistance if they could be open-minded enough to accept the political and managerial innovations as representing, at the least, the fundamental reform of the health policymaking and programming mechanisms that can facilitate the implementation of what should be recognized as enlightened national health policies (given the current national needs and resources).

Regardless of the degree of efficiency with which the new structures and processes are working in the health field, and regardless of how alien these innovations may appear to Western health care professionals and development specialists, one should keep in mind the uniqueness of the approach: health care is the exclusive responsibility of the public sector, and health protection is the collective responsibility of the people. Although the magnitude of health needs is staggering, and threatens to increase many times over in the event of expanded war, the government has taken some decisive and definitive actions directed at improving the health of the masses. Although the severe shortage of skilled personnel and managers makes any concerted and nationwide effort extremely difficult, the fact of a strong and definitive government direction in shaping health policy is a very positive and significant foundation for progress. Western analysts are likely to learn as much as

they may be able to offer, as long as the ideological dimensions of the system are considered to be beyond the scope of legitimate analysis or assessment.

C. DONOR INTEREST AND THE GOVERNMENT'S ABSORPTIVE CAPACITY

Interest among foreign donors in assisting the Government of Mozambique has been considerable, partly out of political sympathy and partly as a result of the evident widespread suffering and illness borne by the population due to colonial exploitation, military conflict, and recent floods and food shortages. A large measure of assistance comes from the Communist bloc states and from the United Nations' agencies.

From all the available evidence, however, the ability of the government to fruitfully use all assistance, process gifts, and/or implement development projects is extremely limited. The number of educated and trained Mozambicans is very small, and those in the public service have been overburdened by the relatively large amounts of aid that have come in from all parts of the world, all of varied types and dimensions. Assistance in health has been evidently more than can be managed, although it is apparently less than is needed (according to the United Nations).

This problem of absorptive capacity is somewhat aggravated by the innovative structures and processes adopted by the government (discussed above) for carrying out development

processes. The emphasis on popular participation and on the primacy of politics is certain to have considerable impact on the rapidity with which aid can be absorbed and the utility it has. If Mozambique is overwhelmed by the level of foreign assistance directed at it, it will not be the first developing country to learn of the nature of the generosity of developed nations. At some point, additional assistance becomes a negative influence, primarily because of the time and effort some donors require of top government officials in developing projects.

To a large extent, donors should bear the bulk of responsibility for restraining their activity and generosity when it is apparent that the recipient country does not have sufficient personnel to use it effectively. Considerable thought and analysis should be directed at ascertaining the absorptive capacity of the government and in assessing whether any contemplated assistance would do more harm than good. This requirement of further program development for assistance to Mozambique cannot be stressed too strongly, since any recommendation against giving aid is so contrary to the interest and inclination of those whose job it is to give money away.

VII. CONCLUSIONS, PRIORITIES, AND RECOMMENDATIONS

This review of the Mozambique health sector and brief analysis of some key health assistance issues is intended to serve as technical groundwork for any team that might be invited by the Mozambique Ministry of Health to visit the country.

Although this review could not benefit from access to primary sources of data, the availability of recent and reliable secondary sources supports the general conclusions that are the bases for the priorities and recommendations below.

Conclusions of this review are as follows:

- the national health policy of Mozambique is clearly articulated, is appropriately targetted to the health needs of the people, and uses a programmatic approach that has the potential for being both effective and affordable;
- the establishment of communal villages together with the use of "dynamizing groups" have the potential for facilitating the village-based delivery of health services which is a key part of the government's national health policy;
- The government's commitment to the tenets of national health policy (i.e., importance of village-based, non-physician health workers; collective responsibility for preventive services; decentralization of responsibilities and management; etc.) is more than just rhetorical and ideological; there seems to be a seriousness of purpose as well as political and practical commitment to the policies and programs;

- the government needs little assistance in policy and program development (it knows well how it wants to develop its health system) but does need technical and resource assistance in a number of areas of priority health needs, which appear to be as follows:
 - a. the health problems of refugees and other displaced populations are acute;
 - b. the lack of qualified medical personnel is currently a serious constraint to the development of the country's health services, particularly for the rural areas;²³
 - c. medicines and preparations are not produced in Mozambique and must be imported; the importation of these and other medical supplies and equipment, while crucial, is prohibitively costly, given the country's current financial difficulties;
 - d. immediate food needs and nutrition-related support are a high priority, given Mozambique's difficulties in agricultural production;
 - e. availability of health manpower will be limited until the development of adequate training facilities;
 - f. infectious and parasitic diseases pose a major health problem in Mozambique; the success of the Ministry's emphasis on preventive programs is dependent on assistance to on-going vaccination campaigns;

