

PD-AAG-III

*dup*

108717204201

150p.

Rural Health Delivery

Project Paper

USAID, SOMALIA

January 1979

AGENCY FOR INTERNATIONAL DEVELOPMENT  <b>PROJECT PAPER FACESHEET</b>	1. TRANSACTION CODE <input checked="" type="checkbox"/> A A = ADD <input type="checkbox"/> C = CHANGE <input type="checkbox"/> D = DELETE	PP 2. DOCUMENT CODE 3
	4. DOCUMENT REVISION NUMBER <input type="text" value="1"/>	

3. COUNTRY/ENTITY <b>SOMALIA</b>	4. DOCUMENT REVISION NUMBER <input type="text" value="1"/>
-------------------------------------	---

5. PROJECT NUMBER (7 digits) <input type="text" value="649-0102"/>	6. BUREAU/OFFICE A. SYMBOL <input type="text" value="AFR"/> B. CODE <input type="text" value="06"/>	7. PROJECT TITLE (Maximum 40 characters) <input type="text" value="Rural Health Delivery"/>
---	--	--

8. ESTIMATED FY OF PROJECT COMPLETION FY <input type="text" value="85"/>	9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY <input type="text" value="79"/> B. QUARTER <input type="text" value="2"/> C. FINAL FY <input type="text" value="83"/> (Enter 1, 2, 3, or 4)
---	---

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 - )						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	4026	6	4032	14,992	257	15249
(GRANT)	(4026)	(6)	(4032)	(14,992)	(257)	(15249)
(LOAN)						
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY	76	246	322	1001	4155	6156
OTHER DONOR(S)						
TOTALS				15993	4412	20405

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>79</u>		H. 2ND FY <u>80</u>		K. 3RD FY <u>81</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1)	533	510		4032	-	2916	-	1992	-
(2)									
(3)									
(4)									
TOTALS									

A. APPROPRIATION	N. 4TH FY <u>82</u>		O. 5TH FY <u>83</u>		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED  <input type="text" value="01/18/82"/>
	Q. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1)	3387	-	2921	-	15249	-	
(2)							
(3)							
(4)							
TOTALS							

13. DATA CHANGE INDICATOR: WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1 YES  
 2 NO

14. ORIGINATING OFFICE CLEARANCE SIGNATURE <i>Charles P. Campbell for</i> TITLE <b>Charles P. Campbell AID Representative</b>		15. DATE DOCUMENT RECEIVED IN AID WORK FOR AID DOCUMENTS, DATE OF DISTRIBUTION DATE SIGNED <input type="text" value="11/16/78"/> <input type="text" value="10/10/79"/>
---	--	--

*1 ml/psv*

PROJECT PAPER

TABLE OF CONTENTS

**PART 1 INTRODUCTION**

- A. Face Sheet Data
- B. Abbreviations-----1
- C. Map -----2
- D. Project Design Team -----3

**PART 2 PROJECT BACKGROUND SUMMARY -----4**

**PART 3 THE PROJECT -----7**

- A. Description of Project and Logical Framework -----7
- B. AID Inputs to Project -----14
  - 1. Technical Assistance -----14
  - 2. Training -----15
  - 3. Commodities -----16
  - 4. Construction-----18
- C. GSDR Inputs to Project -----18
- D. Other AID Activities in Somalia -----18

**PART 4 RESULTS OF SPECIFIC PROJECT ANALYSES -----19**

- A. Financial Analysis -----19
- B. Economic Analysis -----21
- C. Social Beneficiary Analysis -----23
- D. Role of Women-----24
- E. Logistics and Supply Analysis -----25
- F. Technical Analysis -----26
- G. Environmental Analysis -----28
- H. Administrative Analysis -----28
- I. Manpower Analysis -----30

**PART 5 SPECIFIC PROJECT PLANS -----32**

- A. Financial Plan -----32
- B. Implementation Plan -----33
- C. Evaluation Plan -----34
- D. Administrative Plan -----36
- E. Special Conditions and Covenants -----37

3 11/15

**PART 6 ANNEXES**

- A. PID Approval Cable**
- B. Health Planning and Primary Health Care**
- C. Manpower Development**
- D. Training**
- E. Health Education**
- F. Logistics and Commodity Support**
- G. Financial and Economic Trend Analyses**
- H. Detailed Budget and Justification**
- I. Social Soundness**
- J. Checklists**
- K. IEE**
- L. Certification - Section 611(e)**
- M. Technical Analysis - Construction**
- N. Letter of Request from Government of Somalia**

5 N/E

**B - ABBREVIATIONS**

<b>CHW</b>	<b>Community Health Worker</b>
<b>CY</b>	<b>Calendar Year</b>
<b>FY</b>	<b>Fiscal Year</b>
<b>FYDP</b>	<b>Five Year Development Plan</b>
<b>GDP</b>	<b>Gross Domestic Product</b>
<b>GNP</b>	<b>Gross National Product</b>
<b>GSDR</b>	<b>Government of the Somali Democratic Republic</b>
<b>HP</b>	<b>Health Post</b>
<b>HPTI</b>	<b>Health Personnel Training Institute</b>
<b>IRR</b>	<b>Internal Rate of Return</b>
<b>MCH</b>	<b>Maternal and Child Health</b>
<b>MOH</b>	<b>Ministry of Health</b>
<b>NCHW</b>	<b>Nomadic Community Health Worker</b>
<b>NPV</b>	<b>Net Present Value</b>
<b>PHCP</b>	<b>Primary Health Care Program</b>
<b>PHCU</b>	<b>Primary Health Care Unit</b>
<b>PHN</b>	<b>Public Health Nurse</b>
<b>TBA</b>	<b>Traditional Birth Attendant</b>



D - PROJECT DESIGN TEAM

Primary Health Care Specialist/ Health Planner Co-Team Leader	Brooks Ryder, M.D., M.P.H. Medical Service Consultants, Inc.
Health Economist Co-Team Leader	Catherine Fort, M.A. Medical Service Consultants, Inc.
Health Education Specialist	Robert Lennox, Sc.D. Medical Service Consultants, Inc.
Health Manpower Development Specialist	Alton Wilson, M.P.H. Medical Service Consultants, Inc.
Curriculum Design Specialist	Jocelyn Carlson, B.A., Ed.M. Medical Service Consultants, Inc.
Medical Supply/Transport/ Logistics Specialist	Frederick Michael USAID/Wash DS/POP/FPSD
Director of Primary Health Care	Mohamed Abdullahi Guuled, M.D., M.P.H. GSDR/MOH
Health Development Officer	Arjuna Abayomi-Cole, M.P.H. USAID/SOMALIA

PART - 2

PROJECT BACKGROUND SUMMARY

In response to a formal request by the Government of the Somali Democratic Republic (GSDR), the Government of the United States of America has agreed to render assistance to the Somali Health Sector. A Project Identification Document on this subject was developed early this year (PID Annex A), and this Project Paper (PP) has been developed in accordance with the recommendations of the P.I.D. team.

The proposed five-year project focuses upon the delivery of primary Health care services to Somalia's rural and nomadic populations, who comprise 80 percent of the total population but lack access to the existing health system. Those who would be beneficiaries of a rural and nomadic health system are Somalia's "poorest of the poor".

The project will develop a system to deliver promotive, preventive and curative health services to an estimated rural and nomadic population of 800,000. Nine hundred workers, members of the communities they serve, will be trained to perform simple health promotive and disease preventive tasks and serve as referral agents to direct their community members into the existing health system.

The GSDR will absorb the recurrent costs of the program by the end of five years and extend it to all regions of the country. Essential commodities and construction will be provided to support the system. As part of the program GSDR managerial capabilities in the areas of logistics/supply, health data accumulation and health planning will be strengthened to assure the project's replicability.

A comprehensive coverage of the health problems of Somalia may be found in HEW's Synchrisis Series, and in Annex B of this Project Paper. Attention in this section will be limited to the background issues that give rise to the need for this project.

- The rural health problems of Somalia are due to preventable diseases, for the most part, and require an approach that stresses preventive measures such as hygiene, sanitation, vector control, nutrition and health education. Whereas there is a need for medical services, many cases that go untreated or that get treated only if a hospital is available, could be handled by first aid or simple medical treatment. The major causes of infant mortality are measles, neonatal tetanus, dysentery, malaria and malnutrition -- all preventable.
- A constraint to health sector development in general and to rural health care in particular has been a need for adequate financial resources to purchase equipment, drugs and vehicles, which require foreign exchange.
- The Somali health system is presently concentrated on the delivery of curative services in hospitals and health facilities situated in large towns and municipalities. Yet more than 60 percent of the population live in rural areas inaccessible to the medical facilities.

- Efforts to extend health care to rural populations have been frustrated by a critical shortage of trained manpower to supervise and coordinate the existing highly centralized system.
- In an attempt to meet both urban and rural needs, the enrollments of the medical, nursing, and health professional schools were doubled. The quality of training has suffered, yet still the need for increased manpower remains.
- Adding to the shortage, Somali and third-country trained health professionals and paraprofessionals are lured away from the country's health sector by more lucrative positions in other countries and even other sectors within Somalia.

Although the GSDR and the MOH are aware of the potential benefit of promotive and preventive services, they continue to allocate the major share of their limited financial resources to the more conventional curative services such as hospitals and clinics. This conservative approach gives immediately tangible, visible outputs for funds expended, on facilities that can be supported both logistically and administratively by the existing system. The resulting facilities are adequate for serving urban areas and are well utilized. There is little evidence to support the contention that GSDR investment in curative medical facilities is ineffective.

On the other hand, the MOH and the GSDR have long been aware that a need exists for rural health services to both settled and nomadic populations. The question has been: What is the best method for delivering those services without disrupting the financial base that supports the curative medical system?

To answer that question, the GSDR has experimented with a number of approaches largely funded by bilateral and multilateral donors. These efforts have had minimal impact at best. The following examples are illustrative:

- WHO's Basic Health Services Program at Balad, a small town 35 km north of Mogadiscio, trained paramedical health workers to give simple curative and preventive services. Although laudable in concept, the BHSP, instituted in 1962 and still in operation, never achieved the degree of replicability to be of significance.

The main reasons cited for this are: Lack of supervision of the health workers, inadequate logistical support and frequent transferring of personnel to areas outside of the program.

- The WHO Smallpox Eradication Program mobilized massive resources to extend immunization into rural areas of Somalia and created the framework for a future program for extended immunization for measles, TB, and childhood diseases as well as a pool of manpower with some skills in community assessment and immunization.

The framework thus created has potential for inclusion in the PHCP but would require massive logistical support to continue as an independent vertical program.

- A maternal and child health center network has been established with assistance from UNICEF and WFP. This program will be extended to each of the 16 regions within the next year.

The proposed PHCP will complement this program by sharing facilities with MCH centers and utilizing the same supervisory personnel and logistical systems.

- The dissemination of health promotive education through radio and poster messages has been supported by UNICEF.

Although no test of the effectiveness of these health education services has yet been devised, their messages are being received in remote rural areas.

- Vertical programs for the control of specific diseases: TB, malaria, Schistosomiasis function in rural areas with WHO support.

In short, the mode of delivery of health services to rural areas has been determined primarily by what sort of activities donors would support. This is not to say that Somalis have not attempted to implement measures of their own:

- The literacy campaign of 1972 disseminated health education messages while teaching the alphabet.
- Self-help schemes in rural areas were responsible for such improvements as slab toilets, local roads, dispensaries, and regular village clean-ups.
- The medical, nursing and health professional schools are broadening their curricular offerings to include public health and community nursing and medicine content.
- 470 Community Health Workers were trained by tutors from the Health Personnel Training Institute at the settlement camp of Kurtunwaare.

In summary, the GSDR, drawing on its own resources and those of many international donors, have achieved minimal success in bringing the rural and nomadic populations of Somalia into the existing health care system.

The common thread which limited the success of previous attempts was inability to decentralize logistical and supervisory support of programs, leaving personnel isolated, undirected and disillusioned. Those programs that were successful have been, by and large, vertical programs operating on a crisis strategy (i.e., Smallpox Eradication) with extensive operational budgets and limited objectives. The logistical and supervisory support needed for their success was created parallel to, but outside of, the existing health system and left little for the GSDR to build on.

The program proposed in this Project Paper is based upon the extension of the existing Health Care system into rural areas by decentralization of supervision and logistical supply to Community Health Workers. To accomplish this necessary task, an intermediate supervisory network of specially trained personnel will be established in rural areas, effectively shortening all lines of support. If rural health care is to become a reality in Somalia, this step is essential.

USAID has an opportunity to help Somalia develop an affordable rural health care system that will become an integral and permanent part of the existing health care system, thereby achieving the GSDR's goal of health care for all people.

PART - 3

THE PROJECT

A Description of the Project

1. Rationale and Scope of the Project

The key to helping the GSDR bring rural and nomadic populations into the existing health care system is to develop a cost effective extension of that system that will have roots in the communities to be served. This requires that a new category of community health worker (CHW) be developed who will live in the community and deliver basic health services to his/her neighbors along with the existing community traditional birth attendant (TBA). The services to be delivered by this team will include: first aid; treatment of uncomplicated illness; health education in matters of sanitation, nutrition and child health; assistance to mothers in child-birth; direction in the construction of sanitary facilities and water storage; and referral of complicated medical problems to more sophisticated facilities and health personnel.

This approach addresses two problems that have been serious constraints to rural health care delivery in the past: inability to keep health workers in rural areas (the CHWs and TBAs are already community members) and lack of trained personnel. (The CHWs and TBAs will receive only four months training in the simplest type of health care, thus allowing greater numbers to be trained in a shorter time.)

Because of their minimal training, however, these CHWs and TBAs will require a maximum of supervision and logistical support. This support could not be achieved at the central level due to the numbers needed (2,000 to serve the country) and the long distances to be covered (maximum of 1,200 miles from Mogadiscio). Therefore, a crucial element of the system must be the establishment of intermediate depots of supplies as well as supervisory and service personnel. These supervisors, drawn from the existing pool of nurses, midwives and sanitarians, will be located in a facility called a Primary Health Care Unit (PHCU) within walking distance of the communities in which the CHWs and TBAs live and work.

The PHCU staff will provide in-service training, supervision and supplies for several CHWs and TBAs situated nearby and accept referrals from them. The logistical and supervisory support for the PHCU staff will be provided by the personnel of existing district health centers, who will in turn be supported by the regional health center personnel. The 16 regional health centers will continue to receive support and direction as they do now, from the MOH in Mogadiscio.

Thus a pyramid of numbers of supervisory personnel will be created as part of the system which will require fewer highly-trained health workers than a centrally supervised system and at the same time will shorten distances for logistical support and strengthen supervisory links at every point. All existing personnel will be included in the system and replication will be facilitated by training of additional personnel.

## 2. A.I.D. Health Project Elements

### a. Training and Supervision

While some commodities and construction will be required, the main focus of the A.I.D. project inputs will be on training and supervision. Training required to establish this self-perpetuating system will be as follows:

#### Training of Tutors and MOH Personnel

U.S. long and short-term technicians will assist counterparts from the MOH in developing a curriculum and training a cadre of tutors that will eventually be responsible for all subsequent training and supervisory functions of the Primary Health Care Program (PHCP). The instruction of these tutors and MOH counterparts will include: some long-term (1-2 year) training in the U.S. on the programmatic and operational administration of a PHCP; some short-term training (three months) in essential skills necessary for PHCP function such as data systems and finance; and some third country observation and training (three months) of existing PHCP's in countries such as Sudan, Tanzania, Mali, Nigeria and Swaziland. The tutors will be involved in all aspects of curriculum development, project development and operational activities. This will facilitate their commitment to the concept and equip them for assuming responsibilities for replication and operation of the PHCP in future years.

#### Training of Trainers

U.S. technicians, MOH counterparts and tutors will use their combined skills to train groups of nurses, midwives and sanitarians selected from Somalia's health training institutions, who will staff District Health Centers and PHCU's and provide training and supervision for CHW's and TBA's.

#### Training of CHW's and TBA's

The training and supervision of CHW's and TBA's will be the responsibility of the trainers in the PHCU's. They will conduct in-service training on a continual basis which will be in the form of demonstration and example.

#### Orientation Training

All health personnel will be given an orientation to the functions and operation of the PHCP and its support. This will include MOH personnel, technicians and others within Somalia's health sector.

#### Retraining

In addition to the continuing in-service training that will be a responsibility of each health worker's supervisor, all personnel will be given periodic retraining courses that will upgrade their skills and introduce new concepts.

b. Logistics and Supply

Inadequate and infrequent delivery of supplies and personnel to health facilities have been cited as major constraints to Somalia's attempts to deliver rural health services. Traditionally, all health supplies have been imported into Mogadiscio and stored in a central warehouse. Distributions from the Central Stores to Health Facilities is hampered by long distances and bad roads. The flow of materials will be facilitated in this project by using intermediate health facilities (District Health Centers and PHCU's) as secondary depots of supplies, necessitating only periodic deliveries from the central warehouse.

c. Facilities

While not a major objective of the project, some facility construction and/or renovation will be necessary to assure an adequate framework for project activities.

Regional Training Centers

Two 3-classroom training centers with storage space and dormitories will be built (one in the north and one in the south) and serve as the major facilities for training of tutors and of trainers. These facilities will have lasting importance to the PHCP as they will be the sites of training for future replication activities and for retraining of PHCP workers.

District Health Centers

The District Health Centers within the 16 districts to be included in this project will serve as facilities for middle-level supervisory personnel and these workers will be responsible for accepting referrals from lower levels of the PHCP (PHCU and Health Post). While many of these centers exist, renovation of some of them will be required to permit accomodation of increased numbers of personnel and upgraded referral function.

Primary Health Care Unit (PHCU)

The fundamental facility to receive referrals from CHW's and TBA's will be the Primary Health Care Unit (PHCU). The personnel located in this facility (nurse, midwife and sanitarian) will all have the major responsibility for training and supervising the activities of the four CHW's and four TBA's associated with their area. In all, 64 of these 3-room structures will be built (see Annex H, page 15). Provision has been made to add living quarters for the PHCU staff.

At present no PHCU's exist. Rural dispensaries have been constructed in the project area however. Because curative services will be included in PHCU activities, project plans call for renovation and expansion of dispensaries into PHCU's wherever possible.

## Health Post

The Health Post is the facility from which the CHW and TBA will work. These will be the most numerous (256) and also the simplest. In most cases the Health Post will be a dwelling in the community constructed by self-help or simply the home of the CHW. It is anticipated that the CHW will work primarily out of a lockable box. A very modest allowance will be made for renovations to existing structures.

### 3. Setting and Magnitude of the Project

During the five-year life of the project, the technical assistance, training, commodities and construction outlines in previous sections, and detailed in the Annexes, will be deployed in two phases within 4 of Somalia's 16 regions which contain 16 of the country's 84 districts (see Map). By the end of the project, 900 primary health workers in all categories will be delivering services to 800,000 people (1/4 of Somalia's population) and vital linkages for supervision, logistics and continuing training will be in place. More importantly a system will be operational which is manageable and affordable by the Somali's and can continue to generate trained health workers as fast as they can be absorbed, thus assuring the mechanism necessary for replication.

#### a. Phase I Activities (Month 1-30)

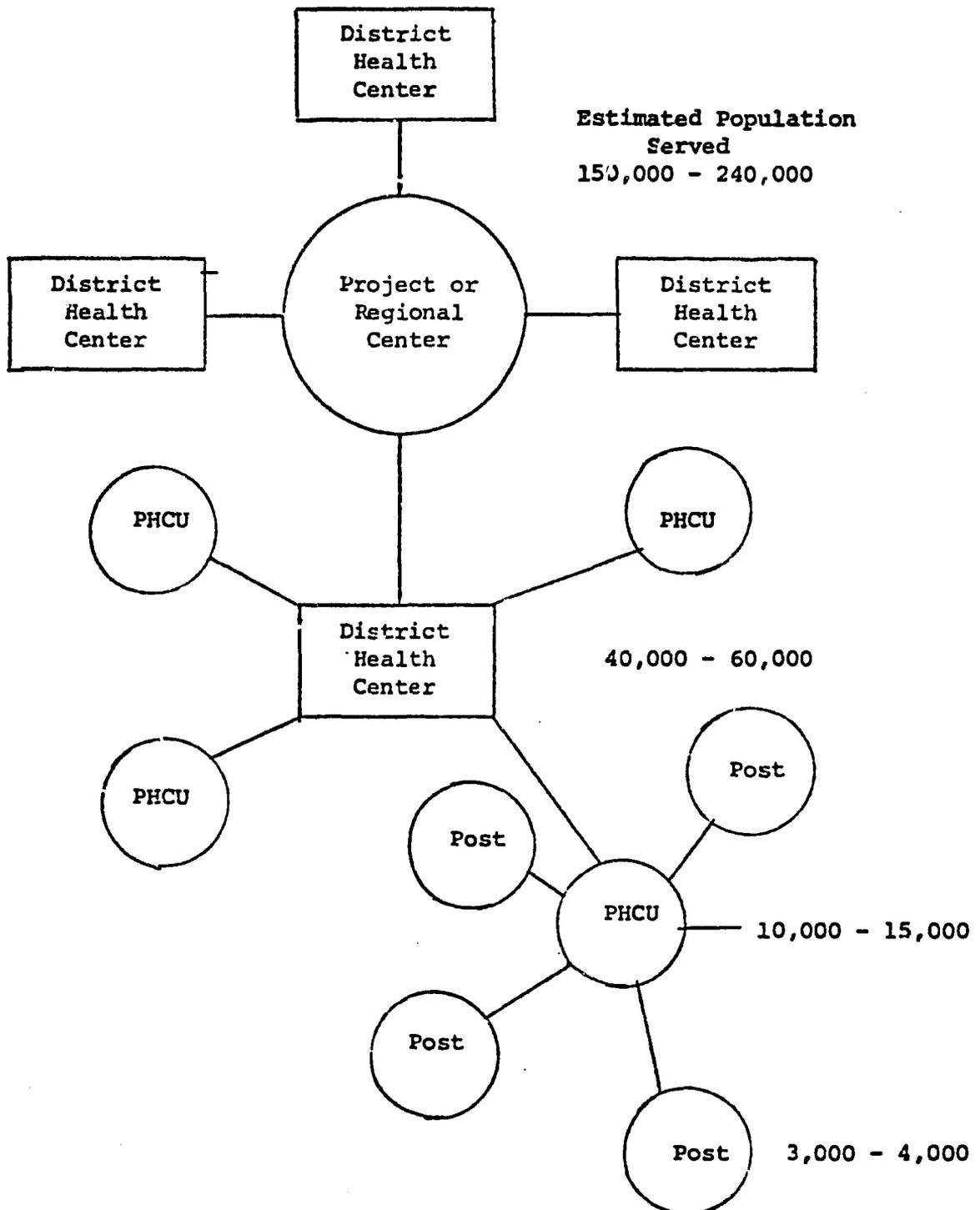
During the first phase, training activities will begin to produce tutors, trainer-supervisors, CHW's and TBA's. The first activities will involve the development of a curriculum based upon an analysis of tasks to be performed by the various workers. One center of activity will be in Baidoa (Bay Region) and will address the problems of delivering services to rural farmers. The second center of training will be located in Burao (Togdheer Region) and will deal mainly with delivery of services to nomadic populations. While some similarities in the health needs of farmers and nomads are evident, the differences in their life styles, particularly with regard to mobility, will necessitate some differences in approach. Training Centers and quarters for staff and trainees will be constructed in these two sites, but training activities will be begun in temporary quarters nearby. Tutors will train trainers at the Training Centers initially and move to the PHCU sites for practical experience. Similarly the trainer-supervisors of the PHCU will begin the training of CHW's at the PHCU and complete the instruction in the CHW's own community along with that of the TBA's. A team consisting of one CHW and one TBA will have responsibility for providing promotive, preventive and curative services for a population of 3-4,000 people. The three-person team at the PHCU level will have the responsibility of providing these same services for 3-4,000 people, but their primary concern will be the supervision, training and backstopping of four CHW-TBA teams.

The district-level health workers will receive referrals and give logistic, training and supervisory support to four PHCU's. The diagram on the following page graphically illustrates the interrelationships of the system's parts to the whole and the magnitude of the population served by each part. The diagram is representative of the system in only one Region, however. During Phase I, it will be duplicated in a second Region.

While training, staffing and supervision of PHCU personnel will be the major Phase I activity, other activities that will take place are as follows:

CHAPT I

Schematic drawing of the Project (or Regional) structure follows:



- Orientation and inclusion of other area health workers into the system (i.e., technicians, regional health center and hospital personnel, dressers).
- Development of a data system appropriate for the PHCP and suitable for planning purposes.
- Development of a system of logistical supply, storage and maintenance of vehicles and equipment.
- Development of base-line information about the health status and traditional health practices of area residents to be used in measuring project impact.
- Development of a system for integrating existing vertical services such as MCH, extended immunization and malaria control into the PHCP.

Admittedly, one of the largest and most important tasks to be accomplished in Phase I will be to develop an approach for delivering health services to nomads. Towards that end a two-person team of U.S. technicians (one anthropologist and one epidemiologist) will spend eight months accumulating all information on the subject and exploring the various alternatives that could be employed in the northern nomadic regions of Somalia.

Training of the CHW's for nomadic communities (Nomadic Community Health Workers - NCHW's) will begin early in the project. It is the method of their deployment (i.e., traveling with the nomads, accompanying veterinary service teams or mobile versus fixed placement) that will be the subject of the investigation. Until the question is resolved, trained NCHW's will be placed and supervised in the settled nomadic communities from which they come.

#### b. Phase II Activities (Month 31-54)

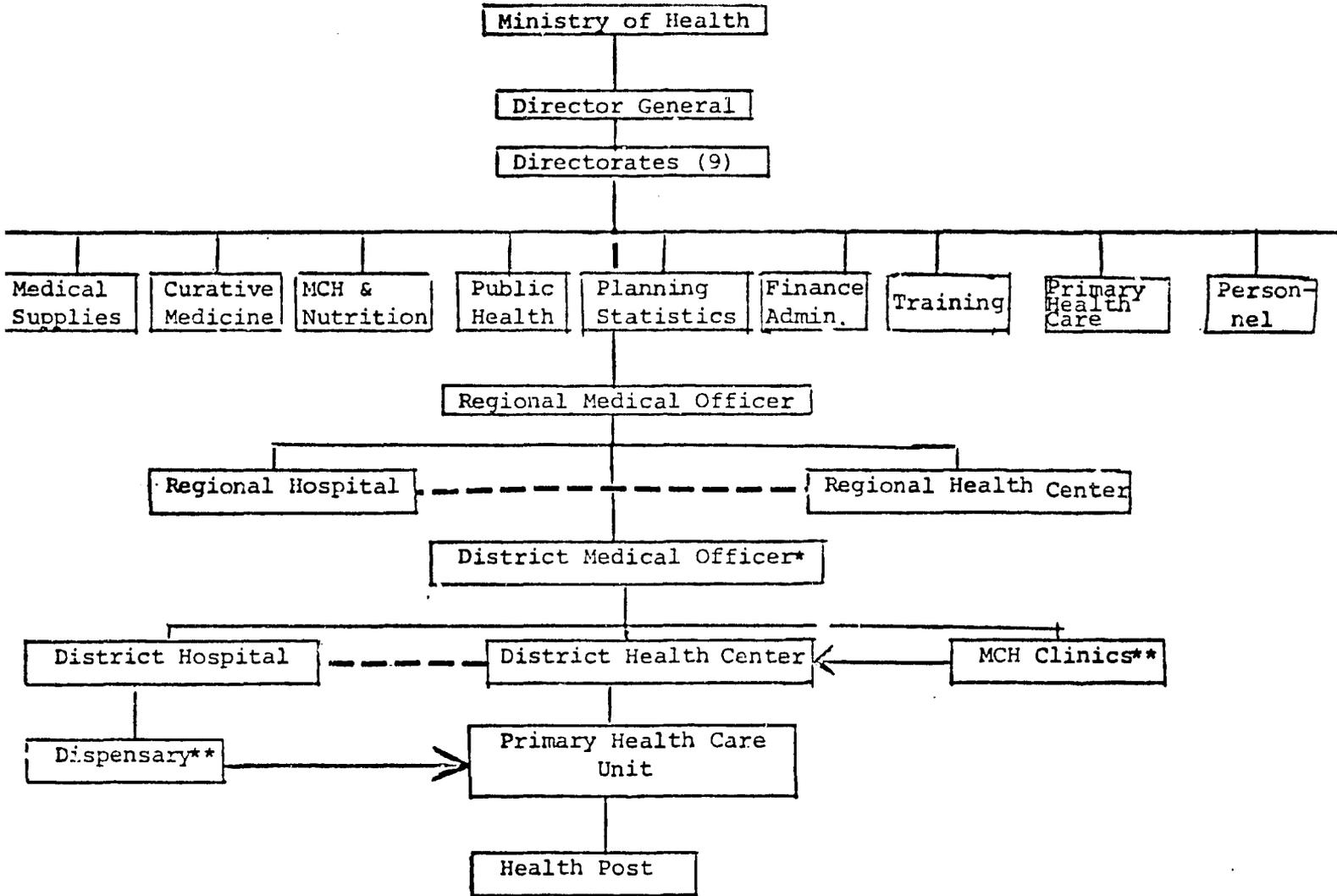
The major task to be accomplished in Phase II will be the replication of the existing system in two additional regions, Lower Juba in the south, and Mudug in the north (see Map). The Health Training Centers established in Phase I will be used for training of trainers in their respective geographical areas. Other aspects of the replication will be identical to those outlined in Phase I.

Another significant activity will be the retraining of health workers trained in Phase I. This will update their skills and set the pattern for formalized continuing education which is essential to the continued vigor of the PHCP system.

For details of the project plan and methodology, the reader is referred to Annexes B, C and D. A logical framework for the inputs, outputs, goals, assumptions and linkages of the project appears on the following page.

CHART 2

Schematic - Organization of Ministry of Health, Projected for Primary Health Care, Showing Relationship with Curative Services



\* The RMO is responsible for all curative and preventive health services in the region. Under the RMO, the DMO is responsible for all such health services in the district.

\*\* Where appropriate MCH clinics are to be upgraded to district health centers and dispensaries to PHCUs.

Dotted lines between regional and district hospital and health centers emphasize close coordination and two way referral process.

**Project Title: Health Services**

**NARRATIVE SUMMARY**

**OBJECTIVELY VERIFIABLE INDICATORS**

**IMPORTANT ASSUMPTIONS**

**Program Goal:**

- Improvement of health among Somalia's rural and nomadic population through a health delivery system (PHCP) reaching to village level.

**Measures of Goal Achievement:**

- One trained CHW and one "upgraded" TBA per 4,000 population.
- Nationwide supervisory and logistical/technical support structure established.
- Decrease in infant mortality/morbidity.
- Reduction by 50% in communicable and environmentally-mediated diseases among infants and children.

**Assumptions: long term value:**

- PHCP is applicable/adaptable to nomadic populations.
- Trained personnel will continue to serve in rural/nomadic population groups.
- MOH reprioritizes its health delivery system, emphasizing prevention more than curative and rural/nomadic more than urban/periurban populations.

**Project Purpose:**

- PHC services delivered to four population groups with rural-settled and nomadic populations.
- Establishment of training program capable of providing PHC workers and supervisory staff for the entire country.
- Development of PHCP model that is replicable for the entire country.

**EOP Status:**

- 800,000 people in rural settled and nomadic populations being served by PHCP.
- Decreased incidence of pertussis, measles, tetanus, and polio.
- Increased quality/quantity of water for human consumption.
- MOH willingness/desire to replicate PHCP in other regions.

**Affecting purpose-to-goal link:**

- The four project areas selected for PHCP represent major epidemiological/cultural/geographic patterns of Somalia's population.
- Present categorical disease programs are less effective during 5-year life-of-project than proposed PHC approach (over long-term, assumption has more validity).
- Additional sources of water can be found/tapped without excessive diversion for livestock use.

**Outputs**

- CHW's workers and PHC tutors/supervisors trained and functioning in PHCP in four population groups.
- Necessary facilities developed.
- MOH infrastructure strengthened to support program needs and to replicate PHCP throughout country.

**Magnitude of outputs**

- 900 Somali health workers trained/functioning including 256 CHW's 256 TBA's and staff for 64 PHCU, 16 District HC's and 2 training institutions.
- supervisory/management systems installed and functioning.
- Systems for PHCP planning, logistical support, information (data) and health education installed/functioning.
- EPI, MCH, TB and malaria categorical programs linked with/integrated into PHCP system.

**Affecting output-to-purpose link:**

- MOH has willingness/ability to keep trained health workers at peripheral PHC facilities.
- CWA's, when trained and returned to village, accessible to supervisory/logistical support services.
- MOH project-related infrastructure can be strengthened to support project needs.
- Categorical disease program managers willing to experiment with PHCP linkages when operating in PHCP project areas.

## B. A.I.D. Health Sector Project Inputs

The project design team in collaboration with Ministry of Health officials has identified A.I.D.'s inputs to this project consistent with the GSDR's policies as well as A.I.D.'s guidelines.

This section will describe A.I.D.'s inputs into the project and the rationale for their choice.

