

PD - ABQ-605  
~~Return to~~ .98162  
~~A. FERRARA, ATR/EA~~

Eritrea Health and Population (EHP)

Project Number 661-0005

Project Paper (PP)

DRAFT. June 17, 1994  
Note Editing still in process

Eritrea Health and Population (EHP) Project  
Project Paper (PP)

**TABLE OF CONTENTS**

	<u>PAGE</u>
Project Data Sheet	1
Table of Contents	2
List of Acronyms	4
<b>I EXECUTIVE SUMMARY</b>	<b>5</b>
<b>II BACKGROUND AND RATIONALE</b>	
A Health Sector Overview	7
B Health Sector Context and Constraints	16
C GOE and Other Donor Activities in Health	24
D Experience with Similar Projects in Eritrea	27
E Relationship to USAID Strategic Statements	27
F Relationship to GOE Development Priorities	28
<b>III. DETAILED PROJECT DESCRIPTION</b>	
A Introduction	30
B Focus Provinces	32
C Sector Goal and Project Purpose	34
D End of Project Status	34
E Project Outputs and Inputs	35
<b>IV BUDGET SUMMARY &amp; FINANCIAL ANALYSIS</b>	<b>52</b>
A Budget Summary	
B Project Budget Tables	
C FAA Section 611a and 611e	
D Financial Sustainability	
E Methods of Financing	
H Review of MOH and MOF Financial Systems	
<b>V IMPLEMENTATION PLAN</b>	<b>53</b>
A Implementation Roles and Responsibilities	
B Implementation Schedule	
C Procurement Plan	
D Monitoring, Evaluation, and Audit Plan	
<b>VI. SUMMARY TECHNICAL ANALYSES</b>	<b>55</b>
A Social and Gender Analysis	
B Economic and Financial Analysis	
C Technical and Institutional Analysis	
D Engineering and Environmental Analysis	
<b>VII LEGAL AND REGULATORY REQUIREMENTS, CONDITIONS PRECEDENT, AND NEGOTIATING STATUS</b>	

**ANNEXES :**

- A PID Approval Cable
- B Logical Framework Matrix
- C Technical and Institutional Analysis
- D Economic and Financial Analysis
- E Social and Gender Analysis
- F Engineering and Environmental Analysis
- G Initial Environmental Examination
- H GOE Financial Capabilities Analysis
- I FAA Section 611e Certification
- J Statutory Checklist
- K Project Issues
- L GOE Request for Assistance
- M Draft Action Memorandum for the USAID Coordinator
- N Waiver of GOE 25% Financial Contribution
- O Malaria Analysis
- P Family Planning/MCH
- Q Detailed Budget
- R Congressional Notification
- S REDSO/ESA PP Concurrence Cable

## LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AIDSCAP	AIDS Control and Prevention Project
ARI	Acute Respiratory Infection
AVSC	Association for Voluntary Surgical Contraception
BASICS	Basic Support for Institutionalizing Child Survival
CA	Cooperating Agency
CRS	Catholic Relief Services
DHS	Demographic and Health Survey
ECS	Eritrean Catholic Secretariat
EPI	Expanded Program of Immunization
EPLF	Eritrean Peoples Liberation Front
EU	European Union
FP	Family Planning
FPAE	Family Planning Association of Eritrea
FY	Fiscal Year
GOE	Government of Eritrea
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IEC	Information, Education, and Communication
IPPF	International Planned Parenthood Federation
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
MCH	Maternal and Child Health
MOH	Ministry of Health
MSH	Management Sciences for Health
NGO	Non-Governmental Organization
PACD	Project Assistance Completion Date
PD&S	Program Development and Support
PH	Population and Health
PHC	Primary Health Care
PHN	Population, Health, and Nutrition
PID	Project Identification Document
PHC	Primary Health Care
PP	Project Paper
PSC	Personal Services Contractor
PVO	Private Voluntary Organization
REDSO/ESA	Regional Economic Development Services Office for East and Southern Africa
TA	Technical Assistance
TB	Tuberculosis
TAP	Technical Assistance Project
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USAID/W	USAID/Washington
WHO	World Health Organization

## I. EXECUTIVE SUMMARY

Newly independent Eritrea is determined to reverse the devastating effects of a 30 year civil war. Government structures and policies are being established to create the necessary infrastructure and systems to sustain economic growth and development. Essential to Eritrea's economic development is solving the challenges within the health sector of raising the physical well-being and productivity of Eritrea's population.

The formidable challenges facing the Ministry of Health include high mortality and morbidity rates for women, infants, and children due to such preventable causes as diarrheal diseases, malaria, tuberculosis, tetanus, acute respiratory infections, female circumcision, closely spaced pregnancies, and early and late pregnancies. Contraceptive prevalence is very low at less than five percent and the annual population growth rate exceeds three percent, which, if not reduced, will result in a doubling of Eritrea's population in 23 years.

The Eritrea Health and Population (EHP) Project is a five year, \$15 million project designed to achieve two major, interrelated outputs which address the principal constraints to providing high quality basic health services: (1) a strengthened public health delivery system capable of delivering basic health and family planning services, and (2) increased demand for, access to, and quality of an integrated package of basic health and family planning services, especially by women and children in the four focus provinces. The project will lay the necessary foundations and build capacity for a sustainable national health care delivery system.