23. In an interview in 1976, Dr. Martins, Minister of Health, explained that U.S. doctors could be very helpful but stressed that general attitudes were almost as important as technical skills. "They must not come here to tell us how to make our revolution. They must understand our politics and be able to take part in the whole life of the community. Some of the recently recruited technicians from Europe had difficulty in accepting FRELIMO'S emphasis on universal sharing in manual labor."(10)

- g. a large portion of disease is associated with unsafe drinking water supplies and lack of adequate waste disposal and other sanitary measures; and
- h. there is immediate need for basic out-reach health services in rural areas which can be provided by expanded and improved mobile health clinics.

An additional area of health-related support which should also be noted is that of the transportation sector,--"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." (44, pg. IV-34)

Although Mozambique has had millions of dollars worth of pledges from the international community, " the total lags far behind the \$420 million estimated as needed by the UN." (13, pg. 28)

Currently there is a Congressional prohibition against direct assistance to Mozambique and the U.S. Executive Directors of the international financial institutions have been instructed by the President of the U.S. to vote against any proposed loans to Mozambique. Financial aid to Mozambique may, however, be of three kinds: 1) emergency food aid, 2) indirect assistance through multi-lateral organizations, and 3) assistance to refugees.²⁴ "Further assistance, using the

24 The U.S. has already provided Mozambique direct assistance for flood victims (\$25,000 in food aid) and assistance in the implementation of sanctions against Rhodesia (\$10,000,000 pledged as of January 1978.) (58, pg.1)

three categories outlined above, might be an initial means of responding to some of Mozambique's needs within a regional framework strategy for assistance without violating the present Congressional injunction." (58, pg. 1)

On the basis of the above conclusions and priorities, this review has the following recommendations:

(1) International donor support to the Mozambique health sector should be significantly increased primarily by providing resources and commodities that are used directly in the provision of basic services and in the development of the village-based, outreach network;

(2) Professional technical assistance should be provided where obviously needed and requested (e.g., in developing a training capability), but the focus should be on direct resource and budgetary support; and

(3) The United States should join in the international effort to assist in improving the health of Mozambicans and their health care system; it should explore ways and means for collaborating effectively with the Government of Mozambique and with other donors that have been active in providing health assistance.

APPENDIX I

RESOLUTIONS OF THE 8th SESSION OF FRELIMO CENTRAL COMMITTEE ON HEALTH CONDITIONS IN MOZAMBIQUE (1976)

A. INTRODUCTION

Protection against health hazards is a right of every citizen. This right was always denied to our people by Portuguese colonialism.

From the beginning, FRELIMO in its programs denounced the degrading status of the medical situation of the Mozambique masses under the colonial regime. The existing structures were designed almost exclusively to serve the small minority of settlers, while over large areas of the country a nurse or first-aid agent was never found.

B. FRELIMO'S MEDICAL ACTION DURING THE ARMED STRUGGLE

FRELIMO's action in the medical field began before the triumph of the armed struggle and the proclamation of national independence.

The first units of our guerrillas included nurses or first-aid technicians. Although their principal task was to give medical assistance to the fighters, it was soon verified that the main work had to be directed toward the population whose medical conditions were aggravated by colonial-military repression.

Accordingly, the number of fixed or mobile health outposts was increased to assist the population who were victims

of bombing and attacks of the colonial army, or plagued by endemic diseases which spread because of difficult sanitary conditions resulting from the armed conflict.

This action in the first phase had an essentially curative character.

At the same time, we were effecting a preventive type of action.

Mass vaccinations were conducted in the liberated zones, reaching thousands of people, on a scale never registered by colonialism in spite of having at its disposal technical and material means far superior to ours.

The success of our action is due to the fact the FRELIMO, which is deeply implanted among the Mozambican people, knows and interprets their aspirations and organizes in collaboration with the masses the resolution of their problems. The masses, following the indoctrination given by FRELIMO militants, fully realize the advantages resulting from mass preventive campaigns (vaccination and others) and actively participate in them.

From another viewpoint, the priority allocated to preventive medicine is a means of serving the large masses more efficiently.

In the colonial-capitalist system, diseases were a medium of enrichment for doctors and nurses. In the rural villages, sickness permitted quacks and witch-doctors to enjoy prosperous business.

Our objective, however, is not exploitation nor serving the needs of a limited number of persons. Our objective is to

create conditions for the masses to organize themselves to defend their own health.