### 1. Technical Assistance

A.I.D. will provide 42 person years of technical assistance over five years to this project. Long-term assistance will constitute 36 person years and short term assistance, 6 person years. All advisors must have had previous experience in the supervision and training of paramedics in developing countries.

#### Long-Term Technical Assistance

- The long-term Project Manager/Health Planner stationed in Mogadiscio will serve as counterpart to the MOH's Director of Primary Health Care and be responsible to the Project Director, USAID/Mogadiscio. He will supervise program activities, co-supervise field staff with his MOH counterpart, liaison with other MOH officials, account for budget and expenditures, direct short-term consultants and submit reports.
- Two long-term public health nurse/educators will be required at the training centers in Baidoa and Burao (one at each site). These individuals will work with qualified counterparts assigned by the MOH in the training and supervising of tutors to become trainers of CHWs.
- Two long-term nurse midwife/educators (one for each training site); these NME's will work with counterparts provided by the MOH and engage in activities similar to the PHNE's. The focus of their training of tutors to retrain traditional birth attendants for assuming roles in the PHCP.
- Two long-term epidemiologist/sanitaricians (one for each training site) will work with MOH assigned counterparts and participate in the training of tutors that will in turn supervise and instruct CHW's and TBA's in disease prevention, water supply protection and sanitation.

They also must be familiar with the techniques of epidemiological survey, primary data collection and statistics.

- Long-term supply management and transportation specialist will be stationed in Mogadiscio and, with his MOH appointed counterpart, organize and supervise an efficient system for procurement, storage, transport and inventory of program commodities, as well as repair and maintenance of program vehicles and equipment. He will develop, with his counterpart, a program for the training of MOH appointed staff in the area of logistic/supply management and vehicle/equipment maintenance.

## b. Short-term Technical Assistance

- Curriculum Development Specialist, 6 person months, to assist program personnel in Baidoa and Burao in the design of a course of study and training materials for the training of CHW's and TBA's .
- Epidemiologist, 8 pm: 2pm to conduct a literature review of existing information on health problems of, and the delivery of health services to nomads, and 6 pm to conduct local epidemiological surveys of health problems and prospects for limiting the impact of endemic diseases among nomads in Somalia.
- Anthropologist/sociologist, (8pm): 2 pm to conduct a literature survey of existing information on social attitudes of nomads toward disease and approaches to bringing health services to them and 6 pm to conduct field investigations among nomads of Somalia regarding health and disease, knowledge of disease processes, and alternate health care resources available to them.
- Health Education/Media Specialist, 3 p m to assist the health education department of the MOH in developing materials and methods for promoting the PHCP.
- Water Resources Development Specialist (6pm) to investigate alternatives for the provision of potable water at PHCP installations and to make recommendations for cost effective storage.
- Uncommitted Short-Term Consultants (20pm) to be used as deemed appropriate by the project director and his MOH counterpart with advice from field staff.
- 3 Program Evaluators (9pm) to participate in evaluation of the project during the 3rd and the final year of project life (3 evaluators, 2 evaluations, 1½ months each)

## 2. Training for Somali Health Personnel

The training inputs to the project include long-term U.S. participant training (48 p m ) and short-term training in Somalia (including refresher/orientation courses), third countries (40 p m ), and the U.S. (45 p m ).

### a. Long-term, U.S.

Four long-term participants will be selected by the MOH for advanced training in the U.S. for placement on return to the PHCP. This will include:

- a physician for an MPH program in health planning (emphasis on primary health care);
- a health educator for an MPH program in primary health care education;
- two public health nurses for a specially designed 2-year course of study in the delivery of primary health care services. These individuals will assume major responsibility for the future replication of the PHCP to other regions of Somalia.

b. Short-Term, Third Country

The short-term third country observational training will take place at the sites of other functioning PHCPs in Sudan, Mali, Nigeria, Tanzania and Swaziland. The training will orient supervisors of the PHCP to the potential scope and administration of such programs.

c. Short-Term Training US

Short-term training in such specialties as statistics, economics and data management will be offered to MOH selected personnel for up to three months per participant. The project will fund up to five participants from the PHCP each year (15 over the life of the project).

d. In-Country Training

Three types of training will take place:

- Training of PHCP Health Workers (CHWs and TBA's);
- Orientation seminars for managerial and supervisory staff;
- Continuing education for previously trained personnel.

3. Commodities/Supplies

The commodity and supply inputs to the project have been selected and limited to items that are necessary to overcome critical bottlenecks that might delay the progress of the PHC program. Special emphasis, has been given to the needs of Somalia's rural poor and nomadic populations in the selection of commodity and supply inputs.

a. Vehicles

An input of 46 project vehicles will help alleviate a major constraint to the implementation of the PHCP. Throughout the country the transportation problems are the same: drugs and supplies cannot be delivered to rural areas because of lack of vehicles; supervision of rural workers is impossible without transport. Probably lack of transportation more than any other constraint could hamper the implementation of the PHCP.

To help alleviate this constraint, the project provides an input of 46 vehicles based upon the following formula:

42 Passenger Vehicles

- 1 four-wheel drive, 4-6 passenger vehicle per district health center to deliver equipment, supplies and supervisory personnel to the PHCU's and Project site. (16 total).
- 4 such vehicles per Training Center for the distribution of supplies and equipment and to carry training and supervisory personnel to all parts of the Project area. (2 for counterparts and 2 for U.S. advisors).
- 1 such vehicle for use of U.S. project director and the logistics and supply specialist and their counterparts to carry out their responsibilities.

#### 4 Trucks

- 2 10-ton capacity trucks to be stationed at the Central Warehouse in Mogadiscio for the delivery of supplies and materials for the two Training Centers and regional depots for resupply to DHCs and PHCUs.

All vehicles except those required for Phase 2 are slated for replacement during the life of the Project.

#### b. Drugs and Medicines

Drugs and medicines will be supplied by the project to health posts, PHCUs, and district health centers during the first two years of their operation. The GSDR/MOH will assume responsibility for their replacement.

#### c. Equipment and Supplies

- Equipment and supplies for health workers at 256 health posts, 64 PHCU's and 16 district health centers will be provided on a one-time-only basis.
- Equipment for Training Centers, including furniture for classrooms and dormitories; audiovisual and training materials; dormitory and kitchen supplies and classroom supplies, will be provided.

#### d. Other Commodities

- 4 Refrigerators (2 per Training Center) for storage of perishable drugs and use in immunization cold chain.
- 16 Refrigerators (kerosene) one for each district health center.
- 4 Air Conditioners for the Central Warehouse to assure proper storage of perishables associated with Program.
- 24 Ceiling fans to be installed at Central Warehouse to ensure proper circulation for protection of stored commodities from excessive moisture.
- Shelving for installation at Central Warehouse to provide storage area for Program commodities.
- Equipment for Media Center of the Department of Health Education to assist in the Unit's efforts to promote the Primary Health Care concept.

#### 4. Construction

All construction inputs required by the project are scheduled to take place in rural areas. These structures will be built out of local materials to the extent possible. In order to avoid excessive delays in Project implementation, the use of prefabricated units for housing of Field TA staff is recommended.

- 256 health posts - of simple local construction to provide a base of operation for the PHCP at the community level.
- 64 Primary Health Care Units - which are one-story buildings with attached living quarters for the staff.
- Renovation of 16 District Health Centers. While many of these structures exist, most will require renovation in order to facilitate the operation of the program.
- 2 three-classroom Training Centers, with storage space and dormitory facilities for training activities, at the sites in Burao and Baidoa.
- 8 Prefabricated houses - 3-bedroom to serve as living quarters for the technical advisors at Burao and Baidoa. Two extra dwellings (one for each site) have been provided for housing short-term TA's and Mogadiscio-based staff when in the field.

#### C. GSDR Project Inputs

All GSDR inputs directly associated with this project are recurrent costs of salaries and allowances for personnel trained with A.I.D. funds; vehicle maintenance, fuel and driver salaries associated with A.I.D. supplied vehicles; and recurrent equipment and drug supplies for PHCU's within the Project area. (For an analysis of GSDR inputs and ability to fund, see the Financial Analysis Section of this Project Paper).

#### D. Other A.I.D. Activities in Somalia

In addition to the Health activities that comprise this project USAID is planning to assist the GSDR in agriculture and water resource development. Both of these projects, now in the planning stage, will impact on the PHCP in a positive manner.

The agriculture project plans to deliver extension services to rural farmers in the Bay region in a program similar in concept to the PHCP. This physical proximity of the Agriculture project to the Baidoa health training center will allow the technicians to be supportive of each other's program and provides opportunities for shared resources.

The water resource development project plans to identify and exploit ground-water resources throughout the country. As lack of water is a major impediment to agriculture and a critical constraint to the maintenance of good health, it is expected that the water project will implement and support both the agriculture and the health programs and facilitate their replication.

## PART 4

### RESULTS OF SPECIFIC PROJECT ANALYSES

#### A. Financial Analysis

From CY 1974 to 1977, the health sector's share of government expenditure on the recurrent side has fluctuated around an average of 6.95 percent. However, expenditures for 1978 are estimated to represent only 5.2 percent of the national budget, indicating that allocations to the health sector are remaining constant while national expenditures in other areas expand.

Annex G contains a detailed description of GSDR financial operations and economic trends, as well as an in-depth analysis of trends in health sector allocation and expenditure.

On the development side of health sector activities, although the FYDP envisaged So. Sh. 75.6 million to be spent during the period beginning in 1974 and ending in 1977, actual achievement was So. Sh. 25.5 million or 33 percent of the original plan. This accounts for about one percent of the total development related investment versus the originally planned two percent.

The low implementation rate of development activities is primarily the result of a lack of resources which has resulted in funding problems for specific projects. As many development projects tend to be expensive curative-oriented facilities, the shortfall in implementation is all the more dramatic. And furthermore, these internal financial constraints have meant the reliance of the MCH on autonomous agencies and external assistance.

Given the current budgetary constraints of the MOH, it is important to determine the direction and extent of the GSDR commitment towards funding preventive activities. The direction of expenditure within the health sector is difficult to assess as the MOH current budget does not distinguish between curative and preventive services. Nor does it break down expenditure by programs or facilities. Instead, the current budget is divided into two categories: goods and services, and personnel. Money for materials, supplies, equipment, and rent line items in the budget of more than one program are grouped together into one integrated total. Most officials prefer this system as it allows for maximum flexibility in making spontaneous allocations to areas that exhibit "greatest need." However, since expenditure by facility records are not centrally maintained, "need" is based more on estimates of past experience and future requirements than on quantifiable utilization factors such as inventory turnover. In addition, even if budgeting by facility or program were practiced, the frequent personnel transfers experienced in the health sector would make it a cumbersome task. Such changes are difficult to reflect in the recurrent expenditure of facilities.

The problem of tracing the direction of expenditure is compounded as other Ministries such as Education and Local Government, and the Water Development Agency promote preventive activities. Little inter-ministerial coordination of services exists.

In any case, although data are lacking, it is reasonable to conclude that the direction of expenditure (both current and development), indicates a strong bias towards strengthening and expanding curative services. WHO "pilot"-type projects make up the bulk of preventive activity. Contributions are estimated to be around So.Sh. 6 to 7 million per year.

The MOH is aware of the current low level of input into preventive services and has declared itself committed to promoting rural services. To keep better account of the increased commitment, the budget will be divided into curative and preventive expenditure. As the present budgetary procedure connected with preventive/outreach programs is at best informal, it is strongly recommended that this be done. Other recommendations for improved budgetary practices are mentioned in Annex G.

Fluctuations in allocations to the health sector are a reflection of the economic difficulties and resource constraints that the GSDR has had to face. And, since current economic activity will influence the availability of funds to the health sector during the life of the PHCP, it is important to obtain a clear picture of just what the economic prospects of Somalia are.

The GSDR is hindered in its drive towards economic development by a number of factors such as the shortage of trained manpower and managerial skills, a general lack of absorptive capacity reflecting shortcomings in the institutional infrastructure, a deteriorating trade balance, world inflation and the severe drought of 1975.

To insure the success of the PHCP, it is important to realize that continued large trade deficits coupled with accelerating public investment may produce a foreign exchange squeeze in the near future. The drought combined with the ambitious FYDP has driven the national budget into deficit as it has proven difficult to curb the expansion of recurrent expenditure in the short run. The external public debt acquired to finance the surge of public investment has meant a rapidly rising debt service ratio. Furthermore, deferred debt payments come due in 1982. If export growth, remains sluggish, the GSDR will be hard pressed to slow growth in the debt service burden unless concessionary assistance continues to be forthcoming to finance directly productive investment. If not, inputs to social sector services might decline. Because investment in the social sector does not generate revenue, it is often the most vulnerable to cutbacks during periods of limited funding for development activities.

However, in the long run, with careful management of development activities, the future prospects of Somalia are promising. To combat problems, the GSDR has already turned to rigorous fiscal management, and it is carefully monitoring the growth in current expenditure.

With this in mind, the PP team has carefully structured the pace and scope of A.I.D. sponsored project activity in the PHC area in order not to unduly tax the MOH's recurrent budget and managerial capability to successfully administer this program. The Financial Plan for this project is located in Part 5.

To discover (1) what impact project costs will have on the MOH recurrent budget, particularly after A.I.D. inputs have terminated, and (2) to what extent the recurrent budget will have to increase to meet additional expenditure, a trendline analysis of future allocations to the health sector, both at the central (MOH) and regional (Bay and Togdheer) levels, was made (see Table 8 in Annex G.).

As can be seen, project costs associated with the PHCP are a relatively minor percentage of the overall Ministry budget, starting at 1.6 percent in year 1 and rising to 5.9 percent by year 6. The impact on the regional level budgets, however, is a much greater concern. By year 6 (the termination of AID inputs), PHCP related expenditure will represent 72 percent and 57 percent of the Bay and Togdheer Regions' budgets respectively. Although the sample size is small, from these figures it can well be surmised that at present, budgetary allocations are heavily skewed in favor of expensive curative care facilities located in the urban areas. Largely rural regions do not provide the services to absorb a significant share of the budget.

Thus, from a financial standpoint this project will demand a firm commitment on the part of the Central Government and will mean placing priority on extending preventive care in rural areas over the next several years. This commitment has been repeatedly stressed by MOH officials, but has not thus far been confirmed by recent expenditure trends. Ideally, GSDR officials will want to increase the MOH's share of the Central Development Budget from its, at present, meagre level of 1 percent, while maintaining its share of recurrent expenditure at 7 percent. However, as resources are currently limited, an increase in funds to the health sector will mean a cut back elsewhere. Whether GSDR officials will be willing to make this kind of trade off is an open question. Therefore it is imperative that priorities in health service delivery be established based on need. As rural areas are inadequately served, the extension of primary care services is the most cost effective way of achieving that goal (see the Economic Analysis for justification).

In sum, until such time as revenue from net exports and other domestic sources improves, the GSDR will have to increasingly rely on debt to finance its development efforts. The PHCP, carefully phased, is a program that will not burden Somalia's limited resources. Hopefully, as the economy and infrastructure strengthens, the current strain on the GSDR budget will be eased. Until then, GSDR investment and recurrent expenditure growth must correspond to need, and be carefully paced.

## B. Economic Analysis

Establishing a rural primary health system will provide a wide range of benefits. In cost-benefit analysis as applied to the health sector, the total cost of illness serves as the measure of benefits derived from preventing or eradicating illness. Costs comprise three elements: (1) loss of production; (2) expenditures for medical care; and (3) the pain, discomfort and suffering that accompany illness. Because the first two are more easily quantified, the third is often neglected for lack of data and appropriate methodology.

51 30

However, because consumption is the ultimate goal of all economic activity, it is necessary to realize that consumption benefits derived from avoiding the disutility in pain and discomfort are important. And, they may exceed in importance the other benefits of avoided income loss and medical cost.

The data requirements to undertake a reasonable cost-benefit are formidable. In Somalia, most necessary information (i.e., earnings by age and sex, labor force participation and unemployment rates, life expectancy tables, distribution data of deaths and morbidity by age, sex and type of malady under consideration, etc.) is simply not collected. Other methods such as cost-effectiveness analysis must be employed to get around this handicap.

Cost-effectiveness is used to compare different ways of achieving the same objective; in this case the objective is the extension of health services to the rural areas, which at present are not served.

Traditionally, the GSDR has placed priority on building hospitals to provide medical services for its population. At present, these hospitals are located mostly in urban areas, consequently leaving the majority of Somali people in rural areas without medical care.

Two strategies, therefore, can be pursued to provide medical services in rural areas. One is to continue building curative oriented facilities in areas presently lacking them. The other is to institute a system of basic, primary care that focuses on preventing illness and its consequent drain on economic resources. If curative care is needed, simple services can be provided on the primary level, more complicated cases being referred upwards to the existing curative system.

In the following analysis, it must be kept in mind that as accurate and detailed data are lacking, only rough orders of magnitude can be calculated. It is estimated that a 400 bed hospital in an urban area such as Mogadiscio can provide services to around 600,000 people on a yearly basis. Likewise, on the same population scale, a PHC complex as envisaged in this project is capable of serving a predominately rural population of roughly 150,000 to 200,000. Thus, replicated four times, total population served would be in the neighborhood of 600,000 to 880,000, depending on seasonal variations in population size and distribution.

Table 9 at the end of Annex G outlines the costs of providing these two types of services. Recurring costs for four PHC complex units and one hospital are about the same. Construction costs and equipment expenditure vary enormously. In total, four PHC complex units cost about one-fourth of that necessary to build, equip and operate a hospital. In addition, per capita training costs for doctors, more important to the functioning of a hospital than twice that of other medical and paramedical staff (nurses, sanitarian, etc.), if calculated on a yearly basis. Overall, the cost of training doctors would be much more.

Finally, as it is capable of serving a larger and widely scattered population, the PHC approach is more cost-effective than curative facilities. Bringing health services to remotely located people rather than the people to the service, more effectively addresses the problem of providing care in rural areas where the availability and accessibility of medical facilities are, at present, a serious problem.

### C. Social Beneficiary Analysis

The PHCP for Somalia has been designed to deal with the health problems of the rural poor and nomadic population.

The social matrix of Somalia is marked by ethnic and cultural homogeneity. The two most unifying factors in the country are the Muslim religion and the common language of Somalia that is spoken all over the country.

By and large the rural and nomadic population of Somalia see their form of traditional medicine as peculiarly suited for their way of life and to their relationships with the moral universe. They generally prefer to treat illness by their own methods, as there are no government health facilities in their villages, but they recognize different modes of therapeutic practices as valid. They see a common human element between the two systems. They also recognize areas of overlap where traditional medicine and scientific medicine may exist side by side without conflicts, at some points complementing each other.

The principle social analysis was conducted between the PID and the PP to serve as a constructive basis for the PP design. The analysis consisted of an examination of attitudes toward health and adaption of new ideas. The findings of this analysis as summarized below were considered by the PP team in arriving at their delivery system.

The conclusions of the social analysis (see Annex I for the complete analysis) are as follows:

1. Good health is one of the greatest perceived needs of the people,
2. The traditional approaches to disease is much less mystical and more pragmatic than in most of the rest of Africa,
3. There appears to be no resistance to combining traditional and modern treatments at the same time,
4. Modern medicine and drugs have been readily accepted and used even in rural Somalia,
5. Contrary to the view of many foreign aspects, there are few genuine barriers to the transfer of new medical technology, and
6. A general health program to reach nomads and settled families will undoubtedly greatly benefit the rural areas of the country.

The PP design team, considering the social analysis, incorporated the following points into the project design:

1. A continued social investigation of the nomadic culture as part of defining the delivery system for nomads;
2. Using local traditional birth attendants and community health workers from the village as the base of the delivery system;

3. The possibility of using the radio as a medium of health education,
4. Emphasis of the program on health education; and
5. Incorporation of a sanitation component as part of the system.

The project as designed appears socially sound and will have positive social impacts particularly through its emphasis on health education using local people.

#### D. Role of Women

It is apparent that women in Somalia, as in much of Africa, are vital to rural health development. They make most of the household's sanitation and nutrition decisions, and, in Primary Health Care Program, at least implement, if not make, many of the basic decisions related to the rural health program. Women also customarily play an important informal role in decision-making. They exercise much influence over their children, and sons have strong ties to their mothers.

Women exercise much more influence than is superficially apparent. The Somali Government is firmly committed to a policy of female emancipation and women have shown that they are ready to participate. Those in the Bay Region are already involved at the local level and can play an important positive role in the implementation of the Primary Health Care Program. This will be in full accord with their involvement at the local level in the People's Vigilante Corps (The Gulwaadayaal) which coordinates hygiene and welfare inputs at the district and sub-district level.

Incorporating women into PHC project activities should not present a problem, and there is every reason to believe they will be active participants. Government leaders have indicated that women should participate more actively in the development of the nation, and the government has taken steps to give equal rights to women. This is reflected in educational enrollments where the portion of females has gone from 20 percent to 25 percent of total enrollment since 1970. In the 1974-1978 Five-Year Development Plan, the government indicated a need for expanded educational opportunities, both formal and non-formal, for women. At the present time, about 20 percent of the medical students are women in the Faculty of Medicine and 27 percent in Veterinary Medicine, and females are being nominated as candidates for overseas training.

In the GSDR/MCH PHCP most of the job categories will be filled by women. The PHCP will provide an active role for women at all levels: tutors at the Training Centers will be chosen from among graduates of Somali nursing schools to assume long-term responsibility for the development of a training program. Many of the trainees will be women whose nursing skills will be upgraded. They in turn will train TBAs who are so intimately involved in giving maternal care.

The PHCP will serve to integrate traditional and modern ways of caring and curing that immediately affect the condition of women, both as providers and consumers. MCH services are a major part of PHCP and will be extended in many areas where there are none offered now.

The majority of the recipients of the PHC program are women and children that form about 65 percent of the rural population. Despite the cultural problems, many of the activities performed by the CHWs and TBAs are appropriately suited for women:

- Inspection of village schools and treatment of school children.
- Health education talks to families in the villages.
- Nutrition education.

- Pre and post-natal visits to women.
- Deliveries to be done by trained TBAs.
- Participation in immunization campaign.

GSDR/MOH officials are aware of the full participation of the women in PHCP, and will continue to maintain the momentum.

With regard to the prevalence and health implication of female circumcision, a custom that has been universally practiced and that has health implications, official governmental opinion is strongly opposed to it. A commission composed of the Ministers of Health, Education and Religion and the Somali Democratic Women's Organization (SDWO) is studying the issue. The position of the SDWO is that passing a law against the custom is premature at the moment. They feel that a massive educational campaign against the practice is required before a law will be acceptable and confirm already changed attitudes. Representatives of SDWO will attend a WHO Seminar on "Traditional Practices and the Health of Women" in Khartoum in February.

The official position of the government and the typical opinion of educated men and women in urban areas are opposed to circumcision. It is in rural areas that ideas about the rights of women are slow to penetrate. The A.I.D. supported outreach of health services and health education will be the first step forward changing traditional attitudes towards customs such as circumcision that are harmful to the well-being of women and children.

#### E. Logistics and Supply Analysis

Long distances, poor roads and inadequate numbers of transport vehicles pose formidable impediments to the implementation of the Primary Health Care Program, as well as to other rural programs. Supply and supervision emanating entirely from the MOH and Central Stores in Mogadiscio have been depending upon extremely long lines of support when extended to the remote rural areas. Frequent breakdowns of supply vehicles and over-committment of centrally located supervisory staff have left rural health workers unsupported for long periods of time.

The logistics and supply component of this project has been designed to shorten those supply and supervision lines by allowing for intermediate centers of supply and supervisory personnel. CHW's and TBA's will be within walking distance of their supervisors and stores. District Health Center personnel have been assigned a vehicle to provide the required mobility for administrative, logistical and supervisory support services to the PHCUs. Access between region and district as well as region and Mogadiscio is good, for the most part, because of the presence of improved roads.

Sites for the two Training Centers to be constructed as part of the project were selected not only for their proximity to existing administrative facilities, but for their accessibility by tarred roads.

The project represents the farthest extension of supportable primary health services into rural areas ever attempted in Somalia. It is the considered opinion of the design team that the decentralized deployment of supplies and supervisory personnel envisioned by this project is the only viable approach to supporting such a network of services on a national basis.

## F. Technical Analysis

### 1. Appropriateness of Technology

A.I.D.'s project will support the activities of the GSDR Primary Health Care Program, which seeks to deliver a balanced program of curative, promotive and preventive care to the people of Somalia, particularly the rural poor and the nomads.

The PHCP is based upon a concept currently being tried in other LDCs which utilizes lower level paraprofessional workers to perform a small number of health related activities. These CHW's and TBA's are selected in Somalia from the community. They will receive their training over a four-month period using training materials patterned after those in use in similar programs in other LDCs. Thus, the level of capability of the CHW, and TBAs and the skills they are expected to learn are essentially compatible. In this way, only health technology which is appropriate and supportable in a Somali rural environment will be introduced.

A.I.D. assistance is also being channeled into a program which the Somalies have selected and adapted from the recommended format developed by WHO experts for other countries. This plan takes into account the financial and technological constraints of the country. This is reflected in the types of equipment, drugs, and other supplies, which will be utilized at the PHCU and community level. This same approach has been used in designing the PHCUs and village facilities as well as the logistics/supply system which will support the PHCP.

Two other important factors illustrate the technological soundness of the project. First, provision has been made for baseline analysis in all project areas. These will be used to evaluate program performance and outcome over the life of the project and beyond. Second, a data collection and management system will be incorporated into the PHCP program, thus giving a sound basis for future rural health service planning and PHCP replication.

A.I.D.'s project inputs to the PHCP will be entirely consistent with GSDR's strategy of utilizing a health technology which is appropriate.

### 2. Suitability of the Technology for Replication and Defusion

The concept of the community, rural or village health worker has been introduced into a number of developing countries within the past 30-40 years. To date, most of the experience with this approach has involved activities at fairly circumscribed levels, except in the case of the "barefoot doctors" in China. Nevertheless, it is a concept which has gained wide acceptance in the international health field.

The use of lower-level health workers to deliver health services has been tried in the WHO basic health services program and in the resettlement villages with marginal success. Although the delivery of such services within the PHCP format has not been tested for its applicability, replication and diffusion, there are several important factors, however, that reflect positively on the GSDR's ability to successfully implement this program on a national scale. These include:

- the PHCP plan endorsed by the MOH was developed in a systematic and analytical way, carefully adapted to Somalia's needs from the WHO pattern for Primary Health Programs;
- the PHCP is designed to accommodate the individual needs of the various parts of the country as well as the requirements of different population groups (s.g., nomads);
- accomplishments of the Somalis in the area of Primary Health Care Services delivery to resettlement community populations have been impressive in that they demonstrate a willingness to participate in such efforts with very little in the way of commodities or highly trained staff;
- health activities promoted through self-help have been encouraging, particularly in the rural areas;
- the training of CHWs is related closely to their own capabilities and motivation, as well as to the specific health need of their own communities;
- the responsibilities assigned to CHWs are small in number and represent a manageable range of tasks;
- the PHCP includes plans for ongoing program evaluation. This will allow the GSDR to modify its implementation activities as more experience is gained with the program.

Thus, technology being used in the PHCP appears to be suitable for Somalia. It is reasonable to expect that the program can be extended to encompass the entire country. A.I.D.'s input would not be imposing unrealistic or over complicated technology upon the GSDR health section. Instead, U.S. resources would ensure that the GSDR would be able to accelerate the expansion of the health system into most needy areas.

The equipment, supplies, drugs and vehicles which are to be used in the PHCP were selected by the Somalis with the assistance of WHO professionals. The commodities to be funded by A.I.D. were chosen from lists and appear to be reasonable and appropriate.

While local supplies can be used for some construction, the shortage of building materials makes the importation of houses for T.A. staff more cost-effective than local construction.

On the basis of the preceding analyses of appropriateness of technology, suitability of the technology for replication and reasonableness of technical costs, this project is technically sound and consistent with all aspects of FAA Section 611(a) and (b). Section 611(e) certification may be found in Annex L and a technical analysis for construction requirements in Annex M.

In addition, this project responds to the most recent FAA guidance and to the Agency's general policy directives concerning the involvement of lowest income recipients and beneficiaries.

### G. Environmental Analysis

The PHCP program proposes no inputs that are capable of pollution or deleterious action on the environment. No use of irreplaceable resources is recommended. The environmental integrity of proposed project sites will not be violated or substantially altered in any way that would constitute a threat to human or animal health. The project will have a beneficial effect on the environment because many of the primary and secondary inputs will be directed toward education of the public and improvement of water resources and sanitary waste disposal.

For these reasons, and others to be found in the initial environmental examination (Annex K). A "negative determination" is recommended.

### H. Administrative Analysis

In this section, critical administrative issues of the project are examined in the light of their probable impact on program success and eventual replication.

#### 1. Issues Relevant to the MOH/GSDR

##### a. Organization and Function

The Ministry of Health is the agency responsible for all health affairs of the GSDR. It is responsible for implementing the PHCP and integrating A.I.D.'s assistance into the program. The MOH is headed by a non-technical politically appointed, cabinet level minister. The chief administrative officer responsible for day-to-day operations of the MOH is a civil servant with the title of "Director General". Under the DG are nine directors responsible for all activities of the health sector. A resume of the administrative organization of the MOH and its relationship to the PHCP may be found in Annex B.

##### b. MOH Capability in Program Coordination

While major responsibility for coordinating PHCP activities rests with the newly appointed Director of Primary Health Care, the integrated preventive/curative approach will impact on nearly all other directorates. This is particularly true of the directorate of public health, the directorate of curative services, the directorate of MCH and nutrition, the directorate of medical supplies and the directorate of planning and statistics. Each of the directors of these divisions is a capable professional with the necessary skills to accomplish his/her function. Some of the directorates have been newly created and several of the directors have just recently been appointed, however. An MOH administrative manual adequately states scopes of work relative to the PHCPs coordination but it will be necessary for the directors to have some time to adjust to their roles vis-a-vis the PHCP. All indications, however, point to a harmonious cooperative enthusiasm within the Ministry that should accomplish the desired coordination providing tenure in their present positions is assured.

c. MOH Absorptive Capability

The creation of the directorate of Primary Health Care indicates an MOH commitment to absorb the integrated responsibilities of the PHCP. This action also has increased the total absorptive capacity of the MOH. Other activities within the health sector, most notably curative medical services, will continue to demand attention from the various directorates. The A.I.D. program will place a health planner/administrator in the MOH as a counterpart to the director of Primary Health Care. This input will greatly facilitate the rapid incorporation of the PHCP into the total health services delivery system and assist in planning for its future expansion.

The absorptive capacity of the MOH will be most rigorously tested by the necessity for changing service orientation and decentralization of supervision. Change of emphasis from the more traditional curative services to a more balanced mix of curative and preventive services is a relatively new idea. The relegation of administrative and supervisory authority to regional and local levels will reduce interministerial work loads and increase administrative efficiency particularly within the MOH.

d. MOH Support Services

The ability of the MOH to logistically support programs, particularly in rural areas, has been limited; similarly, the health information and data system on which planning efforts are based is weak. The A.I.D. sponsored program has inputs to address both of these shortcomings i.e., vehicles and technical assistance for logistical support and formulation of health information system as part of the PHCP. If anything, the A.I.D. health program will strengthen the administrative structure of the MOH in all areas, including coordination, absorptive capacity, support services and planning.

2. Issues Relevant to AID

While this project is complex, a number of features will permit USAID/Somalia to supervise and monitor this effort. These include:

- an excellent spiritual cooperation exists between AID/W, USAID/and MOH personnel at all levels
- a performance report will be required of each short-term consultant participating in the program upon the completion of his/her assignment
- internal evaluation reviews, on an annual basis, of each aspect of the program will be conducted by USAID/Somalia, representatives together with the GSDR/MOH staff.
- external evaluation exercises at months 30 and 57 will give a detailed analysis of the staff to meet project goals.
- periodic field checking and observation will be conducted by USAID/Somalia and REDSO/Nairobi

- performance evaluation of all construction under this project will be performed jointly by MOH officials and a REDSO/Nairobi engineer.
- USAID/Somalia will appoint from their staff a project manager who will provide day-to-day supervision and support of the program.

## I. Manpower Analysis

One of the most significant and enduring outcomes of U.S. inputs into the Primary Health Care Program (PHCP) will be the progressively large number of well-trained health personnel the program will generate. This Project will assist the Ministry of Health (MOH) in developing a long-term capability to do its own training, to continuously improve the skills of its trained personnel and thus achieve in numbers, quality and permanency the health manpower resources required to meet the health needs of the rural poor.

In a five-year span, the Project will train (or retrain) some 900 health workers to staff health facilities in four regions, especially in the villages in remote areas. It will implement, test and modify, as necessary, various approaches to the delivery of primary health care services to settled rural communities, to nomadic populations and to semi-nomadic groups. By end of project rural health services will reach about one-quarter of Somalia's 3.5 million people.

The health infrastructure established in the four regions, as described in Part III, pp 9-16, will be replicable under similar conditions in the other 12 regions of Somalia, assuming that specific, identifiable constraints can be managed. High on the list of constraints is the temporary shortage of trainers and of qualified candidates to be trained.

