STAFF APPRAISAL REPORT

MALAWI

FAMILY HEALTH PROJECT

JUNE 1986

Population, Health and Nutrition Department

CURRENCY EQUIVALENTS

Currency Unit = Malawian Kwacha (MK)

US$1.00 = MK --

MK1.00 = US$ --

SDR1.00 = MK --

METRIC EQUIVALENTS

1 meter (m) = 3.28 feet

1 square meter (sq.m) = 10.76 square feet

1 kilometer (km) = 0.62 miles

1 square kilometer (sq.km) = 0.386 square miles

GOVERNMENT FISCAL YEAR

April 1 - March 31

MALAWI

FAMILY HEALTH PROJECT

CREDIT AND PROJECT SUMMARY

Borrower: Republic of Malawi

Credit Amount: SDR --- million (US$15-20 million)

Terms: Standard

Cofinancing: To be determined. In particular interest has been expressed by UNICEF, WHO, ODA, CIDA, USAID, GTZ and the Government of the Netherlands

Project Description: The objectives of the project are to: improve health status particularly of mothers and children through expansion and strengthening of existing health programs; increase the availability and accessibility of a complete range of child spacing services including surgical contraception; strengthen the Ministry of Health's (MOH) capacity to plan, manage and evaluate health services in the framework of decentralized health system; and design and implement a multisectoral family health program. The project would comprise of two parts: Part A, which includes activities to be undertaken by the MOH and Part B which includes multisectoral family health activities coordinated by the Economic Planning and Development Department (EPDD), Office of the President and Cabinet. Part

A comprises the following components: increased coverage of peripheral health services and strengthening of district health services, manpower development, development of management and support systems, strengthening and expansion of family health programs, strengthening of disease prevention activities, and development of nutrition activities. Part B comprises the following components: introduction of family health activities in the functional literacy and women's programs; introduction of family health activities in youth programs; development of information, education and communication activities in family health; census support; and development of population planning capability in the EPDD. The project would support activities begun in the first 3 years of a 5-year program developed by the government.

Benefit and Risks:

The project would directly benefit about 2 million people in 9 districts through the expansion of primary health care; about 2 million women and children through the strengthening and expansion of family health programs; about 1.5 million people throughout the country through disease prevention programs; about 750,000 women and children through development of nutrition activities. The country as a whole would benefit from improved health

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services resulting from reorganization of the health care delivery system and from strengthening management and support systems. Family health activities through key ministries are expected to reach about 2.5 million adult men and women (600,000 through the functional literacy program, 300,000 through women's programs, 100,000 through youth programs and 1.5 million through information, education and communication activities). The ability of the Government to plan and evaluate population activities will be enhanced through support for the census and for the development of population planning capability in the EPDD. The main risks of the project would relate to the ability of the various government agencies to implement programs efficiently. The project attempts to minimize these risks through coordination of multisectoral family health activities by the EPDD. Changes in the organizational structure of the MOH have already begun and the reorganized MOH is expected to be able to implement the project satisfactorily.

Project Cost: US$42.9 million

Financing Plan: The financial plan would be finalized when the availability of cofinancing for the project is known.

Map:

MALAWI

FAMILY HEALTH PROJECT

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Basic Data

(All figures apply to 1985 unless otherwise indicated)

General:

Area	118,500 sq.km
Population	7,154,000
Population Density	74 per km^2
Rural population as a proportion of total population	91.5% (1977)
Crude birth rate	54/1000 population
Crude death rate	21/1000 population
Rate of population growth	3.2%
Infant mortality rate	151/1000 live births
GNP per capita	210

Health:

Population per physician	52,893
Population per nurse	2,978
Population per hospital bed	7,127
Proportion of births attended	60% (1984)
Proportion of women receiving antenatal care	70% (1984)
Proportion of children between 1 and 2 years of age fully immunized	55%
Government expenditure on Ministry of Health as proportion of total budget	4.8%

Definitions

Contraceptive Prevalence Rate: The percentage of married women of reproductive age who are using (or whose husbands are using) any form of contraception.

Crude Birth Rate: The number of births per 1,000 population in a given year.

Crude Death Rate: The number of deaths per 1,000 population in a given year.

Dependency Ratio: The ratio of the economically dependent part of the population to the productive part, arbitrarily defined as the ratio of the young (those under 15 years of age) plus the elderly (those 65 years of age and over) to the population in the "working ages" (those fifteen to sixty-four years of age).

Infant Mortality Rate: The number of deaths of infants under one year old in a given year per 1,000 live births in that year.

Life Expectancy at Birth: The average number of years a newborn would live if current age-specific mortality rate maintained. Life expectancy at age five and above can

	exceed life expectancy at birth substantially if the infant mortality rate is high.
Mortality:	Death as a component of population change.
Rate of Natural Increase:	The rate at which a population is increasing (or decreasing) in a given year due to surplus (or deficit) of births over deaths. The rate of natural increase equals the crude birth rate minus the crude death rate per 100 people. It also equals the population growth rate minus emigration.
Rate of Population Growth:	The rate at which a population is increasing (or decreasing) in a given year due to natural increase and net migration, expressed as a percentage of the base population.
Total Fertility Rate:	The average number of children that would be born alive to a woman (or group of women) during her lifetime if during her child-bearing years she were to bear children at each age in accord with prevailing age-specific fertility rates.

ABBREVIATIONS

ACMO	Assistant Chief Medical Officer
CBR	Crude Birth Rate
CDR	Crude Death Rate
CMO	Chief Medical Officer
CMS	Central Medical Stores
CO	Clinical Officer
DCMO	Deputy Chief Medical Officer
DMO	District Medical Officer
EN	Enrolled Nurse
EPDD	Economic Planning and Development Department
EPI	Expanded Program of Immunization
FFS	Family Formation Survey
GDP	Gross Domestic Product
HA	Health Assistant
HI	Health Inspector
HSA	Health Surveillance Assistant
IEC	Information, Education and Communication
IMR	Infant Mortality Rate
IUD	Intra Uterine Device
MA	Medical Assistant
MCH	Maternal and Child Health

MOCS	Ministry of Community Services
MOH	Ministry of Health
MOWS	Ministry of Works and Supplies
MYP	Malawi Young Pioneers
NSO	National Statistical Office
ODA	Overseas Development Administration
OPC	Office of the President and Cabinet
PHAM	Private Hospitals Association of Malawi
PHC	Primary Health Care
RNI	Rate of Natural Increase
SCO	Senior Clinical Officer
TBA	Traditional Birth Attendants
TFR	Total Fertility Rate
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

MALAWI

FAMILY HEALTH PROJECT

I. INTRODUCTION

1.01 Malawi is a land-locked country located in east central Africa. It has a total land area of approximately 118,500 km² of which approximately 36,200 km² is considered arable. Geographically, Malawi is bordered to the north by Tanzania; to the east, south and southwest by Mozambique; and to the west by Zambia.

1.02 Malawi is divided into three administrative regions which vary significantly in topography and climate. The Northern Region consists largely of plateaus ranging from about 1,500 to 2,500 meters high and with temperature ranges between 15°c and 18°c. The Central Region has low lying terrain along Lake Malawi rising to highland plateaus ranging from about 1,000 to 1,200 meters and with a temperature range similar to the Northern Region. The Southern Region is distinguished by widely varying climatic and topological areas: the Shire Valley, in the extreme south, is very hot with an average annual temperature of 27°c; and the highest mountain, Mount Mulanje and the Shire highlands which have generally cool temperatures.

1.03 Between 1967 and 1979 Malawi's Gross Domestic Product (GDP) grew at an annual average rate of 5.5%. In 1979-1981 the economy of Malawi fell upon hard times. As a result of deteriorating terms of trade, drought and disruptions on external transport routes the GDP fell by 2.7 percent, deficit on the current account and in the Government budget ballooned to unsustainable levels, and investment and savings rates fell sharply.

1.04 The Government launched a two-pronged effort to deal with the problems of the economy: a stabilization program designed to reduce short-term fiscal and balance of payments disequilibria and a structural

adjustment program designed to improve efficiency of resource use and to ensure that positive growth of per capita income could be re-established and maintained over the medium and long-term, within the context of a manageable balance of payments current account deficit. These programs have been supported by three structural adjustment operations from the World Bank and a series of standby and an Expanded Financing Facility from the International Monetary Fund. As a result of the improved policy environment, more favorable climatic conditions and better export prices, the Malawian economy began to recover in 1983-84. Gross Domestic Product (GDP) grew to 4.1 percent in 1984, with expansion occurring in most sectors. The balance of payments deficit on the current account was reduced and the budget deficit as a percentage of GDP was also reduced significantly. Despite continued implementation of these programs, Malawi's economic recovery has slowed in 1985. It is estimated that GDP growth fell from 4.1 percent in 1984 to less than 2.5 percent in 1985. This was the result of exogenous factors. It is believed that the recent setbacks are temporary and that, with continued implementation of the Government's program, growth of per capita income can resume and financial equilibrium can be restored. Despite the progress made in the past twenty years, Malawi is still one of the poorest countries in the world.

II. SECTOR STATUS AND ISSUES

A. Population

2.01 Demographic Situation. The population of Malawi was enumerated as 5.55 million in September 1977. It had increased by 37 percent since 1966, when the enumerated population was 4.04 million, thus implying an average annual rate of intercensal growth of 2.9 percent. The population in 1985 was estimated to be 7.15 million and the growth rate 3.2 percent. Malawi is one of the most densely populated countries in Sub-Saharan Africa, equalled or surpassed only by Rwanda, Burundi, Nigeria and Uganda. The national density according to the 1977 census was 59 inhabitants per km^2, and this may now have risen to 74 per km^2. There is considerable variation within the country, however, with 1977 regional densities ranging from 24 in the Northern Region, to 60 in Central Region, to 87 in the Southern Region, and district densities varying from 11 to 230 persons per km^2. The level of urbanization in Malawi is low by any standard. If an urban locality is defined as a locality with a minimum of 2000 inhabitants, 8.5 percent of the population in 1977 lived in urban areas, and only 5 percent in 1966. The urban growth rate has been high, however, averaging 7.6 percent between 1966 and 1977.

2.02 Between 1966 and 1977 rural-to-urban moves made up about 35 to 45 percent of all internal migration. Other important migration streams were into areas of commercial agricultural development or new agricultural settlements (such as the north and east of Central Region) and out of areas with population pressure on limited land resources (such as the Shire highlands) or out of areas lacking in general economic development (such as

most of the Northern Region). External migration, important in past decades, has undoubtedly fallen and is expected to continue to diminish.

2.03 The level of mortality in Malawi from the 1950s to the mid 1970s was exceptionally high by any standard, and declined only very slowly during this period. According to Bank estimates, life expectancy stood at only 37 years in the late 1950s, then rose to 39 years by the mid-1960s and to 41 years by the early 1970s. These low levels of life expectancy are due primarily to extremely heavy mortality in childhood. Even in the early 1970s, the national infant mortality rate (IMR) was as high as 190 per thousand live births, with 36 percent of all children dying before reaching their fifth birthday. The IMR is estimated currently to be 151/1000 live births. Childhood mortality as severe as this is exceptional in any part of contemporary Africa, or elsewhere in the world. Reasons for this exceptionally high mortality are only partly understood. A Family Formation Survey (FFS) undertaken in 1984, and whose results are currently being analyzed may provide some information into the causes of childhood mortality. By contrast, adult mortality appears to be unremarkable by Eastern African standards. The level of fertility is high. In the mid 1970s, the total fertility rate (TFR) was estimated at between 7.5 and 8.0 and is unlikely to have changed since. Regionally the TFR is highest in the Central Region at around 8.5, lowest in the Southern Region between 7 and 7.5. The TFR in the Northern Region is close to the national average.

2.04 Population Projections. The following table summarizes the projected size and growth of the population of Malawi over the next 30 years. Rapid population growth is all but inevitable over the next few

decades. If fertility remains constant, the population will grow from 7.15 million in 1985 to 11.95 million in 2000 and 21.31 million in 2015. If there is standard decline in fertility, the population will grow to 11.94 million in 2000 and 17.09 million in 2015. If there is accelerated decline in fertility, the population will grow to 10.63 million in 2000 and 13.29 million in 2015. By 2000 an accelerated fertility decline could reduce population increase by 12%, and within 30 years from now, a fall in fertility would cut the population increase by a quarter to a third.

MALAWI: POPULATION PROJECTIONS 1985-2015

	Population (in millions)			Ratio of Population to Base 1985 population in	
	1985	2000	2015	2000	2015
A. Constant Fertility	7.15	11.95	21.31	167	298
B. Standard Decline	7.15	11.44	17.09	160	239
C. Accelerated Decline	7.15	10.63	13.29	149	186

2.05 Socio-economic Implications of Population Growth. Malawi faces the prospect of a 50 to 70% increase in population size over the coming 15 years, and a doubling or tripling within the next 30 years. Such massive and rapid population growth will have significant socio-economic consequences. During the 1970s economic growth averaged 6.8% annually while the population growth rate during the same period was 2.8 to 2.9%. This resulted in a continued increase in per capita income. Between 1979 and

1983 annual growth in GDP has failed to match population growth, with a consequent slight decline in average income. Much of the economic growth is due to estate agriculture and smallholder agriculture. Continued rapid growth in agriculture is essential to provide food for the growing population. However, the growth of the agriculture sector is constrained by shortage of land. All agricultural land in Malawi will have to be brought under cultivation to support the population within the next 30 years if fertility does not fall. By 2015 there will be a land deficit of 13% with constant fertility. The effect on nutritional intake is already being felt. There is evidence that suggests that current domestic food production falls significantly short of required levels. At present this deficit may be as much as 15%. The following table shows the land required to support the population at present nutritional levels and land productivity under three fertility assumptions.

TABLE

Fertility Assumption	Land Needed to Support Population (km^2)		Percent of Total Land Resources* Require for Cultivation	
	2000	2015	2000	2015
Constant Fertility	24,054	42,888	63	113 (deficit)
Standard Decline	23,018	34,389	61	91
Accelerated Decline	21,259	26,749	56	71

*not including land under estate cultivation in 1985.

2.06 If fertility remains constant, there are major implications for

primary education expenditures. To achieve current enrollment targets for primary education, annual costs would have to rise from K24.4 million in 1985 to K68.2 million in 2000 and to K159.3 million in 2015 (a 552% increase). With accelerated fertility decline, annual costs would rise from K24.4 million in 1985 to K61.2 million in 2000 and to K66.1 million in 2015 (a 170% increase). Thus rapid fertility decline could result in annual savings of K93 million by 2015. Similarly, a decline in fertility could cut annual secondary education expenditure within 30 years by 17% if moderate, and by 43% if rapid fertility decline occurs. The need for expanded Maternal and Child Health (MCH) Services will also increase substantially. If no fertility decline occurs, the number of children under 5 years of age will increase by 70% in 15 years and will more than triple within 30 years to 4.5 million. To maintain present levels of services MCH expenditures would have to grow by 3.8 percent annually. Since coverage is still very incomplete much larger cost increases will be necessary to achieve an adequate standard of MCH care. Reduction in fertility will not only reduce health costs, but enable the country to increase the quality and scope of the health services.

2.07 Population Policy. Although until recently population growth has not been considered a problem by the Government of Malawi, child spacing has come to be recognized as a valuable component of MCH services on the grounds that unregulated pregnancies endangered the health of both mothers and children. In 1982 the Government decided to include child spacing services as part of the MCH program. The overall goal of the child spacing program is "to reduce maternal morbidity and mortality by allowing the mother to rest between pregnancies and to reduce infant and child morbidity and

mortality". The Government further stated that the introduction of child spacing services did not interfere with the right of the family to have as many children as desired, and that the child spacing program was not a tool of population control. These statements reflected deeply rooted attitudes in Malawian society favoring large numbers of children.

2.08 The last two years, however, have seen significant changes in attitudes at all levels. There is increasing concern over the consequences of current rates of population growth, and there is awareness that rapid growth may be a constraint to development. At the 1984 International Population Conference in Mexico, the Government expressed its support for the concept of educating the public about the benefits of small families. At the request of the Government, IDA undertook a Population Sector Review in October 1984. Two major recommendations emerged from the review. The first was that the Government establish a formal capacity for population policy formulation and planning. The second was that the MCH program and its child spacing component be further developed and strengthened. For planning it was recommended that the Government establish a population planning capacity in the Economic Planning Division, Office of the President and Cabinet, to develop a multi-sectoral population program. Population related activities should be initially started in priority ministries, such as Education, Community Services, Agriculture and the Information Department of the Office of the President and Cabinet. For MCH and child spacing services it was recommended that the Child Spacing Program should be revised for incorporation into the five-year National Health Plan then under preparation. A seminar was held in June 1985 to discuss the report and the

major recommendations were accepted by the Government. The introduction of the child spacing program has generated interest in child spacing among the public, despite the limited availability of services. Though no systematic surveys have yet been undertaken, it is increasingly evident that demand is growing rapidly. Random record checks at these clinics show that an increasing proportion of clients come from outside the catchment areas. People are willing to travel long distances to obtain contraceptives. This phenomenon has been observed in hospitals in urban and rural areas alike. Demand for services has led the MOH to develop plans for a nationwide child spacing program. The results of the FFS are expected shortly and will contribute to a better understanding of the determinants of fertility in Malawi.

B. Health

2.09 Health and Nutrition Status. Mortality is high, particularly amongst infants and children. The Crude Death Rate (CDR) is estimated to be 23 and the Infant Mortality Rate (IMR) 151. While mortality has declined from its high levels in the 1950s and 1960s (CDR 30, IMR 200), compared to neighboring countries, Malawi's infant and child mortality are very high. Though there are limitations with regard to its quality, completeness and accuracy, available mortality data strongly suggests that about one fourth of 0-4 mortality occurs in the first month of life and another fourth between the second and twelfth month of life, and the remaining half between the first and fourth year of life. Infant mortality in rural areas is reported to be twice that in urban areas. The leading causes of death (inpatient) data in children 0-4 years are: measles (16.2%), pneumonia

(13.0%), nutritional deficiency (11.2%), malaria (10.1%), anemia (9.1%) and diarrheal diseases (8.4%) (Annex 1, Table 1). The leading causes of death (inpatient data) in those older than 5 years are: pneumonia (7.7%), tuberculosis (7.6%), accidents (6.3%), malaria (5.9%), anemia (5.8%), diseases of the nervous system (5.8%), and nutritional deficiencies (3.2%) (Annex 1, Table 2). The following inferences can be drawn from these data:

- 57 percent of all deaths in Malawi occur in children under five years of age; and
- five conditions - nutritional deficiency, pneumonia, malaria, measles, and diarrheal diseases - account for at least one-third of all deaths in the country and are easily preventable or treatable.