As defined in this project, basic health services include EPI, ORT, family planning, pre- and post-natal care, AIDS control, nutrition, and ARI and malaria treatment and control. The terms, "health systems" and "health delivery systems", as used throughout this Project Paper, subsumes both health and family planning.

The project will focus both at the national and provincial levels of the health system. The four contiguous central provinces of Asmara, Akele Guzai, Hamasien, and Senhit have been selected as focus areas for project implementation for four principal reasons: (1) the outlying provinces are already being served by a number of other donors, (2) the four central provinces are in critical need of improved health services, (3) the central provinces are the optimal place to model an improved and integrated health system for expansion to the rest of the country, while at the same time reaching the largest number of people with at least minimal health and family planning services, and (4) the selection of provinces contiguous to Asmara will facilitate USAID project management and oversight of project.

activities

Recognizing the MOH's present limited absorptive capacity, the project is designed to be implemented in two phases over the five year Life of Project (LOP). During the first two years of the project, Phase I will focus on those areas for which absorptive capacity is considered adequate and for which sufficient information exists to proceed in a cost effective manner. The focus will be on those aspects of systems building which will lay foundations for rational systems expansion during the second phase. Assuming sufficient headway is made, this first phase should also lead to a greater absorptive capacity by the health system during the latter half of the project, as the systems developed or refined should be poised for expansion in the target provinces.

Project inputs consist of support for MOH strategic planning and budgeting, development of a demographic and health system information base, as well as a health management information system (HMIS), logistical system for drugs and medical supplies, development of a supervision program, health services training, both long and short term, evaluation of options for improving the physical infrastructure of the health facilities, improvements and integration of basic health services, expansion of NGO and private sector roles in service delivery, health and family planning education (IEC), operations research, and commodities.

While initially appearing to have many diverse project inputs, the EHP Project actually consists of a closely interrelated set of interventions which will be implemented, to the extent possible, in an integrated manner. This close integration of project activities makes the project more compact, and therefore, more manageable. Whenever it makes sense, studies and analyses will be combined for simplicity of execution and multiplication of effect.

(ADD BUDGET INFORMATION HERE)

The project is a forerunner in Eritrea in terms of significant donor assistance to the health sector, and is expected to serve as a catalyst to stimulate other donors to provide a critical mass of coordinated support for the sector. Over the medium term, this should provide the basis for a longer term sustainable investment in the Eritrean health sector.

## II BACKGROUND AND RATIONALE

### A. Health Sector Overview

#### 1 Health Status

Most Eritreans are at high risk of morbidity or mortality due to the effects of thirty years of war, recurrent drought and food shortages, and the inter-related problems of underdevelopment, including poverty and poor living conditions, inadequate infrastructure, unhealthy environment, low literacy and lack of access to basic health services. The especially vulnerable groups include food insecure people (1,500,000), female-headed households (138,000), returning refugees (500,000), orphans (90,000), street and working children (5,000), and the disabled (43,500). In general, the plight of children and women in Eritrea is particularly serious, with very high mortality and morbidity rates.

Although there are fragmentary and incomplete national statistics, the GOE estimates infant mortality at about 135 per 1000 and the child (under 5) mortality rate at 203 per 1000 live births. The overall pattern of child morbidity and mortality is dominated by the interactive combination of communicable diseases, undernutrition and micronutrient deficiencies. A principal cause of child mortality is diarrheal disease which accounts for 10.7% of all hospital admissions and has a case fatality rate of 12.7%. Malaria contributes to 19.6% of hospital admissions with a case fatality rate of 7.4%. Acute respiratory infections (ARI, including upper respiratory tract infections, bronchitis, and pneumonia) account for 44% of hospitalizations, with a mortality rate of 3.2%. High case fatality rates also exist for meningitis, anemia and measles.

Eritrean children are not appropriately protected against vaccine preventable diseases. Only 24.9% of the under-five child population is fully immunized, 25.5% are vaccinated against measles, 34.4% against tuberculosis, 30.7% against polio (OPV3) and 31.6% against diphtheria, pertussis and tetanus (DPT3).

Women of child-bearing age (15-44) are also very vulnerable. Maternal mortality is estimated at 710 maternal deaths per 100,000 live births, while the maternal mortality rate for rural areas (excluding Asmara) is estimated to be 799 per 100,000, one of the highest in the world. The leading causes of maternal mortality, as recorded in hospitals and health centers, are malaria, ARI, and pregnancy complications (including those of illegal abortion). Although there are few records to corroborate it, there is widespread concern that many women are dying in childbirth and of other causes not captured by health statistics. Fewer than five percent of women deliver at a health facility or under the care of trained personnel. Particularly worrisome is

the very low coverage (estimated at 9.2%) of women aged 15-44 years with tetanus toxoid (TT2)

A principal underlying cause of much of the mortality and morbidity in children and women is malnutrition and micronutrient deficiencies (iron, Vitamin A, and iodine). While few statistics are available on maternal nutrition and anemia, proxy indicators such as low birth weight suggest the problem is severe. Drought and famine have intensified malnutrition in general while cultural practices favoring men in intrafamilial food distribution patterns mean that women are often deprived of nutrients. Eighty-five percent (85%) of Eritrea's population lives in economically depressed areas without even basic necessities, and incomes are extremely low (the World Bank estimates national per capita income is between \$70 and \$150 per year). Food insecurity is a chronic problem, despite improvements in agricultural practices and increased inputs, for example, badly timed rains and pests resulted in 80% crop loss in 1993. The drought pattern has continued into 1994 with a failure of the "short rains" early in the year and as of mid June, 1994 little sign of the beginning of the "long rains" which traditionally extend from June through August.