To meet personnel requirements for the PHCP, the Ministry of Health will draw on manpower resources presently available in MOH programs or which can be produced by the Ministry's basic training institutions as the PHCP is phased in (see Annex D -Training). All will need retraining in preventive medicine and public health. Of major significance, the new category of Community Health Worker will extend the delivery of services to the village level. No problems are anticipated in the recruitment, training and placement of the 512 CHW's and TBA's to staff village Health Posts in the four regions of the project. They will be selected by their own villages, trained by MOH trainers and returned to their own villages. Supervision will be given by PHCU staff.

The Project is designed to begin the training process almost immediately following arrival of the U.S. technicians. The steps in selection of Somali health personnel, their training, placement and supervision are detailed in Annex C and D. Major thrust of the program is to begin health services as early as possible, especially to deploy the nurses, sanitarians and Community Health Workers at the PHCU and village level. Their training will begin within three months, and the first workers will be on the job three to four months later. As trainers are prepared at the Regional Training Center, the training of lower level workers can be accelerated at District Health Centers and PHCU's at a pace limited only by the Ministry's capability to absorb them. The placement of personnel in PHCP facilities cannot advance faster than the MOH can establish administrative and logistic support.

A major input into the training program will be the teaching of administrative and supervisory skills to nurses, midwives and sanitarians working in District Health Centers and PHCU's. Inadequate administration and supervision at the middle level of operations has been identified as weaknesses in previous rural health service programs..

Another weakness which plagued the Balad Basic Health Service Project was caused by frequent transfer of health personnel trained in the project to posts outside the project. The MOH has given recognition to this problem and will minimize it in the new program.

Attrition of personnel will have to be managed by increasing the number of candidates selected for the program so that no key position is vacated without having a trained replacement ready.

The reluctance of health personnel to serve in isolated and poorly developed areas of rural Somalia can be a serious obstacle to success of the program. This problem can be alleviated by: 1) offering incentives or hardship pay, 2) by improving the living and working conditions, 3) by recruiting more workers from the rural areas and training them in the rural setting of the project training areas, or 4) providing variety in working conditions through periodic rotation.

Evaluation of the training process, measured in large part by the quality of job performance, will be carried out both internally by training and service staff, and externally by MOH and USAID. The self-evaluation process will become a routine task in the supervision of workers, with more formalized assessment at one and two-year intervals. The external evaluation will be held after two years of program operations and again toward the end of the five-year project.

Needless to say, but too often overlooked, health personnel to be effective must have strong administrative backup support, and adequate equipment and supplies. The lines of logistics and communications should be short enough to assure adequacy of supplies at all times. The project provides a long-term U.S. logistics and supply advisor/trainer, and short-term consultation in statistics and data collection. Participant training will contribute to the strengthening of the support systems.

In summary, the balance of U.S. technical assistance in the training component of the program and MOH commitment to give the PHCP the priority it requires in selection, training and placement of personnel are significant indications that the program can succeed. It is technically feasible, the methodology sound, and the goals realistic.

PART 5

SPECIFIC PROJECT PLANS

**A. Financial Plan**

The table below outlines the Financial Plan for AID and GSDR inputs into the PHC project. Annex H contains a detailed budget breakdown and justification for costs used.

SUMMARY COST ESTIMATE AND FINANCIAL PLAN  
(U.S. \$000)

SOURCE  USE	PROJECT YEAR 1				PROJECT YEAR 2				PROJECT YEAR 3				PROJECT YEAR 4				PROJECT YEAR 5				TOTAL	
	AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID	GSDR
	FX	LC	FX	LC	FX	LC	FX	LC														
A. Technical Assistance	890	-	-	-	870	-	-	-	816	-	-	-	762	-	-	-	816	-	-	-	4,154	--
B. Training	213	-	-	-	571	-	-	-	385	-	-	-	306	-	-	-	295	-	-	-	1,770	--
C. Salaries and Allowances	-	5	-	195	-	80	-	118	-	96	-	431	-	4	-	765	-	3	-	931	188	2,640
D. Commodities	419	-	64	6	197	-	79	9	96	-	91	9	295	-	205	13	102	-	217	13	1,109	706
E. Construction (GSDR)		-	-	3		-	-	4		-	-	6		-	-	4		-	-			17
Subtotal	1527		268		1718		410		1,393		537		1367		987		1216		1,161		7221	3,363
Contingencies (10%)	153		27		179		41		140		53		136		99		121		116		722	336
Inflation (10% compounded)	152		27		358		85		460		179		634		458		742		708		2346	1,457
Subtotal (Project Costs)	1832		322		2248		536		1993		769		2137		1544		2079		1985		10289	5,156
F. Construction (USAID)*	2200				668								1250				842				4960	
GRAND TOTAL	4032		322		2916		536		1993		769		3387		1544		2921		1985		15249	5,156

\* USAID construction cost estimates include contingencies and inflation.

**B. Implementation Plan**

<u>Action</u>	<u>Date</u>	<u>Agent</u>
1. PP submitted to AID/W	1/79	USAID/S
2. PP approval	2/79	AID/W
3. Grant Ag signed	2/79	USAID/S
4. RFP drafted	2/79	GSDR/USAID/S
5. RFP published	3/79	GSDR
6. Proposals received	5/79	GSDR
7. Contractor selected	6/79	GSDR
8. Contract signed	7/79	GSDR
9. MOH identifies counterparts for U.S. Technical Advisors	7/79	GSDR/Contractor
10. MOH begins selection of candidates to become tutors	7/79	GSDR
11. at the two training centers		
11. Vehicles (13), prefab houses, construction materials ordered, drugs and supplies for PHCP ordered	7/79	GSDR/Contractor
12. Training Center equipment and supplies, health faculty materials ordered	7/79	GSDR/Contractor
13. MOH begins selection of nurse and sanitarian candidates to become trainers.	7/79	GSDR/Contractor
14. Social anthropologist and epidemiologist begin literature search on nomad problems	8/79	Contractor
15. Project Director/Health Planner arrives and helps select long term participant trainees	9/79	GSDR/Contractor
16. Project Director makes arrangements for arrival of team and begins planning for implementation with MOH	9/79	GSDR/Contractor
17. Long-term Advisors arrive. Short-term participants, third country and U.S. selection begins (each round selected on anniversary)	10/79	GSDR/Contractor
18. Short-term Advisor arrives and assists project staff in curriculum development for CHW training	10/79	GSDR/Contractor
19. Social anthropologist and epidemiologist arrive	10/79	Contractor
20. Anthropologist and epidemiologist begin studies on nomads in the North	11/79	Contractor
21. Trainers and project staff for South move to Baidoa temporary facilities	1/80	GSDR/Contractor
22. Training of trainers begins in South, working with first group of 20 CHWs	1/80	GSDR
23. Site selection and construction plans for Baidoa Center completed	2/80	GSDR/Contractor
24. Trainers and project staff for North move to Burao temporary facilities	2/80	GSDR
25. Training of second group of 20 CHWs begins by trainers at PHCU level	4/80	GSDR
26. Curriculum specialist develops task analysis for NCHWs and preliminary curriculum	4/80	Contractor
27. Second course for trainers begins at center	4/80	Contractor/GSDR
28. Training of PHCU staff and NCHWs begins in North	5/80	GSDR
29. Replacement vehicles ordered (to be repeated annually)	6/80	GSDR/Contractor
30. Remaining PHCU staff begins training at Baidoa Center	7/80	GSDR

<u>Action</u>	<u>Date</u>	<u>Agent</u>
31. First round PHCU staff, NCHW and district supervisory staff begin work in North - Second round training begins (date of training depends upon placement and approach)	7/80	GSDR
32. Testing of various approaches in delivery of health services to nomads begins with posting of first round NCHWs	9/80	GSDR
33. Second round training of PHCU staff and NCHWs begins in North	9/80	GSDR
34. Completion of training and staffing for South	6/81	GSDR
35. Internal evaluation begins, North and South	11/81	Contractor/USAID
36. Training for Phase II personnel begins	1/82	GSDR/Contractor
37. Interim evaluation of project begins	1/82	GSDR/Contractor
38. PHCU construction and district health center renovation being for Phase II	1/82	GSDR
39. Training for Phase II personnel, round 2 begins and first round personnel begin services	5/82	GSDR
40. Final internal evaluation begins	5/82	GSDR/Contractor
41. Critical point for decision on design of new health project	5/82	USAID/S
42. Training for final staffing begins	4/83	GSDR
43. Staff begins review of activities and introduces program modifications	4/83	GSDR/Contractor
44. Training for Phase II personnel completed except for NCHWs	7/83	GSDR
45. First refresher training course for South	8/83	GSDR
46. Final project evaluation begins	3/84	USAID/S
47. Project completed	6/84	

This is to be considered as a preliminary implementation schedule. A detailed implementation plan for each project activity will be required of the contractor three months after arrival at post.

### C. Evaluation Plan

USAID/Somalia recognizes that the concept of health care provided at the community by lower level paraprofessional workers (CHW's and TBA's) is relatively new. As such, this carries some risk. On the basis of factors previously described (accomplishments in health service delivery, self-help activities, administrative changes), USAID/Somalia feels that there is strong evidence to support a significant A.I.D. commitment to the Somali Health Sector at this time.

To ensure that the PHCP continues to expand and that A.I.D. inputs actually play a critical role in expansion, USAID/Somalia will rely heavily upon periodic and program evaluation.

In addition to required reports of progress and periodic inspections by A.I.D. staff, two project evaluations are scheduled:

- an interim evaluation at month 30,
- a final evaluation at month 57.

#### INTERIM EVALUATION

This evaluation will address progress in output level accomplishment at the training center level in both north and south as well as those at the PHCU and community level. The planned outputs are contained in the project's logical framework in part.

The output level analysis will concern itself with the key elements of this project:

- training/orientation/workshop courses for CHW's, TBA's and their supervisors;
- construction of training centers, PHCU's and renovation of district health centers;
- development of a functioning logistics and supply system;
- implementation of a health data and management information system;
- integration of the project into the total health system, including vertical programs.

An additional important element of the evaluation will involve assessment of CHW and TBA community promotive and preventive activities. These will include efforts at source control work, sanitation, health education, immunization team activities and curative services. The evaluation will also include an assessment of the impact of the project on pilot area residents.

Month 30 has been selected as the most logical point for this evaluation as a significant number of CHW's, TBA's and supervisors should have been trained and posted, and PCHUs built. The accompanying logistics/supply and health data systems should also have begun operations.

By this time, it should be possible to assess the efforts of the GSDR to adjust its budgetary allocations toward assuming the recurrent costs of the program in future years.

On the basis of this interim evaluation, future activities of the project can be modified to address identified needs. At this point, also, decisions can be made concerning the viability of the PHCP approach as an expanding future MOH activity (go-no-go) and the advisability of an additional project design effort to continue the project beyond the 5 year period.

The interim evaluation of the project at month 30 will be conducted with the participation of:

- USAID/Somalia
- REDSO/Nairobi
- GSDR/MOH.

#### FINAL EVALUATION

In the event that the interim evaluation results indicate that sufficient progress is being made in the project, consideration should be given to a new P.P. design effort for expansion of the PHCP.

If the interim evaluation results at month 30 indicate that program deficiencies exist, the contractor and the GSDR will be given 12 months to show an improvement in project performance. If the deficiencies are not corrected, steps will be taken to facilitate early termination of the project.

In either case, the final evaluation will focus on:

- institutional and systems accomplishments during the life of the project, reflecting progress since the interim evaluation.
- an impact analysis of the entire network and its effect on the delivery of health services in the project areas.

The impact analysis will measure achievements at the goal and purpose level through use of the objectively verifiable indicators included in the project's logical framework.

It may be possible to perform additional impact analysis of certain baseline statistics data such as infant mortality, nutritional status and death rates. These analyses will depend upon data generated by the project itself and the population corrected figures between successive years of project life.

Due to the innovativeness of the project, its potential replicability and its cost over five years, data will be collected for an ex post evaluation to be undertaken approximately three years after termination of the project. This evaluation will focus on whether the replicability of the program did occur without further AID assistance, the four pilot regions still supply the health delivery services while expansion occurred into other areas, and the changes that occurred in the treated areas. During the implementation of the project, plans will be made to survey the areas surrounding the impact areas to discern the actual impact of the project and provide a data base for such an ex post evaluation.

#### D. Administrative Plan

Program implementation will be carried out with maximum coordination between the MOH, the contractor(s) and USAID/Somalia. The principal contractor will be responsible for all technical services required for the project.

Pursuant to Policy Determination 68, the USAID proposes to use host country contracting procedures. The primary reason for preferring this contract made is that it supports the GSDR's desire to be involved in and control its own projects. The GSDR plans to establish a "Project Implementation Unit" in its Planning Commission which will be responsible for all activities incidental to donor-funded contracted services. The Mission is prepared to

give significant staff time to this Unit in reviewing AID's Handbook II contracting procedures. These efforts will be supplemented by REDSO's contract and legal assistance, sufficient to achieve effective contract management and compliance with Handbook II.

USAID/Somalia or a designated contractor such as the African-American Procurement Contractor, Inc., will be responsible for procurement of supplies and equipment for the project. Processing of participants for training abroad will be the primary responsibility of the USAID/Somalia, but selection of training candidates will be carried out jointly by the Project contract staff, the GSDR (MOH), and USAID/Somalia.

The responsibilities and mechanism for the Programmatic and Operational Activities of the Project are as follows:

GSDR

Programmatic - The principal person responsible for program activities is the Director of Primary Health Care of the MOH. He acts as counterpart to the Project Director and Project Manager USAID/Somalia. He will also coordinate any liaison activities within other directorates of the MOH and agencies of the GSDR. He will assist in the plan formulation and execution of the annual work plan.

Operational - The Director of Finance and Administration of the MOH will be responsible for administration of the Contract for the GSDR and will serve as principal disbursing officer. He will be accountable for making requests for funds from USAID/Somalia Controller and the administration of A Blocked Bank Account in the name of the GSDR.

All equipment including vehicles will be purchased in accordance with AID's competitive procurement procedures.

A.I.D.

Programmatic - The Project Manager designated by USAID/Somalia will oversee program activities as counterpart to the Director of Primary Health Care/MOH and to the contractor's Project Director. He will arrange for input of all necessary A.I.D. approvals including the services of the REDSO/NAIROBI Engineer to advise on details of construction associates with the Project. He will also be responsible for coordination of activities between A.I.D. Projects (e.g., Agriculture and Water).

Operational - The USAID/Somalia Controller will be responsible for receiving and acting upon requests for funds and replenishments to the Blocked Account and monitoring those expenditures.

E. SPECIAL CONDITIONS AND COVENANTSConditions

1. USAID/Somalia and the GSDR will agree on the final design and specifications for each facility (PHCU and/or District Health Center) to be constructed or renovated.
2. The GSDR will provide counterpart personnel to work with each long-term technical advisor. These personnel will have appropriate background training and experience so as to maximize the value of their counterpart experience.

Covenants

1. The GSDR and MOH will assure tenure of Somali personnel in their PHCP roles, thus giving the project maximum continuity of administration and supervision.
2. The GSDR will assure that A.I.D. provided commodities and vehicles will be utilized in a manner designed to maximize the achievement of project goals.
3. The GSDR/MOH will make every effort to reprioritize the operating budget of the health sector to provide for the necessary expenditures in support of PHCP and its eventual replication.
4. Failure of the GSDR to provide their critical inputs and staff or failure of the project to meet program objectives or recognition of the inability of the GSDR to meet recurrent costs at the interim (30 months) evaluation of the program may be terminated before irreversible stresses can be placed upon the GSDR's finances.

## **ANNEXES**

- A. PID Approval Cable**
- B. Health Planning and Primary Health Care**
- C. Manpower Development**
- D. Training**
- E. Health Education**
- F. Logistics and Commodity Support**
- G. Financial and Economic Trend Analyses**
- H. Detailed Budget and Justification**
- I. Social Soundness**
- J. Checklists**
- K. IEE**
- L. Certification - Section 611(e)**
- M. Technical Analysis - Construction**
- N. Letter of Request from Government of Somalia**

PP RUQMDI

UNCLASSIFIED

DE RUEHC #0308 1530453

STATE 140300

ZNR UUUUU ZZH

P 022059Z JUN 78

FM SECSTATE WASHDC

TO RUQMDI/AMEMBASSY MOGADISCIO PRIORITY 1543

RUVQC/AMEMBASSY NAIROBI PRIORITY 0534

BT

UNCLAS STATE 140308

AIDAC

E.O. 11652: N/A

TAGS:

SUBJECT: PID REVIEW: SOMALIA RURAL HEALTH SERVICE PROJECT  
649-0102

1. SUBJECT PID REVIEWED 20 APRIL BY PROJECT REVIEW COMMITTEE WITH PARTICIPATION FULL PID PREPARATION TEAM. EXCEPT FOR MINOR RESERVATIONS PID ACCEPTED IN PRINCIPLE SUBSTANTIALLY AS PRESENTED TO BE DEVELOPED INTO PHASE I PROJECT. TEAM AND MISSION ARE CONGRATULATED ON PREPARATION OF WHAT IS MOST READABLE DOCUMENT CLEARLY OUTLINING SITUATION IN HEALTH SECTOR AND STRATEGIES PROPOSED FOR MEETING NEEDS OF POOR MAJORITY.

2. PID CONTAINS GOOD PROJECT CONCEPT AS PHASE I DESIGN ACTIVITY WHICH COMMITTEE RECOMMENDS SHOULD BE OF THREE YEARS DURATION. COMMITTEE RECOGNIZES THE EXPERIMENTAL AND EVOLVING NATURE OF THE PROJECT AND THAT A SIGNIFICANT OUTPUT OF PHASE I WILL BE THAT PROBLEMS IN SECTOR WILL BECOME MORE DEFINED AND FOCUSED, LOCAL EXPERIENCE WILL BE GAINED AND UNDERSTANDING AND TRUST OF LOCAL OFFICIALS ATTAINED WHILE BASIC ASSUMPTIONS WILL BE TESTED LEADING TO DESIGN AND ULTIMATE IMPLEMENTATION OF SUBSTANTIAL FOLLOW-ON ACTIVITIES ASSUMING OF COURSE REASONABLE SUCCESS WITH PHASE I AND SUSTAINED SUPPORT OF HOST GOVERNMENT.

3. PHASE I ACTIVITIES SHOULD INCLUDE: (1) MANPOWER ANALYSIS; (2) CURRICULUM DEVELOPMENT FOR TRAINING OF PERIPHERAL LEVEL WORKERS; (3) IN-SERVICE TRAINING OF HEALTH WORKER SUPERVISORS; (4) SURVEY OF AND ORGANIZATION OF TRAINING OF THOSE IN LOGISTICS SYSTEM INCLUDING TRANSPORTATION, STORAGE AND DISTRIBUTION; AND (5) ASSISTANCE TO THE HEALTH PLANNING UNIT. PP TEAM MUST BE SENSITIVE TO NEED TO DESIGN ACTIVITIES WHICH BOTH MEET SOMALI EXPECTATIONS OF DEVELOPING PRACTICAL, WORKING DELIVERY SYSTEM AND YET WHICH DOES NOT OVER TAX CAPABILITY TO INTEGRATE, MANAGE AND MAINTAIN SERVICES AND FACILITIES DEVELOPED.

4. IT IS APPRECIATED THAT DURING PHASE I GSDR WISHES ESTABLISH OPERATIONAL DEMONSTRATION PROJECTS IN SEVERAL DISTRICTS.

## PLANNING FOR PRIMARY HEALTH CARE

This annex, describing considerations relevant to the planning of a Primary Health Care Program, has introductory background information on demographic data and health problems. The second part describes the present health delivery system of the Ministry of Health; health strategy, policies and plans of the MOH for development of a primary health care program, and previous PHCP experience.

Part three describes the components of the proposed USAID supported PHCP. Constraints to implementation and other considerations are covered in part four.

### I. Demographic Data and Health Problems

#### A. Demographic Data

Reliable data on the characteristics of the Somali population are lacking, but estimates place the present population at about 3.5 million. Nomads make up 60 to 70 percent of the total. About one-quarter of the total population resides in areas designated as urban or peri-urban, and of 60 such areas, fewer than 25 were listed as having 5000 or more inhabitants.

Of the rural population, an estimated 80 percent are nomads and the rest live in rural settled areas. Semi-nomadic families and groups may live in settled areas during part of the year, and also follow nomadic population movements, depending on seasonal variations in the availability of water and pasturage for their flocks. It is to the nomads and the rural settled populations that the MOH is seeking to extend its health care delivery system.

Almost half of the population is below 15 years of age. Life expectancy is estimated to be 41 years. In surveys conducted prior to 1975, males outnumbered females 106 to 100.

A crude birth rate estimated in 1974 at 49 per thousand and a death rate of 24 per thousand results in an estimated natural increase in population of 2.5 percent per year.

#### B. Health Problems

While numerous attempts have been made to identify the 10 leading causes of morbidity and mortality from hospital and clinic sources and from disease-specific patterns, the statistical data are presently too fragile to permit more than general impressions as to their relative frequency. Typical listings follow:

## a. Leading Diseases in the Country (not in order of frequency)

General

Malaria\*  
 Respiratory Disease & TB  
 Helminthic Parasitic Diseases  
 Schistosomiasis  
 Skin Infection  
 Dysentery  
 Malnutrition Status  
 Eye Diseases  
 Disease of Pregnancy and  
 Puerperium

In Nomadic Area

Respiratory Disease & TB  
 Wounds, Injuries, Burns  
 Malaria\*  
 Seasonal Eye Infections  
 Pregnancy Diseases & Puerperium  
 Malnutrition\*\*  
 Zoonoses (anthrax, rabies, etc.)  
 Others

## b. Leading Causes of Infant and Childhood Deaths (not in order of frequency)

General

Diarrhea  
 Pneumonia and TB  
 Malaria  
 Measles  
 Whooping cough  
 Malnutrition  
 Tetanus

In Nomadic Area

Pneumonia and TB  
 Accidents (Burns, Bites, etc.)  
 Malaria  
 Malnutrition  
 Complications of delivery

Smallpox eradication programs have apparently eliminated the last foci of the disease, although active smallpox surveillance efforts continue.

Communicable diseases of infancy and childhood that are preventable by immunization are of particular interest in planning the MCH component of the PHCP. By age 10 one hundred percent of Somali children have had measles. From 1961-1963, 13,224 cases of whooping cough were reported by dispensaries. This and other evidence suggests that pertussis is a major cause of mortality among children. Unverified data identifies diphtheria as a leading cause of childhood morbidity (and probably mortality). A 1978 survey of 3,093 school children found symmetrical flaccid paralysis at a rate of 6 per 1,000 children examined.

Neonatal tetanus is regarded as a major cause of neonatal mortality, with one survey showing a rate of 154 infant deaths per 1000 live births among rural women.

Undernutrition and malnutrition are common, with marked geographical and seasonal variations. Vitamin A and C deficiencies are frequently cited in the literature.

\*Malaria - Seasonal, only during wet season

\*\*Malnutrition - Particularly severe during droughts (famine)

c. The Major Diseases in Bay Region CY 1977

<u>Hospital Admissions</u>	<u>Number of Cases</u>
1. Bacillary Dysentery	3721
2. Intestinal Parasites	2704
3. T.B. Pulmonary	2500
4. Malaria	1653
5. Measles	1478
6. Whooping cough	962
7. Chickenpox	832
8. Venereal Diseases (Gonorrhoea and Syphilis)	632
9. Infectious Hepatitis	178
10. Abortion	123

(Prepared by Regional Health Superintendent Mr. Dugsilye Reydal Warsame, Bay Region, Baidoa)

The lack of safe or potable water and the inadequacy of the amount of water available for human use constitute (except in a small number of municipalities) one of the major contributing factors to the difficulty of preventing disease and promoting health in Somalia. Nomads and the populations of rural settled areas have access, during most the year, to only the most meagre and contaminated sources of water, usually at livestock watering points.

II. The Ministry of Health's Delivery System

A. The Present System

The present health system of Somalia is patterned after the Italian and British colonial systems. These health services are largely curative in orientation and based in urban areas. For instance, Mogadiscio alone has 6 hospitals with 2560 of Somalia's 5961 beds. The remaining 3401 beds are distributed among the nation's 68 other hospitals.

Fifty MCH centers, staffed and functioning, and 291 dispensaries are located mostly in urban and settled areas. Thirty two additional health centers are equipped but not staffed. By the end of 1978 newly-graduated nurses will be assigned to these centers. Eighty-three MCH personnel have just participated in, or are currently attending, a one-month refresher course in MCH on nutrition. Government policy is to have one MCH center in each district by the end of 1981 with, perhaps, two in some municipalities. These MCH centers will be integrated into the PHCP as the program is extended.

All health facilities are Government operated and all health personnel are paid by the Ministry. Private practice of medicine was abolished in 1974. No missionary hospitals are operating. All health and medical care is provided at no cost to the recipient.

Organizationally, the MOH has the following directorates under the Minister of Health and his Director General:

1. Planning and Statistics
2. Public Health
3. MCH and Nutrition
4. Finance and Administration
5. Primary Health Care
6. Curative Medicine, e.g. Hospitals, Dispensaries
7. Training
8. Medical Supplies
9. Personnel

Some directorates are further subdivided into divisions, e.g. the directorate of public health includes subdivisions of occupational health, communicable disease, health education, and environmental sanitation.

#### B. Health Strategy, Policies and Plans of MOH

The description of the Ministry's health strategy and policies, contained in the Synthesis (Chapter IX), prepared in April - May 1978 from information derived from the health section of the Five-Year Plan 1974-1978, Government of Somalia, identifies four parts to the health strategy of Somalia. These are:

1. development of integrated preventive and curative health services,
2. health manpower development,
3. disease prevention and control, and
4. promotion of environmental health.

In the PID (see Annex A) prepared at the same time, it is stated that the "Five-Year Development Plan accords first priority to (the) establishment of a basic health structure throughout the country with emphasis on integrated primary health care for rural areas and nomadic communities."

In the absence of any subsequent formal pronouncements in written form concerning MOH plans and policies, the Project Design Team has consulted with the Minister of Health and his senior professional advisors. It would appear that the MOH is firmly committed to a future course of action that will:

1. emphasize a prevention-oriented approach to health problems,
2. stress the provision of health services to nomadic and static rural populations, and
3. undertake to formulate plans within which the limitations imposed by budgetary restrictions and shortage of trained manpower are given fullest consideration.

Significant to an understanding of why there has been no detailed PHCP planning by the MOH prior to the arrival of the Project Design Team in September 1978 are four contributing elements:

- a. the severe drought of 1974/75 which made destitute a significant number of nomads and of rural populations,
- b. the settlement of 150,000-200,000 refugees from Ethiopia and the Ogaden Region with attendant demands upon the health service,
- c. the demands upon MOH manpower and management skills imposed by the 1977 smallpox epidemic and subsequent eradication and surveillance activities, and
- d. the generally limited resources of the MOH in manpower and finances.

The Ministry of Finance informed the Project Design Team that budgetary allocations assigned to MOH will not be raised during at least the next few years and the initiation, development and operation of a PHCP will, therefore, necessarily have to be financed from outside donor sources and by reallocations within the present levels of the MOH operating budget.

A Health Planning Team from WHO is scheduled to visit Somalia for a 3-6 week period in January-February 1979. The team will consist of one health planner, one epidemiologist, and one statistician (presently in Somalia). In the considered judgement of the Project Design Team this cart-before-the-horse situation should cause no undue concern since the MOH/AID concept of PHCP dovetails with known MOH/WHO health planning concepts.

The MOH intends to bring the "vertically-structured" TB, malaria, and EPI programs into the framework of Primary Health Care. The GSDR plans to make work in rural areas compulsory for all health workers. Some recent graduates from the medical faculty have already been posted to district-level health facilities.

#### C. Prior MOH Activities and Experience in PHCP

A WHO-supported program providing basic health services to poor urban populations within several hours drive from Mogadiscio was undertaken in 1962. Initiated first in Balad, 35 kilometers to the north, it was extended in later years to Koryole, Wenle Wein, and Afgoi to the west and south of Mogadiscio. The Balad Project was sited in an agricultural area which had nomadic populations on its outer edge. It had an international staff of three persons: a P.H. Medical Officer, a P.H. Nurse/Midwife and a Sanitarian. Services provided included:

- an outpatient department (OPD) for curative care
- domiciliary care
- a limited number of in-patients (because referral facilities were too distant)
- MCH, "the focal point of the service"
- CDC and immunizations
- health education services.

The "Balad Project" experienced difficulties that included:

- weakness in early planning and design,
- lack of commitment by MOH to what should have been a joint MOH/WHO effort,
- lack of middle-management and supervisory national personnel who could be assigned to the project, and
- inadequate budgetary and personnel allocations for a project of its size and scope.

Several WHO documents identify and describe these problems. Although the presently-functioning program in the Balad area is but a shadow of its conceived potential, the exercise does appear to have convinced MOH officials of the validity of this approach to providing PHC services, and has led them to seek ways for providing similar services to other large population groups in nomadic and rural areas of Somalia. The proposed PHCP may thus be visualized as a natural outgrowth of the Balad MOH/WHO experience.

Ministry officials prepared for the Project Design Team a balanced and well-organized presentation in which the achievements and successes as well as the problems and constraints of the "Balad Experience" were touched upon. The Team is convinced that at this key level of the MOH the "lessons learned" have been identified and assimilated.

Professionally qualified men, well versed in the PHC concept, presently head up the key directorates that will be involved in PHCP. These directorates include: Primary Health Care, MCH and nutrition, public health, among others. These officials, already in place in positions of critical importance to PHCP, may be considered a "technical resource" of significant dimensions.

A course in community health is offered to students at the Medical faculty. Thus offering encouragement to the possibility that, upon graduation, young physicians will have an understanding of some of the problems of rural health delivery systems. A mutually beneficial, reciprocating relationship between PHCP personnel and the medical faculty can be visualized. The MOH has translated the WHO manual on Primary Health Care into the Somalian language. Following field use, adaptations were made to adjust the manual to locally-encountered conditions, and the manual was again rewritten in Somali.

### III. The Primary Health Care Program

A. The proposed PHCP of the MOH, to be developed with USAID assistance, is described in the Project Paper to which this document is annexed. Details of manpower development, training requirement, logistical support, etc., will be found in other PP annexes (C,D,F). Details concerning the basic "building block" upon which the concept rests, namely the CHW and NCHW, are dealt with in following paragraphs. A profile of the primary health worker is incorporated in this Annex (Part D) because it is basic to the MOH's understanding of the PHCP, and because it forms a cornerstone for the development of planning for manpower and training, logistics and support, and health information systems.

#### B. Definition

The PHCP is a comprehensive health delivery system which:

- is community based and reaches beyond the health center and dispensary,
- is specifically designed to have responsibility for rural and nomadic populations,
- lays stress on health services that are promotive and preventive rather than curative, and
- relies on community participation and self-reliance in the development of a rural/nomadic health care system at the peripheral level.

The services provided by Primary Health Care will include "promotion of proper nutrition and an adequate supply of safe water, basic sanitation, maternal and child care, immunization against the major infectious diseases, prevention and control of locally endemic diseases, education concerning prevailing health problems and the methods of preventing and controlling them, and appropriate treatment for common diseases and injuries."

These services, provided by community health workers (CHWs), nomadic community health workers (NCHWs), and traditional birth attendants (TBAs), with the necessary supervisory and support services make up the basic program of PHC.

#### C. Integration of PHCP and Existing "Vertical" Programs

Programs for the control of malaria, TB, schistosomiasis, measles, leprosy are now carried out by MOH in "vertical programs" addressed to specific population groups in selected areas, utilizing personnel and technical procedures focussing only upon one disease-entity at a time. As more trained, multi-phasic health workers are placed in health facilities with wider geographic and numerical distribution, the MOH anticipates a gradual reduction in the size and scope of such vertical programs. Within populations served by the proposed PHCP, the gradual integration of these programs into the work of health posts and health centers is envisaged. During the first years of the project, however, cooperation and coordination will be initiated by using CHWs and NCHWs as liaison personnel between their communities and mobile or specialized health teams involved in malaria control, schistosomiasis, TB, leprosy and blindness working in the areas served by health posts.

Illustrative of the approach that could be followed is the description of the possible PHCP/EPI integration that follows:

Expanded Programs on Immunization (EPI)

The Ministry of Health, with WHO assistance, is initiating a country-wide Expanded Program on Immunization (EPI), as part of a national and international effort to reduce morbidity and mortality of diseases of infants and children preventable by immunization. EPI will be a fully mobile operation in Somalia. Its objective is to reduce morbidity and mortality due to neonatal tetanus, pertussis, measles, tuberculosis, diphtheria and poliomyelitis by 50% by 1985.

The long-term goal of the MOH is the delivery of immunization services as part of MCH services. Presently Somalia has only 50 functioning MCH centers (April-May 1978) and as most of these have inadequate refrigeration to store vaccines at required temperatures, EPI operations will involve the use of mobile teams. According to the EPI proposal, as individual cold-chain capacity is developed such centers will become immunization centers for their areas.

The proposed EPI time table of operations calls for the Bay Region to be incorporated in the mobile team operation beginning in November 1978 and in the Togdheer Region in November 1980.

By establishing EPI services in static health facilities, such as PHCP training centers and district health centers which have reliable 24-hour electricity, immunization activities can be extended from such centers to surrounding areas within six hours travel. The PHCP herein proposed can effectively link up with the EPI operation when cold chain equipment has been installed and tested and when responsible personnel have been appointed and trained.