2.10 Data on morbidity is obtained from outpatient facilities only. The leading causes of morbidity are: malaria, respiratory infections, diarrheal diseases, skin diseases, inflammatory eye diseases, trauma, venereal diseases, and hookworm and other helminthic infestations. Among children 0-4 years, malaria (35.6%), tuberculosis (19.8%), diarrheal diseases (8.7%), inflammatory eye diseases (7.9%) and skin diseases (5.6%) (Annex 1 Table 3) are the five leading causes of outpatient morbidity. These account for 77.6% of morbidity of children and are easily preventable.

2.11 Under-nutrition is a major underlying factor for the high mortality and morbidity levels, particularly in children under 4 years of age. Nutritional information is sparse and generally outdated. The 1981 National Sample Survey of Agriculture revealed that Malawian infants have a low prevalence of wasting, but a very high level of stunting. A distinct

growth faltering begins at 6 months of age, possibly due to insufficient food intake and the onset of infectious diseases. The prevalence of underweight and wasting was found to be higher between 6-24 months, coinciding with the nutritionally critical period of weaning. Prevalence of stunting increases with age through the first three years when it reaches a peak of 65% and levels off at 60% for the remaining two years. This shows that most children get stunted during the weaning period, a time of maximal growth. A more recent survey (in one district only) has highlighted the problem of food availability. Sixty-nine percent of women interviewed said they had insufficient food for their families. Taking April as the first month of the harvest, 30% of women reported they ran out of food in September and 60% in December.

2.12 Health Plans. Shortly after independence the Government launched its first five-year plan (1965-69). Resources were devoted primarily to curative services and development of nursing manpower. Evaluations of plan implementation showed that these interventions, though important, were unlikely to improve health status. With assistance from the World Health Organization (WHO), the Government produced a 15-year health plan (1973-1988) whose priorities were: development of basic health services; control of communicable diseases; manpower development; construction of new hospitals and improvements of existing ones; and, reorganization of the Ministry of Health (MOH). In 1975 emphasis was placed on the development of maternal and child health services and in 1978 the MOH introduced a primary health care program on a pilot basis. Implementation of the 15-year health plan was hampered by: lack of financial resources, lack of trained manpower

and inexperienced health administrators. Recognizing that the 15-year plan covered too long a time period and was no longer up-to-date, the MOH began preparation of a 10-year National Health Plan in 1983 through the first IDA-supported health project.

2.13 National Health Plan (1986-1995) and Health Policy. The National Health Plan has set the following medium term goal: "...to achieve a drop in early childhood mortality of 33.3% over a five-year period; to achieve an improvement in maternal health; and to impact on the extent and severity of illness due to major causes of morbidity 5 years of age and over through the Primary Health Care approach and/or core health services". To accomplish this goal, six specific objectives have been developed: (1) improve access to a rational network of available and acceptable facilities by extending the peripheral services, especially community based services and by modestly strengthening hospital facilities and staffing; (2) establish effective mechanisms for the MOH manpower development and the monitoring of deployment; (3) improve the management support of the enhanced health delivery system; (4) improve child survival of the under five age group; (5) improve health status generally by strengthening relevant programs; and (6) improve the nutritional status of mothers and children.

2.14 For the first five years (1986-1990) the plan assumes that there will be no real growth in the MOH's recurrent budget. Recognizing the budgetary constraints emphasis is placed on improved cost recovery and cost effectiveness. At the same time emphasis is placed on consolidation of existing services and expansion of priority health programs which have low recurrent cost or manpower implications. Recognizing the seriousness of the

nutrition problem the Plan has highlighted the development of nutrition activities. Given the resource constraints the MOH faces on the one hand, and the need for priority health programs on the other, the plan is modest in its resource requirements and in its expectations.

2.15 Organization of Health Services. MOH has primary responsibility for the development of policies, strategies and programs for health care in Malawi. Public health services are provided mainly by the MOH. The Private Hospitals Association of Malawi (PHAM) made up of church-related and other private voluntary agency facilities, is the largest non-government provider of health services.

2.16 MOH services are provided at four levels: community, health centers and rural hospitals, district hospitals, and central hospitals. Services at the community level consist of an extensive network of outreach activities through mobile clinics and the Primary Health Care (PHC) program, (Paras 2.35-36). Community level services stress activities and interventions associated with under fives care (health education, environmental sanitation, diarrheal disease control, immunizations, pre- and post-natal care, and growth monitoring). The MOH runs 162 health centers and 19 rural hospitals which offer similar services: curative care, pre-natal, natal and post-natal care, infant and child care, and all services provided at the community level. Many health centers also run nutrition clinics (nutrition education, food preparation demonstrations and free food supplements). There are 21 district hospitals run by the MOH which are the referral facilities for health centers. In addition, they offer all preventive services available at the health center. The two central

hospitals function as the referral hospitals for their respective regions. They are also training facilities for various training institutions. There is one general hospital. There are considerable regional variations with regard to the distribution and coverage of facilities. Twenty percent of all health facilities are situated in the northern region, 33% in the central region and 47% in the southern region for population of 860,000; 2,785,000; and 3,432,000 respectively. The percentage of population within 8km of a health facility is 57, 70 and 100 for the northern, central and soutnern regions respectively. There are a total of 11,664 beds in the country of which 6,017 are in MOH facilities. The quality of health services have steadily improved as a result of the increased ability of the MOH to post well trained health personnel to health centers and sub-centers. Utilization of hospital services (both inpatient and outpatient) is very high (Annex 1, Table 4). The same is the case with services provided at health centers and sub-centers where daily patient loads range between 100 and 150.

2.17 PHAM operates 20 district hospitals, 19 rural hospitals, and 97 health centers in the country. PHAM hospitals account for just over one third of all admissions. PHAM facilities see about 14% of total outpatient first attendances. The range of specific services offered by PHAM is similar to that of the MOH. Fees are charged for curative services though most preventive services are available free of charge. Despite efforts by the MOH and the PHAM secretariat the quality of services provided at individual facilities varies enormously.

2.18 The MOH recognizes the significant contribution to the provision

of health services and training of health staff made by PHAM. While it provides an annual subsidy the MOH does not propose to take over any PHAM units because of its financial situation despite strong pressure from church organizations. Instead plans have been developed to ensure close cooperation and coordination between PHAM and the MOH. These plans will enable the MOH: establish peripheral health staff positions in PHAM facilities; utilize the training capacity of PHAM for its training needs; integrate district level supervision and in-service training for PHAM and MOH programs; adopt standardized preventive and curative interventions at PHAM and MOH health facilities; and standardize job descriptions and training for health staff.

2.19 Local government authorities and other agencies such as the army, police, estates and industries provide curative and preventive services for their employees. Private medical practice is limited to about 35 physicians in urban areas. There are about 5,000 traditional healers and about 5,000 traditional birth attendants (TBAs) scattered throughout the country. By July 1985 about 800 TBAs had been trained by the MOH. Formal links between the MOH and traditional practitioners do not exist.

2.20 Management and Administration. The Principal Secretary is the senior manager in the MOH who is responsible for both its technical and administrative branch (Chart I). The Chief Medical Officer (CMO) has overall responsibility for all technical services. He is assisted by the Deputy Chief Medical Officer (DCMO) and other technical staff. On the administrative side the Deputy Secretary is responsible for the Planning Unit and for the administrative units such as finance, personnel,

administration and internal audit. Below the MOH, the health care delivery system has three levels, viz., regional, district and peripheral. Each of the country's three regions has a Regional Health Team comprising of a Regional Public Health Inspector and a Regional MCH Coordinator who report directly to their respective units at the MOH. The District Medical Officer (DMO) is responsible for all health services in the district and reports directly to the CMO. Peripheral health services are managed by the medical assistant in charge of the health center. Together with the health assistant he is responsible for supporting primary health care activities at the village level.

2.21 With increasing emphasis on preventive and rural health services ad hoc organizational and management changes have been made periodically in the structure of the MOH. However, the organization structure is cumbersome. Recognizing these problems, the Malawi Civil Service Review Commission undertook a comprehensive study of the MOH in 1984. The study highlighted the MOH's major management problems. First, the objectives of the MOH were not clearly defined and individual departments did not coordinate their activities. Objectives of individual departments were not well defined. Second, lines of authority were often unclear. Accountability followed professional rather than functional lines. Third, individual roles were inadequately defined and often there were no job descriptions. This led to ad hoc allocation of responsibilities and often resulted in reduced efficiency. Fourth, there were too many levels of authority in the administrative branch of the MOH. At the same time, the reverse occurred at the district level where a manager was expected to

manage too large working groups. Fifth, the decision making process was overcentralized. Routine operational issues were referred to the CMO which should have been dealt with lower down the hierarchy. Sixth, management support systems were inadequate. There was no firm control or monitoring of expenditures particularly with regard to vehicles and supplies. The MOH also failed to delete a number of redundant posts from its establishment list. This resulted in recruitment of non-essential staff in some sections while other sections with priority needs were unable to recruit essential staff. Seventh, the Regional Health Teams and District Health Teams typically lacked experience in planning and evaluation. Finally, there was inadequate supervision of peripheral health workers. Poorly developed supervisory systems, lack of training in supervision, lack of delegation of authority and transport shortages were the crucial factors responsible for poor supervision.

2.22 Following the Civil Service Review Commission, the MOH undertook additional studies on the operations of the country's two central hospitals through the IDA supported health project. These studies found that significant savings could be obtained from the operating expenses of the institutions.

2.23 Recommendations of the Civil Service Review Commission have been studied by the MOH and objectives for the Ministry have been drawn up. A new organizational structure has been developed (Chart II). The recommendations of the Commission together with the MOH's proposals are currently being reviewed by an inter-ministerial committee chaired by the Secretary to the President and Cabinet. A condition of negotiations would

be that the Government bring to negotiations a defined position and plan regarding reorganization of the MOH to IDA for review and comment by IDA (para 3.16).

2.24 Pharmaceutical Procurement and Distribution. Pharmaceuticals for the health sector are supplied by the Central Medical Stores (CMS), a self-financing and self-accounting body since April 1984. In 1983-84 its annual turnover was around K4 million. Pricing of drugs is currently fixed at CIF value plus 12.5% to cover all operating costs (up from 3% before April 1984). The CMS is responsible for procurement, inventory control and store keeping, drug assembly, repackaging and distribution, and manufacture of simple products. Since 1983, a program of continued upgrading of its operating procedures has been underway. Facilities for formulation and manufacture of simple drugs have been established in Blantyre. Regional stores are being constructed in Lilongwe and Mzuzu. Implementation of plans to improve drug procurement and monitoring control has begun. These activities when fully operational are expected to result in cost savings of K900,000 annually. The development of a district level network, establishment of a quality control laboratory, and further training of staff constitute the next phase of development of the pharmaceutical system.

2.25 Manpower and Training. There were 4,962 established positions in the MOH in June 1984. Nearly 15% of these positions were vacant (Annex 1, Table 5). A considerable amount of manpower development activities have been undertaken during the past 5 years. Annex 1, Table 6 presents the growth of health staff between 1978 and 1983 by category. From this table it is clear that some categories of staff are particularly affected. The

number of medical officers and dentists declined during this period whereas the number of clinical officers, enrolled nurses, laboratory technicians and health educators (manpower primarily staffing rural health facilities) rose substantially during this period. The MOH has concentrated upon the development of health auxiliaries and has been able to post most staff to rural health facilities. With low attrition rates (about 5% per annum) it is likely that the MOH will be able to produce adequate numbers of health auxiliaries to staff its facilities during the plan period (Annex 1, Table 7). Furthermore, PHAM training facilities produce more enrolled nurses they can absorb and the MOH can utilize them.

2.26 The question of shortage of doctors is, however, another matter. Malawi does not have a medical school. In the past, the country has sent candidates abroad to pursue medical studies. However, difficulties in securing admissions to overseas universities and the difficulties in persuading doctors to return has led to a chronic and serious shortage. The MOH is therefore considering establishing a medical school in the country. Feasibility studies have been carried out. These studies have highlighted the high cost of establishing a separate medical school and a teaching hospital. Recognizing the difficulties in such an approach, the MOH has recently been studying alternative ways to provide medical education in Malawi i.e. use of facilities at Chancellor College for pre-clinical studies or pre-clinical training of Malawian students abroad (with clinical training at home).

2.27 Efforts to establish continuing education programs for health workers began in 1984. However, few facilities exist and continuing

education programs are held at hotels at high costs at infrequent intervals. The other major problem with continuing education programs is the lack of coordination between major service programs resulting in duplication and wastage of scarce resources. These problems underline the inability of the MOH to plan and implement continuing education programs.

2.28 Maternal and Child Health (MCH). The MCH program was initiated in 1973 under the five-year mini-plan and an MCH department was established in the MOH under the Assistant Chief Medical Officer (ACMO), MCH. At the regional level, an MCH supervisor oversees MCH activities in each of the three regions. At the district level, a member of the existing district health staff, usually a nurse, is appointed as MCH coordinator. The objectives of the MCH program are to: strengthen and expand MCH services throughout the country; strengthen the training of health workers; increase immunization coverage of all children to 80% by 1990; improve nutritional status of children and decrease the incidence of underweight children through growth monitoring, nutrition education and food supplementation where necessary; use Traditional Birth Attendants (TBAs) to deliver MCH services; and, promote child spacing.

2.29 Child care services are provided through 1,075 static and outreach under-five clinics throughout the country. There were about 600,000 first attendances of children under one year of age in 1983. Immunizations are provided as part of the MCH program. Despite an impressive beginning, shortage of equipment and supplies, weak cold chain and poorly trained staff have resulted in the proportion of fully immunized children to decrease by about 20% since 1982. Present coverage levels are about 35%. Nutritional

surveillance and education activities are undertaken at health clinics. The quality and impact of these activities has not been evaluated.

2.30 Antenatal services include monitoring of pregnancies, identification of "at risk" cases, and health education and malaria prophylaxis, and are provided through 639 static (hospitals, health centers, maternities) and 700 outreach clinics. In 1982, there were 246,714 first attendances at antenatal clinics and 876,104 re-attendances.

2.31 In 1984, an evaluation was undertaken of MCH activities. The evaluation confirmed earlier field observations that the quality of services is consistently high and the people attending appeared to have confidence in the staff providing the services. However, coverage appears to be far from adequate; about 60% of women have at least one antenatal visit, some 40% of all pregnant women deliver at home, and over 50% of children aged four years and under are not being reached by MCH services. Services are constrained by lack of transport, drugs and IEC materials. Mothers with young babies under two years do not seem to use the services as much as mothers with older children. Also use of facilities for post-partum services virtually non-existent. This together with low immunization coverage and poor nutrition may be significant reasons for Malawi's high IMR. Unregulated fertility, often resulting in short birth intervals and early weaning, is another factor associated with continued high infant and child mortality rates.

2.32 Child Spacing. In light of the continuing problems of infant and child mortality, the MOH organized a workshop on Health and the Family in 1981 which recommended the introduction of child spacing services. In 1983

an initial two-year plan to initiate child spacing was prepared. The objectives of the plan were to: Orient health staff on child spacing; include general information on child spacing as part of all pre-service health worker training; provide technical training to providers of child spacing services; develop the capability of the MOH to implement the child spacing program; organize seminars to acquaint community leaders about child spacing; educate mothers and fathers on the importance of child spacing; provide child spacing services as an integral part of MCH services at various levels of the health care delivery system; provide clinical and applied research activities in sectors related to MCH and child spacing including fertility and infertility; and develop a simple system for monitoring and evaluation of child spacing activities.

2.33 In 1983, child spacing services were introduced in the two central hospitals at Blantyre and Lilongwe and the Zomba General Hospital. Initially, these services were provided by doctors alone. Shortly after the program was initiated, midwives were trained in child spacing, and currently they too provide services. The participation of midwives has resulted in a steady rise in the number of acceptors. As a result, clinics are now held every working day rather than on a weekly basis. The total number of attendances at the Queen Elizabeth Hospital's child spacing clinics were 8,281 of which 2,138 were new clients in 1984. Demand for services at the hospitals in Lilongwe and Zomba has also been growing steadily. Child spacing services are now available at all district hospitals and preliminary indications are very encouraging. No estimates of contraceptive prevalence rates are presently available. Training of trainers and service providers

has exceeded the targets. The MOH has begun to use the mass media to provide general information on family health. Community seminars have not yet been organized.

2.34 Despite a promising start, the program has experienced difficulties which have important implications for future child spacing plans. These difficulties have reduced the effectiveness of the health care delivery system and relate to the inadequacy of facilities, supplies and logistics problems and lack of a good reporting system. Facilities to provide child spacing services in Lilongwe have been totally unsatisfactory. Services are provided at a run down facility that is heavily overcrowded. The rapid and unforeseen growth in demand has resulted in a severe shortage of contraceptive supplies. The principal problems to date have been limited knowledge of possible demand and a lack of coordination between MOH headquarters in Lilongwe, which orders commodities, and the Central Medical Stores (CMS), which handles customs clearance, storage, and distribution of contraceptives. Demand has also been difficult to project since child spacing services have only recently become available and the MOH has no previous experience. The other major problem at present is the lack of a good data collection and record system. Forms for information on child spacing users are still under development. The program urgently needs a simple data collection record system that can be used by both Government and PHAM hospitals.

2.35 Primary Health Care (PHC). Following national seminars in 1978 the MOH began implementation of PHC, on a pilot basis, in three districts. The PHC approach adopted by Malawi consists of training district area and

health center staff in concepts, community sensitization and the establishment of village health committees (VHC). VHC's are responsible for initiating PHC activities at the community level. An evaluation of these activities undertaken in 1982 revealed a number of weaknesses in the approach. Consequently, the program was revised significantly and PHC activities were begun in a phased manner in 1983. In the first phase, PHC activities were to be concentrated in three districts. The MOH was able to cover nine districts by mid-1985 and other districts are eager to implement the PHC program. In the face of such interest the MOH undertook another evaluation of the program in 1985. The evaluation concluded that the PHC approach in Malawi is appropriately cautious and is education intensive. PHC activities are introduced into an area only after village health committees (VHC) have been formed and trained. The evaluation found that VHCs interacted well with health workers in their respective areas. Health workers visited VHCs on a monthly basis and the quality of the supervision was good. The provision of bicycles at the health center level considerably facilitated supervisory activities. The MOH has concluded that one health worker can effectively supervise 3 VHCs. Participation of communities was good and an understanding and acceptance of the concept of self reliance was developing. There was adequate intersectoral planning and implementation. It concluded that the education intensive approach adopted by Malawi is providing a solid base for nationwide expansion. The evaluation was unable to assess the impact of the PHC program because of the short implementation period.

2.36 Though the PHC program is making gains the evaluation identified

three major problem areas: transport; pressure of work; and continuing education. Area teams and VHCs felt that there was poor supervision from the district level because district teams lacked transport. In addition to strengthening the mobility of district teams the evaluation recommended continued use of bicycles and motorcycles at the area and village levels so as to facilitate further the implementation of field activities. Area teams were expected to cover large areas and hence the pressure of work was significant. Steps needed to be taken to reduce the work load of area teams through perhaps introduction of extension assistants or part time workers at the village level. The evaluation recommended strengthening continuing education programs for district PHC teams, area teams, health workers and village health committees.