Therefore, the health struggle ceases to be an exclusive task of the Health Services and becomes a struggle in which all militants, citizens, sectors and structures are engaged.

If, during the struggle, the insufficient supplies and few technical resources obstructed action against all diseases, we soon came to realize that it was within our means to launch a battle against some of them.

Accordingly, this was done for sicknesses resulting from lack of body hygiene, lack of food or primitive hygienic conditions. The fight against these types of diseases ought to be an essentially preventive one of eliminating the causes or sources of such diseases. To create the habit of regularly washing the body with soap or its substitute, to burn wastes, to avoid using stagnant waters are above all organizational tasks which fundamentally depend upon the degree of political mobilization, and were therefore within each of our capacities.

Against the same background is placed the campaign to improve dietary habits. In some regions such food items as salads and vegetables were introduced, the raising of chickens and other poultry was organized and new food habits were created through the destruction of certain taboos or irrational prejudices.

This priority given to preventive medicine over curative medicine, decided in the 5th Session of FRELIMO's Central Committee and in the Tunduru Health Conference, does not simply

correspond to a decision to effectively employ available means. It is essentially a political choice. It is the principle of giving priority to politics over technique, which is a constant factor of our action and one of the pillars of our medical work.

Against this background, FRELIMO'S hospital is not a simple post where sick persons are treated; it is a diffusion center for our lines of thinking; it is a center of a new life, a base of support for the development of new types of relationships.

This action is particularly important in the domain of health, for otherwise we easily fall into a narrow professionalism. Striking signs of this professionalism are the reasonings that "what really matters is to give a clinically correct treatment"; or "an aspirin cures in the same manner in a reactionary hospital as it does in a revolutionary hospital."

Our experience has demonstrated that what is essential is to create a type of relationship between the sick person and the health technician who treats him, a relationship with a sense of mutual trust, which allows a productive accomplishment.

The sick person should see, through the conduct of the doctor, nurse and helper, through their work and their language that they are servants of the people and supporters of the interests of the exploited majority.

C. THE SITUATION FOUND IN THE MEDICAL SECTOR THROUGHOUT THE COUNTRY

We state that medical work in the liberated zones was marked by two essential characteristics:

- Its objective was that of serving the masses;
- The people participated in the execution of a great number of medical tasks, defending their own health conditions.

In September 1974, upon assuming control of the Government on a national basis, we had to face the situation existing in zones which, until the end of the armed conflict, had remained under the enemy's control.

What were the characteristics of this situation?

In the first place, the existing structures were oriented to satisfy the needs of a privileged minority.

On the other hand, the motive force behind the practice of medicine was not human suffering but profit-making. In colonial-fascist medicine, with rare and distinguished exceptions, there prevailed the unbridled search for riches. This is why we find a medical structure wholly in imbalance.

In urban centers essentially populated by colonialists, there were found structures capable of rendering medical assistance in keeping with the economic capacities of each individual. It is in these urban centers that the private consulting rooms and nursing homes were found, centers of exploitation, where the sick person is considered as a source of income; this is where the doctors and nurses amassed their wealth. In the Government hospitals which sheltered the less privileged of the suburban population, the medical assistance was very poor, and the sick person was attended to in keeping with his economic capacities.

Consequently, there existed in these institutions various categories or classes (of patients), corresponding to the socio-

racial make-up of the colonial-capitalist society, passing from the white colonial settler down to the "assimilated" and the "indigenous" individuals.

In these institutions there was a complete lack of interest in the sick person of poor means, verified in the manner of examination by the doctor or nurse, in the lack of hygienic conditions in the installations themselves, in the liberalism and total absence of a sense of discipline among the workers.

In this sector, during the colonial period there was already a relatively large number of Mozambicans toiling as nurses. As victims of ferocious racism existing in the hospital, Mozambican nurses were prevented from assuming responsible jobs, these being reserved for foreigners. At the same time, working in a sector ruled by the spirit of profit-making, in their daily contacts with doctors who were making fortunes, they ended up dominated by the same mentality, and they desired to accumulate wealth themselves.

Accordingly, if on account of the exploitation and discrimination to which they were subjected they became conscious of the oppression, their aspirations were essentially of a capitalist nature. On the other hand, in spite of all the discrimination, the Mozambican nurse appeared as a relatively privileged person compared to the great mass of people.

Therefore, we can understand how the nurse's national feeling, born in revolt, did not overcome the desire to replace the settler.