D. The Primary Health Worker Profile

1. The Community Health Worker (CHW)

Definition: The CHW is a man or woman who is a member of the community to which he/she is assigned to work and is selected by that community to provide PHC services. The CHW:

- will be selected by the village members, MOH officials and the local political organization from among nominees designated by the community;
- will be a full-time worker in his community;
- will be selected for his leadership qualities and/or leadership potential;
- will be provided with a hut or a room by the community, from which he (she) will carry out his PHC activities, or he (she) will operate from his (her) own home;

- will be provided with a (lockable) secure box in which can be kept necessary supplies;
- will be supervised, administratively, by MOH personnel from the nearest PHCU.

Duties and Functions: The CHW will be prepared to deal with health problems and health related activities as follows:

1. communicable diseases
2. maternal health
3. child health and nutrition
4. accidents and first aid
5. village and home sanitation
6. other common requests
7. community development.

The CHW will serve as the liaison person whenever MOH teams involved in malaria control, TB, leprosy, schistosomiasis, blindness, etc., are operating in his community, and will obtain information about customs, habits and taboos that are directly or indirectly related to the health of the community in which he is serving; discuss community problems with local leaders and help work out solutions for improving the (quality of) life of the population, and . . . know the sources of help in the health field. He will describe, demonstrate and supervise villagers in constructing appropriate methods for improving the village sanitation.

The CHW will be responsible for a population group of approximately 4000 people, in his own and neighboring villages, it being recognized that population density varies considerably from season to season.

The CHW will be required to visit, on a regular or frequent basis, all parts of the area inhabited by the population groups for which he is responsible; travel during such visits will necessarily be by foot.

## 2. Nomadic Community Health Worker (NCHW) (for nomadic populations)

Definition: The NCHW is a CHW assigned to work with nomadic population groups.

Duties and Functions: His duties and functions will be essentially the same as those of the CHW, but with adaptations suited to meet the needs of nomadic population groups.

Recruitment and selection: Details of the recruitment and selection procedures and of the characteristics of the NCHW will be developed during phase I of the project. For present planning purposes, the description of the CHW profile will, pro tempore, be considered applicable to the NCHW.

### 3. Traditional Birth Attendant (TBA)

Definition: The TBA is a person who assists the women of the community during childbirth. She may or may not have special training but is recognized by community members and their leadership as the person to be called for assistance at childbirth. One or more TBAs may operate in the same community but for purposes of planning (in this Project Paper) it is assumed that one TBA and one CHW will cooperate in meeting basic health and midwifery services for approximately 4000 people.

#### The TBA:

- is an unsalaried member of the health system,
- may be compensated by the families she assists or by the community she serves by payments in-kind (e.g. eggs or a chicken),
- will be trained and upgraded by professional health workers of the MOH operating out of the nearest health facility (PHCU);
- will work cooperatively, insofar as can be achieved, with the CHW.

### 4. Health Center Personnel

The public health nurse, the nurse-midwife and the sanitarian assigned to the health center will:

- meet existing MOH criteria for training and experience for these professional positions,
- have successfully completed the course of training offered by the training center for PHC workers,
- have been recommended by training center staff and have been appointed to the positions by MOH,
- are responsible for supervision and the continuing in-service training of CHWs and TBAs,
- are responsible to MOH personnel at the next highest echelon of the health delivery system, the District Health Office, (e.g. the DMO and his professional staff). The District Health Office is not described in detail in this presentation, but MOH job descriptions and guidelines can subsequently be reviewed and revised as the project develops.

### E. Physical Facilities

1. The Health Post, which is the most peripheral unit to the PHCP, may be an especially designated hut or room, provided by the village for use by the CHW and TBA, or it may consist, even more simply, of a secure (lockable) box kept in the home of the CHW. The type of facility and its location will be determined in discussions with the community leaders. Its construction will be a community self-help project.

2. The Primary Health Care Unit is the health facility at the next level of the organizational structure of the health delivery system. Physically the PHCU will consist of:

- 3 rooms for treatment, examination and storage. Existing MOH plans presently used for construction of MCH centers are adequate in size and arrangement for use as PHCU;
- simple two-room living quarters for each of the 3 PHCU health workers;
- one potable water supply;
- one sanitary facility latrine.

As practicable, the choice of construction and design of water supply and latrine will be based on its replicability by community residents using available materials.

The PHCU is staffed by:

- 1 public health nurse,
- 1 nurse midwife,
- 1 sanitarian,
- 1 auxiliary or helper.

It is the referral point for patients and problems from the CHWs and TBAs in health posts.

Its staff is responsible for supervision and for the continuing in-service training of CHWs and TBAs.

It will offer:

1. MCH and other health services,
2. supervisory services for CHWs and TBAs,
3. logistical commodity support for its health posts.

As the hub of four health posts, each serving 4000 people as well as its own population of 4000, the PHCU will serve approximately 20,000.

3. The District Health Center is the only facility which is part of the PHCP and also part of the existing health system. Within the 16 Districts of the 4 Regions to be included in this project the majority of those buildings exist at the present time. Their description is as follows:

- 3 to 5 room one story buildings with a covered porch waiting area,
- some have potable water and latrines,
- some have living quarters.

4. The Training Centers (2) will consist of three classrooms 20 x 20 feet, storage space 10 x 20 feet and dormitory space 30 x 55 feet. These facilities will accommodate 30 students and will be located in Baidoa and Burao.

5. The Houses for Technical Assistants (8) will be 3 bedroom prefabricated structures 24 x 48 feet. There will be four at each training site. These will be used by both long-term and short-term advisors.

## HEALTH MANPOWER DEVELOPMENT

I. INTRODUCTION

With the Government's commitment to establish a national rural health care program, health manpower requirements demand top priority in program planning and implementation. Because past practices have been largely hospital-based and curative in nature, the new emphasis on preventive services, village oriented, will require innovative measures in the selection, training, placement and supervision of health personnel at all administrative and service levels of the health delivery system.

A. Model Training and Service Area1. Baidoa Center

In Phase 1 the Project will establish two regional training and service areas, based on the Ministry of Health's concept of a primary health care model. Basically, it is similar to primary health care models developed by WHO, models which are being implemented in other lesser developed countries in Africa. Baidoa, in Bay Region, has been selected as the training center for the South. In this project area, designed to serve a largely settled population, manpower requirements are comparatively easy to identify. The implementation process can proceed at a pace dependent mainly on the Ministry of Health's ability to assign trainers and service personnel, as described below, and USAID's timetable of providing technical assistance and commodity-logistic support.

2. Burao Center

A second regional center is to be located at Burao, Togdheer Region. Various approaches for the delivery of health services to nomadic populations will be studied and tested during the first three years of the project. Thus, the pattern for staffing and training for the North will be determined as the program evolves. To assist in this effort, USAID will provide a sociologist/anthropologist and an epidemiologist for several months at the beginning of the program in the North. These technical advisors will be selected for their experience in having worked with nomads.

B. Expansion to Other Regions

In both Phase 1 project areas -- Baidoa and Burao -- initial experience will establish conditions under which primary health care services can be replicated under comparatively similar conditions in other regions. In Phase 2, the project will train personnel and staff two additional regions, Lower Juba in the South and Mudug in the North.

b5 100

## C. The Development Process

### 1. Flexibility

In describing the model staffing pattern required for the Phase 1 project areas, it should be kept in mind that this model will need flexibility to fit each situation as services are implemented. For example the population of a region will vary widely in areas with large nomadic or semi-nomadic populations, who spend the dry seasons near their fixed stations, but travel to other grazing grounds in the rainy seasons.

This model has the basic ingredients for sound delivery of primary health care services, with strong linkage of administrative, supervisory and support elements.

### 2. Mobility

Mobility of service and support staff, and distance between the various levels of service are critical factors in deciding the location and mix of health personnel needed to provide at least acceptable standards of service. The proposed model assumes that a Community Health Worker (CHW), living in his village, can walk to and from the outer reaches of the several villages for which he is responsible, or that the villagers can walk to his Health Post. Likewise, the Primary Health Care Unit (PHCU), the next service level above the Health Post, is within reasonable walking distance, or that local transportation is available.

To adequately carry out administrative and supervisory support for the PHCUs and the Health Posts, the staff of the District Health Center will be provided with a four-wheel drive vehicle. This vehicle will transport not only the supervisory staff, but also the drugs and supplies needed at the lower levels of service. The Project training centers will also be provided with vehicles to transport trainees to towns and villages for their practical training. This need for mobility will increase as the training process is extended to all districts of the project areas.

### 3. Pace of Implementation

Manpower development is a slow process at best. It can be accelerated by increasing the input of required resources, and by assuring that all inputs are applied in the most effective manner. However, the pace of implementation cannot exceed the country's rate of absorptive capability.

The timetable described for project implementation is a tight one, but one that can be met with careful planning and resolute action. For example, although good training facilities are essential, their construction takes time. The preliminary steps of selection and training of trainers, development of curriculum, and identification of staff

to be assigned to the project can begin very early. Actually, the training of the first group of trainers, planned to take place at the Baidoa training center, can be initiated in temporary, existing facilities in Baidoa. At least two months in the training schedule can thus be gained.

#### 4. Lessons Learned

The proposed USAID supported project is not the first MOH program to demonstrate delivery of basic health services in a rural area of Somalia. The Balad project was initiated by WHO in 1962 in a settled population area some 35 kilometers north of Mogadiscio. This project has achieved certain successes and has identified problem areas, especially in administration, staffing and training, that will have spin-off benefits for the new project.

Conditions and commitments agreed on for manpower development in the proposed project will be critical factors, e.g., the careful selection of the best qualified candidates to become tutors and trainers, and of dedicated personnel willing to be placed in remote, isolated areas for comparatively long periods of time.

## II. PRESENT STATUS

### A. Present Staffing

The Ministry of Health presently has about 5,000 positions, principally for the staffing of hospital and clinic-based curative services, and for the centrally administered endemic disease control programs. Positions budgeted include 250 physicians; 800 nurses, sanitarians and other trained para-professional staff; 150 administrators, accountants and clerks; 1,200 auxiliaries, most of whom have been trained on-the-job and passed government examinations; 250 drivers and mechanics. The remaining 2,350 positions are for personnel with no training, such as watchmen, cleaners and various other auxiliaries.

At any one time there is a shortage of trained staff estimated at 30 percent. With few exceptions, physicians are not available to direct district hospitals; these are staffed by medical assistants. This critical shortage of doctors will be alleviated by the Faculty of Medicine, which graduated its first class of 40 medical students last year, and will increase the number to 80 within five years. Courses in community medicine have been introduced, and students will be required to include field practice. The GSDR will also require an internship to be served in rural areas.

To bridge the gap in shortage of nurses and sanitarians, the Health Personnel Training Institute (HPTI) and the MOH nursing schools doubled their intake of first-year students in 1977-78. This resulted in a critical shortage of tutors, so that the schools have not been able to maintain training standards.

## B. Emphasis on Curative Care

At present, with the emphasis on curative care, delivered largely in regional and district hospitals, a structure for the delivery of primary health care services is essentially nonexistent. An estimated 80 percent of the medical care available in the country is concentrated in the urban areas of Mogadiscio and Hargeisa, which together have less than 20 percent of the total population.

Physicians, nurses and other paraprofessional personnel coming out of the country's training institutions are prepared to provide curative services, so their placement in the primary health care program will necessitate extensive retraining in primary health care, task-oriented skills. Also, because of the shortage of qualified tutors, many graduates of the HPTI and the nursing schools lack adequate basic skills.

Also, like many other developing countries around the world, Somalia suffers a "brain drain" of many of its best trained workers, who are attracted by higher pay and other incentives abroad.

## C. Preventive Health Services

### 1. Maternal and Child Health Centers

The Ministry of Health lists 84 MCH centers, 70 of which are located outside Mogadiscio. However, 32 of the 70 centers in rural regions are presently not staffed. Many of the facilities are in various stages of disrepair. With new construction, or renovation, these centers have potential for upgrading to become district health centers in the PHCP. Most of the districts have an MCH center. In Baidoa and Burao, location of the proposed training centers, the MCH staff is part of a comprehensive health center, which also has endemic disease control personnel in place.

The Ministry of Health has recently begun the retraining of nurses, medical assistants and midwives to improve the MCH services, and expects to assign staff to the 32 unstaffed centers within the next several months.

### 2. Dispensaries, Traditional Medicine and Pharmacies

At the village level throughout the rural regions there are 291 dispensaries, manned by dressers. These dispensaries have some potential for upgrading into primary health care units (PHCUs), with the training and assignment of nurse-midwives and the retraining of the dressers. Every village has at least one traditional birth attendant (TBAs), some of whom have been given training in aseptic delivery techniques and provided with an MCH kit from UNICEF.

In much of rural Somalia, and especially among nomadic tribes, traditional medicine men are often the only local resource for medical care. They employ a mixture of herbal treatment and some modern antibiotics and other drugs.

In some areas rural people have access to commercial pharmacies, and the pharmacists often participate in health delivery in a paramedical capacity.

### 3. Endemic Disease Control Programs

The MOH conducts a number of centrally-directed endemic disease control programs, such as malaria, tuberculosis, smallpox and leprosy control. Somalia has just completed a most successful smallpox eradication campaign, now in a stage of active surveillance. This was the first such campaign to successfully reach all sectors of the country.

Most field workers staffing the endemic disease control programs have been trained to perform the skills required only for the one program. Some of these workers can be retrained for the PHCP. Some 50 sanitarians seconded for the smallpox campaign will be released for placement in the MOH program, including the PHC system. The MOH plans to eventually integrate the vertically administered programs into the locally administered horizontal promotive, preventive and curative services in the districts and regions.

#### D. MOH Three-Year Plan, 1979-81

The GSDR is presently developing new three-year manpower requirements. These are being submitted to the Ministry from the regions and districts. However, these requests for personnel are based only on needs of the curative medical services, and will have no provision for positions needed in the proposed Primary Health Care Program. This will require reprioritization and allocation of present personnel or personnel now finishing basic training to progressively staff the PHCP as it develops.

### III. CURRENT AND FUTURE PLANS FOR MANPOWER DEVELOPMENT

#### A. Manpower Resources

The senior administrative and program staff of the MOH has assured The Design Team that personnel with basic training will be made available, and retrained as necessary, to staff the Primary Health Care Program as it is phased in.

Tutors and trainers, the latter to also staff health facilities and continue the inservice training process, are to be selected from personnel already meeting certain educational and experience qualifications. The tutors will have completed the post-basic course for tutors. The trainers will have had successful work experience following completion of their basic training. Many of them will have worked in regional or district programs, as in the MCH or endemic disease control programs.

## B. Implementation Plan

The implementation plan for the project calls for an initial two months of orientation and planning for U.S. technicians following their arrival at Post about Month 4 of the project. Work on curriculum development and the training of trainers, who will share in that process, will begin about Month 7. Training for the first group of lower level PHC workers, including the community health workers, will begin at the same time. The CHWs, selected by the villages, will return to their villages on completion of training. Completion of staffing for the project area in Bay Region is to be achieved by the end of the second year. (See Annex D for detailed phasing of training in the four regions.)

Once the initial round of training to staff all facilities in the Bay Region is completed, the center will then be ready to assess and retrain as necessary, and to begin to train staff for placement in replicable service areas in other regions to become operational in Phase 2 of the program.

In the North, where the population to be served is largely nomadic, two U.S. technicians, an anthropologist/sociologist and an epidemiologist with experience working with nomads, will supplement the U.S. training staff. Research will be combined with various service models to identify effective delivery techniques. Thus, a staffing pattern required to serve nomadic populations may take up to 42 months to implement.

## IV. MANPOWER REQUIREMENTS FOR THE PRIMARY HEALTH CARE PROGRAM

### A. Levels of Service

The Primary Health Care Program is based on three levels of service in each region. These levels and their staffing are as follows:

- a. Health Post: Each village, or cluster of villages with a combined population of 3000-4000, constitutes a health post. The health post will be staffed by:

1 community health worker, selected by the village and paid by the Ministry of Health on completion of training.

1 (or more) traditional birth attendants, paid by the mothers they serve.

- b. Primary Health Care Unit (PHCU): The PHCU will be the hub of the primary health care complex, with four or five satellite health posts (total population: 16,000-20,000)

The Primary Health Unit will be staffed by:

1 nurse trained in public health

1 nurse midwife

1 sanitarian

1 traditional dresser from the area, retrained to perform appropriate skills. The CHWs selected from the satellite village posts in adjacent PHUCs will be trained at one of the PHUCs.

### 3. District Health Center

The District Health Center will encompass three or four PHC Units and serve a district population of 50 - 60,000. It will be located near or adjacent to the district hospital, expediting the two-way referral process.

Staff for the District Health Center will include:

- 2 senior nurses (public health trained)
- 2 nurse midwives
- 1 sanitarian of senior grade
- 1 statistical clerk/secretary
- 1 driver and several service personnel

### B. Regional Health Services

Above the district health center, a regional health department directed by a Regional Medical Officer will provide administrative and technical supervisory services for the PHCP. In the two Regions where Project Training Centers will be located, the Project staff will relate directly to the Regional Health Office, and some staff will double in training and service. The staff will include:

- 2 senior nurses\* (public health trained)
- 2 PH/MCH nurses\*
- 1 sanitarian, senior grade\*
- 1 administrator/logistics and supply officer
- 2 secretary/typists
- 3 drivers and other service personnel
- \* tutors

### C. USAID Counterparts

Three U.S. Technicians will serve as counterparts to the Somali staff, stationed at each training site as follows:

- 1 public health nurse educator
- 1 nurse-midwife educator
- 1 sanitarian/epidemiologist

**D. Summary of Estimated Somali Manpower Requirements for one Region and with Totals for Four Regions**

Position Title	District				Total One Region	Total 4 Regions
	Project Center (1)*	Health Center (4)*	PHCU's (16)	Health Post (64)*		
Nurse (Senior)	2	8	-	-	10	36
PHN/MCH Nurse	2	4	16	-	22	84
Nurse/Midwife	-	4	16	-	20	80
Sanitarian Sr.	1	-	-	-	1	22
Sanitarian	-	4	16	-	20	80
Statistical Clerk	-	4	-	-	4	16
Secretary/Typist	2	-	-	-	2	4
Administrative/ Logistics and Supply	1	-	-	-	1	2
Community Health Workers-	-	-	-	64	64	256
Traditional Birth Attendant	-	-	-	64	64	256
Auxiliary Nurse Dressers	-	-	16	-	16	64
<b>Total</b>	<b>8</b>	<b>24</b>	<b>64</b>	<b>128</b>	<b>224</b>	<b>880</b>

\* Number of facilities to serve a population of about 200-250,000.  
For larger or smaller regions, the model would need modification.

Significantly, the 64 nurses and sanitarians needed to man the 16 PHC Units of a region, and the 64 community health workers to serve in the 64 satellite village health posts constitute new, "extension" components of the PHC Program. Together, they represent 40 percent of the total staffing requirements for the region, accounting for one third of PHC regional personnel costs. (This excludes TBAs, who are not MOH employees, and service personnel, such as watchmen and cleaners).

## V. PROJECTION OF MANPOWER REQUIREMENTS - ALL REGIONS

The above manpower estimates would probably approximate the personnel requirements for each of the other 15 regions. To achieve more precise estimates would require considerable data not presently available, such as distribution of population, physical characteristics of each region, work load and distance factors, and, particularly, health needs of the people to be served.

Using the project model, a national man-power projection can be calculated for the 16 regions containing:

- 64 District Health Centers (excludes urban districts)
- 256 Primary Health Care Units, and
- 1024 Village Health Posts.

### National Manpower Requirements by Position and Location

<u>Position</u>	<u>(16)* Region</u>	<u>(64)* District</u>	<u>(256)* PHCU</u>	<u>(1024)* Post</u>	<u>Total</u>
Nurse Practitioner	32	128	--	--	160
PHN/MCH Nurse	32	64	256	--	352
Nurse/Midwife	--	64	256	--	320
Sanitarian, Sr.	16	--	--	--	16
Statistical Clerk	--	64	--	--	64
Secretary/Typist	32	--	--	--	32
Administrator/Logistics Supply	16	--	--	--	16
Community Health Workers	--	--	--	1024	1024
Traditional Birth Attendants	--	--	--	1024	1024
	<u>128</u>	<u>384</u>	<u>768</u>	<u>2048</u>	<u>3328</u>

\* Number of facilities.

## B. Development in Four Regions of Project

In the five-year period of this project, trained personnel will be placed in four regions - Bay and Togdheer in Phase 1, and Lower Juba and Mudug in Phase 2. By the end of the project, staff trained and placed would approximate in number about four times the manpower requirements estimated above for one region, i.e., about 900 professional or paramedic personnel. Population served is estimated at approximately 800,000 rural people in a variety of rural situations - settled communities, nomadic and transhumant areas.

The population by region varies considerably within the project area. Depending on where the nomad families are in any particular season, the populations would fluctuate - higher around the home-based fixed stations or water holes in the dry season, and lower when the herds are taken to distant grazing areas in the rainy season.

Populations reported for purposes of the smallpox eradication campaign for the four regions in the project are:

Bay Region	497,000
Togdheer	270,000
Lower Juba	320,000
Mudug	<u>44,250</u>

1,113,250

The project as designed will cover about half of the Bay Region, to be determined by project staff on the basis of population distribution.

### C. Model Replication

The above data provide "ballpark" figures useful in "broad stroke" planning for the purpose of selection, training or retraining and placement of health personnel. Only experience gained in the project and beyond in replication of primary health care services can provide the refined data required for planning future extension of the program to other regions. There are many variables to be considered, such as patterns of migration, resettlement, population growth rates.

The Design Team visited the Baidoa and Burao sites and is keenly aware of the difficulties to be faced in providing health services to the nomads. The kinds and mix of health workers needed to serve the large nomad and semi-nomadic populations, their training and the ways in which they will be deployed may well produce a model quite unlike the model designed for the more settled rural areas. Long distances between villages or fixed stations of the nomads will require either greater mobility for the health staff provided or more staff to cover the sparsely settled areas.

One alternative may be to train members of the nomad families to look after basic health needs while away from their fixed stations. These trained family members would be unpaid. They would receive certain supplies from CHWs and PHC Units located at fixed stations. These stations are normally populated in all seasons by the older members and young children of the nomad families, and by complete families during the dry season when animals are returned to the home-based water holes.

## VI. OTHER MANPOWER CONSIDERATIONS

### A. MOH Administrative Support

The staffing of service personnel at the region, district and village levels constitutes only one dimension of the manpower structure. Equally important is provision of technical guidance and administrative support for the regions from the Ministry of Health. Thus, each department with responsibility to provide support services will need adequate staffing of professionally-trained people to meet the requirement of the health delivery system. The Project Director/health planner can assist the MOH in assessing the organizational and staffing needs at the Ministry level.

### B. Interministerial Coordination

Coordination of health interests and health-related activities in other Ministries, such as Education, Agriculture and Finance, is essential to conserve limited resources in the total national effort to improve the health and well-being of the rural population. There is evidence of such cooperation in the training of multipurpose workers for the resettlement program, in which health was included, and in the health content included in the literacy program.

### C. Role of Local Government

The government's organizational structure via Regional and District Commissioners provides strong leadership and assistance to village committees concerned with the problems of the people. An MOH senior official emphasizes that: "The local population should be actively involved in the formation and implementation of health care activities, so that health care can be brought in line with local needs and priorities. Decisions upon what the community needs, requiring solutions, should be based upon a continuing dialogue between the people and the services."

#### 2. Health Service Linkage

The community health worker, who is to be selected by the villages, trained and assigned to work in his community, is the vital link to assure continuing dialogue. His technical support is close by - at the Primary Health Care Unit. Trained nurses and a sanitarian in the PHCU are available to work with him and his village committees to improve the environment and reduce preventable disease. In turn, the PHCU team has the administrative and technical support of the District Health Center and the Regional Health Office. Thus, the management/supervisory channels flow unbroken from top to bottom of the system.

### VII. CONSTRAINTS TO MANPOWER DEVELOPMENT

A number of significant constraints face the MOH and USAID project staff in the implementation of the Primary Health Care Program.

1. Past emphasis on curative medical care. This imbalance in the use of limited resources has resulted in a scarcity of MOH personnel trained in preventive medical care and public health. Personnel to be reassigned to staff the Primary Health Care Program will have to be retrained in those skills required to meet minimum standards for delivery of health services.
2. Scarcity of training personnel prepared to teach preventive medicine and public health techniques.
3. Lack of training curriculum and materials.
4. Lack of training facilities.
5. Preference of trained doctors, nurses and other professional personnel to work in urban areas and in hospital based curative services. Reluctance to accept posts in rural, underdeveloped areas.
6. Attraction of many top-level personnel to accept higher paying jobs abroad.
7. Imbalance in the allocation of funds for preventive care versus curative services.
8. Lower priority given to health when other national emergencies arise, e.g., the 1974-75 drought.
9. Transfer of trained staff from one post to another within the MOH or to positions outside the health sector.

The MOH is confronted with an overwhelming task of reorientation or retraining of practically all of its health personnel to achieve the balance desired for curative and preventive services. On a national scale, the MOH has indicated high priority for the training of some 1200 auxiliary health personnel whose only previous "training" has been on-the-job experience with trained staff. But, equally important is the need to retrain most of the professional staff now working in the system.

The MOH also recognizes that, for one reason or another, many of the graduates of the HPTI and the nursing schools do not have the appropriate skills for minimum job functions when they are placed in the hospitals or MCH clinics. The problems are compounded when efforts are made to accelerate the production of health personnel. High on this list of constraints are:

- shortage of trained tutors, and
- lack of opportunities for the students to practice what they are taught in the classroom.
- The curriculums for the student doctors, nurses, midwives and others do not include appropriate content for the teaching of skills needed to deliver preventive medical and health care services.

#### VIII. Other Donor Assistance in Manpower Development

##### A. WHO

WHO has assisted the MOH since 1962 in manpower development and training in the Balad project and the project extension at Afgoi, Koryole and Wenle Wein. Accomplishments were restricted for a number of reasons, especially by transfer for project trained staff out of the program.

WHO has provided technical assistance to the two nursing schools and to the Health Personnel Training Institute. Scholarships have also been made available.

##### B. Italian Government

The Italian Government is the principal donor supporting the Faculty of Medicine, which graduated its first class of 40 physicians last year. The faculty has recently added a Department of Community Medicine, offering some field practice in preventive medicine and public health.

##### C. Training Scholarships by Various Donors

Several other donors have provided scholarships for the training of physicians and other professional health/medical personnel.

#### IX. Relevance of Donor Assistance

##### A. WHO

Lessons learned in the Balad Project will be fed into the planning and implementation of the proposed AID - supported Primary Health Care Program. Both AID and the GSDR will have commitments regarding manpower development that cannot be allowed to diminish if project goals are to be achieved.

**B. Faculty of Medicine**

With the new emphasis being placed by Faculty of Medicine on community health, it is realistic to expect that the MOH will begin to assign medical graduates to serve internship in the rural health program. Eventually, those who are motivated to choose public health as a career would be logical candidates for placement in the primary health care system at regional and district levels.

**X. Recommendations**

1. Once the blueprint for implementation of the Primary Health Care Program has been approved by USAID and the GSDR, the Ministry of Health should begin the process of identifying key personnel to be assigned to the project staff. Of immediate concern would be the assignment of staff who will become tutors and trainers of PHC personnel. Criteria for selection should be established as early as possible.
2. With the arrival of AID consultants, the process of training the trainers in teaching methodology and public health techniques can begin.
3. The phase for training of trainers is the time for further development of curriculum and production of training materials. This procedure is described in the section on training.
4. Construction of the training center should be accelerated for use at the earliest possible date. Training will begin, however, in temporary facilities.
5. To minimize the reluctance of staff to accept assignments in rural areas, better living conditions, communications and other incentives should be considered. Careful selection of staff dedicated to help in the improvement of health conditions in rural areas would be indicated.
6. There is no easy solution to the brain drain. However, it will be necessary to provide incentives that will keep trained health personnel in Somalia.
7. Staff to be assigned to the PHC program should be selected on the basis that they would be interested in the challenge of developing a new and valued service, and be willing to remain for at least two or three years.
8. It is recommended that the MOH follow a policy of not transferring rural health staff in a way that would disrupt continuity of service.

**XI.****A. Selection and Placement of Project Staff**

It is assumed that the MOH, with GSDR sanction and support of the Ministries of Planning, Finance and Labor, will allocate the required number of positions and systematically select qualified candidates to fill them. Further, this process will begin without delay and will proceed at a pace to meet the project development schedule.

6-7 P.V

## B. Continuity of Service After Placement

It is assumed the GSDR and the MOH will not transfer staff in and out of the project areas except in areas where such transfers are necessary for the good of the program, and only in consultation with the Director of Primary Health Care in the MOH and his USAID counterparts. When candidates are being selected for placement special emphasis will be given to establishing that the candidates are motivated to serve in this innovative program, and have no unreasonable personal reservations about staying in their assignments for the life of the project. This is a critical factor, especially for the tutors and other staff assigned to the Project Training Centers and for the key positions at the District Centers.

## XII. Factors To Continue In Selection, Training, Placement, Supervision and Performance Assessment of Primary Health Care Personnel.

### A. Selection and Placement of Personnel

#### 1. Tutors

Tutors assigned to the project training centers should be carefully chosen from among the most experienced teaching staff in the MOH. These tutors will have completed post-basic tutor training and will have at least one year of successful experience as tutors.

In addition to their professional qualifications, the tutors will be selected on the basis of interest and motivation to participate in a challenging national endeavor. They should be willing to accept assignments away from the urban setting of Mogadiscio and Hargeisa, and stay at those locations for the life of the project.

In like manner, the project should offer the tutors the best possible working conditions to assure job satisfaction.

#### 2. Trainers

The same considerations noted for tutors would apply in the selection of trainers. The cadre of trainers in the project area will be the nurses and sanitarians selected to staff district health centers and PHCU's. They will serve a dual role as trainers of lower level personnel and as service staff in their respective areas.

#### 3. Health Personnel Assigned to District and PHC Units

Nurses, sanitarians and other personnel selected to complete the staffing in the Districts and PHCUs must be oriented for service in rural and underdeveloped, isolated areas. The MOH and Project staff should consider carefully the questions of "Under what conditions will these health workers accept rural placement and be willing to remain at their posts for reasonable periods of time? What incentives will be required?", etc.

In short term, it may not be possible to select personnel who have come from rural areas to be trained as nurses and sanitarians in Mogadiscio. However, in the long-term, future candidates for basic training and placement in the Primary Health Care System should be recruited from

rural regions to the extent possible. The present number of rural candidates possessing required entrance qualifications; i.e., secondary school graduation, should be gradually increased as the nation's educational system advances.

#### 4. Community Health Workers

The criteria already established for selection of CHWs provide that:

- a. The CHW will be selected from his village by the village committee. The MOH staff in the District will assist the village in this process.
- b. The CHW candidate will be literate, or, if not, can be given literacy training in order to keep simple records, read labels, etc.
- c. The CHW would be supported by his village during training, plus receiving a training stipend from the MOH.

#### 5. Nomadic Community Health Workers

The NCHW will be selected in the same way the CHW is chosen -- by his own community. The NCHW will probably function at fixed way stations, or in other ways yet to be determined. Conceivably service to the Nomadic herdsmen while away from their fixed stations could be provided through appropriate training of a selected member of the nomad family, or by the same person who treats the animals. The latter could be given the necessary training in preventive health care and issued basic supplies to carry with him.

#### B. Training

##### 1. Basic Training

Gaps in the basic training of nursing and sanitarian personnel assigned to the District Health Centers and the PHCUs will be assessed jointly by the training institutions and the Project tutors. Joint decisions would be made on how to rectify the weaknesses, and where the needed basic skills would be taught.

The problem of training gaps will be most critical in the initial phase of project staffing. It is conceived that much of the task-oriented skill training could be carried out in the project area on a combined classroom-field laboratory basis.

In the long-term, curriculum revision and high standards of training will provide adequate basic skills. At that time the Primary Health Care system could be utilized by the training institutions for field practice.

## 2. Continuing In-Service Training

At the lower levels of service, greater emphasis will be given to continuing inservice training, under the guidance of the Project Training Center and the direction of center-trained "trainers" posted in the District.

The CHWs will be trained in or near their own villages at a PHCU facility. Only a brief period of orientation at the District Health Center and the District Hospital will be necessary.

Again, a large share of the skill training for the CHW can be managed as continuing inservice training by the District and PHCU staff.

### C. Supervision and Evaluation

#### 1. Supervision

In a practical sense, supervision is best envisioned as an interaction between a "supervisor" and a health worker in which the focus is on helping the worker improve his job skills. For example, a sanitarian working with a CHW to improve the environment in a village would demonstrate the tasks to be performed and thus help the CHW build self confidence in repeating the tasks.

It is axiomatic that the lower one goes on the manpower scale, the greater the requirement for continuous, good supervision. In the PHC program, provision is made for an unbroken line of administrative and supervisory support from top to bottom. The teaching of appropriate skills in supervision are to be included at all training levels. The nursing schools and the HPTI recognize the need to provide training in administration and supervision, and are currently revising curriculum to cover these components.