2.37 Communicable Disease Program. Tuberculosis control activities consist of case finding, treatment and prevention through BCG vaccinations. These activities are undertaken in hospitals and a few urban clinics. There is little knowledge of the extent, severity and distribution of the tuberculosis problem. A nationwide tuberculosis control program does not exist. Malaria prevention activities consist of prophylactic use of antimalaria drugs and domicilliary treatment of malaria cases. No vector control activities are undertaken. Malaria prevention activities are integrated into the health sector. Chloroquine has been the drug of choice but there is increasing resistance to the drug. In some districts chloroquine resistance is as high as 40%. As a result the program plans to use amodiaquine for chloroquine resistant cases. Schistosomiasis is prevalent in the lake shore area, the Shire valley and highlands and in the

central plateau. It is rare or absent in the mountains above 1500 metres. Schistosomiasis control activities are currently limited to the lake shore areas where spraying with molluscicides is undertaken. Diagnosis and treatment of cases at health centers is unsatisfactory primarily due to inadequate training of health staff and lack of equipment and supplies.

2.38 Health Expenditures and External Assistance. Government resources finance a large proportion of the MOHs recurrent budget. the MOHs recurrent budget rose from K18.7 million in 1981/82 to an estimated K30.4 million in 1985/86 (Annex 1, Table 7). About 68% or K19.3 million came from the Treasury. The remaining 32% is expected to come from fees (4%) and external sources (28%). Between 1981/82 and 1985/86 non-treasury support for the recurrent budget ha ranged between 19% and 32%. Support for drugs and medical personnel cover a large proportion of external support. Annex 1, Table 8 shows that revenue from fees have not kept pace with the growth of health expenditure. Between 1975/76 and 1984/85 revenue from fees as a percent of gross MOH expenditure in constant prices, declined from 4.4% to 2.8%. It is expected that following revision of fee schedules, revenue from fees would rise to 4.3% of gross MOH expenditure in 1985/86. Health expenditures cannot be broken down easily by programs. Annex 1, Table 9 shows actual MOH expenditure by activity category in 1985/86. Eighty-one percent of the budget is expected to be spent on hospitals and only 6% on preventive activities. Between 1976/77 and 1985/86 total MOH expenditure has increased about five-fold with an average growth of 16.8% (annex 1, Table 10). When expenditure is adjusted for inflation the MOH's budget has still increased by about two-fold with an average annual growth of 6.4%.

Despite this growth the MOHs recurrent budget position is difficult and expenditures have consistently exceeded approved budgets by about 35%. This has been due, in part to inadequate budgeting for pipeline projects and in part to lack of a comprehensive health plan and lack of budgetary controls. On a per capita basis, health expenditures grew from K1.2 in 1975/76 to K4.3 in 1985/86 in current prices as from K1.6 to K2.2 in constant prices.With the preparation of the national health plan (paras 2.13-2.14) a more realistic projection of incremental recurrent costs has been undertaken. The incremental recurrent expenditures due to implementation of the first 5 years of the plan are expected to be K2.0 million at the end of the 5 year period. The project, which includes activities beginning in the first 3 years of the 5 year program, would have incremental recurrent costs of K2.5 million. Financial problems have adversely affected the implementation of earlier plans. The ceilings on the recurrent budget have limited the size of the development budget. The MOH would need an additional K6.03 million in the recurrent budget in order to adequately fund all ongoing and proposed activities. A significant increase in treasury allocations is unlikely during the plan's first five years. In view of the difficult financial situation, the MOH has taken a number of steps to improve the financing of the health services. Fees charged for private patients were revised in 1984. Other fee schedules for general patients were also revised. As a result fee collection is expected to rise from K570,000 in 1982/83 (3.3% of gross MOH expenditure) to K1.6 million in 1985/86 (or 4.3% of gross MOH expenditure). It is projected that in 1990 income from fees will rise to K5.3 million (6.8% of MOH expenditure). The other major area being pursued

is improvement of the operational efficiency of the MOH. With the restructuring of the CMS and the strengthening of the pharmaceutical sector annual savings of K910,000 are expected. Other cost saving measures, particularly with regard to hospital management are being introduced. Through improved efficiency of its operations the MOH expects to save K1.2 million in 1986 rising to K4.3 million by 1990.

2.39 The approved capital budget of the MOH, as a percent of total government budget, increased from about 1.2% in 1977/78 to 4.8% in 1985/86. Actual expenditures in constant prices per capita increased from K0.19 in 1977/78 to K0.56 in 1983/84. The capital budget of the MOH for 1985/86 is estimated to be K7.5 million. Of this K6.3 million is externally financed (Annex 1, Table 12). Only 15% of the capital budget is financed from government resources. Underutilization is a prominent feature of the capital budget though the situation has improved in recent years. From 1976/77 to 1983/84 underimplementation averaged 28% ranging from 42% in 1981/82 to 6% in 1983/84. Limitations of the recurrent budget and delays in construction were the main constraints.

2.40 Income to PHAM is derived from government allocations, fees and overseas donations. MOH contributions account for about 35%, fees 34% and overseas donations for about 30% of its income. The total government assistance to PHAM in 1984/85 was about 11% of MOH expenditure. In 1985/86 K2.5 million (or 11%) of the MOH budget has been allocated. The MOH grant supports (a) cost of Malawian staff employed by PHAM, and (b) cost of drugs for TB, leprosy, sexually transmitted diseases and bilharzia. In addition vaccines for immunization of the under-five population are provided free.

On the development side PHAM units have been built with funds from agricultural development projects and external financing.

2.41 A number of donor agencies have been involved in the development of health services in Malawi. UNFPA, UNICEF and WHO support the MCH program. UNICEF and WHO also have ongoing programs which include support for expanded program on immunization, primary health care, water and sanitation, health manpower development and health management. The EDF has financed replacement of 4 old district hospitals. The African Development Bank has financed the construction of 2 new hospitals and a number of rural health centers. Bilateral assistance has been provided by some ten governments including the United States of America, Federal Republic of Germany, United Kingdom and Japan.

C. Sectoral Issues

2.42 The implications of rapid population growth have been discussed earlier (paras 2.05-2.06). The rate of growth would slow in primarily three ways: unavoidably by a rise in mortality if there is no reduction in fertility, by mass emigration, or by a significant fall in fertility. Obviously, an increase in mortality, already at a very high level, is completely unacceptable. There is indeed a danger, however, that if population growth outstrips the country's land resources, food supplies, and ability to provide adequate health and education services, mortality may, in fact, rise. Large-scale emigration to neighboring countries, all of which are experiencing high rates of population growth and economic problems themselves, is no longer an option. Though reducing fertility is the only practical and important solution, analysis of population problems extends

beyond fertility, mortality and migration. Population programs must addres issues such as women's development and literacy, health and education.

2.43 Fertility reduction on the scale required to alleviate the problems of population growth can only be achieved through understanding of these problems by both the Government and the public, followed by the development of appropriate population policies by the Government and their implementation through a multi-sectoral family health program. The Government does not support any direct reference to limiting family size, and wishes families to preserve the right to have as many children as they desire. The present policy consists of providing child spacing services to those who want it, and to establish social and educational programs which will develop awareness of the problems of rapid population growth. The objectives of the government are appropriate and form the basis for the developmert of a multi-sectoral family health program.

2.44 The Government has made significant efforts to reduce the infant and child mortality rates through increased accessibility and improved quality of services. These efforts have been successful in parts of the Southern Region where the IMR has dropped to around 75. In other parts of the country, however, the Government's efforts have had limited impact due to a number of factors. First, an important factor in the high levels of infant and child mortality is the inadequate targeting of select interventions in the vulnerable age groups. This has resulted in a lack of focus on priority activities. Secondly, many family health and disease control programs are still new and have not yet covered the whole country. Health services are still not readily accessible in many rural areas of the

country. Shortages of drug supplies in remote health facilities are common. Thirdly, as new health programs have been implemented over the years, the management of the MOH has not evolved to respond to the changing environment. Most decisions are highly centralized. There is little coordination between health program units at the central level, and consequently the effectiveness of service delivery suffers at operational levels. The roles of the regional and district levels need to be clearly defined, particularly in view of the development of primary health care programs. Finally, areas such as financial planning, budgeting and manpower management are poorly staffed and managed. The MOH consistently overspends its recurrent budget due to insufficient financial planning and budgetary controls. Hospital management is particularly weak. The absence of trained hospital administrators and the severe overcrowding make hospitals highly inefficient institutions often providing basic services at higher unit costs.

2.45 Though nutrition activities are undertaken as part of the MCH program concerted attempts to address Malawi's malnutrition problems have not yet been made. An inter-ministerial nutrition committee has been established under the leadership of the Ministry of Agriculture but is largely ineffective. The Government has thus far not accepted IDA assistance to address the problems of malnutrition.

2.46 Three major themes emerge from the preceeding sectoral analysis namely: development and strengthening of a decentralized health system, institution building for health and population, and, expansion of population activities. The development and strengthening of a decentralized health

system (with a strong focus on primary health care) would make basic health care accessible in even some of the more remote rural areas. This focus on village and community health at an appropriate level of sophistication is most cost effective and efficient given Malawi's stage of development. It is also the focus of disease prevention, nutrition and family health activities. Institution development of the Ministry of Health and the larger hospitals would improve efficiency through strengthening organizational management, financial management and controls (including efficiency improvements, cost saving measures and cost recovery), planning and budgeting and manpower development. Sectoral planning through strengthening the epdd is part of the institution development objective. Expansion of population activities would enable information on child spacing to be discriminated to a larger audience and would result in demand creation.

D. Role of the Bank

2.47 IDA has been involved in the health sector in Malawi since 1971 when the first Karonga Rural Development Project included a health component. In all, ten agricultural projects have included health components with a total investment of about US$4.5 million. Inputs have ranged from enlarging and modernizing the Karonga Hospital to bilharzia control programs and the development of sub-centers and health posts. In 1980 IDA undertook a health sector review. In late 1982 the Government decided that, for purposes of facilitating child spacing on health grounds, child spacing services would be available as an integral part of the MCH program. A child spacing component was therefore included in the first

health project. Since this very cautious beginning, child spacing services have expanded steadily, and demand has been rising. As a result of the changing environment the Government requested IDA to undertake a population sector review in 1984. The results of the review were discussed at a seminar held in Lilongwe and attended by senior Government officials.

2.48 The first IDA assisted health project began in 1983 and focused on critical issues relating to planning and financing. The project's objective is to make individual components of the health system more effective in relating to the health needs of Malawians. Each of the five components deals with major problems identified in the 1980 Health Sector Review: a comprehensive, revised National Health Plan; improved systems of financial accounting, health and service statistics, and an epidemiological survey and development of evaluation capacity; an improved planning and monitoring capacity; an efficient, cost-effective system of pharmaceutical procurement and distribution; the first phase of a national primary health care program; and the introduction of child spacing activities. The National Health Plan has been completed. A Community Health Sciences Unit to improve monitoring capacity, undertake epidemiological surveys and strengthen health statistics collection is being established. Training of staff in biochemistry, microbiology and laboratory technology has been delayed because of difficulties in obtaining admission into overseas universities. Substantial progress has been made in the pharmaceutical component. CMS was established as a distinct self-accounting unit with effect from April 1, 1984. Facilities for manufacture of drugs at Blantyre are in use. Most primary health care activities have been completed ahead of schedule, and in most

cases agreed targets have been exceeded. The same situation prevails with regard to child spacing activities under the project. The ongoing project has emphasized cost-effectiveness (through strengthening the CMS), cost recovery (with the introduction of fees for some categories of services (para 2.38), stronger community involvement (through the PHC programs(para 2.35-36), consolidation rather than expansion of health facilities, and institution building (through strengthening the planning process and establishment of improved systems of financial accounting). These strategies are comprehensively reflected in the National Health Plan (paras 2.12-2.14). Despite these achievements the project has lagged behind with regard to civil works with the result that it has been extended by one year.

III. THE PROJECT

A. Objectives and Design

3.01 Following the approval of the National Health Plan (1986-1995) by the Government the MOH prepared a detailed five-year implementation program for the period 1986-1990. The program was submitted to IDA and other donors for funding. The appraisal mission recommended a phased approach to funding the five-year program. The first phase would cover new activities initiated during the first three-years and the second phase would include activities to be initiated during and beyond the next two-years of the program. The phased approach has been adopted in order to: (a) allow for a mid-term evaluation of the five-year program; (b) enable the Government study alternative ways of supporting medical education in Malawi; and (c) determine the most cost-effective approach for providing the northern region with referral hospital facilities. Consequently, the proposed project covers activities to be initiated during the first three-years of the five-year program. The project description in this chapter includes all proposed activities regardless of the source of funding.

3.02 The objectives of the proposed project are to:

(i) improve health status particularly of mothers and children through expansion and strengthening of existing health programs;

(ii) increase the availability and accessibility of a complete range of child spacing services;

(iii) strengthen the MOH's capacity to plan, manage and evaluate health services in the framework of a decentralized health system; and

(iv) design and implement a multisectoral family health program.

3.03 The proposed project is a logical follow-up to the IDA assisted first health project. It is designed to continue institution building activities, to consolidate and expand priority programs such as primary health care and child spacing begun under the first project, and, to introduce family health activities through a multisectoral approach. The project would achieve its objectives through support for activities implemented through the MOH and other ministries. The project would support activities at the national, regional, district and peripheral levels throughout the country through the MOH. At the peripheral level, activities would focus on improving coverage of health services; at the district level activities would comprise: management and support system strengthening, provision of surgical contraception services, and strengthening of district level referral services; at the regional level activities would focus on management strengthening; at the national level activities would include: management and support system strengthening, manpower development, training and IEC in family health, communicable disease, and nutrition programs, and urban family health services. As far as the introduction of family health through a multisectoral approach is concerned the project would support: IEC and training activities in functional literacy, women' and youth programs; development of IEC campaigns on family health; and, development of population planning and analytical capability.

3.04 The government has established the following targets for the five-year period:

(i) reduction of IMR from a national average of 151/1,000 to 100/live births;

(ii) reduction of 1-4 mortality from 330/1000 to 210/1000 population;

(iii) reduction of maternal mortality from 16/1000 to 10/1000 births; and

(iv) achieve a contraceptive prevalence rate of 10%.

These targets are achievable over a five-year period. However, the three-year project period is too short a time to demonstrate impact. Hence a number of process indicators will be utilized to measure progress. These include immunization coverage, antenatal care, supervised deliveries, growth monitoring and contraceptive prevalence (Annex 1, Table 13).

B. Summary Description

3.05 The project, to be implemented over a three-year period starting January 1, 1987, consists of two parts: Part A, which comprises activities to be undertaken by the Ministry of Health, and Part B, which comprises multisectoral family health activities to be coordinated by the Economic Planning and Development Department, Office of the President and Cabinet.

3.06 Part A includes the following seven components:

(a) Increased coverage of peripheral health services and strengthening of district health services (US$14.3m)[1]. Support for expansion fo the primary health care program from nine districts at present to cover 15 districts (at the rate of three districts annually) through training, material production, provision of equipment and supplies for village health committees; construction, furnishing and equipping of 26 new health centers and upgrading of six existing health centers; and replacement of two existing district

[1] Totals in this paragraph exclude contingencies.

hospitals and one general hospital.

(b) Manpower Development (US$1.2). Support to the MOH to replace an existing enrolled nurses school and to expand its capacity to 144 (from 120); assistance for the construction, furnishing and equipping of three regional level training facilities for in-service training of about 1,000 health workers annually; and one long-term overseas fellowship in manpower planning and analysis.

(c) Management and Support Systems (US$1.5m). Support to the MOH at the national, regional and district levels for the management of health programs and for development of district level planning through technical assistance and in-service training courses; annual workshops in administration for all district hospital administrators and secretaries; annual workshops on plan assessment; a study of the potential of expanding or revising health insurance; provision of computers to the accounting section of the MOH and major hospitals with local training in invoicing and budget management; support for baseline and follow up surveys of health status, and evaluation studies; support for pharmaceutical production, supply and distribution through construction, furnishing and equipping a quality control laboratory, expansion of facilities of the Central Medical Stores in Lilongwe, construction, furnishing and equipping of pharmaceutical depots at eight district hospitals, and local and overseas training for pharmacists, pharmacy technicians and assistants; provision of vehicles, equipment and supplies.

(d) Family Health (US$8.0m). Support for strengthening the maternal/child health program through technical assistance, training, Information, Education and Communications (IEC) materials, vehicles and equipment; support for introduction/strengthening the child spacing program through orientation of all health staff, training 900 service providers, provision of contraceptive supplies; provision of child spacing services in urban areas and surgical contraception units at seven district hospitals by upgrading/replacing existing facilities, and construction, equipping and furnishing of three new urban health centers and replacing the family health unit in Lilongwe; support for expansion of diarrheal disease program by technical assistance, training health workers in oral rehydration therapy and provision of oral rehydration salt packets; support for the expanded program on immunization through long term technical assistance; in-service training courses, IEC materials, equipment, supplies, vehicles and operating costs of the vehicles.

(e) Disease Prevention (US$2.9m). Support for the introduction/strengthening of a national malaria control program through provision of short-term technical assistance, supplies, and IEC materials; support for the bilharzia control program through provision of equipment and training of health assistants; support for the tuberculosis control program through provision of equipment, supplies, vehicles, local and overseas training in laboratory technology; support for expansion of the environmental

health program through provision of equipment, vehicles, materials and local and overseas training of health surveillance assistants, health inspectors and public health officers.

(f) Nutrition Activities (US$1.1m). Support for the development of nutrition activities in the MOH and MOCS through technical assistance, development of IEC materials, training health workers, women's groups and community development assistants to undertake nutritional surveillance, construction of fish ponds and supplementary feeding through women's groups for high risk women and children in districts with extremely high infant mortality.

(g) Project Management for Part A (US$0.5m). Support for a project coordinator, architect, accountant, administrative assistant and secretary including office equipment and supplies.

3.07 Part B includes the following 5 components:

(a Functional Literacy and Women's Programs (US$1.4m). Support for the Ministry of Community Services for the introduction of family health topics into the ongoing functional literacy and women's programs; construction, equipment and furnishing of a regional training center; support for production of IEC materials and overseas and local training.

(b) Youth Programs (US$0.3m). Support to the Department of Youth for development of training and educational programs in family health aimed at young audiences through provision of equipment, IEC materials and support for innovative activities.

(c) Information, Education and Communication (US$0.4m). Support for

the development of nationwide IEC programs by the Information Department through production of IEC materials, overseas training and surveys and evaluation activities.

(d) Census Support (US$1.6m). Support to the National Statistical Organization for the completion of analysis of the 1987 census through provision of equipment, materials, long-term technical assistance and local training.