Wide-spread malnutrition, both moderate and severe, in children under five years of age results, in part, from frequent, closely spaced pregnancies which also aggravate the nutritional status of mothers. Another major preventable cause of child malnutrition is the late introduction and insufficient quality and quantity of supplemental foods given to infants during breast feeding.

Little is known about the patterns of fertility and fertility regulation practices in Eritrea, as reliable demographic or health statistics are extremely limited. Indications are that fertility is high and contraceptive use, including traditional and modern methods, is low. The high total fertility rate of 6.8 (estimated) and the resulting high dependency ratio (46.5 percent of the population is under 15 years) stem from a number of factors which vary in their susceptibility to change: high infant mortality, the low status of women which defines a woman's main role to be child bearer, young age at marriage (in some groups as low as 12-13), and the very limited availability of contraceptives.

A significant proportion of Eritrean women have very early or late pregnancies, placing them at special risk. Closely spaced pregnancies put stress on both the health of women and of their children. Early marriage is also a leading cause for maternal mortality and indirectly for infant mortality when an anemic, nutritionally deprived, physically immature teenager becomes pregnant. One survey revealed that 65 percent of those women marrying at age 13-15 had an average of 4 children before age 20. Research carried out at Keren and Ghinda Hospitals has also

demonstrated a high incidence of maternal mortality related to female circumcision (infibulation) (Selassie, 1985)

Although there are no statistics on the effects of birth spacing for Eritrea, worldwide evidence shows that proper birth spacing and avoidance of early and late pregnancies can prevent a significant number of maternal and infant deaths. Proper spacing has also been shown to reduce the incidence of malnutrition among children under five years of age.

EPLF efforts during the war laid the foundation for family planning in Eritrea. Available information from the Planned Parenthood Association of Eritrea indicates that awareness of modern contraception is low, only about one third of mothers in rural areas are aware of family planning methods and only about 2% are users. However, awareness in and use in urban areas is growing. The acceptance rate in urban areas is about 13 percent. There is evidence that Eritrean women who know about family planning methods want to use contraceptives, indeed, there is a rapidly increasing demand in Asmara for depo-provera and an increasing use of other family planning methods. However, the number of complications resulting from illegal and self-induced abortions which are seen in the hospitals indicate that most women still do not know about, have access to, or feel comfortable with family planning.

Malaria is found throughout Eritrea except for the central highlands above 2200 meters elevation. In lowland Eritrea, it is the leading cause of morbidity during the peak transmission period. Available health statistics indicate that it accounts for over 30 percent of outpatient morbidity. Malaria will pose a particular problem within the next several years as three major events occur: the proposed repatriation of 500,000 refugees currently living in Sudan into areas of seasonal and intense malaria transmission, the demobilization of the EPLF, and the development of irrigated agriculture in the western, southern and eastern lowlands.

While the HIV/AIDS seropositivity rate in Eritrea does not currently approach the magnitude and severity found elsewhere in sub-Saharan Africa, there is evidence that the seropositivity rate has increased significantly since 1988. Among the contributing factors are social disruption due to war and increasing urbanization. The seaport cities of Massawa and Assab are reported to have AIDS problems associated with the transit population and increased number of prostitutes. Then too, the cultural practice that permits men to have many sexual partners even if married may contribute to the rising incidence. Data are unavailable on the risks imposed on Eritrean women by HIV/AIDS during pregnancy and childbirth, however, data from other countries indicate that the risks are serious.

## **2 Health Delivery System**

The long war which was fought in Eritrea not only affected health status of the population but also had a large impact on health services. Eritrea's current health delivery system reflects this history. The physical infrastructure was severely damaged during the war and has required extensive reconstruction. The new system is an integration of two very different health delivery systems which were in operation during the war: one which was developed by the EPLF in the liberated areas, and one which was under the control of the Ethiopian government. The Ministry of Health has faced the challenge of integrating health workers from the EPLF (who remain unsalaried) with civilians from the previous Ethiopian system as well as those returning from abroad, all of whom have very different training and experiences. The first two years, 1991-1993 (after liberation but before independence), were particularly difficult as the EPLF had to assume responsibility for services in the whole country while redesigning the national program and commencing with rehabilitation of the infrastructure - all without any significant donor support and without any consistent national budgetary support. Only in late 1993 was the Ministry able to regroup and begin any normal processes of development planning. Numerous planning and management activities have now begun and basic policies have been developed and adopted. The situation is still dynamic enough, however, to present good opportunities for donor input into all areas.

### **a Ministry of Health Policies and Planning**

The Government of Eritrea considers human resource development as the most critical component of its economic development plan. This includes improving the physical well-being and productivity of the population. To meet these challenges, the MOH has developed a national health policy that would make primary care available to all citizens. The policy emphasizes maternal and child well-being, decentralized and integrated services, and community involvement and support.