#### 2. Evaluation

Just as supervision and inservice training become an integral part of the day-by-day operations, assessment of job performance is a continuous responsibility for the supervisor. Identification of job skills which need strengthening provides the basis for further inservice or refresher training.

The project provides for formal internal evaluation of the PHC program at mid-point and again toward the end. This self evaluation will look carefully at progress being made in manpower development, and suggest ways in which any weaknesses found can be corrected.

An interim evaluation (external) and a final evaluation will also carefully assess the manpower component of the program.

## TRAINING

### I. Introduction

A necessary requirement of a rural health program is a critical number of trained health personnel. At present manpower resources are insufficient and maldistributed so that rural villages and nomadic communities are severely underserved. The training institutes that do exist have in the past offered curricula that are didactic and curative and not preparatory for the settings and conditions of primary care delivery.

The commitment to rural health depends upon a new approach to training for its realization. Significant numbers of health personnel must be trained and retrained, and they must be trained specifically for health promotion and disease prevention activities if training is to be a solution to the problem.

The new training program in primary care should have a curriculum based upon a clear, specific definition of those tasks to be performed on the job in rural and nomadic settings. The training should take place close to the areas to be served. Insofar as possible, trainees should come from those areas and identify with the people and problems there.

In order to depart from the fundamentally curative orientation of the existing nursing and paraprofessional schools, it is proposed that two new training centers be established, one in the south, the other in the north. They will be concrete testimony of the commitment the Government of Somalia is making to bringing health services to all the people.

Trainees and graduates of these centers will feel an esprit de corps. Their relationship to the centers will continue even after the initial training when they return for continuing education following their initial service assignments.

The centers will be focuses for public health studies distinct from but complementary to the urban health professional schools. It is envisioned that the centers can be used as field placements for medical students, nurses and sanitarians, thereby expanding the existing opportunities for community medicine and nursing.

At the beginning the three priorities of the centers will be:

- 1) the creation of a curriculum for community health workers for settled rural communities, transhumant and nomadic populations.
- 2) the training of trainers of CHW's and NCHW's.
- 3) the orientation of managerial and supervisory personnel to the PHCP and goals and purposes of the project.

The centers will offer a variety of workshops for project personnel. The project will add significantly to the growing body of experience with new kinds of health manpower and new kinds of training.

#### Present Status of Training for Primary Care

Past efforts at training workers for rural areas have been sporadic, discontinuous, and productive of only small numbers of trained workers.

Very few trained health personnel are found in villages or among nomads. Health care is typically provided by traditional practitioners and birth attendants. Curative services are offered, in a few villages, by dressers and medical assistants trained by the British, Italians, or on the job. Formal programs to train medical assistants have been discontinued, and they are a vanishing breed. Their numbers were never sufficient to provide medical care for all. Neither did they assume public health functions, nor were they trained to do so.

As is the pattern the world over, medical graduates tend to locate in urban areas or to emigrate to other countries where they get paid more. The medical school curriculum is European and courses tend to be didactic rather than practical. However, a Department of Community Medicine was created this year and offers field experience at the WHO Basic Health Services project at Balad. A full-time advisor arrives in January to supervise the development of the Community Medicine curriculum. The graduates of the first class at the Medical School will return for a month in January 1979 to discuss their experiences since graduation, and to assess the strengths and weaknesses of the curriculum in relationship to national needs and priorities in health.

At the Mogadiscio Nursing School work has begun on Community Nursing Curriculum and on ways of developing task-based curriculums. Both these efforts indicate changes in the kinds of training to be given with new priority accorded to public health subject matter and to innovative ways to practical teaching. The PHCP can coordinate the activities of the nursing schools by providing post-basic training in supervision, in teaching methods, and in primary care subject matter that will upgrade nurses.

There are shortages of health manpower in Somalia; there are shortages of trainers of health manpower. The best students at the health professions schools are selected to receive a post-basic course on teaching methods and then are reassigned as tutors. Recently the tutors were recruited to train community health workers for the resettlement camp at Kurtenwaray. They wrote a manual based on the WHO Guide on the Primary Health Worker and translated it into Somali. They used the manual to teach 470 volunteer workers at the camp site. They made enthusiastic and highly motivated trainers. The chief tutor among them described his perception of the community workers as "priests of health."

This effort to train community health workers using the young as a resource and depending on their enthusiasm, devotion and patriotism is reminiscent of the Literacy Campaign of 1973 when students were dispersed throughout the country to teach concepts of first aid as well as the alphabet.

### Proposed Training Center Activities and Programs

#### Curriculum Development

Ideally curriculum development is a collaborative development. It involves the identification of the societal needs to be addressed by education. It identifies objectives, ways of teaching to achieve the objectives, and ways of evaluating the success of the teaching and of the learning.

The objective of the Curriculum Committee for the PHCP will be to develop a curriculum that is: practical; feasible; teachable; acceptable to the trainers; acceptable to community health workers; and directly related to the overall goals of the project.

Tutors at the centers, U.S. technical assistants, trainers, MOH department personnel, all will participate in the initial discussion of the courses to be offered. They will be assisted by a Curriculum Specialist during the first six months of the project. They will learn a systematic method of course design with the emphasis on practical skills.

#### Verification of the Functions of Primary Care Workers

During the first six months of the project the information base about primary care workers will be broadened.

1. The nurses and sanitarians who will be trained as trainers will learn how to do a community diagnosis by participation in one as a first activity of their initial training course. They in turn will teach CHWs and NCHWs how to keep and record important information that will help define health needs and policies as well as priorities when it has been analyzed by the statisticians and planners in the MCH. The information gathered by the trainers during this exercise will influence decisions about which skills the CHWs should learn to meet the identified needs.
2. A literature search of documentation about other primary care worker training programs will begin during the first month of the project. The extensive international literature on primary care workers needs review and annotation as reference and resource during the development of the curriculum. The proceedings of the proposed Conference on the Delivery of Health Services to Nomads will add to the literature. U.S. Technical Assistants and Somali project personnel will make visits to training centers in such countries as Sudan and Tanzania to observe and learn from the experiences of others.

3. Literature and materials search on teaching semi-literates. These materials will provide essential examples of teaching functional literacy. It is expected that additional materials specifically for Somalia will be developed at the training centers throughout the project as more and more trainers are trained. These materials will be valuable to the Faculty of Education at the University, which is also involved in literacy programs. It is expected that a literacy component for the CHW curriculum will be developed to teach the workers to read labels and keep simple records.
4. An anthropological and epidemiological survey to be conducted early in the project will provide a description of social aspects of village and nomadic life useful in deciding which ways of teaching would be acceptable and effective. This study will supplement the Social Survey appended to the PP and will focus on the analysis of the implications of health beliefs for the curriculum.

#### DESIGN OF A COMPETENCY-BASED CURRICULUM

Writing a job profile or description of responsibilities to be performed on the job by a trainee at the end of training is the first step in developing a competency-based curriculum. When we talk about competencies we mean the functions, skills, tasks performed by a worker to satisfactorily do the job. For purposes of teaching, we also need to consider what the worker needs to know to do the job well, and how we want the worker to feel about what he's doing, what the desirable attitudes are.

A description of probable competencies that would be expected of the two categories of workers to be trained in the PHCP follows. The description is based on training models and would be revised during the process of curriculum development to meet specific conditions of the project settings where trainers will be deployed.

#### RESPONSIBILITIES OF TRAINERS OF COMMUNITY HEALTH WORKERS

1. Plan and implement a community diagnosis including health status assessment, and assessment of social, cultural, behavioral patterns of the community.
2. Evaluate data from the community diagnosis.
3. Plan, implement and evaluate a course of studies (initial and continuing) for community health workers with technical assistance from project staff.
4. Assist in selection of CHW trainees.
5. Supervise and monitor CHW's.
6. Evaluate changes in health status and CHW performance, as well as changes in CHW knowledge, skills and attitudes before and after instruction.
7. Revise instructional program on basis of experiences; devise replicable instructional units for future use.

RESPONSIBILITIES OF COMMUNITY LEVEL WORKERS (CHW's and TEA's)Diagnosis and Evaluation (Ongoing)

1. Continuous census of births, deaths, migrations, household make-up
2. Birth weights
3. Age-specific death and fertility rates
4. Parity and gravidity of pregnant females
5. Weight and/or arm circumference charting of infants and young children by sex and age.
6. Simple diagnostic categories by age and sex (example: diarrhea, fever, respiratory or skin ailments, abnormal delivery, trauma, hemorrhage, tetanus etc.)
7. Vaccination status (scarification)
8. Feeding and weaning practices

Health Promotion and Disease Prevention

1. Simple infant care and newborn care
2. Breast feeding and supplementation
3. Weaning and transition foods
4. Hygiene in the home
5. Safety in the home, fields, village
6. Village hygiene (water and excreta, vector control)
7. Vaccination- logistic link with E.P.I.
8. Improved food production for home consumption
9. Malaria suppression in infants, young children, pregnant women
10. Iron supplements in pregnancy
11. Tetanus vaccination of pregnant women in third trimester
12. Sterile razor blades and cord ties for village midwives
13. Referrals to district or regional level of:
  - a. Abnormal pregnancies
  - b. Failure to thrive infants (severe)

- c. Kwashiorkor and marasmus
- d. Severe and acute and chronic illness
- e. Trauma (severe)

The CHW may make referrals to the PHCU or district level, or schedule villagers for next visit of trainer-supervisor; he also monitors follow-up, diagnosis and treatment at the village level.

Direct Diagnosis and Treatment (also includes health education)

1. Simple early oral treatment of diarrhea (water, salt, sugar solutions by finger-pinch measurements)
2. Home treatment of respiratory infections
3. Simple treatment of respiratory infections
4. Simple treatment of skin infections
5. Malaria (oral treatment as feasible)
6. First aid
7. Follow-up and assure treatment of chronic diseases (T.B., leprosy)
8. Distribution of appropriate medicines.

DEVELOPMENT OF OBJECTIVES FOR CURRICULUM

In the development of a competency-based curriculum, the responsibilities identified in a job description are used as objectives for teaching. The skills necessary to perform on-the-job responsibilities are what must be taught and learned during the training period. The following are lists of the competencies that will have been acquired by 1) trainers of CHWs and, 2) CHWs at the end of the institutional periods.

COMPETENCIES (END OF COURSE) OF TRAINERS

1. Given a case study, trainers will be able to do a community diagnosis.
2. Given the same case study, trainers will be able to select and analyze data from community assessment.
3. Given data from village or district, trainers will be able to plan courses of study relevant to the health needs of villagers, especially mothers and children.
4. Given data from a district, trainers will be able to select candidates for village health workers and defend their selection procedures.
5. Given case studies, trainers will be able to plan and implement procedures for monitoring and supervising a health project involving villagers.

6. Given case studies, trainers will be able to plan and undertake evaluations of the health status of communities as well as individuals. They will also be able to evaluate the performance of trainees (CHWs).

#### INSTRUCTIONAL METHODS

1. Community diagnosis may be taught by discussion and problem-solving methods, both written and oral.
2. Field data assessment. Participants will be given written and visual materials to analyze and evaluate. They will decide whether training is or is not a solution to problems identified. In cases where training is contra-indicated they will select alternatives such as administrative solution or incentives or the withdrawal of incentives. They also complete a field project in community diagnosis.
3. Given data analyses from the community assessment of their own catchment area, participants devise training programs for community health workers. They design and practice nonformal methods of instruction including group discussion, cassettes, pictures, diagrams, simple signs, memory-rhymes, role plays, etc.
4. Students as a group design instruments and procedures for selecting candidates. They role play interviews and administer their selection procedures on other trainees instructed to play a given role. They then select candidates for their own villages.
5. Students learn techniques of supervision. They develop supervisory schedules for their own sets of villages.
6. Students evaluate changes in the health status of communities and individuals as well as the performance of CHWs. They learn evaluation skills as they relate to training and supervision of village health workers. Given sets of sample data, students prepare and interpret a report on changes in health status.
7. Trainers revise the training program for community health workers on the basis of evaluation data and design a replicable instructional program.

#### COMMUNITY HEALTH WORKER COMPETENCIES ACQUIRED DURING TRAINING

1. Health Education. After the instructor demonstrates a session in health education, the CHWs practice teaching each other (role play), then later instruct villagers under supervision of the trainer.
2. Preventive Program. CHW candidates discuss ways of implementing a preventive program for their villages. They practice the skills involved (i.e., immunization, home visitation, preparation of weaning foods, building latrine, etc.)
3. Clinical Procedures. After watching the instructors as they demonstrate clinical procedures, CHWs in turn perform each procedure under supervision.

**EVALUATION**

Evaluation activities will include both internal evaluation of the training curriculum and program at the end of Year 02, and regular on-going evaluation of trainers and of trainees throughout the instructional periods. Supervision and evaluation will be closely linked; teachers will assume both teaching and supervisory responsibilities, and will learn techniques for both of these. The curriculum will be constantly evaluated and revised in terms of trainers performance and CHW performance, and the experiences and information generated by field work and field assignments.

TRAINER OUTPUTS  
YEARS 01-05  
Four Project Zones

YEAR 01BAY

16 nurses  
4 sanitarians

---

20 trainer-supervisors  
20 CHWs

YEAR 02BAY

32 nurses  
16 sanitarians

---

48 trainer-supervisors  
44 CHWs

TOGDHEER

32 nurses  
16 sanitarians

---

48 trainer-supervisors  
22 CHWs

YEAR 03LOWER JUBA

16 nurses  
4 sanitarians

---

20 trainer-supervisors

TOGDHEER

16 nurses  
8 sanitarians

---

24 trainer-supervisors  
21 CHWs

MUDUG

12 nurses  
4 sanitarians

---

16 trainer-supervisors

YEAR 04LOWER JUBA

16 nurses  
8 sanitarians

---

24 trainer-supervisors  
32 CHWs

MUDUG

16 nurses  
8 sanitarians

---

24 trainer-supervisors  
32 CHWs

YEAR 05LOWER JUBA

16 nurses  
8 sanitarians

---

24 trainer-supervisors  
32 CHWs

MUDUG

16 nurses  
8 sanitarians

---

32 trainer-supervisors

## HEALTH EDUCATION

I. INTRODUCTION

Aside from the technical education of individuals specifically involved in the delivery of health services there is a body of instructive activity that is directed toward the promotion of health and prevention of disease. These activities, broadly grouped as Health Education, are primarily aimed at the public and include the following:

- Improving dietary habits;
- Increasing awareness of available health services;
- Promoting higher standards of personal hygiene and community sanitation;
- Increasing public knowledge concerning the modes of disease transmission;
- Deleting early signs and symptoms of disease.

Traditionally, the responsibility for these activities are shared by several administrative units. In Somalia, health education activities are coordinated by the Department of Health Education which is included within the Directorate of Public Health of the MOH. This department was created in 1977, replacing the former Committee on Health Education.

II. PRESENT ACTIVITIES

Since its formation, the Department of Health Education has been engaged in several activities including the following:

- Radio programs of ten minutes duration, broadcast twice weekly, highlighting a promotive health idea or an available health service.
- Newspaper articles published in the national newspaper weekly covering some aspect of disease prevention.
- Film showings of WHO films exhibited at the National Theater in Mogadiscio and at several Regional Centers. These films are narrated in the Somali language and deal with subjects of Disease Prevention and Environmental sanitation.
- Lectures to post basic nurses and sanitarians at HPTI and the Mogadiscio Nursing School concerning methodology of public health education.
- Posters promoting the use of immunization services. 15,000 of these were produced with support from UNICEF and distributed to the regions.

Other health education activities that are coordinated by the Department of Health Education, but conducted by other agencies include the following:

- Demonstrations of food preparation and child care by MCH clinic staff to new mothers.
- Hygiene and sanitation instruction included in the basic school curriculum by the Ministry of Education.

- Principles of disease prevention and environmental sanitation presented nationally as part of the 1976 literacy campaign sponsored by the Ministries of Education and Information.

### III. FUTURE PLANS

Community based health education is central to the concept of primary health care and delivery of preventive health services. The GSDR has demonstrated a strengthened commitment to health education by creating a Department of Health Education within the Ministry of Health and by making health promotion a central theme in its highly successful National Literacy Campaign.

Since its inception less than a year ago, the Department of Health Education has been without a formal budget but nevertheless has initiated programs WHO's implementation was largely dependent upon financial, physical and personnel resources shared with the Ministers of Education and Information on an informal basis. The department is now developing a 3-year plan for submission to the MOH. This plan places priority on the extension of health education services to rural areas, and promotion of the primary health care concept. Other objectives include the promotion of WHO's expanded immunization program and raising the level of village sanitation.

In order to further these objectives, the following programs have been proposed as part of the three-year plan to supplement those activities previously mentioned.

- The production and presentation of 8 radio dramas. Each of about 20 minute duration that deal with health education topics such as extended immunization, sanitation, nutrition and hygiene. The department estimates the costs for actor and playwright fees to be about 12,000 So.Sh.
- The production of Somalia's first health education color film to be 20 minutes in length dealing with a rural health program, as yet unspecified. The cost of production is estimated at 168,000 So.Sh.
- An informational program consisting of lectures, slides and films to be given regionally to community level political leaders, school teachers and officials dealing with disease prevention health promotion and the activities of the MOH. The cost of this program is highly dependent upon additional staffing to be outlined below, but believed to be in the vicinity of 280,000 So.Sh.
- The publication of a quarterly Health Education Bulletin containing 5 public health oriented articles to be distributed to District and Regional Health Officers, libraries, party leaders and other ministries. The first issue of this newsletter is in press at the present time.
- The development of a Media Center for health education is a long-range plan. This unit, expected to cost 1,093,000 So.Sh., will include a darkroom unit, film and slide projectors mobile projection units for rural use, duplicator and typewriters, as well as audio and video tape facilities.

- The staffing to accomplish these ambitious programs is to be extended from the existing skeleton staff of one Department Head, one secretary and one photographer as follows:

- 2 Clerks - with English ability -- graduates of the Clerical Training Center
- 1 Training Officer - with Post Basic Nursing and Community Health experience
- 1 Health Education Officer - overseas trained MPH education research.
- 1 Sociologist - BS education to participate in health education research
- 1 Duplicator Technician - unskilled
- 4 Sanitarians - to narrate films
- 1 Health Information Specialist/Announcer
- 1 Photographer - with dark room skills
- 1 Executive Officer - to assist with administration and supervision of staff.

- It is expected that the expanded staff and media center facilities will undertake journal publication, poster production, film production and narration, radio and close circuit video plays, slide and photographic exhibitions and training activities.

#### IV. CONSTRAINTS TO IMPLEMENTATION

Since its inception this year, the activities of the Department of Health Education have been funded on a requisitional basis requiring the signature of the Minister of Health. The total funds utilized to date have amounted to about 165,000 So.Sh. derived from a ministerial pool. No official agreement for the utilization of resources from other ministries such as Education and Information exists. The present relationship is an informal one and creates delays and administrative problems.

The fate of the newly-proposed 3-year Health Education Plan outlined above is presently unknown but it is doubtful that it will be fully funded. It is clear that unless staffing and at least a modicum of resource needs are met, activities will be ineffective and probably not appreciably exceed the present level of effort.

#### V. OTHER DONOR ASSISTANCE

Aside from the highly project-oriented educational activities of WHO's Smallpox Program, the major assistance to health education has been provided by UNICEF to Somalia's 84 MCH Centers. The nature of this assistance, however, is indirect through the provision of food supplements and supplies that are instrumental in attracting mothers for health and nutrition instruction.

More directly, UNICEF provided \$500 toward the printing of 15,000 posters last year which were distributed nationally. The subjects depicted in the posters were village sanitation and extended immunization.

#### VI. RELEVANCE TO USAID PROGRAM

The promotion of rural preventive health services envisioned as a cornerstone of the proposed USAID Primary Health Care Program is primarily a Health Education activity. In some developing countries, concern for these precepts rarely exceeds lip service. In Somalia, the creation of a Department of Health Education in the MOH should be regarded as more than a symbolic gesture. It provides an administrative linkage into the future resource allocation and planning activities of the GSDR that is vital to the success and replication of the USAID program.

#### VII. RECOMMENDATIONS

The objectives of the Department of Health Education are clearly aligned with those of the PHCP. The AID funded program will benefit substantially from the Health Education Department's activities in rural areas. It is recommended that support to the Department's activities take the following form:

- Financial support for the development of a media center (\$10,000) to be used in making materials for rural health education within the PHCP.
- Short-term technical assistance in the form of a Health Education/Media specialist to determine, with the Chairman of the Department, the most effective method to deploy the financial resources to the best interests of the PHCP.

## LOGISTICS AND COMMODITY SUPPORT

I. INTRODUCTION

The present Ministry of Health commodity support and transportation systems are inadequate to support any increase in rural health activities. Although present warehousing space is adequate and planned additional storage areas will be sufficient to handle an increase in commodities, transportation of supplies and personnel is a major problem. Additional vehicles, increased commodity input and technical assistance are required to insure the success of the project. Commercial transportation is unreliable even on the best of roads. Emergency shipments are made via Somali Airways.

II. FUTURE PLANS

Expansion of the Ministry of Health's programs to the rural areas will increase demands upon the present logistics support system. This fact is recognized by Central Warehouse officials, but no formalized plan has been developed for addressing these constraints. Discussion with these officials produced a categorical list of activities for inclusion in such a plan, including the following:

- A. Programming - planning, projecting, budgeting and scheduling.
- B. Provisioning - requisitioning, purchasing and funding.
- C. Handling - customs, clearance, receiving and storing.
- D. Distribution - transportation and delivery.
- E. Personnel - training and upgrading skills.
- F. Recordkeeping - accountability documentation for all supply actions.
- G. Reporting - timely reporting by all activities.
- H. Maintenance and Repair - preventive and corrective maintenance for vehicles, medical equipment, and refrigerators.

III. CONSTRAINTS TO IMPLEMENTATION

Although the infrastructure exists for the support of current Ministry of Health programs, it is inadequate to support these programs efficiently and effectively. The absence of a formal plan limits attempts to identify constraints; however, the areas of concern advanced by officials were:

- A. More effective use of floor space and improved warehouse procedures.
- B. Routine maintenance and repair of vehicles. (UNICEF estimates that approximately 1/3 of the vehicle fleet of 150 is deadlined. Primary reasons are: (1) lack of spare parts, (2) lack of routine preventive maintenance,

(3) inexperienced drivers, and (4) insufficient salaries for personnel.

- C. Insufficient medical supplies. Antibiotics and vitamins, particularly, are in short supply.
- D. There is an unreasonable delay in the customs clearance of all program commodities.

#### IV. RELEVANCE TO USAID PROGRAM

- A. An expanded and efficient commodity distribution system is required to provide health services in rural areas not covered or inadequately covered by the present system. This is particularly true of the PHCP.
- B. Improved supply management procedures are required. This includes timely and accurate reporting, efficient procurement, commodity accountability, adequate warehousing, and a responsive distribution system.
- C. To meet project requirements, there must be:
  1. Regular preventive maintenance and timely repair of project vehicles.
  2. Strict accountability for vehicle spare parts.
  3. Improved transportation scheduling.
- D. Expeditious customs clearance of all project commodities.

#### V. RECOMMENDATIONS

##### A. Central Warehouse

1. Conduct skills survey of supply personnel. Modify staffing pattern and update job descriptions, if necessary.
2. Prepare list of standard operating procedures for all sections.
3. Survey and/or transfer unusable, unrepairable or excess items.
4. Prepare warehouse floor plan layout and implement.
5. Palletize commodities.
6. Add shelving in bulk storage and shipping areas.
7. Add ceiling fans and air conditioners for "cool storage" items.
8. Determine usage rates and establish re-order points for all commodities and activities.
9. Prepare transportation schedules for:
  - a. Commodities and personnel in project areas.
  - b. Deliveries from Central Warehouse to project areas.

##### B. Regional Storerooms

Consideration should be given to shortening the supply lines which support field activities. This objective would be achieved by decentralizing the Central Warehouse operation. It is recommended that regional storage facilities be established by MOH in Burao in the north and Baidoa in the south since both cities are regional headquarters, district headquarters, have district health centers, a garage for vehicle maintenance and repair and are connected by excellent roads to Mogadiscio.

A small room, with good security, would be adequate since there would be a limited amount of commodities in storage and a minimum amount of handling. Since operational and reporting procedures would require a minimum of time, these functions could be handled as collateral duties by Ministry of Health personnel already posted there.

Advantages to the decentralization of supply operations would be:

1. timely commodity support to area activities
2. a reduction in transportation costs
3. a decrease in emergency requisitions
4. a reduced workload at the Central Warehouse.

To insure a successful program, the commodity pipeline should be as short as possible, both in time and distance.

The demands of a country-wide health program cannot be met satisfactorily by one central warehouse in the capital city.

#### C. Vehicles (see Annex H)

1. Short term training should be provided at the vehicle manufacturer's facility in the U.S. Training would include vehicle maintenance and repair and shop management. The participants would be transportation officers and lead mechanics in Baidoa and Burao Districts plus one mechanic from Mogadiscio selected by the UNICEF transportation officer. It is recommended that the UNICEF transportation officer accompany the participants as escort officer and also to attend the training courses. Possibly, his expenses could be funded through an arrangement with UNICEF.
2. Improve the present system of spare parts storage, record-keeping, and accountability.
3. The Central and Regional Transportation officers should prepare a regular schedule of maintenance for each project vehicle. Each vehicle should have a complete record of its operational, maintenance and repair costs.
4. The Central, Regional and District transportation officers should prepare regular schedules for the transportation of commodities and personnel.
5. Upon the return of the participants from short term training in the U.S., they should conduct training courses in Baidoa, Burao and Mogadiscio.

#### D. Commodities

1. It is recommended that vitamins and antibiotics be provided for the project's health activities to supplement the inadequate supply of those items. Funds have been budgeted for this purpose.
2. It is recommended that sufficient and appropriate vehicles be provided the project for the transportation of commodities and personnel.

E. To assist in the expeditious clearance of all project commodities, it would be appropriate if a decree were issued to that effect by the highest ranking government official responsible for customs clearances.

F. It is recommended that all PIO/Cs for non-expendable items include the name of the activity for which the procurement was made. These items will be included in the perpetual inventory of the activity. This procedure is required for any future audits.

IMPLEMENTATION ACTIVITY

MONTH

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
1. Prepare list of goals and discuss with Ministry of Health officials.	X							
2. Prepare PIO/Cs vehicles and other USAID-financed commodities.	X							
3. Review warehouse procedures and internal management. Prepare guidelines.		X						
4. Update procedures, if necessary, to support expanded program.		X						
5. Review job descriptions. Prepare standard operating procedures manual.			X					
6. Conduct skills survey of warehouse personnel.			X					
7. Review commodity reporting system. Determine usage rates and re-order points.				X				
8. Survey and/or transfer unusable, unrepairable or excess items in warehouse.				X				
9. Prepare floor plan layout. Palletize commodities. Install shelving.					X			
10. Vehicles. Review present management procedures, controls, etc.					X			
11. Prepare manual of operational guidelines for drivers and mechanics.							X	
12. Prepare maintenance schedule and report forms for each project vehicle.							X	
13. Establish cost record system for each project vehicle.								X
14. Participants to U.S. for short term training.								To be determined
15. Prepare driver/mechanic training course for Regions and Mogadiscio.								To be determined
16. Schedule driver/mechanic training courses for Regions and Mogadiscio.								To be determined

VEHICLE SPECIFICATIONS

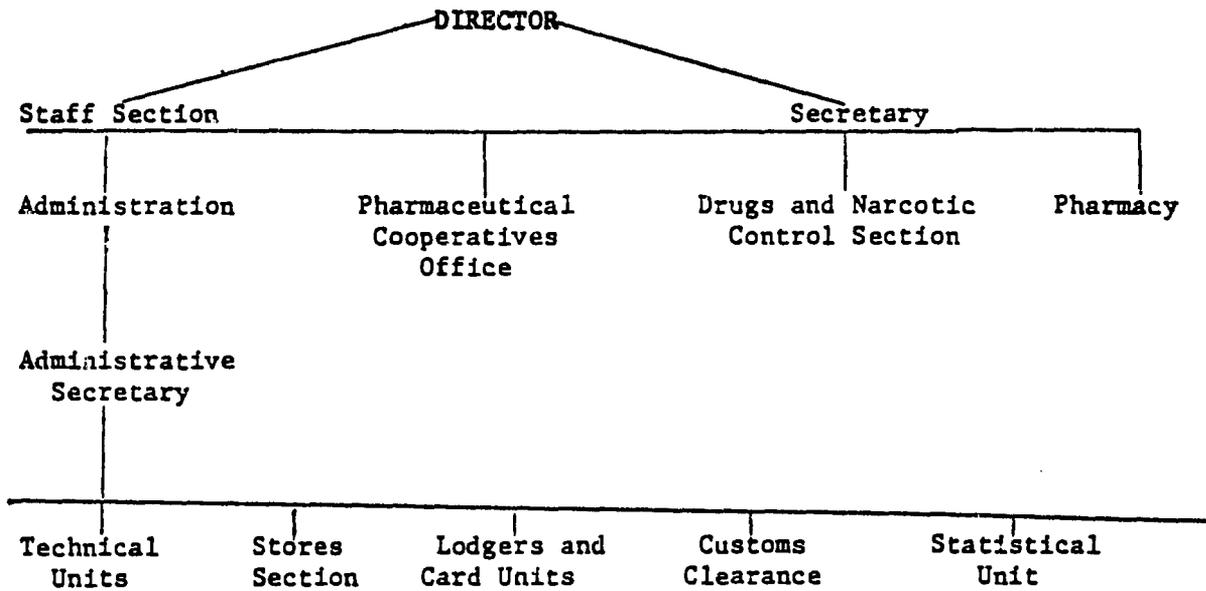
This is a partial list as recommended by the UNICEF transportation officer:

1. Low compression engine. (Diesel recommended for trucks).
2. Four-wheel drive.
3. Heavy-duty suspension, shock absorbers and springs.
4. Oil-bath air cleaners.
5. Reinforced front body.
6. Wind screens.
7. No PCV equipment required.
8. Mission selected spare parts (25% of vehicle cost).
9. Three (3) complete sets of tools plus any "special tools" recommended by the manufacturer.
10. Six (6) maintenance and repair manuals.
11. Six (6) complete spare parts catalogues.

It is our understanding that the Mission will request the assistance of an automotive expert to assist in the procurement to insure standardization of all AID-financed program vehicles. Such a procedure is considered cost-effective.

MINISTRY OF HEALTH

Pharmaceutical and Medical Supply Department



FINANCIAL AND ECONOMIC TREND ANALYSES<sup>1</sup>I. OVERVIEW OF THE GSDR FINANCIAL SYSTEM

The public sector of the GSDR comprises the Central Government, Local Governments, and autonomous public agencies. The system of finance is highly centralized, collections and disbursements being channeled from the Ministry of Finance to other Ministries based on estimated requirements. The local government budget is primarily composed of revenue collected from the two largest cities, Hargeisa and Mogadiscio. From time to time, the Central Government will siphon off part of the locally collected revenue and add it to the National Budget. Most of the funds, however, are ploughed back on the local level, and go to the building of schools, sewerage, sanitation and water systems, local transport and the like.

Expenditure financed by the GSDR is divided into two categories, current and capital, the former going towards the financing of operational costs, and the latter towards capital formation. Capital expenditures are included in the development budget which is largely financed by external assistance.

Allocations for development activities during the 1974-78 period are stipulated in the GSDR's Five Year Development Plan (FYDP), the formulation of which was been the primary responsibility of the State Planning Commission. Due to various factors such as a disastrous drought and low absorptive capability, the Plan has had a low implementation rate. By the end of 1977, only 30 percent of the original intended investment had been realized. Consequently, a new Three-Year Development Plan (1979-81) is currently being formulated in order to strengthen existing activities, and to pick up those priority projects that have not yet been implemented.

II. GSDR INPUTS TO THE HEALTH SECTOR/TRENDS IN HEALTH SECTOR EXPENDITURE

From CY 1974 to 1977<sup>2</sup>, the health sector's share of government expenditure on the recurrent side has fluctuated around an average of 6.95 percent. However, expenditures for 1978 are estimated to represent only 5.2 percent of the national budget, indicating that allocations to the health sector are remaining constant while national expenditures in other areas expand (see Table 1).

Estimates of projected need are made on a yearly basis for salaries, allowances, maintenance and additional construction. Records to determine need (i.e., personnel changes, supply allocations, etc.) are the responsibility of the Regional Medical Officer, and are not broken down by facility. Requests for new supplies, equipment and vehicles are made quarterly, and must be given to the MOH in advance for approval. Disbursements are then made centrally from the MOH.

1. All Tables are found at the end of this Annex.
2. The GSDR operates on a calendar rather than fiscal year basis.

On the development side, although the FYDP envisaged So. Sho. 75.6 million to be spent during the period beginning in 1974 and ending in 1977, actual achievement was So. Sh. 25.5 million or 33 percent of the original plan. This accounts for about one percent of the total development related investment versus the originally planned two percent. On the other hand, if the budgeted amount for 1978 is spent, 70 percent achievement of the FYDP will have been reached for the entire planned period of 1974 to 1978.