(e) Population Planning Capability (US$0.4m). Support to the Economic Planning and Development Department for establish population planning capability through long-term technical assistance, equipment, short-term fellowships and long-term overseas training.

C. Detailed Description

Part A

Peripheral and District Level Health Services

3.08 This component would aim to increase coverage of peripheral health services and to strengthen district health services. The project would support the expansion of the PHC program from nine districts at present to eighteen districts, at the rate of three districts per year. The pilot PHC approach adopted by Malawi has been evaluated (para 2.38-2.39) and, with suitable modifications, will be expanded to cover the entire nation. Training VHS and health staff, provision of equipment and supplies, increased supervision by health staff, and establishment of a referral network are the elements of Malawi's PHC program. VHCs will continue to undertake activities in sanitation and water maternal and child care and treatment of common diseases. The MOH has recently decided to provide child

spacing services through VHCs. This decision is highly significant since it means that education on child spacing and contraceptives will soon be available at the grassroots levels throughout the country.

3.09 The project would support training activities for VHCs and health staff. Training activities would include: one day orientation workshops for 10 senior officers per district; one day orientation seminars for 10 members of each District Development Committee (DDC), 1 week seminar for each district PHC team (comprising 5 persons), 5 day seminars for area PHC teams (50 participants per district), and 1 week training of 66 VHCs annually. A major effort would be made to have refresher training activities for VHCs and health staff on a regular basis. The project would support: 1 day refresher seminars for 20 DDC members per district, 3 day refresher training of each district PHC team, 3 day refresher training of area, 50 PHC teams per district, and refresher courses for 66 VHCs per district. The project would also support visits by health workers in project areas to study the success and difficulties being faced in the implementation of PHC. Area level PHC staff would visit areas within the same district (3 visits per district annually). District level PHC staff would visit other districts where PHC activities are being implemented (1 visit in each region annually). The project would support the provision of 396 drug kits for VHCs at the rate of one kit annually. To improve the ability of health staff to supervise VHCs the project would provide 48 motorcycles and 300 bicycles.

3.10 In each area where the PHC program is implemented there is a need for a health center capable of providing support for village level

activities and for acting as a referral facility. There is a need to upgrade 10 existing health facilities to health centers. Twenty-six new health centers also need to be constructed during the project period. Each health center would enter for a population of 10,000 and would be 378sq.m in area. The project would support these activities and also finance the construction of three houses for 2 enrolled nurses and 1 clinical officer at each new health center and one house at each upgraded health center. Assurances would be sought from the Government during negotiations that the health centers would be adequately staffed by at least one clinical officer and two enrolled nurses once completed (para 7.03a). (para 7.03).

3.11 Health centers refer patients to district hospitals. In Malawi, a number of district hospitals function in inadequate, old buildings. Occupation rates, however, are very high (Annex 1, Table 4). Overcrowding is routine. With the implementation of PHC programs and the introduction of child spacing services at the district level and below, the role of the district hospital has become even more crucial. The project would support the replacement of existing hospitals at Zomba, Mzimba and Mulanje. No new additional beds will be added at Zomba. There will be 40 and 32 additional beds at Mzimba and Mulanje respectively. Both these hospitals are heavily utilized and their current bed strength is inadequate for the demand they face. Furthermore, with the MOH's decision to provide surgical contraception services at district hospitals (para 3.26) the need for additional beds is even greater. The total area in sq.m would be 9,072, 4,536 and 5,636 for Zomba, Mzimba and Mulanji hospitals respectively. Preliminary drawings were reviewed by the appraisal mission and

recommendations for modifications have been made (para 5.01). In addition to replacement of the hospitals, provision is made for 25 and 20 staff houses for key staff at Mulanje and Mzimba hospitals respectively whose presence near the hospitals is considered essential. No provision is made for accommodation in Zomba which is considered to have ample private accommodation. While Mulanje and Mzimba hospitals would be constructed on new sites which have been required. Zomba hospital would be replaced on the same site, this will require construction in phases so as not to disrupt hospital functions. Each hospital would be provided with 2 ambulances and 1 station wagon.

Manpower Development

3.12 The manpower development component of the project has three objectives. The first objective is to strengthen the capacity of the MOH to train enrolled nurses. The MOH proposes to replace dilapidated existing facility in Zomba and to raise the output of enrolled nurses from 120 to 140. This modest increase in output is adequate given the availability of enrolled nurses trained by PHAM (para 2.26). However, training at PHAM facilities is not uniform. Curricula vary by institution as does the period of training. Examination and certifying procedures also vary. Training in child spacing also varies considerably. Some mission institutions do not provide training in provision of child spacing services. Nurses from these institutions would be given additional training by the MOH (para 3.26). During negotiations assurances would be sought from the Government that a standard examination be introduced for all enrolled nurses by December 31, 1988 (para 7.03h).

3.13 The project would support the construction, furnishing and equipping of one school for enrolled nurses at Zomba with a capacity for 140 students. The project would also support the provision of hostel accommodation for the students and a warden's flat. The new facilities, 3,923sq.m in area, would be constructed near the Zomba General Hospital, at a site already acquired for the purpose. Sketch drawings have been reviewed and recommendations for modifications have been made (para 5.01).

3.14 The second objective is to establish a capability for the MOH to undertake in-service training of its workers regularly. In-service training activities are currently undertaken depending upon the needs of a particular program and upon the availability of scarce facilities (para 2.28). The project would support the construction, furnishing and equipping of three regional level training facilities of about 400sq.m area each and are house for the resident caretaker to undertake in-service training of about 1,000 health workers annually. These facilities would be available to all MOH programs for in-service training. Courses to be undertaken at these facilities are described under the respective MOH program. The objective is to utilize the facilities 85% of the time though during the first three years utilization rates are likely to be 95%. Sites have been identified and are being acquired. Sketch drawings have been reviewed and considered satisfactory. To ensure satisfactory scheduling of training activities better coordination between MOH programs and training officers will be essential. During negotiations assurances would be sought from the Government that a training officer would be appointed, to coordinate in-service training activities, by June 30, 1987; and that annual in-service

training plans would be submitted to IDA for review and comment by December 31, 1987 and annually thereafter (para 7.03c).

3.15 The third objective is to develop the analytical capability of the Planning Unit of the MOH to undertake manpower planning and analysis. The project would support the overseas training in manpower planning of one staff member of the Planning Unit. The question of the development of medical education in the country has been under discussion for sometime. The MOH is currently studying alternative ways to provide medical education in Malawi (para 2.27). It is important that the strategy finally chosen be affordable. Assurances would be sought from the Government that, before a decision is made on building a medical school, IDA would be fully consulted (para 7.03d).

Management and Support Systems

3.16 This component would aim to strengthen the management of health services at the national, regional and district levels by instructing the MOH and by improving systems and procedures. At the national level a review of the MOH by the Malawi Civil Service Review Commission has revealed the need to revise the organizational structure to make it more responsive to the changing needs of the health sector (para 2.22-2.24). Restructuring of the MOH headquarters would require functional realignment of departments, creation of a manpower coordination unit, and abolition of one layer of authority in the administrative branch (Chart 2). A condition of negotiations will be that the Government bring to negotiations a well defined position and plan regarding reorganization of the MOH for review and comment by IDA.

3.17 Detailed management studies of each unit of the health care delivery system have been completed by the Malawi Civil Service Review Commission. The project would continue the process of strengthening the management of the MOH by developing unit and job descriptions. To assist with these studies the project would provide one short-term consultant for four months. Following finalization of unit and job functions workshops will be held to undertake the management training of health staff at the national, regional and district levels. The project would support one annual workshop at the national level for heads of units and program managers. This workshop would have 25 participants and would last 5 days. Three Regional and district level workshops will be held annually for management training of middle level health staff. Each workshop would have 20 participants and would last 10 days. One short-term consultant for 4 months would be hired to develop the training programs. The project would also support study tours of 1 month duration to neighboring countries for senior and middle level officials at the rate of 3 annually.

3.18 The project would support the establishment of a regional health team in each of the country's three regions. The regional health team would support and supervise the health services of the region. The regional health team would comprise a Regional Medical Officer (team leader), regional nursing officer, regional MCH coordinator and a regional public health inspector. The project would support the appointment of three regional medical officer and three regional nursing officers. Each regional health team would be provided with a vehicle and driver. The creation of the positions of three regional medical officers and three regional nursing

officers would be a condition of effectiveness (para 7.02b).

3.19 A major area of interest has been the management and administration of hospitals. Detailed studies of the two central hospitals have been carried out and a series of recommendations have been made to improve overall efficiency. These studies have estimated that up to 40% of non-personnel costs at the hospitals can be saved through better management. The project would support annual workshops in hospital management and administration for all hospital secretaries and administrators in Malawi. The development of an implementation plan of the cost saving measures satisfactory to IDA would be a condition of negotiations (para 7.01b).

3.20 Through the first IDA assisted project the Planning Unit was expanded and 6 new posts were established. With the development a national health plan (para 2.13) and training in planning for senior Planning Unit officials, the MOH has been developing an increased ability to plan and evaluate programs. The Planning Unit has evolved into an effective organization. The project would support the MOH's efforts to further improve its planning capability. Through increased emphasis on decentralization the MOH proposes to strengthen district level planning capability. A senior international health planner has been appointed and is expected to begin training district level staff in June 1986. The project will provide for one long-term and one short-term training course in health planning. The project would support one workshop annually for 5 days for 20 senior officials to assess implementation of the plan and to recommend modifications in strategy. A study of the impact of fees charged on utilization of services and on the potential for health insurance would be

undertaken by the Planning Unit. Terms of reference for the proposed study have been finalized. The project would support this study through the provision of a short-term consultant for one month.

3.21 A review of the system of financial accounting of the MOH has been completed. The office of the Chief Accountant has been restructured and a revised system of financial accounting is being implemented. The project would support the strengthening of the accounting section through the appointment at MOH of an accountant to head the budget section. At the district level the project would support the appointment of an assistant accountant in each district. The project would also obtain four computers to improve financial accounting. One computer would be used at MOH headquarters and the remaining three would be used at the major hospitals in Blantyre, Lilongwe and Zomba. The creation of the positions of one budget section head at the MOH and 24 assistant accountants at the district level would be a condition of project effectiveness (para 7.02c).

3.22 With the establishment of a Community Health Services Unit in 1984 the MOH began to develop a capacity to undertake survey and evaluation activities. The project would support the MOH's efforts to further strengthen its monitoring and evaluation capability. A baseline health status and utilization study would be undertaken in the first year of the project. The survey would be repeated in the third year of the project. The project would provide a short-term consultant for one month in the first and third years to assist with study design and field work. In addition, the project would provide for impact studies of specific programs to be undertaken annually.

3.23 Efforts to improve the effectiveness and efficiency of the pharmaceutical system were begun in 1983 (para 2.25). The MOH proposes to further strengthen the pharmaceutical system by decentralization down to the district level. The project would support these efforts through expansion of the Central medical Officers, Lilongwe, the establishment of a quality control laboratory, and, the renovation of pharmaceutical depots at eight district hospitals including furniture and equipment. The project would provide short-term consultants for 1 month duration each to finalize drug legislation, review production procedures at CMS, and review quality control procedures; and, one long-term consultant for 24 months to computerize CMS operations. The project would support two seminars of one week duration for 20 pharmacy assistants in the scope and functions of the revised CMS. Five-day seminars for 30 drug prescriber per seminar would be held at the rate of two seminars annually. The project would support long- and short-term overseas training in drug inspection, drug administration, quality control and drug manufacture.

Family Health

3.24 This component includes support for (a) maternal and child health; (b) child spacing; (c) diarrheal diseases; (d) expanded program for immunization; and (e) health education.

3.25 The MCH program is hampered by poor and inadequate transport, lack of IEC materials and shortage of drugs (para 2.32). The project would support the replacement of 27 vehicles at the regional and district levels. These vehicles would be used for supervision of services at static facilities and for the provision of mobile services. The project would

support a short-term consultant for one month to assist with the development of an integrated course in family health which would be given to 180 health workers (90 EN, 15 MA, 45 RN and 30 CO's) annually. In-service training in priority diseases (diarrhea, malaria, respiratory illness, measles and, nutritional deficiency) would also be held annually for a total of 900 health workers (EN, MA, RN and COs). The project would support the development of an MCH manual for use by health workers in MOH and PHAM units, and the printing of IEC and training materials developed for the MCH program. It would also provide drugs for 1,100 MCH centers and 639 Antenatal clinics.

3.26 The rapid development of child spacing has led the MOH to increase the range of services offered and to make services available more widely (para 2.35). The project would support the development of: surgical contraception services at district hospitals, urban family health services, training of health staff, TBAs and VHCs in child spacing, and IEC materials for child spacing. It would also support the construction, furnishing and equipping of surgical contraception units at seven district hospitals. In addition, the three hospitals to be replaced (para 3.11) would also provide surgical contraception services. Designs for the units have been approved and list of furniture and equipment finalized. The project provides a short-term consultant for one month to review training plans for surgical contraception and to develop a system for quality control. The MOH envisages quality control at district hospitals to be the responsibility of obstetricians and gynecologist at the two central and one general hospital. With increasing demand for child spacing services in urban areas there is a

need to provide adequate facilities (para 2.26). The project would support the construction, furnishing at equipping of an urban family health unit in Lilongwe, three health centers in Blantyre and Lilongwe, and upgrading two existing health centers in Blantyre and Lilongwe. Designs have been reviewed and modifications have been suggested for the family health unit in Lilongwe (para 5.01). The project would support the training of 20 trainers, 10 tutors, 675 nurse midwives and enrolled nurses, 225 clinical officers and medical assistants in child spacing activities; the orientation of 1,440 health personnel and 1,500 DDCD and VHCs in child spacing. IEC materials and contraceptive supplies would be provided by the project. The project would support the appointment of six clinical officers and one enrolled nurses to the urban family health clinics. During negotiations assurances would be sought that six clinical officers and 16 enrolled nurses would be appointed to the urban clinics once completed (para 7.03e).

3.27 The project would support the training of TBAs in child spacing. Four courses, each for 15 TBA trainers, will be undertaken during the first two years of the project. (A TBA trainer is an EN posted at a health center and trains about 5 TBAs in her area annually.) About 250 TBAs would be trained per year in child spacing.

3.28 The objectives of the diarrheal disease program are to reduce attributable morbidity and mortality among children under five years of age. The project would provide a short-term consultant for one month to review the introduction of oral rehydration therapy topics into the curricula of nursing schools and the school for health sciences. The project would support the increased use of Oral Rehydration Salt (ORS) packets by health

workers. Five million ORS packets would be financed through the project. All MCH/PHC personnel, 65% of TBA's and 65% of VHCs in each district will be trained in oral rehydration therapy. These training activities will be integrated into: The Family Health courses (para 3.25); the TBA courses (para 3.27); and VHC training courses (para 3.09). All in-service training activities will include oral rehydration therapy. The project would support the design and printing of 3 posters.

3.29 The objective of the expanded program for immunization is to reduce morbidity and mortality from measles, pertussis, tetanus, diphtheria, tuberculosis and poliomyelitis, among children under the age of 5 years. To achieve this objective the EPI aims to increase the coverage of fully immunized children from 55% at present to 80%. It would provide equipment for strengthening of the cold chain, transport, materials and supplies, training and technical assistance. The project would provide office equipment and a computer for the EPI head office 27 cold chain tool kits, 245 refrigerators and supplies, 3 cold boxes, 500 vaccine carriers and 400 sterilizers would be provided to strengthen the cold chain. Twenty-nine 4-wheel vehicles would be provided at the national, regional, and district levels. Twenty-four motorcycles and 450 bicycles would be provided for the peripheral level. Two boats would be provided to reach communities along Lake Malawi. The project would provide materials and supplies needed for the EPI including kerosene for refrigerators, record forms, vaccines, needles and posters. Training of 48 district staff in EPI management will be undertaken in the first year of the project. A refresner workshop is planned for 1989. Training of 24 district level cold chain technicians is

planned for the first and third year of the project. An EPI status survey is provided for in the first and third year of the project. The project would support the salaries of one copy typist and one clerical officer and the operation and maintenance costs of the vehicles and boats.

3.30 The health education unit would be expected to play a key role during implementation of the National Health Plan through the preparation and production of the IEC materials required by various health programs. The unit would produce posters, pamphlets and booklets needed for the MCH, child spacing and distribution programs. EPI or field testing of materials is underway. In addition, the health education unit will work closely with the Information Department in the development of a national IEC program (para 3.43). Long-term technical assistance has been provided to the health education unit and a work plan is being developed. The project would support the MOH's efforts to strengthen the health education unit through provision of equipment, materials and supplies, four 4-wheel drive vehicles and 24 motorcycles, overseas training in graphic arts, health education and journalism, and local training for community leaders.

Disease Prevention

3.31 This component includes support for (a) malaria, (b) schistosomiasis; (c) tuberculosis; and (d) environmental health programs.

3.32 The objectives of the malaria program are to reduce attributable mortality and morbidity among all segments of the population at risk especially children under five. Malaria prevention activities are integrated into health care services. Major vector control activities do not exist and are currently not proposed. The strategy adopted by Malawi is

to make anti-malarial drugs widely available, to treat malaria early and as far as possible in a domiciliary situation. This strategy, approved by WHO, is considered appropriate for African countries. Chloroquine has been the drug of choice but, in view of increasing resistance amodiaquine is also being used. Drug resistance is as high as 40% in some districts. The project would provide a short-term consultant for one month to review the introduction of malaria control topics into the curricula of nursing schools and the School for Health Sciences. The project would support the procurement of anti-malarial drugs (9.3 million tablets of chloroquine, three million tablets of amodiaquine, 927 kg. of chloroquine powder, and 309 kg. of amodiaquine powder), and IEC materials for the program.

3.33 The objective of the bilharzia control program is to reduce attributable morbidity by 50% in children and by 75% in adults. Bilharzia control activities comprise diagnosis and treatment of cases at health facilities, education on bilharzia in communities, primary and secondary schools, parasitology training of health professionals; and environmental control (spraying with molluscicide) by special teams in the lake shore area. The project would support the bilharzia program through the provision of laboratory equipment at all health centers, vector control equipment in all district hospitals and, 5 courses of 1 week duration each to train all health assistants in the diagnosis of bilharzia. The educational aspects of the program would be developed by the health education unit (para 3.30).

3.34 Tuberculosis control activities consist of case finding, treatment and prevention through BCG vaccinations. These activities are integrated into health care services. The program is constrained by a lack of

knowledge of the magnitude of the tuberculosis problem nationwide, inadequate training of health workers, lack of equipment and supplies, and poor supervision by regional tuberculosis coordinators and district health assistants in-charge of the tuberculosis program. The project would provide microscopes, slides, drugs and reagents to all district hospitals, three four-wheel drive vehicles and 10 motorcycles. The project would support a national prevalence survey to establish the extent of the tuberculosis problem. Overseas training undertaken under the project would include one fellowship for laboratory techniques and two study tours to neighboring countries. Two orientation seminars of community leaders (2 days duration and 25 participants each) would be undertaken annually.