To accomplish this goal, the MOH has identified a number of priorities which include: (1) expansion of primary health care services to under served populations, particularly those at greatest risk of mortality and morbidity (women of reproductive age--15-44 years, children under five, and returning refugees of all ages), (2) restoration of health care facilities and construction of training facilities and student housing, (3) training of all types of health care providers, with priority given to the ex-combatants with health care experience, (4) control of communicable diseases (malaria, TB and HIV/AIDS), (5) strengthening the management of health services, and (6) establishing an effective health information system.

The recent opening of a Planning Office in the MOH is a first step towards developing a health plan in order to accomplish these priorities. The health plan will guide the allocation of financial and material resources, facilities location, manpower use, health services utilization, financial planning. However, at this time, there is insufficient information for planning. Basic demographic and health data are not available for the entire population (this should be remedied upon the completion of a national Demographic and Health Survey in 1994/5) so there is only rudimentary facility, manpower, or logistics planning. The lack of an overall health plan and the absence of population and terrain based mapping for facility location means that there is no clear way to determine how well services are reaching the population at this time.

Decentralization is an accepted principle and steps have already been taken to decentralize some functions (including drugs and medical supplies, communicable diseases control, and health services delivery for primary care and community health). The Provincial Administration (Ministry of Local Government) coordinates a well established working relationship among sectors at the provincial level. By far the major factor restraining further decentralization is the lack of control over budgets and finance at the provincial level. If this can be corrected in the next two years, and information, planning and budgeting undertaken at the provincial level, then decentralization will be well established.

#### **b. Health Services**

In implementing the policy of primary health care for all Eritreans, the MOH gives special attention to under served populations (those in isolated rural areas, pastoralists, and previously marginalized groups) and vulnerable groups (especially women, children, the disabled and the displaced). The emphasis on equity has resulted in a focussing of resources and rehabilitation/reconstruction of facilities in rural areas and lowlands.

The health service structure is pyramidal. At the base of this pyramidal health system, each community of about 1000 is to have a Community Health Agent (CHA) and a Traditional Birth Attendant (TBA) selected by the village. These workers will be trained by the MOH and given initial supplies, community-generated revolving funds will support replenishment. Services provided at this level are first aid, MCH/FP including deliveries, health education, basic hygiene and sanitation, and referrals. These community health workers are to be supplied and supervised from the district health station, which serves about ten villages, or 10,000 people. Health station facilities, which vary from two room clinics to larger buildings with multiple service areas,

provide integrated MCH/FP services, basic preventive and curative care, simple laboratory services, and community outreach as well as supervision and support of community health workers and immunizations in the villages. Health stations are staffed with a minimum of two Health Assistants and a cleaner but may also have a "barefoot doctor" and a pharmacy technician.

The next level of care is provided at the health center (sub-provincial level), which is designed to provide both out- and in-patient services to a population of 50,000 to 100,000. Health centers serve as support, supervisory and referral centers for the health stations in their areas. Facilities include a delivery room, a recovery room, pharmacy, laboratory, and pediatric, male and female wards. Services provided include all of those at the station level plus maternity services, laboratory, and more extensive curative care as well as training and supervision for health stations and community health workers. Health centers are staffed by 2-4 nurses, 6-12 Health Assistants, a laboratory technician, a pharmacy technician, an accountant, and cleaners, guards, and a driver. Although the MOH does not consider it to be a universal phenomena throughout the system, there are indications that some portion of the facilities are not fully utilized at this time. This may be due to a number of factors, some of which may be temporary, including transport problems and the lack of recurrent budgets for kitchen or laundry services.

At the top of the referral pyramid are the provincial hospitals and the national referral hospital. The system is designed so that referrals are made from the lower to the next higher level, so as to screen out and deal with all health problems at the lowest possible level of the health structure. This is especially important for Eritrea considering the very limited numbers of specialized health professionals currently in the country. However, adherence to the referral structure is not well established as yet.

At this time, neither MCH nor FP services are managed in an integrated manner. Although many children present multiple acute and chronic illnesses, health workers use a disease-specific approach to treating childhood illnesses, such as diarrhea, malaria, or acute respiratory infections. This results in incorrect and incomplete diagnoses and treatment. Curative care is usually available daily, but other services, such as ante-natal care and immunizations are offered at less frequent and independent times, necessitating multiple trips to the clinic to satisfy all health care needs.

Treatment is emphasized over prevention of disease, and health workers are rarely able to provide health education.