The low implementation rate of development activities is primarily the result of a lack of resources which has caused funding problems for specific projects. As many development projects tend to be expensive curative oriented facilities, the shortfall in implementation is all the more dramatic. The notable lag in planned investment is the failure to start the major project of the FYDP, the TB hospital in Mogadiscio. In view of the size of the amount planned for this hospital (so. Sho. 40.3 million), the remaining picture shows a reasonable achievement with an expenditure rate of 69 percent of the planned target.

The result of internal financial constraints has been the reliance of the MOH on autonomous agencies and external assistance. For example, another major project of the FYDP, the Banadir Pediatric and Maternity Hospital, was financed completely by bilateral assistance from the People's Republic of China. The Dujuma Resettlement Hospital (estimated cost, So. Sh. 24 million), scheduled for construction beginning in 1979, will be financed completely by the African Development Bank. In sum, more than 25 percent of the health sector's actual expenditure at the end of 1977 has come from external assistance, and total non-governmental funds have financed nearly two-thirds of the health related projects to date. However, after a project has been completed and donor inputs have terminated, the MOH has assumed the responsibility for meeting all recurrent expenditure in hospitals and other curative facilities.

Given the current budgetary constraints of the MOH, it is important to determine the direction and extent of the GSDR commitment towards funding preventive activities. The direction of expenditure within the health sector is difficult to assess as the MOH current budget does not distinguish between curative and preventive services. Nor does it break down expenditure by programs of facilities. Instead, the current budget is divided into two categories: goods and services, and personnel (see Table 2). Money for materials, supplies, equipment and rent line items in the budget of more than one program are grouped together into one integrated total. Most officials prefer this system as it allows for maximum flexibility in making spontaneous allocations to areas that exhibit 'greatest need'. However, since expenditure by facility records are not centrally maintained, 'need' is based more on estimates of past experience and future requirements than on quantifiable utilization factors such as drug inventory turnover. In addition, even if budgeting by facility or program were practiced, the frequent personnel transfers experienced in the health sector would make it a cumbersome task. Such changes are difficult to reflect in the recurrent expenditure of facilities. In sum, the current MOH budgetary system makes it difficult to determine program specific or type of service budgets (i.e., immunization, MCH, health education, disease eradication, curative, etc.), and leads to confusion in budget analysis and in ascertaining total program costs.

The problem of tracing the direction of expenditure is compounded as other Ministries such as Education and Local Government, and the Water Development Agency promote preventive activities. Little inter-ministerial coordination of services exists.

Although data are lacking, it is reasonable to conclude that the direction of expenditure (both current and development), indicates a strong bias towards strengthening and expanding curative services. For illustration, Table 2 lists development investment for 1977 and 1978 as outlined in the FYDP. All construction is curative related and with the exception of the dispensaries to be built in the regions, projects are not located in rural areas. However, one notable exception that was recorded in 1977 but budgeted earlier deserves mentioning. The project, called "Disease Control", refers to mobile units that were formed throughout the country, probably in conjunction with the smallpox eradication program. Vehicles and equipment used by the units were bought in 1975 to promote preventive measures in rural areas. However, no budget for continuing the project has been drawn up for 1978, and no further capital expenditure is foreseen.

Although the exact level of MOH financed support cannot be ascertained, on-going preventive activity funded by the current budget includes MCH services, health education (estimated budget for 1978/79 is So. Sh. 168,000), immunization programs, malaria and schistosomiasis control, and the Basic Health Services Program. Together, however, this does not represent a large share of the Ministry budget and a large share of the funding is provided by donor assistance. It is estimated that the WHO provides support for on-going expenditure associated with preventive 'pilot'-type projects of So. Sh. 6 to 7 million.

The MOH is aware of the current low level of input into preventive services and has declared itself committed to promoting rural activities. The new plan is to include increased funding for health education, immunization, clean water and sanitation programs, and the strengthening of the WHO-sponsored BHSP. To keep better account of the increased commitment, the budget will be divided into curative and preventive expenditure. As the present budgetary procedure connected with preventive/outreach programs is at best informal, it is strongly recommended that this be done.

Other budgetary recommendations to trim waste, maximize optimal resource use, and provide for better accountability of inputs include the following:

- (1) Somalis are diligent and accurate record keepers (particularly with regard to recording patient visits). Extend this practice to health facilities below the regional level to include continuous recording of: vehicle usage and fuel costs (if applicable); type and extent of maintenance; drug inventory turnover; equipment replacement; and, personnel on the payroll. These records can then be consolidated on the central level.
- (2) Ensure line items are provided for in the central budget for equipment and vehicle replacement.

- (3) Improve inter-ministerial financial coordination to avoid duplication of services.
- (4) Institute a separate accounting procedure for the PHCP to ensure a budgetary separation of preventive and curative services. This is to avoid the difficulty in tracing expenditures (both capital and current), and to ascertain trends in resource utilization to best allocate funds according to need.

### III. OTHER DONOR INPUTS

The health sector has received substantial donor assistance. Including all bi- and multilateral assistance related to health sector activities, the GSDR will have received approximately \$51 million over the six-year period beginning in 1977 and ending in 1982. Most of that is made up of funds committed for 1978-79 (see Table 3).

A large portion of appropriated funds has gone, or will go, to areas other than the PHCP. The notable exception is the WHO-assisted Basic Health Services Project. Thus, in the five-year time frame envisaged for the project, AID will be the major donor to this very important program.

The importance of external assistance to the PHCP cannot be over-emphasized. Officials in the MOH have indicated that the ability of the PHCP to draw funds from the Ministry of Finance is often dependent on the extent of funding generated from other sources. The GSDR is more willing to finance the capital and recurrent expenditure of those projects that can contribute funds of their own.

### IV. APPRAISAL OF ECONOMIC TRENDS

Fluctuations in allocations to the health sector are a reflection of the economic difficulties and resource constraints that the GSDR has had to face.

The GSDR is hindered in its drive towards economic development by a number of factors. First are the factors that are beyond the control of the government such as the drought and world inflation. Second are factors such as (1) the shortage of trained manpower and managerial skills, (2) a general lack of absorptive capacity reflecting shortcomings in the institutional infrastructure, and (3) a deteriorating trade balance. These factors are the direct result of economic underdevelopment. GDP figures cannot be given as there is no system of national income accounting, however it has been estimated by the IMF to be \$80.00 per capita.

The drought combined with the ambitious FYDP has driven the budget into deficit as it has proven difficult to curb the expansion of recurrent

expenditure in the short run (see Table 4). As a result, the GSDR has had to rely on concessionary loans and foreign grants to meet budgetary shortfalls subsequently increasing the debt service burden. In 1970, the debt service ratio (service cost divided by exports) was only 2 percent rising to 5.8 percent by 1974. By 1977, it has sharply increased to 9.6 percent and is expected to remain around 10 percent for the duration of the Plan.<sup>1</sup>

However, on the positive side, although the GSDR faced a catastrophic drought that diverted its attention to relief and rehabilitation, a significant amount of planned investment took place, while the current budget remained relatively under control. These are considerable achievements. Moreover, the domestic inflation rate has been brought down from 16 percent during 1976 to 11 percent in 1977. During 1978, it has dropped another point to 10 percent. Sound fiscal practices have benefited the economy as collected domestic revenue has steadily risen. This is particularly the result of increased import duties, increased contributions from the taxed profits of public enterprises, and revenue from the match and tobacco monopoly. There is however, a limit to how far import duties can augment the national budget. Tariff revenue is elastic, the degree of which, depends on the availability of foreign exchange for purchasing imports. As the GSDR is currently experiencing foreign exchange constraints, there is a foreseeable decline in tariff revenue collection. In addition, income taxes make up only a minor portion of tax revenues (around 8 percent), and only salaries higher than So. Sh. 400 per month are taxed. However, much of the population lives in rural areas and are not regular wage earners. Instead, nomads and small farmers are taxed on government purchases of their livestock and produce. At present, there is an intensified effort to bring these people more into the monetary system.

Agriculture is considered the main agent of development and more emphasis is being put on food production and ag-industrial development. The performance of the industrial sector is low as it suffers from underutilization of capacity stemming from the scarcity of raw materials, shortage of skilled labor, management difficulties and marketing problems.

The Balance of Payments situation is a major concern (see Table 5). Although livestock, the major export, continues to grow as a percent of total export value (reflecting favorable market prices), overall the out-turn on exports is poor. Imports have been outstripping exports at a tremendous rate resulting in large trade deficits. Although a breakdown by commodity is not available, indications are that the import of consumer goods declined while that of capital and intermediate goods increased. The GSDR is aware of the trade balance problem, and a concerted effort is being made, first to increase export volume to take advantage of the close proximity of the Middle East markets, and second, to promote import substitution and self-sufficiency in food production. The fishing industry remains relatively small, but is viewed as a potentially important revenue earner.

Overall, the balance of payments position has improved, primarily due to a large inflow of unrequited transfers in the form of official grants. As a consequence, foreign exchange reserves are high (see Table 6), but this does

---

1. IMF estimates.

not reflect an underlying strength in the economy. Grant deposits in government holdings include large funds earmarked for special purposes. A further cause for concern is the fact that present levels of grant aid are not expected to continue. GSDR officials predict a reduction by 1979-80.

Thus, continued large trade deficits coupled with accelerating public investment may produce a foreign exchange squeeze in the near future. External public debt acquired to finance the surge of public investment implies a rapidly rising debt service ratio. Furthermore, debt payments come due in 1982. Table 7 lists projected external debt by source. If export growth remains sluggish, the GSDR will be hard pressed to slow growth in the debt service burden unless concessionary assistance continues to be forthcoming to finance the vast infrastructure required to support directly productive investments. If not, inputs to social sector services might decline. Because investment in the social sector does not generate revenue, it is often the most vulnerable to cut-backs during periods of limited funding for development activities.

However, in the long run, with careful management of development activities, the future prospects of Somalia are promising. To combat problems, the GSDR has already turned to rigorous fiscal management, and is carefully monitoring the growth in current expenditure. Great potential for growth exists in the agriculture and fishing sectors, and most important, there is reason to suspect that Somalia may have recoverable oil deposits.

#### V. DERIVATION OF COST ESTIMATES FOR TECHNICAL INPUTS

Project costs associated with the PHCP are reasonable and appropriate. Costs of building materials, maintenance, commodities and supplies are based on current prices prevailing in Somalia, and where applicable, UNICEF prices for commodities purchased through that organization. Costs of training (including lodging and related expenses) are based on per capita expenditure for students now studying at the HPTI and the Mogadiscio School of Nursing. As price variations are minor between regions, these costs are generally applicable. Salary scales were provided by the Department of Personnel in the MOH and are appropriate to this project.

Where data are insufficient, estimates are made based on related experience in other countries such as the Sudan, Tanzania and Mali, and other AID project experience in Somalia.

A detailed budget breakdown over the project's life and an explanation for the derivation of related costs are found in Annex H.

#### VI. FINANCIAL FEASIBILITY OF AID INPUTS TO THE PHCP

To discover (1) what impact project costs will have on the MOH re-current budget, particularly after AID inputs have terminated, and (2) to

what extent the recurrent budget will have to increase to meet additional expenditure, a trend-line analysis has been made.

The MOH recurrent budget has been projected over a seven-year period, and is outlined in Table 8. Estimated projections were calculated using a trend-line (linear regression) model, and are expressed in constant (1978) dollars. Recurrent expenditure associated with AID-sponsored PHCP inputs has also been projected in constant dollars. However these project costs are incremental to what is estimated to be currently expressed in the MOH budget. That is, an estimate of personnel currently on the payroll has been made and then subtracted from project costs.

As can be seen, project costs associated with the PHCP are a relatively minor percentage of the overall Ministry budget, starting at 1.6 percent in year one and increasing to 2.9 percent by year three. During year four, recurrent expenditure rises to 5.2 percent reflecting the phasing in of drug supplies and community health worker salaries into the MOH budget, as well as the gearing up of the program in the Mudug and Lower Juba Regions. After the termination of AID-financed inputs by year six, recurrent expenditure levels off at approximately \$1.5 million per annum (including inflation and contingencies). Salaries to workers make up the largest share of costs at 77 percent of the total. The depreciation of vehicles and equipment is the second largest component at 11.5 percent, replacement of drugs the third at 9.4 percent, and finally fuel and vehicle maintenance follows at 4.8 percent.

Overall, the impact of the PHCP on the MOH budget is not as great a concern as the potential impact it might have on the regional level. Estimated budgets for the Bay and Togdheer Regions (whose PHCP activities are planned to begin) were obtained for 1977 and 1978. Assuming an annual rate of increase matching that of the total MOH current budget, allocations for recurrent expenditure to the two regions have been projected over the project life, and are also outlined in Table 8.

If there should not be an increase in regional allocations greater than that projected in Table 8 then during the first project year of the PHCP additional recurrent expenditure will take up 60 and 9 percent of the Bay and Togdheer Regions, recurrent budgets respectively. The impact on the Togdheer Region is less initially due to a lag in project implementation. By year six, PHCP related expenditure in the two regions will represent 74 and 57 percent of the Bay's and Togdheer's recurrent budgets respectively.

Although the sample size is small (two out of sixteen regions), from these figures it can well be surmised that at present, budgetary allocations are heavily skewed in favor of expensive curative care facilities located in the urban areas. Largely rural regions do not provide the services to absorb a significant share of the budget. In fact, it is interesting to note that Banadir and Mogadiscio General Hospitals (both located in the capital city) have estimated their current budget requirement for 1978 at a combined total of some \$2.5 million. That is \$1 million more than the estimated recurrent expenditure of the PHCP if it were operating in the four planned regions.

Thus, from a financial standpoint this project will demand a firm commitment on the part of the Central Government and the MOH, and will mean placing priority on extending preventive care in rural areas over the next several years. This commitment has been repeatedly stressed by MOH officials, but has not thus far been confirmed by recent expenditure trends. Ideally, GSDR officials will want to increase the MOH's share of the Central Development Budget from its, at present meagre level of 1 percent, while maintaining its share of recurrent expenditure at 7 percent. However, as resources are currently limited, an increase in funds to the health sector will mean a cut back elsewhere. Whether GSDR officials will be willing to make this kind of trade off is an open question. Therefore it is imperative that priorities in health service delivery be established based on need. As rural areas are, at present, inadequately served, the extension of primary care services is the most cost-effective way of achieving that goal.

In sum, until such time as revenue from net exports and other domestic sources improves, the GSDR will have to increasingly rely on debt to finance its development efforts. The PHCP, carefully phased, is a program that will not unduly tax Somalia's limited resources. Hopefully, as the economy and infrastructure strengthens, the current strain on the GSDR budget will be eased. Until then, GSDR capital investment and recurrent expenditure growth must correspond to need, and be carefully paced.

TABLE 1

**GENERAL BREAKDOWN OF HEALTH SECTOR EXPENDITURE: CY 1974-1978**  
(Millions of Somali Shillings)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
	<u>A</u>	<u>A</u>	<u>A</u>	<u>E</u>	<u>E</u>
<u>Current Expenditure</u>	35.3	42.5	49.0	60.0	59.2
Current Transfers <sup>1/</sup>	NA	NA	NA	.957	.99.
TOTAL	-	-	-	60.98	60.195
Expenditure as a % of Total GSDR current exp.	6.6	7.2	7.1	6.9	5.2
<u>Development Expenditure</u> <sup>2/</sup>	1.043	3.9	14.46	6.0	30.2
Expenditure as a % of total GSDR dev. exp.	.3	1.1	2.3	.6	2.0
Source of finance (dev.)					
a. Domestic	NA	NA	NA		
- budgeted				8.37	6.2
- actual				6.0	-
b. Foreign	NA	NA	NA		
- budgeted				24.0	24.0
- actual				0	-

Revised planned dev expenditure in Health Sector as a % of all dev. exp. (1974-78):1.6

<sup>1/</sup> Current grants and contributions

<sup>2/</sup> For 1978 the figures are budgeted, not actual expenditures.  
All other years are actual.

A = Actual; E = Estimate

Sources: Department of the Budget, Min. of Finance, 1978 Annual Budget  
Central Bank of Somalis, Annual Report and Statement of Accounts (1977)  
State Planning Commission, Planning Dept. Public Account Investment  
Program for 1978.

TABLE 2

## DETAILED BREAKDOWN OF HEALTH SECTOR EXPENDITURE: CY 1977-1978

(Millions of Somali Shillings)

Current Expenditure	1977	1978	Dev Expenditure by Projects	1977				1978	
	RE	E		Planned	Budgeted	Actual	Budgeted (%)	Planned	Bud
<b>A. Personnel</b>									
1. Basic Salaries of Permanent staff	19.93	21.25	1. Strengthening of hospitals	.930	.700	.700	100.0	1.700	.50
2. Temporary personnel	1.56	1.75	2. District hospitals	.700	.500	.500	100.0	.700	.50
3. Allowances	3.02	3.43	3. Mental hospitals	49.200	-	-	-	-	-
4. Contributions to pensions, gratuity funds & terminal emoluments	.54	.57	4. TB hospitals	50.650	.500	.190	38.0	1.010	.50
SUBTOTAL	24.96	26.99	5. Laboratories	.590	.200	.200	100.0	.270	.20
			6. CASS - construction of medical buildings in Kismayo	10.139	2.000	2.000	100.0	-	-
<b>B. Goods &amp; Services</b>			7. Dispensaries (regions)	-	.290	.290	100.0	-	-
1. Materials & supplies	20.08	16.38	8. ASPINA	7.400	2.800	.760	27.0	4.000	4.00
2. Equipment (light)	3.88	2.87	9. Dujuna Hospital	-	24.000	-	-	24.000	24.00
3. Repairs & maintenance	.58	.52	10. CASS- medical instruments	-	.625	.625	100.0	-	-
4. Books, publications & publicity	.07	.05	11. CASS- building Mogadiscio	-	.256	.256	100.0	-	-
5. Rentals	.25	.25	12. Construction of dispensaries	-	.500	.500	100.0	1.450	.50
6. Travelling	2.20	2.00	TOTAL	119.609	32.271	6.021	17.00	32.13	30.20
7. Public & other services	7.39	10.14							
SUBTOTAL	35.06	32.20							
GRAND TOTAL	60.03	59.2							

RE = revised estimate      E = estimate

Sources: Department of the Budget, Ministry of Finance, 1978 Annual Budget  
State Planning Commission, Planning Dept., Public Account Investment Program for 1978

TABLE 3  
DONOR ACTIVITY IN THE HEALTH SECTOR

DONOR	PROJECT	YEAR	ALLOCATION	REMARKS
BRD (Germany)	1. Water Supply System installed in 4 towns (in south)	1977-78	DM 26M/ per annum	most of allocation has not been dispersed
Italy	2. T.A. to university in Mogadiscio, fellowships to study in Italy provided	1973 to indefinite	lire to billion/year	breakdown of actual allocation to the medical faculty not available
UNDP	3. MCH project (advisory services)	1978-80	\$350.000	project approved
	4. Advisor in TB control	1979-	\$100.000 per annum	project approved
	5. Emergency supply of medical supplies for TB control	1978	\$100.000	disbursed an excep- tional case as TA is normally granted
	6. Environmental sani- tation project	NA	\$2M	negotiations continuing with the GOS
WHO	7. Malaria eradication program/ Schistosomiasis control	1978-79 1980-81	\$393.000 \$393.000	funds appropriated - not dispersed possible additional contributions from bilateral donor forthcoming
	8. Basic Health Services	1978-79 1980-81	\$257.000 \$353.000	appropriated funds not yet dispersed.
	9. Small pox eradi- cation	1978	\$1.9 M	not dispersed

TABLE 3 (Continued)

DONOR	PROJECT	YEAR	ALLOCATION	REMARKS
	10. Expanded program for immunizations	1978-82	\$1.6 M	estimate includes funds provided by the following donors: UNICEF, Kuwait, Switzerland.
	11. Nursing education	1978-79	\$744.000	includes IBRD financed Nursing school Kismayo
	12. T.A. fellowships provided to the Medical faculty and library in Mogadiscio	1978-79	\$160.000	Funds appropriated
	13. Center for maintenance of hospital equipment	1978-79	\$110.000	Funds appropriated
	14. Public Health Laboratory Advisor	1978-79	\$135.000	Funds appropriated and dispersed
	15. Community Water Supply Advisory Services (1 sanitary Engineer in place)	1978-79	\$161.000	Funds appropriated and dispersed
	16. Vital health statistics advisory services (statistician in place)	1978-79	\$97.000	Funds appropriated and dispersed
IBRD	17. Third education project extension/improvement of Mogadiscio Nursing School	1978-83	\$1.25 M	Project approved

TABLE 3 (Continued)

DONOR	PROJECT	YEAR	ALLOCATION	REMARKS
	18. Mogadiscio Water Supply Project	1978-83	\$6.0 M	negotiated and waiting approval
UNICEF	19. Health sector support: provides drugs, equipment transport, spares and maintenance equipment, training stipends	1977 1978 1979	\$500.000 \$355.000 \$546.000	Funds appropriated for 1979-1977 78 are dispersed
UNFPA	20. Population survey	1978-79	\$606.300	Funds appropriated
	21. Population and Livestock Censes	1978-79	\$1.5 M	Funds appropriated
	22. MCH support	1978-79	\$570.000	Funds appropriated
Knights of Malta	23.	indefinite	NA	
TOTAL....Approximately				\$51 Million

Does not include donor activity to resettlement projects which may, or may not have a health component included.

TABLE 4

Financial Operations of Central Government

(So.Shs. Millions)

Item	1973	1974	1975	Prelim. Actual 1976	Budget Est. 1977	Revised Est. 1977
Total Rev. and Grants	602.5	859.2	1,255.2	939.4	1,317.0	1,277.5
Total Revenue	440.0	557.7	623.9	689.4	917.0	877.5
Tax	378.2	461.9	491.3	515.3	690.0	666.3
Non-Tax	61.8	93.8	132.6	174.1	227.0	211.2
Grants (External)	162.5	303.5	631.6	250.0	400.0	400.0
Total Expenditures	786.1	1,169.1	1,332.7	1,738.5	—	1,899.5
Ordinary	382.0	508.4	566.6	656.1	793.2	782.8
Development <sup>1</sup>	327.0	353.3	362.1	634.1	1,288.3	—
Extra Budgetary <sup>3</sup>	77.1	307.4	404.0	448.3	—	1,116.7 <sup>2</sup>
Ordinary Surplus or Deficit (-)	58.0	47.3	57.3	33.3	123.8	94.7
Overall Deficit (-)	-183.6	-309.9	-77.5	-799.1	—	-622.0
Financing	183.6	309.9	77.5	799.1	—	622.0
Foreign (Net)	169.9	255.1	269.2	424.9	600.0	600.0
Domestic (Net)	13.7	54.8	-191.7	374.2	—	22.0 <sup>2</sup>

<sup>1</sup>Total development expenditures as published by State Planning Commission. Only development expenditures financed from domestic sources recorded in budget. For example, in 1976 domestic budget development expenditures were So.Shs. 255.2 million and foreign So.Shs. 378.9 (see Table 7, IMF 1978, p. 17).

<sup>2</sup>Estimates (IMF).

<sup>3</sup>Residual item. In 1975 and 1976 included drought rehabilitation expenditures financed by proceeds of commodity aid.

Source: IMF 1978 (Ministry of Finance, State Planning Commission and Central Bank).

TABLE 5

Somalia: Balance of Payments (1973-1977)

(So.Shs. Millions)

Items	1973	1974	1975	1976 <sup>1</sup>	1977 <sup>1</sup>
A. Goods and Services (Net)	-423.1	-651.0	-643.5	692.6	-970.5
Exports FOB Net	358.7	402.7	358.0	510.2	509.5
Imports FOB Net <sup>2</sup>	-612.6	-841.7	-638.1	-963.7	-1,518.0
Trade Balance	-253.9	-439.0	-300.1	-453.5	-708.5
Services Net	-169.2	-212.0	-313.4	-239.1	-262.0
B. Unilateral Transfers (Net)	179.7	325.5	643.5	257.3	407.3
Private	17.2	22.0	12.2	7.3	7.3
Official	162.5	303.5	631.3	250.0	400.0
C. Capital	248.5	202.3	193.9	539.4	610.0
Private	28.4	8.5	58.7	21.8	10.0
Official	169.9	255.1	269.2	424.9	600.0
Commercial Banks	50.2	-61.3	-134.0	92.7	—
D. Errors and Omissions	-7.0	-2.6	-12.0	3.0	—
E. Overall Balance	-1.9	-125.8	182.1	107.4	46.8
F. Changes in Central Bank Foreign Assets Increase (-)	1.9	125.8	-182.1	-107.4	-46.8

<sup>1</sup>Provisional

<sup>2</sup>Data from exchange transactions records adjusted for Franco Valuta imports using customs data. Franco Valuta imports are remittances in kind which do not require any foreign exchange approval by the Somali Authorities and are thus not subject to control.

Source: IMF 1978 (Data supplied by Somali Authorities).

**TABLE 6**  
**SOMALIA'S INTERNATIONAL LIQUIDITY POSITION**  
(Millions of U.S. Dollars)

	1971	1972	1973	1974	1975	1976	1977	1978					
								Jan	Feb	Mar	Apr	May	June
<b>International Reserves,...</b>	26.6	31.4	35.1	42.4	68.5	85.0	120.5	120.3	108.6	174.4	...	...	...
Gold.....	-	.1	.1	.1	.1	.1	1.5	.5	.5	.5	...	...	...
SDRs.....	2.8	5.0	5.4	5.4	5.1	5.0	5.1	5.1	5.1	5.2	5.0	5.0	5.1
Reserve Position in the Fund.....	4.1	4.2	4.7	4.8	5.0	4.9	-	-	-	-	-	-	-
Foreign Exchange.....	19.7	22.2	24.9	32.1	58.3	75.0	114.9	114.7	103.0	168.7	...	...	...
<b>Fund Position</b>													
Quota.....	20.6	20.6	22.9	23.3	22.2	22.1	23.1	23.1	23.3	23.5	23.3	28.1	28.5
<b>Payments Agreements</b>													
Assets.....	6.4	4.8	3.7	2.1	1.7	3.4	...	...	...	...	...	...	...
Commercial Banks: Assets	7.0	13.2	6.3	18.0	36.7	22.3	...	...	...	...	...	...	...

Source: IMF, International Financial Statistics, August 1976

TABLE 7

SOMALIA - MEDIUM AND LONG-TERM EXTERNAL PUBLIC DEBT AS OF DECEMBER 31, 1975Projected Debt Service Payments  
(in Millions of SDR 1/)

SOURCE	Original Principal		Disbursed and Out- standing	Undis- bursed	Total Debt Service (of which, interest)						
	Currency of Denomination	SDR Equiv.			1976	1977	1978	1979	1980	1981	
<u>Development Institutions</u>											
African Development Bank/Fund	U.A.	5.5	5.85	2.44	3.41	.18 (.15)	.26 (.17)	.30 (.17)	.30 (.17)	.29 (.16)	.29 (.15)
Arab Fund for Economic and Social Dev.	US\$	7.3	6.24	6.24	-	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
IDA	US\$	60.0 <sup>2</sup> /	51.25	25.71	25.02	.29 (.23)	.34 (.27)	.39 (.31)	.42 (.34)	.43 (.34)	.46 (.34)
Sub-Total			<u>63.34</u>	<u>34.39</u>	<u>28.43</u>	<u>.47</u> (.38)	<u>.60</u> (.44)	<u>.69</u> (.48)	<u>.73</u> (.51)	<u>.72</u> (.50)	<u>.75</u> (.49)
<u>Bilateral</u>											
Bulgaria	US\$	1.5	1.28	0.61	-	.15 (.02)	.14 (.02)	.13 (.02)	.13 (.01)	.13 (.01)	-
China, People's Rep of	RY SwFR	135.0 80.0	58.12 26.08	62.13	22.07	- (-)	- (-)	- (-)	- (-)	- (-)	2.50 (-)
German, Fed Rep of	DM	42.5	13.86	12.35	-	.62 (.13)	.61 (.13)	.61 (.12)	.83 (.12)	.82 (.11)	.77 (.10)
Iraq	I.D.	2.0	5.77	1.02	-	.22 (.02)	.22 (.02)	.21 (.02)	.21 (.01)	.20 (.01)	.04 (-)
Italy	Lira	5,966.4	7.46	4.20	-	.97 (.23)	.94 (.20)	.91 (.16)	.88 (.13)	.84 (.10)	.51 (.04)

Kuwait	KD	6.2	18.00	-	18.00	.09 (.09)	.16 (.15)	.27 (.27)	.27 (.27)	.99 (.27)	.98 (.26)
Libya	US\$	9.8	8.34	2.56	5.78	.77 (.34)	1.34 (.33)	1.30 (.29)	1.26 (.26)	1.23 (.22)	1.19 (.21)
Qatar	US\$	10.0	8.54	8.54	-	.26 (.26)	.97 (.25)	.95 (.24)	.92 (.21)	.90 (.19)	.88 (.17)
Saudi Arabia	US\$	45.8	39.11	15.31	23.80	- (-)	- (-)	- (-)	2.39 (-)	4.07 (-)	4.07 (-)
United States	US\$	14.5	12.39	12.39	-	.12 (.12)	.12 (.12)	.61 (.20)	.60 (.19)	.69 (.28)	.68 (.27)
U.S.S.R.	R. £Stg	104.0 1.5	117.20 2.59	60.03	59.10	.97 (.21)	2.20 (.26)	2.91 (.91)	6.02 (.83)	5.93 (.74)	5.02 (.63)
Sub-Total			318.74	179.15	128.75	4.17 (1.42)	6.70 (1.44)	7.90 (2.23)	13.51 (2.03)	15.80 (1.93)	16.64 (1.68)
GRAND TOTAL			382.08 <sup>3/</sup>	213.53	157.18	4.64 (1.80)	7.30 (1.83)	8.59 (2.71)	14.23 (2.54)	16.52 (2.43)	17.39 (2.17)
Memo Item: (as of December 1973, SDR)				(108.6)	(112.9)						

Note: During 1976 Somalia has additionally received commitments for the following loans  
 IDA: \$8.0m. Drought Rehabilitation, \$10.0m. Northwest Agriculture;  
 African Development Fund: U.A. 5.0 m. Arab Fund 20.0 m, and Kuwait Fund: \$21.0m. all for Drought Rehabilitation  
 U.S.S.R.: \$21.8m, Commodity Loan (10 years at 2%) for Fisheries. United Arab Emirates: \$20.0m for Education

1/ As per cross currency exchange rates of December 31, 1975; i.e., SDR 1.0 equals: ADB U.A. 0.94; US\$1.17066; Chinese Renminbi 2.3226; SwFR 3.0671; D.M. 3.0698; Iraq Dinar 0.34657; Lira 800.21; Kuwait Dinar 0.3445; Rouble 0.88736; £Stg. 0.5785; So.Shs. 7.3693. (IMF, International Financial Statistics)

2/ Includes U.\$1.9m. exchange adjustment and \$550,000 Project Preparation Credit.

3/ The original principal (SDR 382.08 million) differs from the sum of disbursed and undisbursed (SDR 370.71 million) by the amount of debt already repaid (SDR 11.37 million).

Source: Data provided by Central Bank of Somalia, World Bank  
 Estimates: See Somalia: Country Economic Memorandum, April 1977

TABLE 8

## MOH AND REGIONAL RECURRENT BUDGETS AND RELATED PROJECT COSTS (\$000)

	PROJECT YEAR						
	0	1	2	3	4	5	6
	1979	1980	1981	1982	1983	1984	1985
A. Projected MOH Recurrent Budget	11,700	12,900	14,000	15,250	16,300	17,500	18,600
B. Projected current exp. of the PHCP* (4 regions)	-	205	327	450	845	1,019	1,099
B. as a % of A.	-	1.6	2.3	2.9	5.2	5.8	5.9
Change	-	-	+6	+1	+2.8	+7	+2
C. Projected Bay Reg. Recurrent Budget*	247	272	249	320	342	367	390
D. Projected PHCP exp. (Bay Region)	-	162	184	192	280	280	280
D. as a % of C.	-	60.0	74.0	60.0	82.0	76.0	72.0
E. Projected Togdheer Reg. Recurr. Budg.*	301	351	357	389	416	447	475
F. Projected PHCP exp. (Togdheer Reg.)	-	31	127	170	261	270	270
F. as a % of E.	-	9.0	35.0	43.0	63.0	60.0	57.0

\* Net of currently salaried personnel that will be absorbed into the PHCP over the life of the project. Assumes watchmen and cleaners at District Health Centers and professional staff at both the Training Centers and District Health Centers at currently on the payroll.

TABLE 9

COST-EFFECTIVENESS OF HOSPITALS VS PHC COMPLEXES

<u>PHC COMPLEX</u>	<u>HOSPITAL</u>	<u>ACTIVITIES</u>
\$1.8 million = 4 District Health Centers 4 x 16 PHCUs 32 (at least) Health Posts	\$12 million* = 1 Hospital (300-500 beds) *Costs vary from \$6 to \$30 million	Average Cost of Construction
\$1.2 million	\$1.2 million	Recurr. Average Exp. (p.a.)
\$3.0 million	\$13.2 million	Total
600,000 to 1 million	600,000* (@ 400 beds) *Assumes 80% occupancy rate per year (inpatient). Outpatient load is estimated to be 15 times the inpatient load.	Population Served
<u>Other</u> \$2131*	<u>Doctors</u> \$5500*	Per Capita Training Costs (p.a.)
*Based on yearly operating costs of the HPTI divided by the number of students attending.	* Based on yearly operating costs of the Mogadiscio Medical Faculty divided by the number of students attending.	