3.35 Following successful pilot projects to improve rural sanitation and provide safe water supplies the MOH plans to expand its environmental health program. The project would provide equipment and supplies for the construction of latrines and wells at demonstration sites in all 24 districts, three seven-ton vehicles and four long wheel-based pick ups for transport of supplies throughout the country. The project would strengthen regional and district level supervision of environmental health activities through provision of one four-wheel drive vehicle and nine motorcycles. Local training activities to be undertaken under the project include training 60 health surveillance assistants for 1 week duration annually, refresher courses for 5 days duration for 100 health inspectors and 160 health assistants annually, training of 10 health inspectors, and 5 day training 1,000 VHCs annually. The project would support the overseas training of three senior public health officers at a degree level and three

public health officers at a post graduate diploma level.

Nutrition

3.37 New initiatives in nutrition are being established by the MOH with the participation of the MOCS to deal with the problem of malnutrition and the consequent impact on infant and child mortality. The following activities are proposed to be undertaken: nutrition education through MOH and MOCS, training women's groups to undertake nutrition surveillance, introduction of fish ponds to provide protein for mothers and children at the village level, and strengthen growth surveillance at health clinics and emphasis on supplementary feeding of high risk groups. The project would support the development and production of flip charts, posters and post literacy booklets for use by the MOH through health clinics and by the MOCS through the functional literacy and women's programs. The project would support the training of community development assistants (CDA) in nutrition and would include training in nutritional surveillance. These training activities would be integrated into the 4-week refresher course on family health to be held at each of the 3 regional training centers twice yearly (para 3.39). CDAs would then train women's groups in nutrition. Health workers would be trained in nutrition as part of the family health training program (para 3.25). Finally, the project would support the construction of fish ponds in 150 village communities. Fish from those ponds would provide much needed protein for mothers and children. Technical assistance for constructing and running the fish ponds would be provided by the Department of Fisheries, which has had considerable success in small scale fish funding in southern Malawi. To develop nutrition activities further, particularly

with the Ministry of Agriculture, the project will provide a short-term consultant for two months.

Part B

Functional Literacy

3.38 The 1977 Population Census revealed that 82.2% of the population of all ages was still illiterate. Of these, 77.5% were in the economically productive age of 15 and above. The widespread illiteracy in rural areas has constituted one of the major limitations in enhancing the pace of rural development. The Government has therefore set itself the target of achieving two million literate by 1990. Their strategy will be carried out largely through adult literacy classes held at the various functional literacy centers. This program has not dealt directly with matters of population education to-date. No direct matters pertaining to population education such as family health are covered in the various curricula or reading materials. The emphasis of the Functional Literary component in the proposed project will be to introduce written/pictorial materials relating to family health into functional and women's programs.

3.39 The primary objective of this component is to achieve the rapid dissemination of messages regarding family health to both the rural and urban population. Though child spacing topics will have priority, nutrition and maternal and child health services will also be covered. Through that strategy, it is expected that the demand for child spacing and family health services will be stimulated. Linked to this objective is the related goal to blanket all adult literacy centers and make available to all grassroots workers, simple and relevant information relating to family health. The

target audience will be the large and growing number of illiterates, both men and women, field workers, youth, in both urban and rural areas. The project would support the development and production of IEC materials on family health topics for use in the functional literacy and women's programs. These materials include literacy pioneers, post literacy booklets, family health booklets, posters, and flip charts. The MOH would review all materials produced by the MOCS. The MOCS has the capability to design and produce IEC materials. Training activities, undertaken under the project, include:

(i) a six-week training course on family health education for MPs to be held once a year for 20 persons;

(ii) a four-week refresher course for CDAs on family health to be held twice yearly with 30 participants at each of the three Regional Training Centers;

(iii) a three-week refresher course for Home Craft Workers (HCW) on family health to be held every quarter with 30 participants at each of the three Regional Training Center. All HCWs are female and engage in grassroots activities. They are used for training and establishing various women's programs. There are approximately 1,000 HCWs. They organize about 6,885 rural women's groups which have an outreach of approximately 137,700 women from the community;

(iv) a two-week refresher course on family health for local women leaders (30 participants per course) to be held twice every quarter at each of the three Regional Training Centers;

(v) a three-week basic training course on family health to be held twice a year for functional literacy instructors. This course will comprise 30 instructors per course and will be held at the three Regional Training Centers; and

(vi) a two-week course for literacy supervisors on child spacing/family health issues, to be held once a year. The course will comprise 30 supervisors and be held at the three Regional Training Centers.

The project would support the construction, furnishing and equipping of a training center for the Northern Region to enable the courses discussed above be carried out regionally. This center would serve the needs of the MOCS. The project would support 10 study tours of 1 month duration by planners and program managers from MOCS to study the operational aspects of similar successful programs in adult functional literacy and women's activities in neighboring developing countries. During negotiations assurances would be sought that the MOH establish a health education review committee chaired by the Deputy Chief Medical Officer, with members from the Ministries of Health and Community Services and the Information and Youth Departments to approve IEC messages prepared by non-MOH agencies (para 7.03f).

Youth Programs

3.40 Youth under 19 years of age constitute 51% of the total population. Of this, it is estimated that 57% are females living in the rural areas. The Malawi Young Pioneers (MYP) program trains youth in a number of activities and a wide range of subject matter covering technical

and non-technical areas is taught. However, issues related to family health education are not included. The Malawi youth who are in the child bearing age group are not adequately provided with information needed for their fertility regulation. This inadvertently leads to unplanned pregnancies and very often an increase in the drop out rate from school.

3.41 The objectives of the youth program component are to: provide MYP matron/instructors/instructresses with knowledge related to family health education which can be imparted to MYP youth; provide female MYP graduates with knowledge related to family health education so as to prepare them for responsible adulthood; equip MYP graduates with sufficient knowledge and skills that will enable them to informally educate families and fellow youth in their respective communities; and provide MYP graduates with technical skills that will help them meet the needs of their communities. The first line audience will be the actual MYP workers, matrons/instructors/instructresses,young women and children.

3.42 The project would provide training programs as follows:

(i) a five-week training course on family health for 100 MYP matrons, instructors and instructresses to be held once a year at the MYP Central Training School;

(ii) a three-week basic training course in family health for 60 young women (20-30 years) in the first year of the project, for 120 young women in the third year of the project and a three-week refresher course in the second year of the project for 80 and 100 young women respectively; and

(iii) a three-week training course in family health for MYP female

adolescents (15-20). There will be 12 courses a year with 50 girls in each course. These girls are expected to become effective in familiarizing rural families with family health issues.

The project would support the construction of 10 simple shelters attached to existing dispensaries. These shelters would be used by MYP volunteers to educate women coming to the dispensaries. The project would support the provision of one sewing machine to each of 49 MYP youth clubs and one fish pond in each of seven MYP bases in the country for demonstration of potential income generating activities to village communities.

Information, Education and Communication

3.43 The objectives of the IEC component are to: enhance receptivity among the people of Malawi to the concept of family health; and update knowledge regarding family health among actual service providers. The target audience for these objectives are: the rural population, men, women and youth; local leaders and traditional authorities; urban population, men and women and youth; and health service providers.

3.44 The IEC component will be primarily concerned with the expanded use of mass media in support of family health activities and the holding of training/refresher workshops to further sensitize those already regarded as health service providers and others associated with the content of media messages and multi-media use. The activities will be implemented by the Information Department, Office of the President and Cabinet. The MOH would review the content of family health messages developed for use by the other ministries (para 3.49). The project would support use of the mass media by:

introduction of family health messages into the Chichewa paper, Boma Lathu, to reach a monthly audience of 500,000; family health boards on long distance buses; family health labels on match boxes; radio programs on family health; and production of two films of 20 minute duration annually. The project would support overseas training of three Information Department staff in graphics, audio-visual techniques and development communications.

National Statistical Office

3.45 There is increased awareness in Malawi about the problem posed by rapid population growth. Prospects are good for further development of population policies and programs, provided that a heightened awareness of population problems can be maintained. To this end, the regular collection and dissemination of demographic data are essential. Interest should be maintained over the near future by the publication of the 1987 Family Formation Survey financed by IDA under the first health project. However, undoubtedly the most important operation in this regard will be the forthcoming 1987 census. Most of the costs of this census will be borne directly by The Government, with some technical assistance and equipment to be provided by UNFPA and ODA. The project would enable the NSO to collect, process, analyze and disseminate good quality data in a timely and efficient manner and would improve its long-term capabilities to generate data on population trends in the future. The project would support the provision of: office equipment and materials for the census, training of NSO personnel in data processing and analysis, long-term consultant for 36 months in data processing, and the vehicle operation and maintenance costs for undertaking the census.

Economic Planning and Development Department

3.46 Economic planning does not at present take into account the implications of population growth. National plans have not been developed, but when they are, should take population issues into account. Specific and detailed studies are required to assess fully the serious implications of current population trends in relation to socio-economic growth. The EPDD being responsible for national planning should have the capability to analyze the impact of population growth on economic development. The project would support the development of such capability in the Human Resources Unit of the EPDD. The project would provide a long-term consultant for 36 months to help develop population planning capability. The project would provide a computer, relevant software and office equipment. It would also support the overseas training of two EPDD staff for short-term training and one EPDD staff for long-term training in population planning. As its capability develops the EPDD would coordinate multisectoral family health activities in Malawi. A condition for negotiations would be the Government's agreement in principle that the EPDD would play a coordinating role for multisectoral family health activities (para 7.01c).

IV. PROJECT COSTS AND FINANCING

B. Costs

4.01 Total costs of the proposed project amount to K77.3 million or US$42.9 million equivalent. Base costs are calculated at US$33.6 million equivalent (78%) and contingencies at US$9.3 million equivalent (22%). Foreign exchange costs account for US$17.5 million or 41% of total project costs. Taxes and duties are negligible. Project costs by functional category are summarized in Table 1 below, and details are provided in Annex 3. Capital costs for civil works account for 47% of base costs; furniture, equipment, vehicles, supplies and materials for 26%; monitoring and research activities 1%; technical assistance for 7%; training for 11%; and incremental recurrent costs (salaries and allowances, building, equipment and vehicle operation and maintenance) for 8%.

4.02 Project costs have been estimated at December 1985 prices and will be updated at negotiations. Civil works costs have been estimated on the basis of the value of current Ministry of Works and Supplies contracts for comparable buildings. Furniture and equipment lists have been drawn up and are being finalized. Project costs also include provision for a total of 96 four-wheel vehicles, at a unit cost of about US$15,500 (on CIF basis) and other vehicles (115 motorcycles, 750 bicycles, 2 boats) totalling about US$363,600; 288.5 months of overseas training, at an average monthly cost of about US$2,100; 216 months of long-term foreign technical assistance and 24 months of foreign short-term technical assistance. Incremental salaries, local training costs and operational and maintenance expenses are based on current government scales and rates.

Table 1: PROJECT COSTS BY FUNCTIONAL COMPONENT

	(Local Currency '000)			(US$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
A. EXPANSION OF HEALTH COVERAGE								
1. PRIMARY HEALTH CARE	628.7	243.2	871.9	349.3	135.1	484.4	28	1
2. EXTENSION OF HEALTH SERVICES	5,359.6	3,670.4	9,030.0	2,977.6	2,039.1	5,016.7	41	15
3. STRENGTHENING OF THE HOSPITAL SYSTEM	9,243.3	6,526.8	15,770.1	5,135.2	3,626.0	8,761.2	41	26
Sub-Total EXPANSION OF HEALTH COVERAGE	15,231.6	10,440.4	25,672.0	8,462.0	5,800.2	14,262.2	41	42
B. MANPOWER								
1. NURSING EDUCATION	935.6	654.2	1,591.8	519.8	364.5	884.3	41	3
2. INSERVICE TRAINING	342.2		615.5	201.2	140.7	341.9	41	1
3. ESTABLISHMENT OF MANPOWER CAPACITY	-	.5	34.3	-	19.1	19.1	100	0
Sub-Total MANPOWER	1,297.8	943.8	2,241.6	721.0	524.3	1,245.3	42	4
C. MANAGEMENT OF HEALTH SERVICES								
1. IMPROVEMENT OF MANAGEMENT SYSTEMS, SUPERVISION AND PERSONNEL	87.8	229.9	317.7	48.8	127.7	176.5	72	1
2. HEALTH PLANNING	22.7	81.1	103.8	12.6	45.1	57.7	78	0
3. FINANCIAL PLANNING	142.7	163.3	306.0	79.3	90.7	170.0	53	1
4. HEALTH AND HEALTH MANAGEMENT INFORMATION	226.8	38.2	265.0	126.0	21.2	147.2	14	0
5. DRUG PRODUCTION AND SUPPLY	388.8	942.3	1,331.1	216.0	523.5	739.5	71	2
6. INTEGRATION OF SERVICES AT REGIONAL LEVEL	178.5	115.5	294.0	99.1	64.2	163.3	39	0
Sub-Total MANAGEMENT OF HEALTH SERVICES	1,047.2	1,570.3	2,617.6	581.8	872.4	1,454.2	60	4
D. FAMILY HEALTH								
1. MATERNAL AND CHILD HEALTH	507.3	1,745.0	2,252.3	281.8	969.5	1,251.3	77	4
2. CHILD SPACING	4,154.1	2,094.8	6,248.9	2,307.8	1,163.8	3,471.6	34	10
3. DIARRHOEAL DISEASE	221.4	526.2	747.6	123.0	292.3	415.4	70	1
4. EXPANDED PROGRAM OF IMMUNIZATION	725.2	3,515.4	4,240.5	402.9	1,953.0	2,355.8	83	7
5. HEALTH EDUCATION	71.1	954.9	1,026.0	39.5	530.5	570.0	93	2
Sub-Total FAMILY HEALTH	5,679.0	8,836.3	14,515.3	3,153.0	4,909.0	8,064.1	61	24
E. DISEASE PREVENTION								
1. MALARIA	7.9	37.3	45.2	4.4	20.7	25.1	82	0
2. SCHISTOSOMIASIS	10.9	13.2	24.2	6.1	7.3	13.4	55	0
3. TUBERCULOSIS	46.1	218.3	264.5	25.6	121.3	146.9	83	0
4. ENVIRONMENTAL HEALTH	1,597.0	3,214.5	4,811.5	887.2	1,785.8	2,673.1	67	8
Sub-Total DISEASE PREVENTION	1,662.0	3,483.3	5,145.3	923.3	1,935.2	2,858.5	68	9
F. NUTRITION								
1. NUTRITION	1,132.7	892.4	2,025.1	629.3	495.8	1,125.1	44	3
Sub-Total NUTRITION	1,132.7	892.4	2,025.1	629.3	495.8	1,125.1	44	3
G. PROJECT MANAGEMENT FOR PART A								
1. PROJECT MANAGEMENT	90.6	730.8	821.4	50.3	406.0	456.3	89	1
Sub-Total PROJECT MANAGEMENT FOR PART A	90.6	730.8	821.4	50.3	406.0	456.3	89	1
H. HEALTH THROUGH OTHER MINISTRIES								
1. FUNCTIONAL LITERACY (INCL WOMEN)	1,625.4	896.6	2,522.0	903.0	498.1	1,401.1	36	4
2. YOUTH PROGRAM	510.2	74.5	584.7	283.4	41.4	324.9	13	1
3. INFORMATION, EDUCATION AND COMMUNICATION	203.0	477.6	680.6	112.8	265.3	378.1	70	1
4. NATIONAL STATISTICAL ORGANIZATION	515.1	2,296.4	2,811.4	286.2	1,275.8	1,561.9	82	5
5. POPULATION CAPABILITY IN EPDD	0.9	785.2	786.1	0.5	436.2	436.7	100	1
Sub-Total HEALTH THROUGH OTHER MINISTRIES	2,854.6	4,530.4	7,384.9	1,585.9	2,516.9	4,102.7	61	12
Total BASELINE COSTS	28,995.5	31,427.7	60,423.2	16,108.6	17,459.8	33,568.4	52	100
Physical Contingencies	2,617.0	2,576.2	5,193.3	1,453.9	1,431.2	2,885.1	50	9
Price Contingencies	6,804.5	4,869.7	11,674.3	3,780.3	2,705.4	6,485.7	42	19
Total PROJECT COSTS	38,417.0	38,873.7	77,290.7	21,342.8	21,596.5	42,939.3	50	128

4.03 The total project costs include an allowance of US$9.3 million equivalent for contingencies. Physical contingencies have been assumed at 15% for civil works and 10% for vehicles and equipment, and comprise US$2.9 million equivalent (8% of base costs). The following price contingencies have been included: (i) on foreign exchange expenditures, 7.2% in 1986, 6.8% in 1987, 6.8% in 1988, and 7% in 1989; and (ii) on local cost expenditures, 11% in 1986, 10% in 1987, 9% in 1988, and 9% in 1989. Price contingencies account for US$6.5 million equivalent or 19% of base costs.

4.04 The foreign exchange component of US$17.5 million equivalent is based on estimates of 40% for civil works; 38% for furniture; 100% for equipment; 100% for technical assistance; and 100% for overseas training and study tours. The incremental recurrent costs involving foreign exchange (5%) mainly cover equipment and building maintenance and vehicle operation and maintenance.

4.05 Project costs by expenditure category are shown in Table 2. Peripheral and district health services would absorb 42% of base costs; manpower development 4%; strengthening management and support systems 4%; family health programs 24%; disease prevention programs 9%; development of nutrition activities 3%; project management 1%; functional literacy and women's programs 4%; youth programs 1%; IEC activities 1%; census support 5%; and development of population planning capability in EPDD 1%.