Overall, the country's health infrastructure is in very poor

condition Health care facilities were destroyed or damaged during the 30 year war or were abandoned For an estimated population of 3 2 million, there are 15 hospitals, 35 health centers and 113 health stations Only an estimated 18% of villages have reasonable access Forty percent of the existing facilities are below the expected standard Diagnostic facilities are extremely limited Among the existing hospitals, only half can provide complete x-ray services and a third have a functioning laundry Health centers and stations are even less well equipped A number of these facilities do not have access to water

The GOE and donors have begun a crash program of construction and rehabilitation of 13 hospitals, 42 health centers and 74 health stations over the next five years, with emphasis on the latter two categories to serve rural areas Donor funding has been secured and work begun on 20 of these projects, others have been undertaken by the MOH or provincial authorities

Although Eritrea has an asset in its pool of highly motivated and experienced health personnel, serious personnel shortages hamper the delivery of services at all levels and in all areas The country does not have the number of staff required for service delivery for the existing facilities, let alone new facilities being constructed Many of the existing staff need additional training Overall, the country has one medical doctor for a population of 26,956, one nurse for 13,000, one health assistant for about 10,000 and one laboratory technician for 61,403 There are particularly acute needs for laboratory and pharmacy technicians for health stations and centers, for training of additional community health workers, and for family planning providers The current training facilities are inadequate The Nursing School is crowded and has received little new equipment or reference materials in decades The Health Assistant School is dilapidated and lacks dormitory facilities Currently, no laboratory or pharmacy workers are being trained

The MOH recognizes the need for in-service training at all levels and has established supervisory responsibilities throughout the referral system However, the shortages of personnel and the lack of transport have made consistent supervision and skill upgrading impossible

Although service statistics are collected at each facility and are collated at the provincial and national level, there is only the beginning of an adequate health management information and reporting system The Ministry is keenly interested in developing a health management information system and has done preliminary work in this area

Although the MOH has an essential drugs list and drug importation, marketing and distribution is regulated by

PHARMECOR, evidence points to a clear need for rationalization of the drug supply system as well as for an improved logistics system and better storage of drugs and supplies. Although drug shortages are not always noticeable in health facilities, supplies are evidently inconsistent. Furthermore, the record keeping system does not show what proportion of drugs are procured through the central stores of the MOH and which are provided by donors either through or outside the central supply system. A number of health centers and health stations report that they consume their annual drug supply within 9 months or less, with unreliable supplies available the remainder of the year. Annual drug costs are currently an estimated 17 million birr (USD equivalent = \$2.83 million) but the proportion of this cost borne by the GOE (compared to donors, NGOs) is not clear.

The transport component of the health system is weak, especially considering the difficult terrain (mountains and desert) and harsh climate of much of the country. The MOH has only 84 vehicles (including 20 motorbikes) serving the entire country (a percentage of which are apparently off the road either temporarily or permanently at any one time). The Eritrean Red Cross has 10 ambulances. No maintenance or repair facilities exist outside of Asmara, and the one MOH automotive technician is only capable of making minor repairs. Because of overload in the central government garage in Asmara, the MOH has had to use private garages for vehicle repairs resulting in considerable additional expense.

Less than \$1.20 per person per year is currently being spent by the MOH on health (the World Bank recommends \$7.00 per capita per year to support a package of basic health services). Because of the MOH's serious concern that it cannot support even the most basic package of services, it has developed various resource mobilization strategies, including a national health insurance scheme for all public and private sector employees and a fee-for-service scheme which would institute charges for all services at all levels of the public health system. These strategies are being considered by the GOE for adoption nationwide. In the interim, provincial governments have been instituting taxes on various items, including beer, kerosene and petrol to support health and education services. In Asmara, a one birr additional charge on persons visiting hospitals and clinics has been assessed. In addition, the MOH has indicated that communities or local administrators will have to support community-based health workers and TBAs with either in-kind contributions or funds raised locally and that these health providers, while trained by the MOH, would not become government employees.

The MOH has adopted family planning as an integral part of the primary health care program, but the GOE has not developed an official population policy. Family planning is now included in the curricula of the training schools, but few current health

staff have been trained in service delivery or education. Family planning services are supposed to be offered at all health stations and health centers, but in most places method choice is small (condoms and pills). Services and contraceptive commodities are provided essentially free of charge, even private pharmacies obtain pills and condoms at a subsidized price. The only NGO currently offering family planning services, the Planned Parenthood Association of Eritrea, has only one clinic, in Asmara. Donor assistance to this sector is exceedingly modest.

The MOH recognizes the critical need for health education in the country and has established a Health Education office in the ministry. This office has received very little support from donors, as yet. So far, the only awareness campaign has been for HIV/AIDS prevention, using posters, radio presentations, and direct contact in local languages.

All of Eritrea's ethnic groups use traditional medicine. Although the EPLF at one time discouraged its use, the GOE is now actively encouraging research and promoting cooperation between modern medical practitioners and traditional healers. No data is available on fees charged by THs, but anecdotal information and interview data suggest that an average consultation costs 10-15 birr. Studies have found that self-treatment is common, as well. Many people use modern services only after they have seen no improvement from self treatment or from traditional healers. Traditional healers are seen as most effective for specific illnesses.

The public sector provides the bulk of health services. The private health sector in Eritrea consists of NGOs, for-profit providers (physicians), pharmacists and traditional healers. A small number of local NGOs (all church-based except the Planned Parenthood Association of Eritrea) do provide some health services, for example, the Eritrean Catholic Secretariat operates 24 clinics. However, the role of the private sector in service delivery is very limited. For-profit modern health care providers are very few and are almost all based in Asmara. Private pharmacies in the major cities and towns are important providers of drugs, contraceptives and advice. The traditional healers, who were initially banned by the EPLF, are now considered a major as well as an important source of services, advice, treatment and medicine, especially in the rural areas and especially with respect to treatment of those ailments for which modern medicine has demonstrated little efficacy.