## ANNEX H

DETAILED BUDGET BREAKDOWN AND JUSTIFICATION

The following information was utilized in developing the unit costs which appear in the budget summary table.

<u>A. Technical Assistance</u>	<u>U.S. \$.000</u>
1. <u>Long Term</u>	
a. Health Planner (1) \$110,000 X 4.66 years	513
b. Public Health Nurse Educator (2) \$75,000 X 4.66 years X 2	700
c. Nurse Midwife Educator (2) \$ 75,000 X 4.66 years X 2	700
d. Epidemiologist/Sanitarian (2) \$90,000 X 4.66 years X 2	840
e. Supply Management Specialist (1) \$100.00 X 4.66 years	465
Subtotal	<u>3,218</u>
2. <u>Short Term</u>	
a. 69 PM @ \$12,000/pm of assistance including:	
- Curriculum Design Specialist 6 pm	72
- Epidemiologist 8pm	96
- Anthropologist/Sociologist 8 pm	96
- Health Education Media Specialist 3 pm	36
- Information Data Management Specialist 6 pm	96
- Water Resources Development Specialist 6 pm	72
- Unspecified 30 pm	360
b. 3 Evaluators for 2 evaluations (year 3 and 5) 9 pm	108
Subtotal	<u>936</u>
Total	<u><u>4,154</u></u>

Justification for SalariesBase Salary (per annum)

1. Health Planner	15.000
2. Public Health Nurse Educator	\$25.000
3. Nurse Midwife Educator	\$25.000
4. Epidemiologist/Sanitarian	\$30.000
5. Supply Management Specialist	\$30.000

Plus (for all personnel)

a. Shipping of Personal Effects	\$14.000
b. Travel (for family of 4) allowance	\$ 6.000
c. COL allowance	\$ 1.000
d. Differential allowance 25% of salary	
e. Education allowance	\$ 6.000
f. Overhead	

For the health planner and the supply management specialist allow \$8500 for rent and utilities

B. Training1. In-country Training

Costs are based on the following per capita training costs:

a. Orientation for Tutors (1 month): Manual and materials	\$ 30
b. <u>Retraining for Trainers (3 months)</u>	
\$5 per day (per diem) X 90 =	\$ 450
\$35 (uniform and shoes)	
\$30 (manual and materials)	
\$35 (travel allowance)	
Total	\$ 550

C. Basic Training for CHWs

\$45 food allowance (including 3 month period for CHW inservice training at the PHW and supervisory on-sight visits at the health post.

\$10 (manual)

\$10 (mattress)

\$5 (demonstration kit)

---

Total

\$75

Costs per year are based on the following training rate:  
(see next page)

D. Commodities1. Vehicles

- a. 42 passengers @ \$9000 (1 per DHC, per Training Center, and 1 for Technical Advisor, plus replacement) plus 25% spare parts and 30% transport insurance \$14,000; Fuel (18%) and maintenance (5%) = \$2000/unit/year.
- b. 4 trucks @ \$15,000 (2 to central warehouse plus replacement) plus 25% spare parts and 30% transport insurance = \$24,000; Fuel (18%) and maintenance (5%) \$3450.

Quantity supplied (initial and replacement) I = Initial R = Replacement

REGION	Year 1		Year 2		Year 3		Year 4		Year 5		TOTAL	
	I	R	I	R	I	R	I	R	I	R	I	R
A.	8			2		2		2		2	8	8
B.	4		4	1		2		2		3	8	8
C.							4				4	
D.							4				4	
Technical Assistant	1					1					1	1
Trucks (Warehouse)			2					2			2	2
TOTAL	13	0	6	3	0	5	8	6	0	5	27	19

Note: Replacement of vehicles assumes an average life of 3 years. Only the vehicles for Region A (Bay) and B (logdeer) will be replaced. Depreciation of vehicles begins in year 4.

2. Drugsa. Health Posts (1976 UNICEF prices)

TRA Drugs	\$15.00
First-Aider Drugs	59.00
	64.00

Plus 18% of cost for shipping and handling and 10% inflation  
Total per unit \$82.00 (6 months supply)  
 per annum \$170/unit

b. PHCU (1976 UNICEF prices)

MCH drugs	\$276.00
MW kit #3	39.00
Dispensary Drugs	227.00
TBA Drugs	15.00
	<u>557.00</u>

Plus 28% for shipping, handling, and inflation

Total per unit \$715 (6 month supply)

per annum

\$1450/unit

c. District Health Center

\$50,000 5 years to reinforce existing supplies

Total per unit

\$3125.00

Note: The cost per year of the supplying and equipping of facilities is based on a construction rate outlined under E (construction) below. USAID will provide a two year supply of drugs per facility.

3. Equipment and Supplies

Note: Depreciation of equipment is at 20% per annum.

a. Health Posts

Midwives kit type I	\$ 20.00
Portable sales (2)	20.00
Foot lockers (1)	15.00
	<u>55.00</u>

Plus 30% (shipping and handling)

Total per unit

\$ 72.00

b. PHCU's

Midwives kit type I	\$ 20.00
WHO equipment list (see next page)	600.00
	<u>620.00</u>

Plus 30% (shipping and handling)

Total per unit

\$800.00

c. District Health Centers

Kerosene refrigerator	\$280.00
Cots (4)	600.00
Screen (1)	30.00
	<u>910.00</u>

Plus 30% (shipping and handling)

Total per unit

\$1200.00

Fuel for refrigerator (5% of cost per annum)

\$ 14.00

LIST OF EQUIPMENT FOR PRIMARY HEALTH CARE UNITS  
(1975 prices)

Item	description	quantity	total cost (in \$)
1.	bin, for soiled dressings	1	31.8
2.	basin, for handwashing	1	.7
3.	blanket, brown	1	9.10
4.	broom, stiff	1	3.40
5.	nailbrush	1	4.70
6.	scrubbing brush	1	1.00
7.	handle for brooms	2	1.70
8.	broom, soft	1	2.30
9.	office chair	2	13.30
10.	table with two drawers	1	30.80
11.	couch for examination	1	71.30
12.	screen for examination	1	12.70
13.	cloth for examination screen	1	12.70
14.	cupboard, small	1	78.40
15.	cupboard, for storing poisons	1	28.30
16.	table, for ward	1	46.50
17.	cup for drinking	1	2.00
18.	cup for spitting	1	.90
19.	scapdish	1	1.00
20.	jug, for handwashing	1	.90
21.	hurricane lamp	1	3.50
22.	globe for hurricane lamp	1	.40
23.	wick for hurricane lamp	1	1.70
24.	sheet, waterproof	1	5.70
25.	clay water jar, small	1	.80
26.	plate for water jar	1	.20
27.	pail, enamelled iron	1	3.10
28.	chamberpot	1	6.70
29.	aluminum spoon, large	1	.50
30.	aluminum spoon, small	1	.80
31.	towel hutch back	2	7.20
32.	towel hutch turkish	2	6.10
33.	washbasin stand	1	5.80
34.	insecticide pump	1	1.10
35.	box, for dispensing	1	25.00
			<u>\$424.00</u>

d. Training Centers

<u>Generator</u> @ \$9,000	\$ 9,000
<u>Furniture</u> (classroom and dormitory)	\$30,000

Audio Visual and Training Equipment(1976 prices)

1 slide projector	250
1 Tape recorder (with microphone and editing block)	1,000 1,000
1 Overhead projector	200
1 Mimiograph machine	2,518
1 Wet Copy duplicating machine	2,000
4 Pencil sharpeners	
Cassettes, tapes, blanks	1,000
Transparency film (500 sheets/year)	996
1 35mm Camera	200
Mimiograph masters 9000/year	274
Rolls of paper, bottles of toner and dye (72 rolls and associated bottles/year)	4,320
Sub-total	<u>\$13,500</u>
(plus 10% for inflation)	
<u>TOTAL</u> (Audio Visual)	<u>\$15,000</u>

Dormitory and Kitchen supplies

(for five years includes bed liners, mattress, kitchen utensils)	\$ 8,000
---	----------

<u>Classroom Supplies</u> (for five years)	5,000
--	-------

<u>TOTAL</u> (all equipment)	<u>\$56,500</u>
------------------------------	-----------------

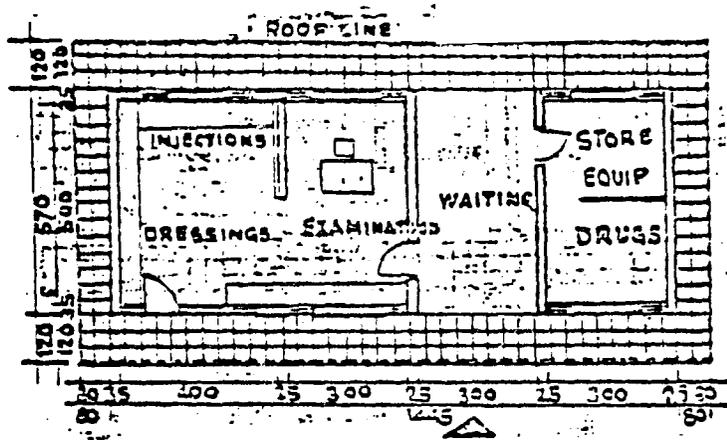
(plus 30% shipping and handling)

<u>GRAND TOTAL</u>	<u>\$83,000</u> per training center
--------------------	-------------------------------------

Other Commodities

1. Refrigerators, top loading freezer  
(4 @ 2 per Training Center) \$400/unit  
Plus Transport/Insurance (30%)  
Total \$ 520/unit
2. Air conditioners (4 at Central Pharmacy  
Warehouse) \$500/unit Plus Transport/  
Insurance (30%) 650/unit
3. Ceiling Fans (24 at Central Pharmacy  
Warehouse) \$150/unit Plus Transport/  
Insurance (30%) 195/unit

DESIGN FOR PRIMARY HEALTH CARE UNIT



4. Shelving (at Central Pharmacy Warehouse) Plus Transport/ Insurance (30%)	\$ 3,900
5. Media equipment for Department of Health Education	<u>10,000</u>
<u>TOTAL</u> (all other commodities)	<u>\$23,000</u>

E. Construction - SEE ANNEX M

ASSUMED CONSTRUCTION RATE

Project Year	Region	Health post	PHCU	District Health Center	Training Center	TA Housing	
1.	A	32	16	4	1	5	
	B		8		1		3
	C						
	D						
2.	A	32	8	4			
	B	11					
	C						
	D						
3.	A	11					
	B						32
	C						11
	D						
4.	A	32	8	4			
	B						11
	C						8
	D						4
5.	A		8				
	B						8
	C						
	D						
<b>TOTAL BUILT</b>		<b>172</b>	<b>64</b>	<b>16</b>	<b>2</b>	<b>8</b>	

KEY: A - Day Region  
 B - Togdheer  
 C - Mudug Region  
 D - Lower Juba Region

ASSUMED TRAINING RATE

PROJECT YEAR	REGION	Health Worker	Public Health Nurse /MW	Sanitarians	Nurse Practitioners (Jr)	Nurse/MW	Sr. Sanitarian Superintendent	Sr. Public Health Nurse/MW	Administrator/Lo- gistics Supply	Nurse Practitioner (Sr)
1.	A	-	20 <sup>o</sup>	20 <sup>o</sup>	8 <sup>o</sup>	29 <sup>o</sup>	1*	2*	1*	2*
	B	-	-	-	-	-	1*	2*	1*	2*
	C	-	-	-	-	-	-	-	-	-
	D	-	-	-	-	-	-	-	-	-
2.	A	64+	-	-	8 <sup>o</sup>	-	-	-	-	-
	B	22+	12 <sup>o</sup>	12 <sup>o</sup>	8 <sup>o</sup>	12 <sup>o</sup>	-	-	-	-
	C	-	-	-	-	-	-	-	-	-
	D	-	-	-	-	-	-	-	-	-
3.	A	-	-	-	-	-	-	-	-	-
	B	21 <sup>+</sup>	8 <sup>o</sup>	8 <sup>o</sup>	-	8 <sup>o</sup>	-	-	-	-
	C	-	4 <sup>o</sup>	4 <sup>o</sup>	8 <sup>o</sup>	4 <sup>o</sup>	-	-	-	-
	D	-	4 <sup>o</sup>	4 <sup>o</sup>	8 <sup>o</sup>	4 <sup>o</sup>	-	-	-	-
4.	A	-	-	-	-	-	-	-	-	-
	B	21 <sup>+</sup>	-	-	-	-	-	-	-	-
	C	32 <sup>+</sup>	8 <sup>o</sup>	8 <sup>o</sup>	-	8 <sup>o</sup>	-	-	-	-
	D	32 <sup>+</sup>	8 <sup>o</sup>	8 <sup>o</sup>	-	8 <sup>o</sup>	-	-	-	-
5.	A	-	-	-	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-
	C	32 <sup>+</sup>	8 <sup>o</sup>	8 <sup>o</sup>	-	8 <sup>o</sup>	-	-	-	-
	D	32 <sup>+</sup>	8 <sup>o</sup>	8 <sup>o</sup>	-	8 <sup>o</sup>	-	-	-	-
TOTAL TRAINED		256	80	80	32	80	2	4	2	4

KEY: A - Bay  
 B - Togdheer  
 C - Lower Juba  
 D - Mudug

TYPE OF TRAINING: + - Basic Training  
 o - Retraining  
 \* - Orientation For Tutor

2. <u>Participant Training (\$000)</u>	
a. <u>Long Term (U.S.)</u>	
1. Health Educator (2)	
1 year MPH @ \$14,000	\$ 28
2. Physicians (2)	
1 year MPH @ \$14,000	\$ 28
3. Public Health Nurse (4) 2 years B.S. or certificate	
	\$ 112
Sub-total	<hr/> \$ 168
b. <u>Short Term (U.S.)</u>	
1. 45 months: 5 part/year for 3 months @ \$4500/participant	
	\$ 100
c. <u>Short Term (Third Country)</u>	
1. 40 months: 5 part/year for 2 months @ \$1500/participant	
	\$ 30
d. <u>In-Country Workshop (16)</u>	
2 in year 1	
1 in year 2 @ 5000/seminar	\$ 30
1 in year 3	
2 in year 4	
Total	\$ 328

C. Salaries and Allowances

Costs are based on the middle range of MCH pay scales for all personnel except Tutors. Tutors receive the upper limit of their respective salary range. The Administrator will also receive a responsibility allowance of So. Shs. 700 per month. Personnel having to move to staff PHCU's should receive a one-time moving allowance of So. Shs. 450 or \$75. Watchmen and Cleaners will be hired locally. Travel allowance (to be provided by the GSDR) is not included in the budget, as the number of days required for traveling by supervisory staff could not be reasonably estimated.

Personnel associated with the project

<u>Health Post</u>	Salary/mo. So. Sh	Salary/year \$	Moving allowance	Respon. allowance	Other
1 Health Worker	450	900			
1 TBA					Payment in kind
<u>PHCU</u>					
1 PH Nurse/MW	900	1800	75		Travel: 6-24 SoSh/night
1 Nurse/MW	900	1800	75		Travel: 6-24 So.Sh./night
1 Sanitarian	900	1800	75		Travel: 6-24 So.Sh./night
1 Watchman	350	700	-		
1 Cleaner	350	700	-		
<u>District Health Center</u>					
2 Nurse Practitioners	1100	2200			Travel: 6-24 So.Sh./night
1 PH Nurse/MW	900	1800			Travel: 6-24 So.Sh./night
1 Nurse/MW	900	1800			Travel: 6-24 So.Sh./night
1 Sanitarian	900	1800			Travel: 6-24 So.Sh./night
1 Statistical Clerk	725	1450			
1 Driver	450	900			
1 Watchman	350	700			
1 Cleaner	350	700			

Health Post	Salary/mo. So.Sh.	Salary/year \$	Moving allowance	Respon. allowance	Other
<u>Reg. Training Center</u>					
2 Sr. PH Nurses	1200	2400			Travel:6-24 So.Sh./night
2 Sr. Nurses Practitioner	1200	2400			Travel: 6-24 So.Sh./night
1 Sr. Sanitarian/Supt.	1200	2400			Travel: 6-24 So.Sh./night
1 Administrator	1200	2400		700	Travel: 6-24 So.Sh./night
2 Secretaries	725	1450			
4 Drivers	450	900			
2 Watchmen	350	700			
1 Cleaner	350	700			

USAID will provide the salaries of the CHW's during the first 3 project years and the moving allowance for the PHCU staff.

D. Commodities

1. Vehicles

- a. 42 passenger:

DETAILED BUDGET BREAKDOWN  
(thousands of dollars)

	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				TOTAL			
	AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR	
	FX	LC	FX	LC	FX	LC	FX	LC																
<b>A. TECHNICAL ASSISTANCE</b>	73.				110				110				110				110				513			
1. Long Term																								
a. Health Planner (1)	73				110				110				110				110				513			
b. PH Nurse/Educator (2)	100				150				150				150				150				700			
c. Nurse/NW Educator (2)	100				150				150				150				150				700			
d. Epidemiologist/ Sanitarian (2)	120				180				180				180				180				840			
e. Supply Management Specialist (1)	65				100				100				100				100				465			
SUBTOTAL	458				690				690				690				690				3,218			
2. Short Term																								
a. 39 PM specified assistance	360				108				--				--				--				468			
b. 30 PM unspecified assistance	72				72				72				72				72				360			
c. 9 PM for 2 evaluations	--				--				54				--				54				108			
TOTAL (Technical Assistance)	890				870				816				762				816				4,154			
<b>B. TRAINING</b>																								
1. In-Country																								
a. Orientation for tutors	.36				--				--				--				--				.36			
b. Retraining for trainers	121				506				352				264				264				1,507			
c. Basic training for health workers	--				6				2				6				5				19			
SUBTOTAL	121.36				512				354				270				269				1,526.36			

**DETAILED BUDGET BREAKDOWN**  
(thousands of dollars)

	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				TOTAL					
	AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR			
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC		
<b>B. TRAINING (cont.)</b>																										
2. Participant																										
a. Long-term (U.S.)	56				28				-				-				-								84	
b. Short-term (U.S.)	20				20				20				20				20								100	
c. Short-term (third country)	6				6				6				6				6								30	
d. Workshops/ Seminars	10				5				5				10				-								30	
SUBTOTAL	92				59				31				36				26								244	
TOTAL (TRAINING)	213				571				385				306				295								1770	
<b>C. SALARIES AND ALLOWANCES</b>																										
1. Salaries of staff																										
a. Health Post																										
CHW (1)						77.4				96.3					173				230				174	403		
TBA (1)																										
b. PHCU																										
PH Nurse-MW (1)			29				43			58				86				115							331	
Nurse/MW (1)			29				43			58				86				115							331	
Sanitarian(1)			29				43			58				86				115							331	
c. District Health Center																										
Nurse Practi- tioner - Jr.(2)			17.6				35			70				70				70							263	
PH Nurse/MW (1)			7.2				14.4			14.4				28.8				28.8							94	
Nurse/MW (1)			7.2				14.4			14.4				28.8				28.8							94	
Sanitarian (1)			7.2				14.4			14.4				28.8				28.8							94	
Statistical Clerk (1)				5.8			11.6			23.2				23.2				23.2							87	



DETAILED BUDGET BREAKDOWN  
(thousands of dollars)

	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				TOTAL							
	AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR					
	FX	LC	FX	LC	FX	LC	FX	LC																				
<b>D. COMMODITIES (cont.)</b>																												
b. Truck (4) - incl. 25% spare parts & 30% transport/ins.	-				48				-				48				-				96							
SUBTOTAL	182				146				70				216				70				684							
c. Fuel (18%)			21				33				33				45				45				177					
d. Maintenance (5%)				6				9				9				13				13				50				
e. 33% depreciation after replacement															84				84				168					
2. Drugs																												
a. Health Post/Mobile Health Worker	3		-		13		-		16		5		16		13		7		22		55		40					
b. PHCU	6				12		-		6		6		12		12		12		12		48		30					
c. District Health Center																												
SUBTOTAL	12.5				12.5				-		-		25		-		-		-		50		-					
SUBTOTAL	22				37				22		11		53		25		19		34		153		70					
3. Equipment & Supplies																												
a. Health Post	2				3				4				3				-				12							
b. PHCU	19				6				-				13				13				51							
c. District Health Center																												
d. Regional Training Center																												
SUBTOTAL	166				-				-		-		-		-		-		-		166		-					
SUBTOTAL	192				14				4				26				13				249							
20% per annum depreciation			38				41				42				47				50				218					

**DETAILED BUDGET BREAKDOWN**  
(thousands of dollars)

ANNEX H-18

	YEAR 1				YEAR 2				YEAR 3				YEAR 4				YEAR 5				TOTAL					
	AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR		AID		GSDR			
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC		
4. Other Commodities 20% per annum depreciation			4.6				4.6				4.6				4.6				4.6							23
<b>TOTAL (COMMODITIES)</b>	<u>419</u>		<u>64</u>	<u>6</u>	<u>197</u>		<u>79</u>	<u>9</u>	<u>96</u>		<u>91</u>	<u>9</u>	<u>295</u>		<u>205</u>	<u>13</u>	<u>102</u>		<u>217</u>	<u>13</u>	<u>1109</u>		<u>656</u>	<u>50</u>		
<b>E. CONSTRUCTION (GSDR)</b>																										
1. Health Post				3				4				6				4										17
<b>TOTAL GSDR CONSTRUCTION</b>				<u>3</u>				<u>4</u>				<u>6</u>				<u>4</u>										<u>17</u>
<b>TOTAL (ALL INPUTS EXCEPT USAID CONSTRUCTION)</b>	1522	5	64	204	1638	79.4	79	331	1297	96.3	91	446	1363	4	205	782	1213	3	217	944	7033	188	656	2707		
CONTINGENCIES	152	5	6	21	164	8	8	33	130	9	9	45	136	4	21	78	121	2	22	94	703	19	66	271		
INFLATION (10% Compounded)	152	5	6	21	343	16	16	69	429	32	30	141	632	1.8	95	363	740	1.8	132	576	2296	52.1	279	1177		
<b>SUBTOTAL: PROJECT COST</b>	<u>1826</u>	<u>6</u>	<u>76</u>	<u>246</u>	<u>2145</u>	<u>103.4</u>	<u>103</u>	<u>433</u>	<u>1856</u>	<u>137</u>	<u>130</u>	<u>639</u>	<u>2131</u>	<u>6.2</u>	<u>321</u>	<u>1223</u>	<u>2074</u>	<u>5.1</u>	<u>371</u>	<u>1614</u>	<u>10032</u>	<u>257</u>	<u>1001</u>	<u>4155</u>		
<b>F. CONSTRUCTION (USAID)*</b>																										
1. Training Center	542				-				-				-				-				542					
2. Housing for T.A.	740				-				-				-				-				740					
3. PICU	886				636				-				1170				842				1534					
4. District Health Center	32				32				-				80				-				144					
<b>TOTAL (USAID CONSTRUCTION)</b>	<u>2200</u>				<u>668</u>								<u>1250</u>				<u>842</u>				<u>4960</u>					
<b>TOTAL PROJECT COST</b>	<u>4026</u>	<u>6</u>	<u>76</u>	<u>246</u>	<u>2813</u>	<u>103.4</u>	<u>103</u>	<u>433</u>	<u>1856</u>	<u>137</u>	<u>130</u>	<u>639</u>	<u>3381</u>	<u>6.2</u>	<u>321</u>	<u>1223</u>	<u>2916</u>	<u>5.1</u>	<u>371</u>	<u>1614</u>	<u>14992</u>	<u>257</u>	<u>1001</u>	<u>4155</u>		
<b>GRAND TOTAL</b>	<u>4032</u>		<u>322</u>		<u>2916</u>		<u>536</u>		<u>1993</u>		<u>769</u>		<u>3387</u>		<u>1544</u>		<u>2921</u>		<u>1985</u>		<u>15,249</u>		<u>5156</u>			

\* Estimated costs of USAID construction include inflation and contingencies.

RURAL HEALTH - SOCIAL SOUNDNESS ANALYSISTraditional Attitudes Towards Health and Disease

Although like many other deeply religious people, the Somalis philosophically accept the problems that are inherent in the human condition, they also have a strongly pragmatic attitude towards health. Good health is the ideal condition for which all strive. "Health", indeed, is one of the common Somali daily greetings. Understanding of health and disease, as with other phenomena, is multicausal. Mystical and non-mystical causes, the former ultimately referable to the inscrutable will of God, are regularly intertwined in explaining particular diseases and their cure. Mystical explanations become particularly prominent in explaining why particular individuals succumb to illnesses when other people, equally at risk, do not.

The witchcraft beliefs which are so powerfully developed elsewhere in Africa, although not entirely absent, are, however, not strongly developed in Somalia. The closest approximation are beliefs in the power of evil spirits, sanctioned by the Quran, which can cause a variety of symptoms and diseases by entering into the body of their human victims.

Possession by evil spirits known under a variety of names is commonest amongst urban women. Those typically affected are women who in towns are more subject to Islamic restrictions than in the nomadic interior. Since treatment is costly and the cost falls most heavily upon husbands and male kin, this affliction is regarded as a means by which women manipulate their menfolk. These traditions' beliefs in spirit possession are today waning and are strongly discouraged by the Somali Government.

More generally, the emphasis traditionally is on a pragmatic approach to illness and its treatment. Thus, as the English explorer Richard Burton inadvertently recorded in the middle of the last century, Somalis were aware that mosquitoes caused malaria before this was known to Europeans. They also traditionally employed a number of practical treatments which were clearly based on systematic observation and trial and error. These included a form of small-pox vaccination, bone-setting, cauterising for pains (including those associated with T.B.), isolating people with infectious diseases, and trepanning. Here, of course, as in female circumcision, infibulation, and severing the umbilical cord, surgery was somewhat crude and not infrequently followed by septicemia. Various ointments and unguents, some composed of herbal remedies, were widely used as well as ghee given to the sick and convalescent. Traditional mid-wives employ similarly pragmatic techniques in facilitating delivery. There is, thus, a considerable if quite imperfectly documented, traditional pharmacopea.

Such pragmatically based treatments are traditionally readily combined with, or supplemented by, religious medication. The commonest practice here is probably the ingestion of an ink solution made by writing passages from the Quran on

paper and washing these off into a solution. This treatment may be supplemented by blessings given by the holy men (wadeods) who prepare these oral remedies. The mystical and the non-mystical thus readily blend harmoniously without being in conflict.

It is consequently not surprising that, as a whole, the rural Somali nomads and cultivators- have readily accepted modern medical techniques. Here they show considerable sophistication. In the early 1950's, following World War II, the constant demand among the nomads was for "MB" (i.e., the supha drugs newly developed by May and Baker during the war). Now more up-to-date antibiotics are requested and widely used. On the whole, injections are preferred to pills and doctors sometimes wryly report that their patients scorn their pills and angrily request injections which they believe to be more effective and powerful. This may possibly reflect earlier conceptions of spirits and powers entering the body to cause illness. If illness can be caused in this way, it is logical to consider that it may also be treated in a similar fashion.

In any event, there is little serious resistance to modern treatments and techniques. The success of the recent small pox campaign in the rural areas is an excellent demonstration of this. Where a new treatment does meet with resistance this can usually be overcome by straight-forward demonstrations of its effectiveness. There is no reason why this pragmatic approach should not be combined with the mystical. Thus where resistance to new drugs is encountered, this might be reduced by having them publically blessed by forward-looking religious leaders. The most serious obstacle at the moment in therapy is the tendency, by no means unique to Somalis, to discontinue taking prescribed drugs as soon as an improvement in health takes place, and the symptoms of disease disappears. This failure to complete a course of drug treatment, unless under direct medical supervision, is often noted in cases of T.B. and other serious communicable diseases. Since it is widely known to the local medical authorities, strong support can be expected in campaigns of health education where this requirement in successful therapy is stressed. These, as the authorities fully appreciate, should, of course, also stress hygiene - particularly in the case of sedentary groups. Amongst the nomadic population, who seldom stay for long periods in the same location, sanitary problems are often less pronounced.

The Somali Government is also equally aware of the public's generally negative attitude towards family planning. Aware of the hazards of disease, injury and premature death, people deliberately try to have as many children as possible. As with livestock, so with people and numerous progeny are a source of pride and public esteem. At the same time, as a martial people, the Somali feel a strong need to increase their population, particularly in manpower. These traditional attitudes are strongly reinforced by recent war with Ethiopia and the ongoing guerrilla struggle. War is hardly an incentive to population control - although it may itself have this malthusian effect.

#### Constraint and Their Resolution

There are thus really few genuine barriers to the "transfer" of new medical technology from the point of view of traditional beliefs. This is a misconception,

based on ignorance of local conditions, and unfortunately widely spread among foreign 'experts'. The most pressing problems are actually logistics and arise from the pattern of nomadic movements amongst the bulk of the Somali population. The answer by no means new or untried, is to extend and reinforce existing health provision in the rural areas. Amongst the nomads this means renewing existing and building more and better equipped (and serviced) dispensaries at major watering points. Water distribution is the key factor here. The dry season wells, round which market centers develop, are regularly frequented by the nomads -- particularly at the time of year when food supplies are most limited and the incidence of disease most high. There is every reason to expect that there would be a warm welcome for the revival of simple mobile dispensaries, with especially-trained dressers, to visit nomadic encampments in the wet seasons when people are most densely concentrated. Ideally this should be supplemented by a supervisory and referral service consisting of senior dresser (or where possible, doctors) using specially equipped land-rovers (or similar vehicles) as mobile health units. This would also allow simple operations to be carried out on the spot and seriously ill patients transported to local hospitals.

As far as health education and hygiene are concerned, the most effective medium is radio. The Somalis have an extremely rich oral culture, they value their language very highly, and oratory, poetry and song remain the most effective means of influencing the mass of the population. Transistor radios are also widely distributed among the local nomads. Since they are not a visual culture, posters, however ingenious, are unlikely to make much impact. In designing suitable radio programmes consideration should be given to the growing problems of drug abuse. This arises from the fact that many extremely powerful drugs (antibiotics and others) are widely available and regularly sold without medical prescription in local pharmacies. The privately-owned pharmacies are often, paradoxically, much better equipped than hospital dispensaries. The high cost to the public of drugs from such medicine stores is an additional problem meriting ministerial action and attention at the highest level of government.

An effective extension and reinforcement of the existing health services along these lines will undoubtedly greatly benefit the rural areas of the S.D.R. Ideally, this should, of course, be coordinated with the provision of additional water facilities and the further distribution of the mosquito-eating fish.

6C(2) - PROJECT CHECKLIST

Listed below are, first, statutory criteria applicable generally to projects with GAA funds, and then project criteria applicable to individual fund sources: Development Assistance (with a sub-category for criteria applicable only loans); and Security Supporting Assistance funds.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP-TO-DATE? IDENTIFY. HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT.

1. App. Unnumbered; FAA Sec. 653 (b)

<p>(a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project;</p> <p>(b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure plus 10%?)</p>	<p>(a) FY 79 Congressional Presentation.</p> <p>(b) Yes.</p>
--	--
  
2. FAA Sec. 611 (a)(1). Prior to obligation in excess of \$100,000, will there be (a) Engineering, financial and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

	<p>(a) Yes.</p> <p>(b) Yes.</p>
--	---------------------------------
  
3. FAA Sec. 611 (a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?
  
4. FAA Sec. 611 (b); App. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per Memorandum of the President dated Sept. 5, 1973 (replaces Memorandum of May 15, 1962; see Fed. Register, Vol. 38, No. 1974, Part III, Sept. 10, 1973)?

	<p>4. Not applicable.</p>
--	---------------------------
  
5. FAA Sec. 611 (e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified the country's capability effectively to maintain and utilize the project?

	<p>5. Yes</p>
--	---------------

6. FAA Sec. 209, 619. Is project susceptible of execution as part of regional or multi-lateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. If assistance is for newly independent country, is it furnished through multilateral organizations or plans to the maximum extent appropriate?
7. FAA Sec. 601 (a); (and Sec. 201(f) for development loans). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.
8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services:
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency and, if so, what arrangements have been made for its release?
7. As a health project, there will be no impact on (c) - (f); the construction and equipment elements will encourage (a) and (b).
8. U.S. technical assistance and commodities will be supplied to this project.
9. See financial analysis section of project paper.
10. No.

### B. FUNDING CRITERIA FOR PROJECT

#### 1. Development Assistance Project Criteria

- a. FAA Sec. 102(c); Sec. 111; Sec. 281a. Extent to which activity will a) effectively involve the poor in development, by
- (a) Project emphasis is directed toward improved delivery of primary health to

extending access to economy at local level, increasing labor-intensive production, spreading investment out from cities to small towns and rural areas; and (b) help develop cooperatives especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions?

the rural poor.

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available (include only applicable paragraph -- e.g., a,b, etc. -- which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source.)