B. Financing

4.06 Of the total project costs of US$42.9 million, US$4.3 (10%) would be financed by the Government, which would cover 3% of the recurrent costs and 7% of the investment costs of the project. The remainder of investment

Table 2: PROJECT COSTS BY EXPENDITURE CATEGORY

	(Local Currency '000)			(US$ '000)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
I. INVESTMENT COSTS								
A. CIVIL WORKS	16,112.6	10,542.8	26,655.4	8,951.5	5,857.1	14,808.6	40	44
B. FURNITURE	1,100.1	661.8	1,761.9	611.2	367.7	978.8	38	3
C. MATERIALS	1,915.1	4,523.9	6,439.1	1,064.0	2,513.3	3,577.3	70	11
D. EQUIPMENT	-	4,750.7	4,750.7	-	2,639.3	2,639.3	100	8
E. VEHICLES	-	2,579.6	2,579.6	-	1,433.1	1,433.1	100	4
F. TECHNICAL ASSISTANCE	-	4,063.7	4,063.7	-	2,257.6	2,257.6	100	7
G. DESIGN FEES	1,880.0	-	1,880.0	1,044.5	-	1,044.5	-	3
H. MONITORING + RESEARCH + EVALUATION	528.1	-	528.1	293.4	-	293.4	-	1
I. ACTIVITIES	86.4	-	86.4	48.0	-	48.0	-	0
J. TRAINING	5,916.9	-	5,916.9	3,287.2	-	3,287.2	-	10
K. OVERSEAS TRAINING	-	1,004.8	1,004.8	-	558.2	558.2	100	2
Total INVESTMENT COSTS	27,539.3	28,127.2	55,666.5	15,299.6	15,626.2	30,925.8	51	92
II. RECURRENT COSTS								
A. SALARIES	618.0	-	618.0	343.3	-	343.3	-	1
B. VEHICLE OPERATION AND MAINTENANCE	675.2	2,660.2	3,335.3	375.1	1,477.9	1,853.0	80	6
C. EQUIPMENT MAINTENANCE	51.0	200.4	251.5	28.4	111.3	139.7	80	0
D. BUILDING MAINTENANCE	112.0	439.8	551.9	62.2	244.4	306.6	80	1
Total RECURRENT COSTS	1,456.2	3,300.4	4,756.7	809.0	1,833.6	2,642.6	69	8
Total BASELINE COSTS	28,995.5	31,427.7	60,423.2	16,108.6	17,459.8	33,568.4	52	100
Physical Contingencies	2,617.0	2,576.2	5,193.3	1,453.9	1,431.2	2,885.1	50	9
Price Contingencies	6,804.5	4,869.7	11,674.3	3,780.3	2,705.4	6,485.7	42	19
Total PROJECT COSTS	38,417.0	38,873.7	77,290.7	21,342.8	21,596.5	42,939.3	50	128

costs would all be financed from external sources. The prospective bilateral cofinanciers include the Government of the Netherlands, ODA, EEC, CIDA and USAID. UNICEF has expressed particular interest in parts of the family health component and WHO in the management and support systems component. An IDA Credit of US$15-20 million has been allocated for this project, but this amount would be adjusted upward or downward depending upon

the availability of external funds and the most attractive financing plan for the project. Table 3 presents project costs by financing source. Discussions within the potential cofinanciers will continue after they have received copies of the draft appraisal report.

Table 3: PROJECT COSTS BY FINANCING SOURCE
(US$'000)

I. Investment Costs	World Bank/ Other External Sources	Government of Malawi	Total
A. Civil works	18705.8	1408.2	20114.0
B. Furniture	1317.2	0.0	1317.2
C. Materials	4259.1	0.0	4259.1
D. Equipment	3328.4	23.7	3352.1
E. Vehicles	1723.1	0.0	1723.1
F. Tech Assistance	2590.7	0.0	2590.7
G. Design Fees	1102.4	74.3	1176.7
H. Monitoring, Res & Eval	352.5	0.0	352.5
I. Activities	58.8	0.0	58.8
J. Training	4067.3	0.0	4067.3
K. Overseas Training	617.3	0.0	617.3
Total Investment Costs	38122.6	1506.2	39628.8
II. Recurrent Costs			
A. Salaries	11.3	420.4	431.7
B. Vehicle Op and Maint	509.1	1802.4	2311.5
C. Equipment Maintenance	6.2	173.4	179.6
D. Building Maintenance	0.0	387.7	387.7
Total Recurrent Costs	526.6	2783.9	3310.5
TOTAL PROJECT COSTS	38649.2	4290.1	42939.3

C. Procurement

4.07 Procurement arrangements are summarized in Table 4. At present, these have been made on the assumption that the IDA would finance all of the investment costs of the project. Should potential cofinanciers require other procedures under parallel financing, the arrangements would be amended when the cofinanciers' financial participation is firm. It is expected that 42% of total project costs would be procured through international competitive bidding (ICB), 27% through local competitive bidding, 6% through other methods, and 25% not being subject to procurement. Separate civil works contracts would be awarded for each of the district hospitals (including accommodation) after ICB as follows: Mulanje (US$2.8 million); and Mzimba (US$2.9 million). Separate civil works contracts, after ICB, would also be awarded for: Zomba General Hospital and Zomba School of Nursing (US$5.1 million); and the urban family health unit at Kamuzu Central Hospital, Lilongwe (US$1.0 million). Local firms bidding for these contracts would receive a preference of 7.5%. The following civil works which include 26 rural health centers with housing, three regional health training centers, renovation of eight pharmaceutical depots, a quality control laboratory, expansion of CMS facilities at Lilongwe, seven surgical contraception units, three urban health centers, and a functional literacy regional training center, are too small and scattered to attract firms from outside Malawi. These contracts would be awarded following competitive bidding advertised locally and in accordance with procedures acceptable to IDA. The remaining items of civil works (upgrading six existing rural health centers and associated housing, upgrading two existing urban health

centers, 10 shelters and 157 fish ponds) would be by force account of the Ministry of Works and Supplies.

Table 4: PROCUREMENT TABLE
(US$'000)

	Procurement Method				
Project Element	ICB	LCB	Other	N.A.	Total
I. INVESTMENT COSTS:					
A. Civil works	11818.0	7219.5	1076.5	0.0	20114.0
B. Furniture	1167.2	0.0	150.0	0.0	1317.2
C. Materials	0.0	4259.1	0.0	0.0	4259.1
D. Equipment	3202.1	0.0	150.0	0.0	3352.1
E. Vehicles	1723.1	0.0	0.0	0.0	1723.1
F. Tech Assistance	0.0	0.0	0.0	2590.7	2590.7
G. Design Fees	0.0	0.0	1176.7	0.0	1176.7
H. Monitoring, Res & Eval	0.0	0.0	0.0	352.5	352.5
I. Activities	0.0	0.0	0.0	58.8	58.8
J. Training	0.0	0.0	0.0	4067.3	4067.3
K. Overseas Training	0.0	0.0	0.0	617.3	617.3
Total Investment Costs	17910.4	11478.6	2553.2	7686.6	39628.8
II. RECURRENT COSTS:					
A. Salaries	0.0	0.0	0.0	431.7	431.7
B. Vehicle Op and Maint	0.0	0.0	0.0	2311.5	2311.5
C. Equipment Maintenance	0.0	0.0	0.0	179.6	179.6
D. Building Maintenance	0.0	0.0	0.0	387.7	387.7
Total Recurrent Costs	0.0	0.0	0.0	3310.5	3310.5
TOTAL PROJECT COSTS	17910.4	11478.6	2553.2	10997.1	42939.3
%	42	27	6	26	100

4.08 Furniture and equipment would be grouped as far as possible into contracts valued at US$100,000 or more, and would be procured through ICB. Items of furniture or equipment valued at less than US$20,000 would be purchased by prudent shopping with at least three price quotations, provided that the aggregate value of such purchases does not exceed US$300,000. The vehicles would be procured as a package through ICB. Suppliers of vehicles would be required to agree to maintain an adequate after-sales service and an inventory of spare parts. Contracts for materials and supplies required for IEC activities would be awarded following competitive bidding advertised locally and in accordance with procedures acceptable to IDA. Prudent shopping with at least three price quotations would be used for miscellaneous items of supplies and materials valued at less than US$10,000 provided that the aggregate value of such purchases does not exceed US$100,000.

4.09 All IDA-financed contracts to be procured through ICB would be subject to prior IDA review. Other contracts would be subject to selective post award review.

4.10 For all consultants employed for this project, qualifications, experience and terms and conditions of employment would be satisfactory to IDA, in accordance with the "Guidelines for the Use of Consultants by World Bank Borrowers and The World Bank as an Executing Agency" (August 1981).

D. Disbursements

4.11 Until agreement is reached on the proposed financing plan for the project, it is impossible to indicate those items against which the IDA credit would be disbursed. It is therefore also impossible to indicate

those items for which full documentation would be required. However, for items to be disbursed against statements of expenditure, documentation would not be submitted for IDA review but would rather be kept in one location in the Ministry of Finance for review by IDA supervision missions and for annual audits (para. 4.12). In addition, it is impossible to base a disbursement profile on the implementation schedule for items to be financed by IDA. However, an indicative schedule of disbursements is shown in Annex 1, Table 14. This is based on the actual disbursement profile of the Kenya Integrated Rural Health and Family Planning Project, which is the most relevant disbursement profile as it relates to the only completed Bank/IDA-assisted family health project in Eastern Africa. It is also the disbursement profile used for the Botswana Family Health Project, which was approved in 1984. It is expected that the credit would be fully disbursed by 12 months after project completion.

E. Accounts and Audit

4.12 Project funds would be maintained in a separate account and would channelled from the Ministry of Finance to the MOH for Part A and the EPDD for Part B and would be administered by the respective Deputy Secretaries. Project financial records would be maintained by the Chief Accountant, MOH for Part A and by the Chief Accountant, Office of the President and Cabinet for Part B. The Office of the Chief Accountant, MOH would be strengthened by the addition of an accountant solely for the project who would receive training by IDA staff in IDA's accounting, auditing and disbursement procedures. The project would be subject to normal government accounting and auditing procedures, which are considered satisfactory to IDA.

V. PROJECT IMPLEMENTATION

A. Status of Project Preparation

5.01 The project was prepared by the MOH in collaboration with the MOS, EPDD, Information Department, Youth Department and National Statistical Office. The National Health Plan (1986-1995) and the IDA Population Sector Review provided the framework for project development. In addition, the MOH was studied by the Malawi Civil Service Review Commission and a new organizational structure was recommended (para.2.24). Site plans, sketch drawings and detailed working drawings for the district hospitals, rural health centers, urban health centers, family health unit, school of nursing and regional training facilities were reviewed by the appraisal mission, and the required modifications will be submitted to IDA for review shortly. Working drawings, bills of quantity and tender documents for all contracts to be executed through ICB would be finalized before negotiations. Confirmation was received that all required sites were acquired. Detailed survey work for the upgrading of rural and urban health centers has been commissioned to consultants and is expected to be completed by September 1986. Equipment lists were reviewed by the appraisal mission and were considered satisfactory. Implementation plans for MOH and non-MOH programs have been drawn up. Terms of reference for studies and technical assistance have been finalized. Discussions are underway with prospective donors to finalize the financing plan. Meetings are planned with donors after the report is discussed with the Government.

B. Organization and Management

5.02 The Principal Secretary, MOH would have overall responsibility for

implementation of Part A, while the Deputy Secretary, EPDD would have overall responsibility for coordination of Part B of the project. The project is expected to start on January 1, 1987, and be completed by December 31, 1989. The closing date for the project would be December 31, 1990. For Part A, a full time project coordinator, accountable to the Principal Secretary MOH, would be appointed. The project coordinator would be assisted by an accountant, an administrative assistant and a secretary. For Part B, the head of the Human Resources Unit EPDD will function as the project coordinator. Two coordinating committees, for Parts A and B, would be established. For Part A, the Principal Secretary, MOH will chair a coordinating committee whose members would include the Deputy Secretary, CMO, DCMO, Chief Nursing Officer, Chief Health Planning Officer, Chief Accountant and the Project Coordinator. Representatives of other MOH units would be co-opted to the committee as necessary. The coordinating committee would meet every month to discuss the implementation of Part A of the project. For Part B, the Deputy Secretary, EPDD would chair a coordinating committee whose members would include the Principal Economist, Principal Planning Officer MCS, Administrator or representative Department of Yough, Chief Information Officer, Commissioner NSO, DCMO and the head of the Human Resources Unit. The coordinating committee would meet every month to discuss implementation of Part B of the project. A condition of negotiations would be the appointment of a Project Coordinator, whose qualifications and experience are satisfactory to IDA, for Part A of the project (para 7.01d).

5.03 The Principal Secretary, MOWS would be responsible for the civil

works program. An architect would be appointed in the MOH's Planning Unit but accountable to the Project Coordinator to assist the MOWS in implementing the civil works program. The production of architectural drawings for the project would be managed by the MOWS, which would also coordinate the quantity surveying and mechanical, electrical, structural and civil engineering inputs of design work. Since the MOWS is not adequately staffed to handle these functions, maximum use would be made of consultants. A condition of effectiveness would be the appointment of an architect, whose qualifications and experience are satisfactory to IDA, to the Planning Unit of the MOH (para 7.02d).

5.04 Procurement of furniture, equipment and supplies, and recruitment of consultants for both parts of the project would be undertaken by the Planning Unit, MOH under the supervision of the respective project coordinators. The Planning Unit has the capability to undertake procurement efficiently.

5.05 Responsibility for implementation of each component undertaken under Part A of the project would rest with the applicable section of the MOH - the Deputy Secretary for manpower development and management and support systems, the Assistant Chief Medical Officer (Family Health) for the Primary Health Care, Family Health and nutrition programs, and the Assistant Chief Medical Officer (Epidemiology) for the disease prevention programs. Responsibility for implementation of each component undertaken under Part B of the project would be as follows: The Principal Planning Officer, MOCS would be responsible for the Functional Literacy and Women's Programs; the Administrator, Department of Youth for Youth Programs; the Chief Information

Officer for IEC programs; the head of the human resources unit for activities at the EPDD; and the Commissioner, NSO for census activities.

C. Monitoring, Reporting and Evaluation

5.06 The project coordinator would have responsibility for monitoring the progress of implementation of their respective parts of the project. He would prepare quarterly progress reports on project implementation and would highlight major issues needing resolution. These reports would be approved by the respective coordinating committees (para 5.02) before submission to IDA.

5.07 A number of process indicators would be utilized to measure progress. For the PHC program the number and types of training and refresher activities undertaken annually; for manpower development the completion and commissioning of facilities; for management and support systems accomplishment of national and district training goals annually; for the MCH and child spacing programs the number and types of training and refresher activities undertaken annually; for IEC activities in the MOH and other government agencies the production of posters, booklets and manuals would be some of the process indicators of the project. Details of the proposed process indicators by year one given in the Annex 1, Table 13.

5.08 In addition to the process indicators discussed above, a number of surveys and studies are planned. First, a mid-term evaluation of the PHC program is planned towards the end of 1988. Second, annual plan assesssment and review workshops are proposed. Third, a study of the impact of revised fee schedules on utilization of services and the potential for health insurance is planned during 1987. Fourth, a base-line health status and

utilization survey is planned for 1987. Fifth, annual impact studies of various programs are planned. Sixth, a special evaluation of the EPI is planned for 1989. Finally, a tuberculosis prevalence survey will be undertaken in 1989. Assurances would be sought from the Government that the results of these surveys would be made available to IDA within 3 months of their completion for review and comments (para 7.03e).

VI. PROJECT BENEFITS, JUSTIFICATION AND RISKS

A. Benefits and Justification

6.01 The proposed project is designed to continue institution building activities, to consolidate and expand priority programs such as primary health care and child spacing begun under the first project, and to introduce family health activities through a multisectoral approach. It draws heavily from the recently prepared National Health Plan and the IDA Population Sector Review. The project is expected to ensure that existing resources are used with maximum efficiency. Through this project the Government would make the priority investments needed to ameliorate the poor health status of its population.

6.02 Through increased coverage of peripheral health services the project is expected to reach 2,000,000 people. The benefits to this population group would primarily be improvement of health status. Increased coverage of peripheral health services would also provide access, for the first time, to child spacing services in rural areas. At the district level strengthening the hospital system and provision of surgical contraception units would provide a complete range of child spacing services. The institution of in-service training would ensure that the quality of service providers remains of good quality. Activities to improve management and support systems would have long and short-term benefits. In the short term, there would be improvements in the management of health programs. The development of objectives for various units and job descriptions at each level would strengthen management capability. Emphasis on the team approach at the regional and district levels would ensure better coordinated and

implementation of health programs. The restructured MOH would ensure that there would be a more rational use of manpower. Continued strengthening of health planning at the national and district levels would ensure that health programs are designed to address priority health problems. The implementation of new accounting systems at the MOH, at district level, and, in the hospitals would enable better monitoring of expenditures and, would improve fee collection. Expansion of the pharmaceutical system up to the district level would further improve the effectiveness of the distribution system.

6.03 The impact of the project on morbidity, mortality and fertility levels is likely to be slight during the three years. However, programs in family health, disease prevention and nutrition supported through the project are designed to have significant impact in the medium term. Reduction of the infant mortality rate from 151 to 100/1000 live births and 1-4 mortality from 330 to 210/100 population are targets for a five-year period. This substantial reduction in child mortality is possible given the specific and targetted approach adopted in the health programs. The target contraceptive prevalence rate at the end of five years is about 10% for modern methods only. There is no target for traditional methods. This is not unreasonable given the persisitently high demand for child spacing services. It is, however, dependent upon how quickly those services can be made available throughout the country.

6.04 Family health activities through the multisectoral approach are expected to benefit about 2.5 million people. Of these, about 600,000 people would be reached through the functional literacy program, 300,000

through the women's programs, 100,000 through the youth programs, and 1.5 million through IEC activities. These activities are expected to increase awareness of family health problems in the short-term and in the long-term result in demand for family health services. Through support for the NSO and the EPDD the project would enable the Government of Malawi to develop institutional capability to generate data on population trends and to analyse the impact of population growth on economic development.

6.05 In view of the difficult financial situation a central concern of the design of the proposed project was to ensure its affordability to the Government. Of particular concern was the affordability of the project's recurrent costs. These are expected to be K3.1 million for Part A and K1.7 million for Part B of the project. The incremental recurrent costs are remarkably low for a project of this size. This is because the Government's strategy has been to limit expansion of services with significant recurrent cost implications and to expand only those high priority programs with low recurrent cost implications.

6.06 Cost saving measures are expected to be realized from improved accounting procedures, bill collection, monitoring and control of expenditures and from changes in hospital treatment regimens. Aggregate figures for the period 1976/77 to 1984/85 show that 87% of the MOH's recurrent budget goes to curative institutions (11% for administration and 2% preventive care). The two central hospitals alone account for about 33% of total MOH recurrent expenditure. Studies financed through the IDA supported health project of the operations of these hospitals reveal that about 44% of their non-salary expenditures can be saved. This could be done

without affecting their output in the following areas: food, overhead costs, vehicle expenditures and hospital supplies. The following example from the Queen Elizabeth Hospital, Blantyre, illustrates the potential savings in Kwacha from one item -- overhead costs -- through improved management.

Overhead	Current Cost (1985)	Projected Cost (1990)
Water	342,705.24	68,541.05
Coal	128,851.52	0
Electricity	105,928.45	105,928.45
Telephone	92,968.00	37,187.20
Other overheads	10,330.65	20,330.65
Total Annual Overhead	680,783.46	221,986.95

6.07 Assuming that the cost saving measures are gradually introduced, the project is expected to result in savings of about K8.4 million. In addition, the MOH has instituted a scheme for cost recovery. At the end of the project K4.4 million are expected to be recovered from fees. Cost recovery would rise to K5.3 million annually by 1990. With implementation of these cost saving and cost recovery measures the MOH would have no difficulty in meeting the incremental recurrent budgets requirements for the project.

6.08 Most of the activities proposed under the project have been pilot tested in the country and suitably modified to permit nationwide expansion. In addition, the phased approach to implementation of the Government's five-year program will enable further modifications as the activities are

replicated nationally.