Although not directly attributable to private providers, a considerable portion of health treatment occurs outside the public sector in the form of self-remedies and self-treatment. The Health Sector Review found evidence that there was a two-to-one ratio in favor of home remedies versus utilization of

traditional medicines

## **B. Health Sector Context and Constraints**

### Health management

It is widely recognized that Eritrea needs to strengthen its capability to manage a national health care system in order to deliver quality services. Health management includes strategic planning, demographic and health statistics, other related information, and adequate health care planning and financing.

Although the EPLF was able to manage a health delivery system under very trying wartime conditions and MOH staff have a wealth of experience in curative medicine and on-the-ground service delivery, there is still a lack of formal training or experience in strategic planning and health management. To administer the expanding national health system effectively, the MOH needs personnel at national and provincial levels who can develop policy, plan, manage, monitor and evaluate. This capacity can be developed through additional training of current MOH staff and recruitment of additional staff. This is especially critical at the provincial level in order to operationalize the GOE's decentralization policy.

### Health management--HMIS

The Ministry of Health officials and donors agree on the need for a well-formulated strategic health plan. Unfortunately, data for decisions on allocation and management of resources are lacking, a gap which is even more significant due to the rapid expansion of the delivery system.

To plan training programs and facilities, and allocate manpower, the MOH has to estimate current and projected staffing patterns by cadre (physicians, nurses, technicians, CHAs and TBAs). Construction of new facilities should be based on comprehensive demographic and epidemiological data and utilization patterns by location. Beyond that, the delivery of services and the functioning of supervision, supply, health information, referrals, and other internal systems rely on information properly collected, analyzed and fed back to planners, managers, supervisors and health providers.

Eritrea has never had a census (although the independence referendum registration has provided some information) nor any sort of national health or nutritional survey. USAID plans to support a Demographic and Health Survey (DHS) in late 1994 in order to provide some baseline data. Although service records in health institutions are of good quality, there is only the beginning of any sort of health information system and virtually

no analysis which can be used for planning and policy making, either at the national or regional level

The MOH has identified the lack of a comprehensive health management information system as a constraint to planning and has set a high priority on the development of such a system. It should be noted that while a critical first step, HMIS development must be supplemented with effective systems for disseminating and utilizing the information, and both steps require adequate training by end-users at all levels.

#### Health management--financing and sustainability

Planning for financing and sustainability, critical to a strengthened health management capability, will be a real challenge over the next few years. The GOE has few resources and a very small total budget. The economy of Eritrea has good recovery potential but recurrent droughts (as in 1993) may threaten this recovery. Extreme poverty in most of the country precludes much cost recovery at this time and it is unclear, even if donors help with facilities and equipment now, how the GOE will meet recurrent costs. This will be complicated by the need to pay salaries to the demobilized EPLF health workers (48% of the MOH staff) who currently are unpaid. The maintenance of the new facilities, planned expansion of services, and provision of salaries to former fighters (currently receiving allowances for housing and living expenses) will require large increases in the health budget. The MOH is developing approaches to deal with these issues but needs assistance in evaluating alternative approaches to implementing health financing schemes.

As of June, 1994, the MOH is operating without a 1994 budget, and instead using a prorated version of the 1993 budget. Managers and administrators at all levels (regional, provincial, hospital, health center, and health station) are uncertain how much financing they can count on. The administrative officer at one hospital described it best by saying, "we do not have a budget and therefore no way to plan."

It is important at this time to project financing needs for the next several years and match these against likely funding availability from all sources including GOE, donors, and cost recovery. Financial sustainability over the life of the EHP Project is clearly not achievable, but as described in Part III of this PP, the EHP Project will help create the financial management, cost recovery, and planning systems which will lay the foundations of financial sustainability in the future.

#### Health management--human resource development

The GOE's emphasis on human resource development as a significant

component of its economic development plan is based on an understanding of its importance as well as Eritrea's present, severely limited situation. Personnel shortages and training needs have been alluded to earlier. The lack of skilled and trained personnel is a serious constraint to the MOH's efforts to develop programs and staff the expanding number of health facilities. The situation will become even more urgent as the demand for health services increases through enhanced awareness and when large numbers of returnees are settled. Currently, the country does not have the number of staff required (based on the MOH's desired staffing) for service delivery and many of the existing staff need additional training. To meet the goals of the Ministry, there will need to be an intensive effort at human resource development - training at all levels and at all stages new recruits as well as upgrading of current staff.

#### Quality of services--summary

While the MOH views improving service quality as a priority it does not yet have an articulated strategy for achieving this objective. In the past, quality assurance has consisted primarily of a retrospective assessment of care based upon a random review of medical records to determine if services rendered conformed to professional standards and if certain outcomes, e.g., case fatality rates, fell within formally established acceptable limits. Today it is considered an integral element of health service delivery aimed more at preventing deviation from acceptable standards of care than in detecting problems after they occur. In addition to effective health planning and health systems design and a functional organizational structure, quality assurance is a function of a variety of factors - qualified providers, adequate infrastructure, equipment and supplies, and effective health management systems. The latter factor subsumes such aspects as clinical guidelines and protocols, appropriate performance standards, and effective supervision systems.