- |   |   |
|---|---|
| <p>(1) (103) for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; (103A) if for agricultural research, is full account taken of needs of small farmers;</p> | <p>(1) Nutrition information will be disseminated as part of overall program to which this project contributes.</p>                       |
| <p>(2) (104) for population planning or health; if so, extent to which activity extends low-cost, integrated delivery systems to provide health and family planning services, especially to rural areas and poor;</p>   | <p>(2) This project is directed toward the delivery of low-cost, integrated, primary health care services to the rural poor.</p>          |
| <p>(3) (105) for education, public administration, or human resources development; if so, extent to which activity strengthens management capability of institutions enabling the poor to participate in development</p>  | <p>(3) Training of primary health care workers and supervisory health personnel will strengthen both non-formal and formal education.</p> |
| <p>(4) (106) for technical assistance, energy, research, reconstruction, and selected development problems; if so, extent activity is:</p>  |   |
| <p>(a) technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;</p>   | <p>(4) (a) Substantial cooperation with U.S. registered, private voluntary organization is proposed.</p>                                  |

- (b) to help alleviate energy problem; b. Not applicable
- (c) research into, and evaluation of, economic development processes and techniques; c. Not applicable
- (d) reconstruction after natural or manmade disaster; d. Not applicable
- (e) for special development problem, and to enable proper utilization of earlier U.S. infrastructure, etc., assistance; e. Not applicable
- (f) for programs of urban development, especially small labor-intensive enterprises, marketing systems and financial or other institutions to help urban poor participate in economic and social development. f. Not applicable
- (5) (107) by grants for coordinated private effort to develop and disseminate intermediate technologies appropriate for developing countries. 5. Not applicable
- c. FAA Sec. 110(a); Sec. 208(e). Is the recipient country willing to contribute funds to the project, and in what manner has or will it provide assurances that it will provide at least 25% of the costs of the program, project or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)? c. Although a "relatively least-developed country, the GOS will fund the major share of the primary health care program and at least 25% of the costs of the AID-supported element.
- d. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing? d. No.
- e. FAA Sec. 207; Sec. 113. Extent to which assistance reflects appropriate emphasis on; (1) encouraging development of democratic, economic, political and social institutions; (2) self-help in meeting the country's food needs; (3) improving availability of trained worker-power in the country; (4) programs designed to meet the country's health needs; (5) other important areas of economic, political and social development, including industry e. Project will encourage (1) - (6) by: utilizing local social institutions; encouraging self-help efforts funding health training; funding and cooperating with a PVO; and encouraging the integration of women into the primary health care program. See social analysis section of project paper.

free labor unions, cooperatives and Voluntary Agencies; transportation and communication; planning and public administration; urban development and modernization of existing laws; or (6) integrating women into the recipient country's national economy.

f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires and capacities of the people of the country; utilizes the country's institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.

g. FAA Sec. 201(b)(2)(4) and -(8); Sec. 201(2); Sec. 211(a)(1)-(3) and -(8). Does the activity give reasonable promise of contributing to the development; of economic resources, or to the increase of productive capacities and self-sustaining economic growth; or of educational or other institutions directed toward social progress? Is it related to and consistent with other development activities, and will it contribute to realizable long-range objectives? And does project paper provide information and conclusion on an activity's economic and technical soundness?

h. FAA Sec. 201(b)(6); Sec. 211(a)(5), (6). Information and conclusion on possible effects of the assistance on U.S. economy, with special reference to areas of substantial labor surpluses, and extent to which U.S. commodities and assistance are furnished in a manner consistent with improving or safeguarding the U.S. balance-of-payments position.

f. Project supports a national program developed by the GOS, which emphasizes local participation and development. See social analysis section of project paper.

g. Yes. See social, technical and financial sections of project paper.

2. a-f Not Applicable

6C(3) - STANDARD ITEM CHECKLIST

Listed below are statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by exclusion (as where certain uses of funds are permitted, but other uses not).

These items are arranged under the general headings of (A) Procurement, (B) Construction and (C) Other Restrictions.

A. Procurement

- |   |   |
|---|---|
| 1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of goods and services financed?  | 1. Yes.   |
| 2. FAA Sec. 604(a). Will all commodity procurement financed be from the U.S. except as otherwise determined by the president or under delegation from him?  | 2. Yes. Where necessary, applicable waivers will be obtained prior to purchase of non-U.S. commodities. |
| 3. FAA Sec. 604(d). If the cooperating country discriminates against U.S. marine insurance companies, will agreement require that marine insurance be placed in the U.S. on commodities financed?   | 3. Yes.   |
| 4. FAA Sec. 604(e). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity?  | 4. Not applicable.  |
| 5. FAA Sec. 608(a). Will U.S. Government excess personal property be utilized wherever practicable in lieu of the procurement of new items?   | 5. Not practicably applicable.  |
| 6. FAA Sec. 901(b). (a) Compliance with requirement that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners and tankers) financed shall be transported on privately owned U.S.-flag commercial vessels to the extent that such vessels are available at fair and reasonable rates. | 6. Compliance will be observed where possible   |
| 7. <u>FAA Sec. 621.</u> If technical assistance is financed, will such assistance be furnished to the fullest extent practicable as goods and professional and other  | 7. Technical assistance will be provided through competitive bidding by private U.S. enterprises .      |

services from private enterprise on a contract basis? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic program .

8. International Air Transport. Fair Competitive Practices Act, 1974

YES

If air transportation of persons or property is financed on grant basis, will provision be made that U.S. - flag carriers will be utilized to the extent such service is available?

B. Construction

- |   |                   |
|---|-------------------|
| 1. <u>FAA Sec. 601(d)</u> . If a capital (e.g., construction) project, are engineering and professional services of U.S. firms and their affiliates to be used to the maximum extent consistent with the national interest? | 1. Yes.           |
| 2. <u>FAA Sec. 611(c)</u> . If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?  | 2. Yes            |
| 3. <u>FAA Sec. 620(k)</u> . If for construction of <u>productive enterprise</u> , will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million?  | 3. Not applicable |

C. Other Restrictions

- |   |                    |
|---|--------------------|
| 1. <u>FAA Sec. 201(d)</u> . If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?   | 1. Not applicable. |
| 2. <u>FAA Sec. 301(d)</u> . If fund is established solely by U.S. contributions and administered by <u>an international organization</u> . does Comptroller General have audit rights?      | 2. not applicable  |
| 3. <u>FAA Sec. 620(h)</u> . Do arrangements preclude promoting or assisting the foreign aid projects or activities of Communist-Bloc countries, contrary to the best interests of the U.S.? | 3. Yes.            |

4. FAA Sec. 636(i). Is financing not permitted to be used, without waiver, for purchase, long-term lease, or exchange of motor vehicle manufactured outside the U.S. or guaranty of such transaction? 4. Yes.
5. Will arrangements preclude use of financing:
- a. FAA Sec. 114. to pay for performance of abortions or to motivate or coerce persons to practice abortions? a. Yes.
- b. FAA Sec. 620(g). to compensate owners for expropriated nationalized property? b. Yes.
- c. FAA Sec. 660. to finance police training or other law enforcement assistance, except for narcotics programs? c. Yes.
- d. FAA Sec. 662. for CIA activities? d. Yes.
- e. App. Sec. 103. to pay pensions, etc., for military personnel? e. Yes.
- f. App. Sec. 106. to pay U.N. assessments? f. Yes.
- g. App. Sec. 107. to carry out provisions of FAA Sections 209(d) and 251(h)? (transfer to multilateral organization for lending). g. Yes.
- h. App. Sec. 501. to be used for publicity or propaganda purposes within U.S. not authorized by Congress h. Yes.

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Somalia

Project Title: Rural Health Service

Project Number: 649-0102

Funding (Fiscal Year and Amount):

Life of Project: Five Years

IEE Prepared by: Mission Date: 11/16/78

Environmental Recommendation: Negative determination

Concurrence: For Charles P. Campbell Date: 11/16/78  
AID Rep, USAID/Somalia

*Richard H. ...*  
af/EA

Assistant Administrator's/Director's Decision: Date: 11/16/78

- 2 -

## I Project Description

AID will assist the Somali Government design a primary health care delivery system. Principal recipients are to be the rural agriculturalists and nomads with the focus on promotive and preventive health services. Four of the nations sixteen regions will be utilized to test the program. If successful, the program can be extended by the Government to cover the remaining twelve regions.

Specifics of the project include: 1) Establishment of a comprehensive methodology for health systems integration and development, 2) training of staff, 3) provision of essential commodities and construction in support of the pilot system, and 4) establishment of a review procedure to assure viability and replicability.

Implementation is to be in two phases: Phase 1, Years 1 to 3 focuses on program development in 2 regions; Phase 2, years 4 and 5, replicates primary health care services tested and operational in Phase 1 into the remainder of the four test regions.

## II Discussion of Impacts

### A. Construction of facilities.

New health care facilities and teaching units will be constructed.

Renovation of existing facilities will also be undertaken to conserve

- 3 -

on resources. Major construction consists of the 64 three room primary health units, 2 training centers, and siting of 8 prefabricated residents for advisors. Renovation will be conducted on 16 existing district health centers. The construction is expected to have only a short term and localized minor influence on the environment.

B. Population Pressures and Land/Resource Use

A concern associated with any major health project is that of sudden increases in population, often at rates far in excess of the natural carrying capacity of the land. While the project on first glance appears to have that potential, after careful analysis, such is not the case. As the program progresses (Phase 2), some reduction in neonatal death rates are expected. The degree of reduction will be dependent upon acceptance of the projects methods. Until the Somali Government has a fully established and functioning rural health care system, the overall reduction in death rate is not expected to be great. Some extension in longevity is also expected, again dependent upon the success of the program.

Under this framework, the five year project is not expected to have a significant affect on population, and should not substantially affect land use. In all likelihood, the project will need to be extended another 5 years to see the full benefits within the 4 regions constituting the test area. Replication to the remaining 12 regions should, at that

- 4 -

time, be fairly rapid. The decision to replicate the program will be dependent upon its success and the resources within the Somali Government. Population estimates for 1988, assuming the current 2.5% growth rate, are around 3.8 million. Once the rural health program is entirely functional and adopted through out Somalia, the reduction in neonatal deaths will have a substantial affect on population figures.

Currently neonatal deaths in rural and nomadic populations amount to 176 per 1000 live births. The majority of such deaths are easily preventable through proper sanitation and sterile technique. A reduction of 80 percent in these deaths will cause the net population increase to shift from the current 2.5% to about 2.9 or 3.0%. The current government programs for the expansion of production will need to consider the effect of these changes. The lead time for proper planning seems ample and the project does have provisions for maternal health care including the extension of child spacing and family planning.

#### C. Water Quality

Ultimately, the results of the program should have a beneficial effect on water quality. As rural and nomadic peoples become aware of the relations between health and water, the care of this resource should increase.

#### D. Health

The project, per its design, will allow the Somali Government to extend

- 5 -

health coverage. When this occurs, it will have a major benefit for the majority of the population, the rural population.

E. Socio-Economic

Promotive and preventive health care systems will have a two pronged effect. Firstly, the human resource will be upgraded and thus the capacity for output increased, Secondly, preventive systems over time are less expensive than curative, therefore the long run governmental expenditures will be less.

III Recommended Action

A. The project from the narrow perspective of its five-year life will have no appreciable affect on the environment, therefore a negative determination is recommended. However, in order to be meaningful this assessment must be based on good data to show accurate projections of the possible changes in the population pyramid. Any attempt to undertake the analysis without some on-the-ground experience with a delivery program showing what the changes in infant mortality and life expectancy are likely to be purely conjectural. The on-the-ground experience will also give some indications of changing attitudes vis a vis family size due to the changes in infant mortality. Therefore an environmental assessment examining the effects of the health program should be conducted as part of the year 3 evaluation relating the changes in the population to the land carrying capacity analysis done in the environmental profile. This preliminary assessment should be updated and expanded in the year 5 evaluation.

ANNEX L

Section 611(e) Certification

Somalia Rural Health Project - Project No. 649-0102

The purpose of this project is to assist the Ministry of Health of the Government of Somalia Democratic Republic in developing an institutional capability to provide comprehensive Primary Health Care Services to the rural poor and nomadic population of Somalia. AID input to the project will consist of providing six long term technically qualified U.S. personnel along with short-term consultants plus other necessary inputs such as training, project related commodities and construction of training institutes (2), primary health care units (64) housing for U.S. and local technicians and some renovation or construction of existing district health centers in four regions of Somalia. By the end of the five-year project period some 800,000 rural poor and nomadic population in four regions of Somalia will receive Primary Health Care services.

Somalia's ability to main<sup>tain</sup> and utilize the project with respect to financial and manpower capability is successfully demonstrated by two AID financed major projects in 1960's namely Mogadiscio Water System and Kismayo Port which are functioning effectively. With regards to the building activities, AID financed Institute of Public Administration in Mogadiscio in 1969 is well maintained and functioning extremely well.

I, Charles P. Campbell AID Representative in Somalia, certify that the Government of Somalia will have at the end of project period, financial and human resources capability to operate and maintain the project activities provided under this Somali Rural Health Project. The GSDR has demonstrated in the past its capability to utilize and maintain AID project activities established in the prior years.

Date

11/23/78



Charles P. Campbell  
AID Representative

## ANNEX M

### TECHNICAL ANALYSIS - CONSTRUCTION

**A. Description:** The project is designed to assist the Government of Somalia Democratic Republic, Ministry of Health (GOSDR/MOH) in developing an institutional capability to provide comprehensive Primary Health Care Services to the rural poor and nomadic population as an integral part of the existing MOH rural health services thru the proposed institutional training program will train approximately 900 health workers (including 512 community health workers and traditional birth attendants who will provide comprehensive primary health care services to some 800,000 rural and nomadic poor population in four regions of Somalia namely TOGDHEER, MUDUG, BAY and Lower JUBA regions. (see the attached map) to implement this project activity, six long term and some short term U.S. technicians are proposed to assist GOSDR/MOH in developing institutional capability. The U.S. Technicians will be located at two proposed training institutes, one at BURAO town in TOGDHEER region and one at BAIDOA town in Bay Region. REDSO Engineer has visited the proposed site for training center at BAIDOA. It is proposed to provide four 3 bedroom prefabricated houses at each of training centers (at Burao and Baidoa) for U.S. technicians. Three of the four houses at each site will be used by long term employees and one for short time TDYer's as a transient quarter. In addition it is proposed to construct four 2 bedroom houses at each training center (Burao and Baidoa) for Somali local counterparts. Each training center to be built will have a housing/dining facilities for 30 (thirty) students with classroom and office space facilities, storage and a small library. It is proposed to build 64 (sixtyfour) primary health care units, four in each district of our regions are proposed to be built. Each region have four districts. Along with each PHCU, it is proposed to build a block of 3 one bedroom/lounge for three public health attendants attached to the PHCU. Due to poor building conditions of some of the District hospitals, it is proposed to renovate 16 nos. of district health centers. The total construction element under this project has been briefly summarized below:

<u>Type of Construction</u>	<u>No. of Units</u>	<u>Area of ea.Unit</u>	<u>Total Area</u>	<u>Location</u>
1. Training center (housing/dining/Kitchen block and classroom/st off office block)	Two	872 SQ. Mt.	1754 SQ. Mt.	BURAO (1) BAIDOA (1)
2. U.S. technician 3 bedroom houses	Eight	1152 SQ. Mt.	9216 SQ.Mt.	BAIDOA (4) BURAO (4)
3. 2 bedroom quarters for Somali counterparts	Six	75 SQ. Mt.	270 SQ. Mt.	BAIDOA (3) BURAO (3)
4. Primary Health Care Units Sixtyfour	Sixtyfour	75 SQ.Mt.	4800 SQ.Mt.	4 per each district

- 2 -

5. 3 room quarter for PHCU attendents	Sixtyfour	78 SQ.MT.	4992 SQ.Mt.	4 per each district.
6. Renovation and/ or construction of existing district health centers	Sixteen			In 16 district. of four regions.

Brief construction description of each of the above activities is appended below:

1. Training Center: Each training center will be a single story structure having sixteen room dormitory (two in each room) with dining and kitchen facilities for thirty occupants. Dormitory/kitchen block will be connected with a covered walkway to the office/classroom block. Office/classroom block will have two classrooms, a principal's office, administrative's office a small stationary store, a library and an office space for seven teachers. All walls will be built with burnt bricks (if cheaply available), or cement block or rocks. Roof will be covered with asbestos roofing sheets resting on wooden trusses with false ceiling. Floors will be of cement concrete having a smooth finish. All windows will be glass louvered windows covered with mosquito screening.
2. 3 Bedroom Prefabricated house: This will be a U.S. manufactured, akin to (drawing no. H89) modular house manufactured by ATCO.
3. 2 Bedroom Quarters: These are designed to suit local Somalian needs having two bedrooms living/dining and kitchen area with an open veranda. Construction materials will be the same as that of training center above.
4. Primary Health Care Unit: This will be a single story structure with an examination/dressing/treatment area, a small office, a waiting area and two small stores. Construction materials will be the same as above.
5. Attendant Quarters: A single story structure with one bedroom and verandah for each occupant (total three occupants) with separate kitchen, store and bathroom facilities for each of the three occupants with an open courtyard in-between. Pit latrines for these three occupants are proposed to be sited away from residential facilities.
6. Renovation/Construction of District Health Centers: This will involve, repairing of leaking roof, screening windows, providing storage facilities, construction of portion walls, painting etc. In the event if the Health Center is in a very poor condition and repair costs exceed the new

- 3 -

construction, it is proposed to rebuilt the entire Health Center. A comprehensive status report shall be prepared by Ministry of Health officials for each of the sixteen district centers assessing its present physical status and types of repairs recommended.

B. Construction Climate: Most of the building in the country consist of cement block walls, hollow burnt bricks walls, or random rubble masonry walls with concrete roofs (if near to the sea) or corrugated iron or asbestos sheets in up country area. Louvered glass windows are assembled by a local factory. Also flushdoors are produced locally. Wood of good quality is scarce in the country resulting in importation of timber (generally cyprus). All other building materials e.g. ironmangery, cement, glass, roofing sheets, sanitary hardware, electrical supplies etc are imported in the country. Two state run organizations are responsible for importing all building materials. Lack of foreign exchange sometimes creates an acute shortage of building materials in the country, resulting in delays or complete stoppage of the construction activities. Quality of the construction work in the country ranges from average to poor due to acute shortage of skilled workers e.g. carpenters, masons, plumbers, electricians and capable building foremen. There are several qualified local contractors in the country capable of carrying out construction activity of this size. Somalia National Construction Agency, a Government operated construction company is usually responsible for carrying out construction of government buildings.

C. Engineering Planning: The type and nos. of buildings proposed under this project has been accordance with the project need. The use of modular prefabricated 3 bedroom houses. In lieu of locally built houses has been necessitated due to uncertainty of timely availability of building materials, which may result in non availability of housing facilities when U.S. technicians arrive in the country. This type of modular houses recently built in Saudi Arabia have proven quite adequate and suitable for semi-desert climate. Constructions of the septic tank/soak pit and footings will be required to be ready prior to the arrival of these houses from U.S. It is estimated that at least 12 months will be required for these houses to be ready for occupancy (see state 272023). The government operated Somali Engineering Consulting Agency (under direction of Public Works Department) will be responsible for developing suitable design for footings and sewage facilities for these houses at both BURAO and BAIDOA. The local contractor will be selected to construct footings and sewage facilities (soak pit and septic tank). U.S. supplier will provide personnel for erection of these modular houses.

Sketch drawings for all other construction activities have been prepared by Somali Engineering Consulting Agency, which have been examined by REDSO Engineer and with some modifications meets REDSO approval. Final drawings and bid documents (contract conditions, technical specifications, bill of materials etc) will be prepared by the Somali Engineering Consulting Agency. REDSO engineer has ascertained this Government Agency

- 4 -

has both capability and qualified manpower availability to prepare IFB (invitation for bid) documents for the proposed construction. This Agency will be also responsible for supervision of construction and issuance of monthly payment certificates to the contractor. The contractor for construction services will be selected using standard Government of Somalia's construction contractor selection requirement incorporating chapter two of AID Handbook eleven guidelines for the selection of the construction contractor. The USCI Somalia Government practice of awarding contract to the state run Somalia National Construction Agency for Government Projects shall not be applicable to the construction activities under this project. The availability of bid package will be published in local news paper and prospective bidders will be prequalified to ensure that are financially sound, capable of performing the work and are bona-fide Somali firm. Proposals of qualified bidders will be examined responsiveness by Somali Engineering Consulting Agency and the lowest responsive bidder with REDSO approval will be awarded the contract.

To ease the present shortage of building materials, it is proposed that a quantified list of materials required for this project will be prepared by the Somali Engineering Consulting Agency and foreign exchange under this project will be made available thru letter of commitment to the Government Agency responsible for importing building materials in the country. If the source of importation is outside the United States, then a waiver permitting importation of these building materials from the developing countries will be requested. The payments to the Government will be made on the cost reimbursable basis, meaning Government of Somalia will initially pay to the contractor and periodically submit the bills to the AID for reimbursement. Each of the construction contract will be executed between the contractor and Ministry of Health or other designated Government Ministry.

It is proposed that a local Somali engineer for supervising and monitoring construction element of this project be hired on a contract basis with USAID/Somalia. He will be directly responsible for all the aspects of the proposed construction and will report to the USAID project officer.

In the event, the importation of building materials become too time consuming and require a large setup with regards to both inland and overseas shipment, storage etc. it is recommended that all the construction element under this project be prefabricated type and importation in Somalia be made from United States only. This decision be made at the early stage of the project implementation and the USAID project officer with assistance of REDSO will approach the U.S. firms specialized in prefabricated houses to solicit reasonably lowest eligible bid.

- 5 -

Implementation Schedule

It is proposed to carry out the proposed construction activity in a phased manner as follows:

Project Year	Location Region	PHCU	Renovation D.H.C.	Training Center	H O U S I N G		
					U.S. 3BR Quarter	LOCAL 2BR Quarter	3RM Attendent Hse.
1	Bay region	16	4	1	5	3	16
	TOGDHEER	8	-	1	3	3	8
2	TOGDHEER	8	4	-	-	-	8
3	-	-	-	-	-	-	-
4	MUDUG	8	4	-	-	-	8
	Lower Juba	8	4	-	-	-	8
5	MUDUG	8	-	-	-	-	8
	Lower Juba	8	-	-	-	-	8
TOTAL		64	16	2	8	6	64

D. Technical Soundness: With the exception of eight 3 bed room modular houses for U.S. technicians , all other construction component is local. All designs of proposed buildings have been kept simple and functional, suitable for project need and in conformance with local climate. In some site locations block cotton or clayey soil may be encountered. In this case footings will be reinforced with a foundations ring beam. However, during site selection (see site selection criteria) efforts will be made to avoid such soils to reduce construction cost. As an alternative, it is proposed that all the buildings be prefabricated to be shipped from the United States. This alternative is suggested because all building materials except sand and rocks are imported in the country, delays in the shipments and excessive transportation costs for upcountry locations may justify prefabricated structures more economical and feasible. Cost comparisons or prefabricated structures and locally built buildings have not been made at this stage. Due to lack of information on the costs for prefabricated structures as proposed under this project, the cost comparisons between prefabricated structures and locally constructed structures have not computed. It is proposed that USAID/Somalia Project Officer during his TDY in AID/W should explore this alternative in detail and contact various suppliers of prefabricated structures to determine the detailed cost comparison.

- 6 -

**E. Cost Estimates:** The cost of simple construction as proposed in the project runs between Somalia shillings 1,200 to 1,400 per square meter, or U.S.\$194 to 225 per square meter. However, these cost figures are based on the construction works carried out in Mogadiscio, capital city of Somalia. The cost of labour in TOGDHEER region and Lower Juba is about three times more than that in Mogadishu plus additional cost for transportation of materials. The cost of labour in MUDUG and Bay regions is about 50% more than that of Mogadishu plus additional cost for transportation of materials from Mogadishu. On these basis construction cost in year 1979-1980 in TOGDHEER and Lower Juba region will be approximately \$362 per square meter and in MUDUG and Bay region approximately \$260 per square meter. These cost figures are compounded for the portion of construction in year 1982-1983 by 15% inflation. This will give construction cost per square meter \$478 for TOGDHEER and Lower Juba region and \$344 for Bay and MUDUG region. These cost figures may seem high, however with the exception of two training centers and six 2 bedroom houses remaining portion of the construction (64 PHCU's and 64 attendant's Quarters) are located in the 16 districts of these four regions, where roads are very rough and locations remote. In some of the areas even basic construction materials like sand and rocks are unavailable and had to be transported from the nearby available supply.

On the basis the following estimates have been made:

TYPE OF CONSTRUCTION	1979 - 1980			1982 - 1983			REMARKS
	No. of Units	Cost per sq.m.	Total cost US\$.	No. of Units	Cost per Sq.m.	Total cost U.S.S	
Training Center	2	a) 362 b) 260	315664 226720	-	-	-	-
Prefabricated 3BR units U.S.	8	75000 each	600000	-	-	-	Five in Bay region and 3 in TOGDHEER
2BR House(local)	6	a. 362 b. 260	81450 58500	-	-	-	Three in Bay and three in TOGDHEER region
Primary Health Care Units	32	a. 362 b. 260	434400 312000	32	a. 478 b. 344	573600 412800	-
3RM Attendant's Quarter	32	a. 362 b. 260	451776 324480	32	a. 478 b. 344	596544 429312	-
Renovation of District Health center	8	8000 per unit	64000	8	10000 per unit	80000	
<b>T O T A L</b>			<b>U.S\$ 2868990</b>			<b>U.S.\$ 2092256</b>	

Total for construction = \$4,961,246.00

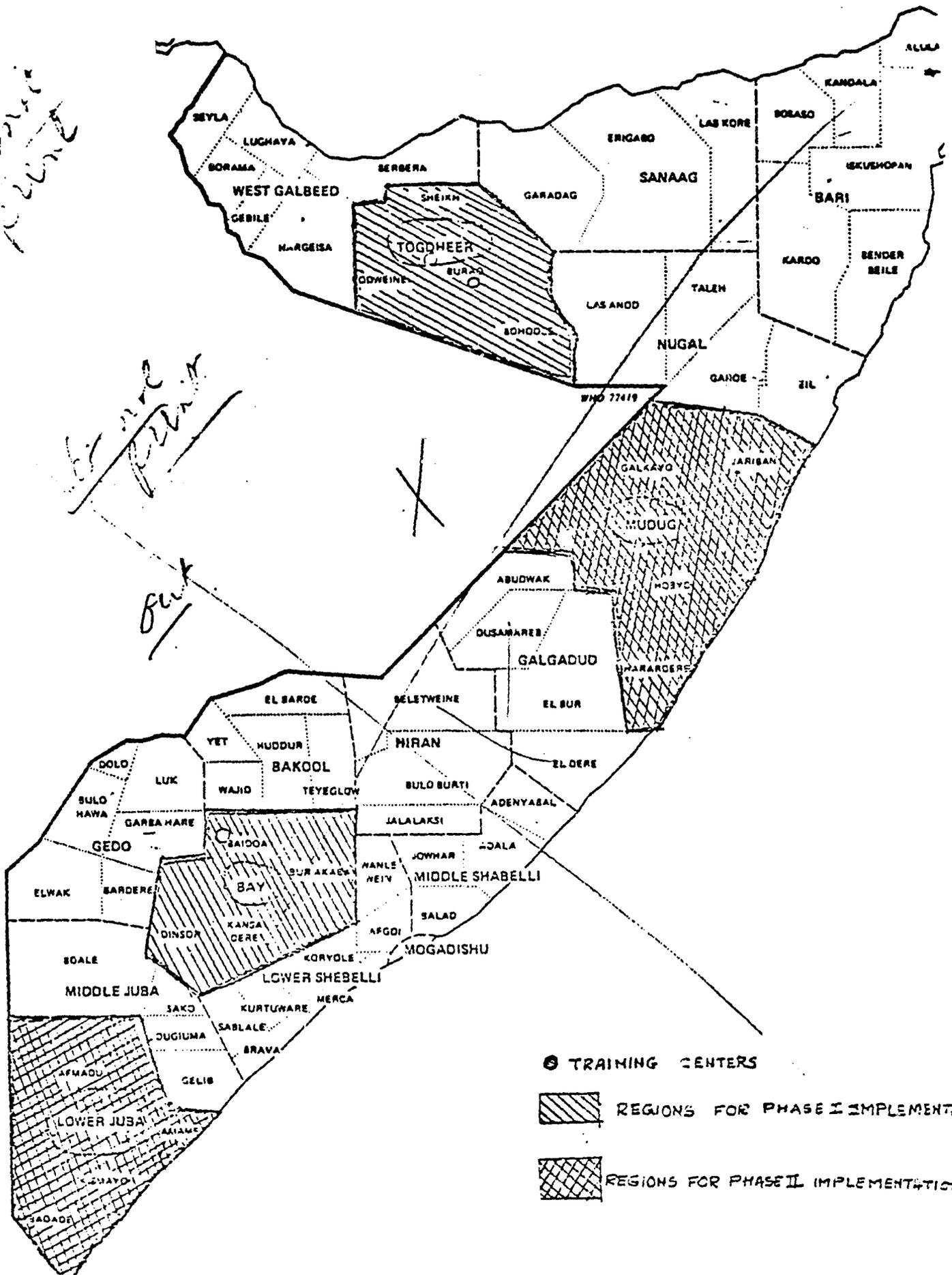
a) For TOGDHEER and Lower Juba regions

b) For Bay and MUDUG regions

Conversion rate U.S.\$1 = 6.189 Somalia Shillings.

*Handwritten notes:*  
10  
11/11/78

*Handwritten notes:*  
East  
West  
but



Attachment to "Technical Analysis  
(Construction)"Site Selection Criteria

1. Site shall be selected on a leveled, well-drained ground possibly free from black-cotton or excessive clayey soil and from the path of water from flooding or heavy rains.
2. Site shall be selected where local construction materials like sand, rocks etc. are available from a reasonable economical distance.
3. Site shall be selected where nearby stream, running water or water well is available.
4. The proposed site shall not encroach any arable land and or shall not encroach or destroy any historic monument or relic.
5. Site for proposed PHCU will be so located to serve maximum rural population in that area and shall be located within a reasonable walking distance.

## LETTER OF REQUEST FROM GOVERNMENT OF SOMALIA

WASAARADDA CAAFIMAADKA



وزارة الصحة

Ministry of Health.

am. Wazaa ku xiran

waabta warq. I.

XWWC 'D'K-158

14/11/78

الموضوع :

jeeddo :

Subject: Final draft of the  
proposed Rural Hea-  
lth project.

Mr. Chaires P. Campbell  
USAID/Somalia,  
Mogadiscio.

Dear Mr. Campbell:

I have the honor to inform you that the GSDR/MOH has reviewed the final draft project for the Rural Health project and finds it consistent with our aims of assisting the Ministry of health to establish a primary Health care program in four regions to reach the rural poor and nomadic population.

In my discussions on October 31, 1978 with the Health Team and key members of my staff I raised certain questions and made comments on the primary Health Care project paper :

1) USAID commit sufficient resources in order not only to introduce the programme in 4 Regions but also to replicate the programme in all the other remaining 12 Regions of the SDR.

2) USAID to establish vehicle maintenance workshop and assume full responsibility for fuel, spare parts, vehicle maintenance and training sufficient personnel in the principles of corrective as well as preventive maintenance of vehicles. local training is cost-effective and is therefore preferred.

3) Drugs and equipment supplies for the health units to be the responsibility of USAID during the first 5 years of the programme.  
Subsequent supplies to be subject for negotiations.

4) USAID Tutors and curriculum specialist to arrive together.

WASAARADDA CAAFIMAADKA

\_\_\_\_\_oOo\_\_\_\_\_



\_\_\_\_\_oOo\_\_\_\_\_

\_\_\_\_\_oOo\_\_\_\_\_

I am, \_\_\_\_\_ Waxaa ku xiran \_\_\_\_\_

Jawaabta warq. I., \_\_\_\_\_

no. \_\_\_\_\_

Ujeeddo :

( 2 )

- 5 ) USAID to increase the personnel to be trained in USA to 2 Doctors , 4 public Health Nurses and 4 Sanitarians.
- 6 ) USAID to increase the number of vehicles for supervision in each district from 1 to 2 per district.
- 7) USAID to provide a vehicle for the national programme manager.
- 8 ) Scale of allowances payable by SAID to health workers to be laid down by the MOH-to avoid anomalies in salaries of different catagories of health personnel.
- 9 ) USAIE to specify of allowance to be paid by USAID to national Tutors ,Doctors,Nurses,sanitarians and national programme Manager (S).

My Ministry and the Ministry of Finance are fully aware of the recurrent cost implications of the project and I want to assure you that GSER/MOH will do all it can to provide both the financial and technical support to make the PHCP a success. The Ministry will be willing to absorb the recurrent cost of the project on a phased basis through its regular budget process once the primary health care programme is introduced in the rest of the country.

I fully endorsed the primary Health care project for GSER/MOH in which all the points I have raised are reflected. I would like the project documentation to be finalized and the project implemented as soon as possible so that project results could be realized within the shortest possible time.

Yours sincerely,

*Muse Rabeleh Good*  
Col. Muse Rabeleh Good  
Minister of Health.  
Somalia.