B. Risks

6.09 The project has three main risks. The first concerns the restructuring of the MOH. The leadership for restructuring has come from the Office of the President and Cabinet. An inter-ministerial task force headed by the Secretary, Office of the President and Cabinet has been reviewing the recommendations of the Malawi Civil Service Review Commission. The MOH has also made much progress and has defined its objective. There is every reason to assume that the task of restructuring would be completed satisfactorily.

6.10 The second risk concerns the civil works element of the project. Experience with implementation of civil works in the IDA assisted health project has been unsatisfactory. The MOH has been unable to adequately brief and monitor the MOWS. Furthermore, the MOWS has been critically understaffed for about two years. Steps have been taken to minimize the risks. First, the MOWS has hired expatriate architects to reduce its staffing problem. Second, considerable use is currently made of consultants by MOWS than in the past. Third, project preparation is at an advanced state with tender documents for all ICB contracts expected by negotiations. Finally, the project provides for an architect to be attached to the MOH (para 5.03) to coordinate work with MOWS. With these steps it is felt that the civil works element would be able to be carried out as planned.

6.11 The third risk concerns the introduction of family health activities through a multisectoral approach. The EPDD is a weak organization and is being reorganized as part of the Structural Adjustment

Program. It is expected to play a coordinating role for multisectoral activities. Through additional staffing, higher level training and technical assistance this role will be developed gradually. The Bank does not have experience with MOCS, the Department of Youth, or the Information Department. However, the project proposes to add family health into existing programs only at this stage. It is therefore felt that multisectoral activities can be carried out as planned.

VII. ASSURANCES AND RECOMMENDATIONS

7.01 The following will be conditions of negotiations:

(a) that the Government bring to negotiations a well defined position and plan regarding reorganization of the MOH to IDA for review and comment by IDA (para 3.16);

(b) that an implementation plan of the cost-saving measures, satisfactory to IDA, has been developed (para 3.19);

(c) the Government's agreement in principle that EPDD would play a coordinating role for multisectoral family health activities (para 3.46);

(d) that a project coordinator, whose qualifications and experience are satisfactory to IDA, be appointed for Part A of the project (para 5.02);

7.02 The following would be conditions of project effectiveness:

(a) the creation of the positions of three regional medical officers and three regional nursing officers (para 3.18);

(b) the creation of the positions of one budget section head at MOH and 24 assistant accountants at the district level (para 3.21);

(c) the appointment of an architect, whose qualifications and experience are satisfactory to IDA, to the Planning Unit of the MOH (para 5.03).

7.03 During negotiations the following assurances would be sought from the Government:

(a) that the health centers would be adequately staffed by at least

one clinical officer and two enrolled nurses once completed (para 3.10);

(b) that a standard examination be introduced for all enrolled nurses by December 31, 1988 (para 3.12);

(c) that a training officer would be appointed to coordinate in-service training activities by June 30, 1987; and that annual in-service training plans would be submitted to IDA for review and comment by December 31, 1987, and annually thereafter (para 3.14);

(d) that before a decision is made on building a medical school, IDA would be fully consulted (para 3.15);

(e) that six clinical officers and 16 enrolled nurses would be appointed to the urban clinics once completed (para 3.26);

(f) that the MOH establish a health education review committee chaired by the Deputy Chief Medical Officer, with members from the Ministries of Health and Community Services and the Information and Youth Departments to approve IEC messages prepared by non-MOH agencies;

(g) that the results of these surveys would be made available to IDA within three months of their completion for review and comments (para 5.08).

7.04 Subject to the above assurances and conditions being met, it is recommended that the proposed project constitute a suitable basis for an IDA Credit of US$15-20 million equivalent to the Government of Malawi.

Annex 1, Table 1

The Ten Leading Causes of Death in Children 0-4 Years, 1983
from 6028 Reported Hospital Deaths

Disease	Total Reported Deaths	% Deaths	Accumulation Percentage
1. Measles	975	16.2	16.2
2. Penumonia	786	13.0	29.2
3. Nutritional deficiency	673	11.2	40.4
4. Malaria	611	10.1	50.5
5. Anemia	549	9.1	59.6
6. Diarrheal diseases	504	8.4	68.0
7. Tetanus	256	4.2	72.2
8. Diseases of the nervous system	96	1.6	73.8
9. Accidents and injuries	89	1.5	75.3
10. Tuberculosis	28	0.5	75.8

Annex 1, Table 2

The Ten Leading Causes of Death in Those Older than 5 in 1983
from 3534 Reported Hospital Deaths

Diseases	Total Reported Deaths	% Deaths	Accumulation Percentage
1. Measles	273	7.7	7.7
2. Penumonia	268	7.6	15.3
3. Nutritional deficiency	222	6.3	21.6
4. Malaria	208	5.9	27.5
5. Anemia	206	5.8	33.3
6. Diarrheal diseases	204	5.8	39.1
7. Tetanus	114	3.2	42.3
8. Diseases of the nervous system	111	3.1	45.4
9. Accidents and injuries	83	2.4	47.8
10. Tuberculosis	78	2.2	50.0

The Ten Most Frequent Causes of Outpatient Visits for Age 0-4 in 1982 from 4.8 million visits

Disease	Percentage of Total	Accumulation Percentage
1. Malaria	39.6	35.6
2. Respiratory infections	19.8	55.4
3. Diarrheal diseases	8.7	64.1
4. Inflammatory diseases of the eye	7.9	72.0
5. Skin diseases	5.6	77.6
6. Abdominal and GI symptons	5.2	82.8
7. Trauma and accidents	3.1	85.9
8. Measles	2.3	88.2
9. Nutrition deficiency disease	2.2	90.4
10. Hookworms and other helminthiasis	1.6	92.0

MOH Hospital Bed Capacity and Occupation
(by Level of Occupancy)

Hospital	Bed Capacity	Average No. Inpatients per Day	Average OCC%
Salima	41	104.5	254.8
Ntchisi	28	67.6	241.5
Zomba	324	570.9	176.2
Lilongwe	567	882.8	155.7
Chikwawa	114	169.0	148.2
Mulanje	137	190.0	138.7
Rumphi	105	144.6	137.7
Kasungu	162	200.0	123.5
Mchinji	76	93.4	122.9
Ntcheu	192	223.1	116.2
Machinga	54	58.4	108.2
Thyolo	138	144.1	104.4
KarongaKaronga	100	101.0	101.0
Mangochi	204	200.1	98.1
Mzimba	133	134.3	97.3
Blantyre	884	847.1	95.8
Nkhotakota	131	124.1	94.7
Nkhatabay	97	91.4	94.2
Dedza	146	135.0	92.5
Nsanje	154	135.9	83.3
Chiradzulu	115	93.4	81.2
Dowa	123	101.9	80.9
Chitipa	73	52.2	71.5
Mwanza	150	80.0	53.3

Source: Inpatient Survey, MOH
August 1983-February 1984

MOH STAFFING SITUATION - JUNE 1984

CATEGORY	ESTABLISHMENT	STAFF IN POST	IN POST AS % OF ESTABLISHMENT
Medical Officer	136	84	62
Dental Officer	11	8	73
Clinical Officer	184	178	97
Medical Assistant	517	351	68
Registered Nurse	497	367	74
Enrolled Nurse/M	907	919	101
Pharmacist	13	9	69
Pharmacy Technician	6	1	17
Pharmacy Assistant	26	32	123
Laboratory Technician	29	25	86
Laboratory Assistant	84	55	65
Radiographer	17	9	53
X-Ray Assistant	9	8	89
Dental Technician	11	7	64
Dental Assistant	12	9	75
Physio/OT	12	6	50
Health Inspectors	101	70	69
Health Assistant	231	169	73
Others	2159	1916	89
Total	4962	4223	85

GROWTH OF HEALTH SERVICE STAFF (1977-1983)
FOR ALL SECTORS--MOH PHAM, LOCAL GOVT

TYPE OF STAFF	1978	1983	% Change 1978-1983 (5 Years)
1. Medical Officer	116	108	-7%
2. Clinical Officer	79	192	Very large
3. Medical Asst.	525	622	+20%
4. Regular Nurse/Midwife	397	519	+31%
5. Enrolled Nurse/Midwife	1040	1555	+50%
6. Dentist	15	11	+27%
7. Dental Technician/Asst.	4	28	Very large
8. Pharmacist	6	9	+50%
9. Pharmacy Technician	1	35	Very large
10. Laboratory Technician	13	40	+207%
11. Laboratory Assistant	56	91	+64%
12. Radiographer	6	20	Very large
13. X-ray Assistant	5	16	Very large
14. Health Inspector	59	74	+25%
15. Health Educator	3	5	+75%
16. Health Assistant	165	214	+30%
17. Other	2509	1852	-26%
Total	4999	5391	+8%
% of Total in MOH	55%	64%	

Data taken from MOH Statistics 1983 and 181: MOH Staff Record as at March 1984, Records Office, WHO Country Programming Document 1978, and World Bank Report, 1981

Annex 1, Table 7

AVERAGE ATTRITION RATES FROM THE MOH: 1981-1983

CATEGORY	Total Employed 1981-83	Total Leavers 1981-83	Annual Mean Attrition Rate
Clinical Officers	351	12	3.4%
Registered Nurses	813	31	3.8%
Enrolled Nurse/Midwives	2231	49	2.2%
Medical Assistants	957	47	4.9%
Health Assistants	438	17	3.9%
Laboratory Assistants	146	3	2.1%
Pharmacy Assistants	132	5	3.8%
	41	5	12.2%

Annex 1, Table 8

MOH RECURRENT EXPENDITURES 1981/82-1985/86 BY SOURCE OF FINANCE

Year	Treasury Allocation	Non-Treasury Sources			Total Non-Treasury Sources	% of Expenditures Financed by Non-Treasury Sources
		Fees	Medical Personnel	Drugs		
1985/86	30369	1048	2600	6000	9648	32
1984/85	28031	568	2600	2000	5168	19
1983/84	20599	533	2600	2100	5233	25
1982/83	17422	537	2300	2100	4937	28
1981/82	18723	393	2300	3100	5793	31

NOTES:

1. Data on fees and expenditure from the Malawi Government Estimate of Expenditure.
2. Foreign medical personnel employed through technical assistance through two parts to their wages. The MOH pays the local rate and the sponsoring agencies pays the differnce between the home rate and the local rate.
3. Federal Republic of Germany and Great Britain provide drug support.

Source: Estimate by the Bank Mission, 1985.

MOH INCOME FROM FEES (1975/76-1985/86)

Year	Gross Expenditure in Current Prices (K'000)	Appropriations in Aid in Current Prices 2/		Appropriations in Aid in Constant Prices (1978/79=100) 2/		
		Current Prices Actual (K'000)	% of Gross Expenditure (%)	Constant Prices (K'000)	As % of Gross Expenditure	Per Capita (K)
1985/86 (Est.)	23057	1557	6.8	686	4.3	0.10
1984/85 (Rev)	24889	906	3.6	472	2.8	0.07
1983/84	21600	683	3.2	385	2.8	0.01
1982/83	17422	570	3.3	358	2.9	0.06
1981/82	18723	1080 1/	5.5	744	5.3	0.12
1980/81	14980	499	3.3	377	3.1	0.06
1979/80	12083	395	3.2	386	3.3	0.07
1978/79	10326	384	3.7	384	3.7	0.07
1977/78	7701	349	4.5	422	4.5	0.08
1976/77	7084	295	4.2	384	4.2	
1975/76	6379	275	4.3	370	4.4	

NOTES:

1/ K356,000 of this sum was British Commodity aid.

2/ Appropriations in aid include fees and departmental receipts and reimbursements. The latter is in the neighborhood of 13% of the total appropriations in aid.

Source: Based on Malawi Government approved estimated of expenditure.

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MOH ACTUAL RECURRENT EXPENDITURE BY ACTIVITY AREA
(1976/77 - 1984/85)

YEAR	Administration Training		Preventive and Control		Curative Institutions		TOTAL	
	K'000	%	K'000	%	K'000	%	K'000	%
1985/86 (est.)	3,069	13	1,360	6	18,628	81	23,057	100
1984/85 (revised est.)	2,789	14	1,526	5	22,963	81	28,031	100
1983/84	2,645	12	1,221	6	17,734	82	21,600	100
1982/83	2,108	12	1,121	6	14,193	82	17,422	100
1981/82	2,377	13	948	5	15,338	82	18,663	100
1980/81	1,693	11	910	6	12,377	82	14,980	100
1979/80	1,440	12	802	7	9,841	81	12,083	100
1978/79	1,048	10	634	6	8,645	84	10,326	100
1977/78	956	12	466	6	6,338	82	7,761	100
1976/77	833	12	615	9	5,636	79	7,761	100
Total: 1976/77-1985/86	19,711	12	9,603	6	131,693	82	161,007	100

Source: Based on Malawi Government approved estimate of expenditure.

MOH RECURRENT EXPENDITURE, ACTUAL EXPENDITURES ON SALARIES & WAGES, GOODS & SERVICES

1975/76 - 1985/86

Salaries & Wages in Current Prices				Goods & Services (in current prices)	Total (in current prices)	Actual Expenditure in Constant Prices(1978/79)		
Adm. & Training	Prevention & Control	Curative Institution	Sub-total (a)	Sub-total (b)	(c)=(a)+(b)	Salaries & Wages (a)	Goods & Services (b)	Total (a)+(b)
657	843	6,566	8,066	22,303	30,369	5,953	9,825	15,478
794	758	5,797	7,349	20,682	28,031	5,837	10,777	16,614
539	643	5,619	6,801	14,798	21,599	5,529	8,351	13,880
537	627	4,221	5,385	12,037	17,422	4,575	7,566	12,141
435	437	3,554	4,426	14,297	18,723	4,168	9,846	14,014
359	318	2,857	3,534	11,446	14,980	3,506	8,638	12,144
358	320	2,462	3,140	8,943	12,083	3,140	8,733	11,873
284	276	2,354	2,914	7,412	10,326	2,914	7,412	10,326
215	182	1,735	2,132	5,629	7,761	2,578	6,807	9,387
165	172	1,495	1,832	5,251	7,083	2,386	6,841	9,227
163	157	1,391	1,711	4,668	6,379	2,237	6,249	8,486

Notes: The price index used from 1975/76 to 1978/79 is a general index. From 1978/79 to 1985/86 two separate indexes were available, one for wages and salaries and the other for goods and services.

Source: Based on Approved Estimates of expenditure on revenue account.

MOH CAPITAL EXPENDITURES IN CURRENT & CONSTANT PRICES AS A PERCENTAGE OF TOTAL EXPENDITURES
1976/77 - 1985/86

YEAR	TOTAL APPROVED HEALTH BUDGET				Approved Budget as % of total Government	Actual Health Expend.	Actual +/- Expend. as % of Approved Budget	Actual Expenditure in Constant Prices 1980/81=100	Actual Expenditure in Constant Prices per capita 1980/81=100
	Government Budget (K'000)	Government (K'000)	Donor (K'000)	Total (K'000)	(%)	(K'000)	(%)	(K'000)	(K'000)
1985/86 (estimate)	156,436	1,252	6,263	7,515	4.8	-	-		
1984/85	134,155	11,147	7,731	8,878	6.6	-	-		
1983/84	162,088	733	6,202	6,935	4.3	6,519	6%	3,679	0.56
1982/83	138,716	210	2,386	2,596	1.9	1,378	47%	866	0.14
1981/82	138,724	34	2,654	2,688	1.9	1,554	42%	1,020	0.12
1980/81	165,589	68	3,316	3,384	2.0	4,246	25.5%	3,205	0.5
1979/80	147,830	424	2,643	3,067	2.1	2,726	11.1%	2,662	0.4
1978/79	130,479	423	1,171	1,594	1.2	1,007	36.8%	1,007	0.18
1977/78	96,224	129	1,070	1,199	1.2	875	27.0%	1,058	0.19
1976/77	60,189	220	2,196	2,416	4.0	1,674	30.7%	2,180	

Note: The price index applied is that one for goods and services.
Source: Based on Approved Estimates of Expenditure on Capital Account.