The MOH is, in fact, attempting to address many of the weaknesses in the health system which impact upon quality of care, e.g., strengthen the physical infrastructure, train or retrain service providers, put in place appropriate administrative policies and procedures, such as essential drug lists, and increase accessibility to services. Still, many weaknesses remain which will negatively affect the quality of services. Most facilities lack some basic equipment or have antiquated equipment in need of replacement. Outages of drugs and laboratory reagents continue to occur due to inadequate supplies and inflexible supply procedures. While there is a crash program to train health professionals, there are no objective staffing criteria in use to ascertain personnel needs and to ensure the efficient allocation of personnel. The configuration of health structures and

proposed staffing patterns could well generate recurrent costs which cannot be supported, effecting the ability of the system to deliver the range of necessary services

Access to health facilities remains low (30%), while only 15% of villages currently have basic services provided by community health workers and TBAs. Even in these villages there are problems with compensation, availability of supplies and supervision, which raises questions about the viability of this approach. Patient referral and continuity of care works poorly at best. Supervision is carried out on an ad hoc or informal basis without the benefit of standards and objectives against which to evaluate performance or supervisory protocols designed to ensure that supervision is performed in a systematic manner. However, the shortages of personnel and the lack of transport have made consistent supervision and skill upgrading impossible

#### Quality of service--integration

Efforts to improve the quality of care in facilities are severely hampered by a lack of integration of case management of childhood illnesses, and integration of service delivery options. Separate, disease-specific clinical guidelines and training activities, such as EPI and diarrheal disease control, leave the difficult task of integration to the health worker in his encounter with the sick child and caretaker. This lack of integration results in missed opportunities for treatment and prevention, inefficient and ineffective health care, and underutilization of health services. The Primary Health Care Division took initial steps toward integration of services this year through a training course for Provincial PHC and MCH/FP Coordinators, and seems very receptive to developing and implementing an integrated case management approach.

#### Infrastructure--access and transport

The county's infrastructure to support the health system is in poor condition, as evidenced by weak or inadequate transportation, patient referral system, drugs, medical equipment and supplies, and facilities. The lack of transport is problematic for both would-be patients and the health care provider because it limits access and availability to services, as well as outreach to the community and supervision of CHAs and TBAs. Transportation is difficult for many reasons, but principally due to (1) the harsh terrain (mountains and desert), with roads ungraded and unpaved roads, requiring four wheel drive vehicles to reach many areas, (2) large, sparsely settled areas which create long and arduous journeys, (3) limited repair facilities for government vehicles (located in Asmara)

combined with a shortage of skilled mechanics and spare parts, and (4) a small stock of vehicles in the Ministry of Health. In some cases, it is a three day walk to the nearest health station. Most health stations have no access to motorized vehicles at all and even many health centers have no vehicles. Some provincial hospitals have only one or two vehicles. This limits all outreach programs, such as EPI, and contributes to the inconsistent supply of drugs and lack of supervision in the rural health facilities.

#### Quality of service--referral

The patient referral system is not fully functional and the breakdown in the system results in inefficient service delivery, especially at the tertiary level. The maternity ward at the central referral hospital, for instance, is currently the only site for assisted deliveries in the Asmara area and consequently is so crowded with normal deliveries that the quality of care provided for complications may be compromised. If the health centers were able to handle normal deliveries (as planned), then the hospital could focus properly on referral cases. However, an effective referral system will only be possible when there are adequate facilities, transport, staff, equipment and supplies at the community, health station, and health center levels.

The health stations and centers will also serve as crucial parts of the supervision and in-service training structure for the village health system.

#### Infrastructure--equipment and supplies

The absence of minimal equipment and supplies and the inconsistent and inadequate supply of drugs, both of which impede the availability and delivery of good quality care, stem from a lack of a comprehensive procurement plan, inadequate logistics and HMIS, and a centrally determined allocation system for supplying drugs to the various levels of the health system. Needed changes include installation of the proper equipment at each facility, improvement of the national system for procurement of drugs and supplies, and development of a comprehensive logistics distribution system. Laboratory services, in particular, must be improved through the provision of appropriate equipment and supplies at each level (as well as through the proper training of lab technicians, discussed above).

#### Infrastructure--facilities

Perhaps the most visible constraint to delivery of health services in Eritrea is the severely damaged and deteriorated infrastructure. Almost all health facilities, having been either destroyed or damaged during the war or neglected for decades,

require serious rehabilitation. The lack of adequate facilities has severely limited access to services and has compromised the quality of services provided. It is estimated that there are over 2,541 villages in Eritrea and presently only 18% of these have reasonable access to services.

As mentioned earlier, the GOE and donors have begun a program of construction and rehabilitation of facilities, emphasizing health stations and centers in the rural areas. The MOH plan for Eritrea is to rehabilitate or construct one health center in each sub-province and one health station in each district. The plans do not appear to be based on adequate planning data, criteria or priorities, or a clear understanding of personnel and service requirements. Standard health facility plans prepared by the MOH are for large, often symmetrical facilities which do not take into account the varying climates of Eritrea or existing health buildings, and have inadequate patient flow and no provision for confidentiality. Siting of new facilities is being determined by formula rather than need. A portion of the current health centers and health stations are underutilized, although the total extent is not known. In at least some cases, drug supplies and staff levels were determined to be adequate and, therefore, not the cause of underutilization. Approximately 80 percent of health facilities in Eritrea have inadequate water supplies that are either too far away, unprotected, unreliable or seasonal. The MOH needs to examine different approaches to health care facilities.