The rural areas did not have medical infrastructures, for the means of enrichment of the doctor or the nurse did not exist there. "To be assigned to work in the bush" was considered punishment or bad luck. The populations were left to themselves without any organization or orientation. The few settlers there had the means to go to the urban centers for medical assistance. Because nothing was planned, because the population was neither organized nor mobilized to fight diseases, we frequently saw the outbreak of epidemics, at times very hard to control, which caused a large death toll. This is why Mozambique has one of the greatest infant mortality rates in the world.

While preventive medicine already has an important role in the liberated zones, in the enemy-occupied zones the prophylactic fight against diseases is still to be organized.

As in the liberated zones, the choice of preventive or curative medicine was decided in the colonial zone according to a political criterion: priority was given to curative medicine, since it provided the means of enrichment to health personnel.

Here it is evident that the Health Services were not conceived to serve the people, but only to serve a minority; on the one hand, the sick did not have the means to pay and the doctors and nurses simply aimed to exploit them.

This colonial-capitalist conception of health services also affected health education, where the recruitment of students was based on social and racial discrimination. Consequently, the majority of qualified personnel is foreign.

The few Mozambican nurses, by their privileged status within Mozambican society, constituted an elite class from the social and economic standpoint, and benefited from some of the crumbs of the private clinic system through their work in the consulting rooms and nursing homes.

Conscious of the depth of the problem, and of the need to provide radical solutions necessary for the liquidation of exploitation and profiteering from sickness, the Government of the People's Republic of Mozambique decreed the nationalization of medicine and the prohibition of the practice of profit-making medicine.

Accordingly, the first steps towards the organization of health services to really serve the large working masses are now taken, for the consolidation of democratic popular power. The colonial medical structure is shaken to its very foundations. The doctors and the nurses are forced to work exclusively for the State, and to serve the sick without any discrimination.

This measure is welcomed with satisfaction by the people who see their own aspirations realized, and their interests defended; but many doctors and nurses do not accept it, because they find themselves deprived of their own means of exploitation. Accordingly, if some doctors and nurses devote themselves with energy and enthusiasm to the dynamization of new medical structures and to the service of the people, others flee. Others, on being sent to various State hospital institutions, create therein true foci of subversion, from where they spread

reactionary slogans. These pernicious people encourage lack of interest in work and in hospital hygiene, lack of discipline and negligence, and deliberately seek to promote chaos with the objective of showing the people that nationalization is a bad measure. They do not hesitate to encourage the departure of doctors, through rumors and slander. They take advantage of daily contact with the sick to spread the wildest rumors and slanders among them. Racism and opportunism find a propitious environment in this atmosphere.

It is now meaningful to define the main themes which ought to guide the political and organizational battle in the domain of health.

Our policy ought to be oriented towards:

- the development of intensive political work in the hospitals, with the fullest participation of the health personnel and the sick, in order to liquidate divisionism, elitism and racism, and thereby create true political unity;
- the development of the consciousness of the social task performed by the workers on the health front, reinvigorating their devotion to the cause of consolidation of democratic popular power through the development of the spirit of "serving the people";
- the establishment of the structures capable of implementing the guidelines delineated by our organization, so that the discipline may be consciously assumed as the sentinel of our political line. (In this context, it is particularly important to create Party Committees in direct liaison with the Party and the Government.)
- the mobilization and organization of the people, so that they may consciously and actively participate in the struggle against disease. By implementing the slogan that "each one of us is converted into a medical agent to defend hygiene and maintain the health of the community, and to create conditions to prepare the body for the struggle."

(Accordingly, it is important to maintain life and to apply in a creative manner our practice of giving priority to preventive medicine, which should meet the needs of the great majority by improving hygienic conditions with a consequent decline in contagious diseases. Accordingly, it is important to pursue the action initiated with the National Campaign for the Sanitation of the Environment which, for the first time on a nationwide basis, permitted the mobilization and awakening of the consciousness of the entire people in the fighting of sickness, using all our organizational and material resources.)

- the giving of priority to the liberated zones which are the vanguard zones, the laboratory where we collect our experiences, so as to develop and consolidate them in their role of the secure rearguard of our Revolution.
- the finding of a correct solution to the problem of first aid helpers and other medical personnel trained by FRELIMO during the liberation struggle, so that they may discharge their performances without bureaucratic red tape, but also to become, in the localities affected, the dynamic nucleus of the revolutionary combat on the health front.

Therefore, while implementing our medical policy, we will be imparting the true spirit of a National Health Service at the service of the people.

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