ESTIMATED SCHEDULE OF DISBURSEMENTS

Fiscal Year and Quarter Ending	Disbursement During Quarter (US$'000)	Accumulated Disbursement (US$'000)	Cumulative Disbursement %
1986/87			
March 31, 1987	0	0	0
June 30, 1987	250	250	1
1987/88			
September 30, 1987	250	500	2
December 31, 1987	500	1000	4
March 31, 1988	1000	2000	8
June 30, 1988	1000	3000	12
1988/89			
September 30, 1988	1000	4000	16
December 31, 1988	1000	5000	20
March 31, 1989	1500	6500	26
June 30, 1989	3250	9750	39
1989/90			
September 30, 1989	3750	13500	54
December 31, 1989 1/	1750	15250	61
March 31, 1990	3500	18750	75
June 30, 1990	2000	20750	83
1990/91			
September 30, 1990	2250	23000	92
December 31, 1990 2/	1000	25000	100

1/ Expected date of project completion: December 31, 1989
2/ Expected closing date: December 31, 1990

Annex 2

Documents Available in Project File

1. World Bank. Population Sector Review, 1986
2. Government of Malawi. Family Health Project Proposal
3. Government of Malawi. National Health Plan (1986-1995)
4. Planning Unit. Population and Health in Malawi, 1984
5. Planning Unit. Manpower: Current Situation, Future Needs, Issues of Management, 1984
6. Planning Unit. The Use and Function of Management Information in the Delivery of Health Care Services, 1984
7. Planning Unit. The Potential for Income Generation and Cost Savings in the Ministry of Health, 1984
8. Planning Unit. Ministry of Health: The Budget Formulation Process, 1984
9. Planning Unit. Strengthening Primary Health Care. Principles, Policies and Strategies, 1984
10. Planning Unit. Health Sector Analysis and Emerging Programming Strategies in the Health Sector, 1984
11. Planning Unit. Pharmaceutical Logistics, 1984
12. Jacobsen, B. Appraisal of Civil Works Component of Proposed Family Health Project, 1986
13. Ayalew, S. Economic Analysis of Proposed Family Health Project, 1986
14. Mohan, P.C. Appraisal of IEC Component of Proposed Family Health Project, 1986
15. Detailed Cost Tables for Proposed Family Health Project, 1986

Annex 3

Detailed Cost Tables (Summary Accounts)

1. Project Costs by Expenditure Category and by Year Including Foreign Exchange Amount and Percentage (K)
2. Project Costs by Expenditure Category and by Base Costs and Contingencies (US$)
3. Project Costs by Expenditure Category and by Year. Totals Include Contingencies (K and US$)
4. Project Costs by Expenditure Category and by Base Costs and Contingencies (K)
5. Project Costs by Functional Component and by Year (K)
6. Project Costs by Functional Component. Totals Include Contingencies (K and US$)
7. Project Costs by Expenditure Category and Functional Component (K)

MALAWI
SECOND FAMILY HEALTH PROJECT
Summary Accounts by Year
(Local Currency '000)

	Base Costs				Foreign Exchange	
	1987	1988	1989	Total	%	Amount
I. INVESTMENT COSTS						
A. CIVIL WORKS	11,071.6	10,726.2	4,857.7	26,655.4	39.6	10,542.8
B. FURNITURE	366.9	695.7	699.3	1,761.9	37.6	661.8
C. MATERIALS	2,104.9	2,005.4	2,328.7	6,439.1	70.3	4,523.9
D. EQUIPMENT	1,784.0	1,283.7	1,683.0	4,750.7	100.0	4,750.7
E. VEHICLES	2,178.6	365.9	35.1	2,579.6	100.0	2,579.6
F. TECHNICAL ASSISTANCE	1,569.5	1,374.9	1,119.2	4,063.7	100.0	4,063.7
G. DESIGN FEES	1,880.0	-	-	1,880.0	0.0	0.0
H. MONITORING , RESEARCH , EVALUATION	331.6	29.2	167.4	528.1	0.0	0.0
I. ACTIVITIES	34.6	25.9	25.9	86.4	0.0	0.0
J. TRAINING	1,902.4	1,975.7	2,078.8	5,916.9	0.0	0.0
K. OVERSEAS TRAINING	741.2	187.6	76.0	1,004.8	100.0	1,004.8
Total INVESTMENT COSTS	23,965.2	18,670.2	13,031.2	55,666.5	50.5	28,127.2
II. RECURRENT COSTS						
A. SALARIES	141.7	206.4	269.9	618.0	0.0	0.0
B. VEHICLE OPERATION AND MAINTENANCE	686.5	2,021.8	627.0	3,335.3	79.8	2,660.2
C. EQUIPMENT MAINTENANCE	1.5	90.7	159.2	251.5	79.7	200.4
D. BUILDING MAINTENANCE	-	106.5	445.4	551.9	79.7	439.8
Total RECURRENT COSTS	829.7	2,425.5	1,501.5	4,756.7	69.4	3,300.4
Total BASELINE COSTS	24,794.9	21,095.6	14,532.7	60,423.2	52.0	31,427.7
Physical Contingencies	2,131.2	2,027.9	1,034.2	5,193.3	49.6	2,576.2
Price Contingencies	2,768.4	4,455.6	4,450.3	11,674.3	41.7	4,869.7
Total PROJECT COSTS	29,694.5	27,579.1	20,017.1	77,290.7	50.3	38,873.7
Foreign Exchange	15,037.4	13,685.4	10,150.8	38,873.7	0.0	0.0

Detailed Cost Table 2

BOLIVIA
SECOND FAMILY HEALTH PROJECT
BREAKDOWN OF SUMMARY ACCOUNTS
(US$ '000)

	Base Costs				Physical Contingencies				Price Contingencies				Total Incl. Cont.				Physical Cont. Plus Price Cont. on Physical Cont.	Base Costs + Price Cont. on Base Costs
	For. Exch.	Local (Excl. Duties & Taxes)	Duties & Taxes	Total	For. Exch.	Local (Excl. Taxes)	Duties & Taxes	Total	For. Exch.	Local (Excl. Duties & Taxes)	Duties & Taxes	Total	For. Exch.	Local (Excl. Duties & Taxes)	Duties & Taxes	Total		
I. INVESTMENT COSTS																		
A. CIVIL WORKS	5.857.1	8.951.5	-	14.808.6	878.6	1.342.7	-	2.221.3	929.6	2.154.6	-	3.084.1	7.665.3	12.448.7	-	20.114.0	2.423.4	17.690.4
B. FURNITURE	347.7	611.2	-	970.8	34.8	61.1	-	97.9	48.9	171.6	-	240.5	473.3	843.9	-	1.317.2	119.7	1.197.4
C. MATERIALS	2.513.3	1.064.0	-	3.577.3	-	22.5	-	22.5	398.5	260.9	-	659.4	2.911.8	1.347.3	-	4.259.1	28.5	4.230.6
D. EQUIPMENT	2.639.3	-	-	2.639.3	263.9	-	-	263.9	448.9	-0.0	-	448.9	3.252.1	-	-	3.252.1	304.7	3.947.4
E. VEHICLES	1.433.1	-	-	1.433.1	143.3	-	-	143.3	146.7	0.8	-	146.7	1.723.1	-	-	1.723.1	156.6	1.566.4
F. TECHNICAL ASSISTANCE	2.257.6	-	-	2.257.6	-	-	-	-	333.1	-	-	333.1	2.590.7	-	-	2.590.7	-	2.590.7
G. DESIGN FEES	-	1.044.5	-	1.044.5	-	-	-	-	-	132.3	-	132.3	-	1.176.7	-	1.176.7	-	1.176.7
H. MONITORING , RESEARCH , EVALUATION	-	293.4	-	293.4	-	-	-	-	-	59.1	-	59.1	-	352.5	-	352.5	-	352.5
I. ACTIVITIES	-	48.0	-	48.0	-	-	-	-	-	10.8	-	10.8	-	58.8	-	58.8	-	58.8
J. TRAINING	-	3.287.2	-	3.287.2	-	-	-	-	-	780.2	-	780.2	-	4.067.3	-	4.067.3	-	4.067.3
K. OVERSEAS TRAINING	558.2	-	-	558.2	-	-	-	-	59.1	-	-	59.1	617.3	-	-	617.3	-	617.3
Total INVESTMENT COSTS	15.426.2	15.299.6	-	30.925.8	1.322.6	1.426.3	-	2.748.9	2.384.7	3.569.4	-	5.954.1	19.333.6	20.295.3	-	39.628.8	3.233.2	36.395.6
II. RECURRENT COSTS																		
A. SALARIES	-	343.3	-	343.3	-	-	-	-	-	88.4	-	88.4	-	431.7	-	431.7	-	431.7
B. VEHICLE OPERATION AND MAINTENANCE	1.477.9	375.1	-	1.853.0	98.2	25.0	-	123.2	242.4	93.0	-	335.4	1.818.5	493.0	-	2.311.5	144.0	2.167.5
C. EQUIPMENT MAINTENANCE	111.3	28.4	-	139.7	5.6	1.4	-	7.0	23.9	9.0	-	32.9	140.8	38.8	-	179.6	8.6	171.0
D. BUILDING MAINTENANCE	244.4	62.2	-	306.6	4.9	1.2	-	6.1	54.4	20.5	-	74.9	303.7	84.0	-	387.7	7.6	380.0
Total RECURRENT COSTS	1.833.6	809.0	-	2.642.6	108.7	27.6	-	136.3	320.7	210.9	-	531.6	2.262.9	1.047.5	-	3.310.4	160.2	3.150.3
Total	17.459.8	16.108.6	-	33.568.4	1.431.2	1.453.9	-	2.885.1	2.705.4	3.780.3	-	6.485.7	21.596.5	21.342.8	-	42.939.3	3.393.4	39.545.9

MALAWI
SECOND FAMILY HEALTH PROJECT
Summary Accounts by Year

	Totals Including Contingencies (Local Currency '000)				Totals Including Contingencies (US$ '000)			
	1987	1988	1989	Total	1987	1988	1989	Total
I. INVESTMENT COSTS								
A. CIVIL WORKS	14,112.6	14,826.9	7,265.7	36,205.2	7,840.3	8,237.1	4,036.5	20,114.0
B. FURNITURE	447.7	921.0	1,002.2	2,370.9	248.7	511.7	556.8	1,317.2
C. MATERIALS	2,310.6	2,378.2	2,977.6	7,666.4	1,283.7	1,321.2	1,654.2	4,259.1
D. EQUIPMENT	2,120.4	1,629.6	2,283.9	6,033.9	1,178.0	905.3	1,268.8	3,352.1
E. VEHICLES	2,589.4	464.4	47.7	3,101.5	1,438.6	258.0	26.5	1,723.1
F. TECHNICAL ASSISTANCE	1,695.9	1,586.6	1,380.8	4,663.3	942.2	881.5	767.1	2,590.7
G. DESIGN FEES	2,118.1	-	-	2,118.1	1,176.7	-	-	1,176.7
H. MONITORING ; RESEARCH ; EVALUATION	373.6	36.0	225.1	634.6	207.5	20.0	125.0	352.5
I. ACTIVITIES	38.9	32.0	34.8	105.8	21.6	17.8	19.4	58.8
J. TRAINING	2,143.4	2,436.8	2,741.0	7,321.2	1,190.8	1,353.8	1,522.8	4,067.3
K. OVERSEAS TRAINING	800.8	216.5	93.8	1,111.1	444.9	120.3	52.1	617.3
Total INVESTMENT COSTS	28,751.4	24,528.0	18,052.5	71,331.9	15,973.0	13,626.7	10,029.2	39,628.8
II. RECURRENT COSTS								
A. SALARIES	139.7	254.5	362.9	777.1	88.7	141.4	201.6	431.7
B. VEHICLE OPERATION AND MAINTENANCE	781.7	2,558.0	821.1	4,160.7	434.3	1,421.1	456.2	2,311.5
C. EQUIPMENT MAINTENANCE	1.7	111.5	210.0	323.2	0.9	61.9	116.7	179.6
D. BUILDING MAINTENANCE	-	127.1	570.7	697.8	-	70.6	317.0	387.7
Total RECURRENT COSTS	943.1	3,051.1	1,964.6	5,958.8	523.9	1,695.0	1,091.5	3,310.4
Total PROJECT COSTS	29,694.5	27,579.1	20,017.1	77,290.7	16,496.9	15,321.7	11,120.6	42,939.3

Detailed Cost Table 4

MALAWI
SECOND FAMILY HEALTH PROJECT
BREAKDOWN OF SUMMARY ACCOUNTS
(Local Currency '000)

	Base Costs				Physical Contingencies				Price Contingencies				Total Incl. Cont.				Physical Cont. Plus Price Cont. on Physical Cont.	Base Costs + Price Cont. on Base Costs
	For. Exch.	Local (Excl. Taxes)	Duties & Taxes	Total	For. Exch.	Local (Excl. Taxes)	Duties & Taxes	Total	For. Exch.	Local (Excl. Taxes)	Duties & Taxes	Total	For. Exch.	Local (Excl. Taxes)	Duties & Taxes	Total		
I. INVESTMENT COSTS																		
A. CIVIL WORKS	10,542.8	14,112.6	- 26,655.4		1,581.4	2,416.9	- 3,998.3		1,673.2	3,878.2	- 5,551.4		13,797.5	22,407.7	- 36,205.2		4,722.4	31,482.8
B. FURNITURE	661.8	1,100.1	- 1,761.9		44.2	110.0	- 154.2		124.0	308.9	- 432.9		831.9	1,519.0	- 2,370.9		215.5	2,125.4
C. MATERIALS	4,523.9	1,915.1	- 6,439.1		-	40.4	- 40.4		717.3	469.6	- 1,186.9		5,241.2	2,425.2	- 7,666.4		51.4	7,615.0
D. EQUIPMENT	4,750.7	-	- 4,750.7		475.1	-	- 475.1		868.1	0.0	- 868.1		6,833.9	-0.0	- 6,833.9		548.5	5,485.3
E. VEHICLES	2,579.6	-	- 2,579.6		258.0	-	- 258.0		264.0	-	- 264.0		3,101.5	0.0	- 3,101.5		282.0	2,819.6
F. TECHNICAL ASSISTANCE	4,643.7	-	- 4,643.7		-	-	- -		599.7	-	- 599.7		4,643.3	-0.0	- 4,643.3		-0.0	4,643.3
G. DESIGN FEES	-	1,000.0	- 1,000.0		-	-	- -		-	238.1	- 238.1		-	2,118.1	- 2,118.1		-	2,118.1
H. MONITORING , RESEARCH , EVALUATION	-	528.1	- 528.1		-	-	- -		-	104.5	- 104.5		-	634.6	- 634.6		0.0	634.6
I. ACTIVITIES	-	86.4	- 86.4		-	-	- -		-	19.4	- 19.4		-	105.8	- 105.8		-	105.8
J. TRAINING	-	5,916.9	- 5,916.9		-	-	- -		-	1,404.3	- 1,404.3		-	7,321.2	- 7,321.2		-0.0	7,321.2
K. OVERSEAS TRAINING	1,004.8	-	- 1,004.8		-	-	- -		106.3	-	- 106.3		1,111.1	-	- 1,111.1		-	1,111.1
Total INVESTMENT COSTS	28,127.2	27,539.3	- 55,666.5		2,380.6	2,567.3	- 4,947.9		4,292.5	6,424.9	- 10,717.3		34,800.4	36,331.5	- 71,331.9		5,819.8	45,512.1
II. RECURRENT COSTS																		
A. SALARIES	-	418.0	- 418.0		-	-	- -		-	159.1	- 159.1		-	777.1	- 777.1		-	777.1
B. VEHICLE OPERATION AND MAINTENANCE	2,660.2	675.2	- 3,335.3		176.8	44.9	- 221.7		434.3	167.4	- 601.7		3,273.3	887.4	- 4,160.7		259.3	3,901.5
C. EQUIPMENT MAINTENANCE	200.4	51.0	- 251.5		10.0	2.6	- 12.6		42.9	16.2	- 59.2		253.4	69.8	- 323.2		15.6	307.8
D. BUILDING MAINTENANCE	439.0	112.0	- 551.9		8.8	2.2	- 11.0		97.9	36.9	- 134.8		544.6	151.2	- 695.8		13.7	684.1
Total RECURRENT COSTS	3,300.4	1,456.2	- 4,756.7		195.6	49.7	- 245.3		577.2	379.6	- 956.8		4,071.2	1,885.5	- 5,958.8		288.3	5,670.5
Total	31,427.7	28,995.5	- 60,423.2		2,576.2	2,617.0	- 5,193.3		4,869.7	6,804.5	- 11,674.3		38,871.7	38,417.0	- 77,290.7		6,108.1	71,182.6

Detailed Cost Table 5

MALAWI
SECOND FAMILY HEALTH PROJECT
Project Components by Year
(Local Currency '000)

	Base Costs			Total	
	1987	1988	1989	Local Currency	(US$ '000)
A. EXPANSION OF HEALTH COVERAGE					
1. PRIMARY HEALTH CARE	302.2	272.8	296.9	871.9	484.4
2. EXTENSION OF HEALTH SERVICES	2,350.7	3,264.5	3,414.8	9,030.0	5,016.7
3. STRENGTHENING OF THE HOSPITAL SYSTEM	6,704.1	5,786.6	3,079.3	15,770.1	8,761.2
Sub-Total EXPANSION OF HEALTH COVERAGE	9,357.1	9,323.9	6,791.0	25,672.0	14,262.2
B. MANPOWER					
1. NURSING EDUCATION	719.2	852.0	29.6	1,591.8	884.3
2. INSERVICE TRAINING	577.2	19.2	19.2	615.5	341.9
3. ESTABLISHMENT OF MANPOWER CAPACITY	34.3	-	-	34.3	19.1
Sub-Total MANPOWER	1,321.7	871.1	48.8	2,241.6	1,245.3
C. MANAGEMENT OF HEALTH SERVICES					
1. IMPROVEMENT OF MANAGEMENT SYSTEMS, SUPERVISION AND PERSONNEL	149.2	84.3	84.3	317.7	176.5
2. HEALTH PLANNING	76.2	20.0	7.6	103.8	57.7
3. FINANCIAL PLANNING	146.2	107.1	52.7	306.0	170.0
4. HEALTH AND HEALTH MANAGEMENT INFORMATION	224.3	10.8	29.9	265.0	147.2
5. DRUG PRODUCTION AND SUPPLY	584.4	625.7	121.1	1,331.1	739.5
6. INTEGRATION OF SERVICES AT REGIONAL LEVEL	140.4	76.8	76.8	294.0	163.3
Sub-Total MANAGEMENT OF HEALTH SERVICES	1,320.7	924.6	372.3	2,617.6	1,454.2
D. FAMILY HEALTH					
1. MATERNAL AND CHILD HEALTH	1,190.0	536.6	525.8	2,252.3	1,251.3
2. CHILD SPACING	3,009.9	2,293.0	944.0	6,248.9	3,471.6
3. DIARRHOEAL DISEASE	244.9	228.7	274.0	747.6	415.4
4. EXPANDED PROGRAM OF IMMUNIZATION	2,300.2	914.9	1,025.5	4,240.5	2,355.8
5. HEALTH EDUCATION	614.1	223.1	188.8	1,026.0	570.0
Sub-Total FAMILY HEALTH	7,359.1	4,196.2	2,960.1	14,515.3	8,064.1
E. DISEASE PREVENTION					
1. MALARIA	32.6	6.3	6.3	45.2	25.1
2. SCHISTOSOMIASIS	12.8	11.0	0.3	24.2	13.4
3. TUBERCULOSIS	155.0	60.8	48.7	264.5	146.9
4. ENVIRONMENTAL HEALTH	1,893.6	1,439.0	1,478.9	4,811.5	2,673.1
Sub-Total DISEASE PREVENTION	2,093.9	1,517.2	1,534.3	5,145.3	2,858.5
F. NUTRITION					
1. NUTRITION	659.9	650.8	714.4	2,025.1	1,125.1
Sub-Total NUTRITION	659.9	650.8	714.4	2,025.1	1,125.1
G. PROJECT MANAGEMENT FOR PART A					
1. PROJECT MANAGEMENT	291.7	264.8	264.8	821.4	456.3
Sub-Total PROJECT MANAGEMENT FOR PART A	291.7	264.8	264.8	821.4	456.3
H. HEALTH THROUGH OTHER MINISTRIES					
1. FUNCTIONAL LITERACY (INCL WOMEN)	968.1	585.8	968.1	2,522.0	1,401.1
2. YOUTH PROGRAM	244.3	164.8	173.6	584.7	324.9
3. INFORMATION, EDUCATION AND COMMUNICATION	258.1	196.2	226.4	680.6	378.1
4. NATIONAL STATISTICAL ORGANIZATION	613.5	1,959.7	238.2	2,811.4	1,561.9
5. POPULATION CAPABILITY IN EPSD	304.9	240.6	240.6	786.1	436.7
Sub-Total HEALTH THROUGH OTHER MINISTRIES	2,390.9	3,147.0	1,847.0	7,384.9	4,102.7
Total BASELINE COSTS	24,794.9	21,095.6	14,532.7	60,423.2	33,568.4
Physical Contingencies	2,131.2	2,027.9	1,034.2	5,193.3	2,885.1
Price Contingencies	2,768.4	4,453.6	4,450.3	11,674.3	6,485.7
Total PROJECT COSTS	29,694.5	27,579.1	20,017.1	77,290.7	42,939.3
Foreign Exchange	15,037.4	13,685.4	10,150.9	38,873.7	21,596.5

ORGANIZATION CHART OF THE MINISTRY OF HEALTH HEADQUARTERS

CHART 1