#### Community health services

CHAs and TBAs, the core of the health system in many rural communities, will be largely providing services, such as health education, which are little understood and valued by the population. At the same time, communities will be expected to be self-reliant in their support of the CHAs and TBAs, except for the initial infusion of training, drugs, and supplies. Since people will be able to go directly to health stations or health centers for care, without referral from a CHA or TBA, there will be relatively little incentive for communities to support these workers. In addition, a variety of important services will not be provided directly by the village health personnel, including, immunization and treatment of conditions requiring antibiotics. Communities will need to be educated about the benefits of such a scheme, before they agree to invest in it. Given the present economic situation, however, with 80% crop loss, it may be extremely difficult or even impossible for many individuals and communities to contribute the resources needed to support these providers of primary health care.

#### Private sector

Current access to the country's health system is almost

exclusively through the public sector. The limited capacity for rapid expansion of service delivery in the private sector must also be considered a constraint to increasing access and utilization of quality health services. Although the regulatory environment has not been favorable towards the private sector in the past, the GOE now recognizes the important role that the private sector can play and encourages increased NGO participation. Strengthening of both groups could have a very positive impact on health service delivery and could shift some of the burden from the public sector, thereby contributing to greater program sustainability. NGOs which are already in the field could also significantly increase their activities if their own planning and management capabilities were strengthened.

### Health education

Despite the importance of health education and the fact that many of Eritrea's health problems could be ameliorated through preventive measures, appropriate health care and awareness by people, there is currently no national health education program providing a framework for IEC activities. Within the MOH, the Health Education Division consists of one person who is not trained in IEC or communications. Health education in the field is sporadic and health facilities have few health education materials. Consequently, there are many missed opportunities for health education in health facilities. The availability of mass media is limited (eg radio, newspapers), and the compounding factors of a low literacy rate and diverse ethnic groups with different languages further complicate potential health education efforts.

Given the current limitation of NGO services and IEC activities, both sectors should be strengthened through awareness raising, training, and support for commodities and logistics systems. The Eritrean experience with health education efforts in Eritrea has been limited, with messages not targeted to specific groups and often inappropriate. Clearly the lesson learned is that messages need to be better tailored to specific groups and target audiences.

### Family planning services

Of special concern is the very low level of knowledge about and use of family planning by Eritrean couples. This is partly a result of lack of information but also because of the lack of contraceptive services. There is much misinformation to be overcome at every level. UNICEF has stated that birth spacing is the single most powerful child survival intervention and it is well proven that birth spacing is critical for reducing maternal mortality. The MOH has adopted family planning as an integral part of the primary health care program. Yet public sector

family planning services are weak, providers need more training, the method mix is limited, and many health staff are not fully aware of the health benefits of family planning

Many policy makers and health providers are not aware of the country's high fertility rate and the potential impact of high population growth rates on development. Some feel that, having lost so many people in the war, there is a need for rapid replacement. However, it is estimated that the annual population growth rate is currently over 3%, implying a doubling of the population by the year 2017. The implications of this growth for employment and for service provision must be taken into account by planners and the positive role which family planning can play in reducing growth rates emphasized.

### Women's status

A number of constraints related to the culture and life style have a negative impact on health status, including the subordinate status of women, the wide disbursement of people, and nomadism. The Social and Gender Analysis (Annex E) provides a comprehensive profile of many widely practiced Eritrean cultural customs which have a detrimental impact on women's health status. These include child betrothal and early marriage, female circumcision (infibulation and cliterectomy), low literacy levels (90-100% in pastoral, nomadic groups), and cultural practices where women have little or no control of decisions affecting their fertility or health. In some Moslem and pastoral nomadic groups, women must seek their husband's permission to obtain health care for themselves and their children. Low literacy, coupled with a lack of information about the availability of health services such as vaccination, growth monitoring and ante/post natal services, and the isolation that comes with a nomadic lifestyle, all limit women's utilization of health services. Further, women often do not have a voice in decisions which may affect their work and health, and are barred from decision-making committees even though many of the issues discussed affect them directly.

### Miscellaneous constraints

Eritrea, while appearing relatively small on the map of Africa, is actually quite large geographically -- over 400 miles long and approximately equal in size to the State of Pennsylvania. Sixty percent of Eritrea's population is concentrated in the central highlands, with relatively sparse populations scattered over wide areas accessible only by very rough roads or mountain trails. Compounding the problem, approximately twenty percent of the population are nomadic and thus even more difficult to reach with health services. Also, approximately 80,000 refugees have

returned from Sudan and an estimated additional 420,000 refugees are expected to return during the next several years. Most of these refugees are expected to settle in the remote areas of the Western lowlands.

Out of Eritrea's population of approximately 3,200,000, approximately 1,500,000 are currently drought-affected and eligible for food aid. As a result, Eritrea has by far the highest percentage of "at risk" persons of any country in the Greater Horn of Africa. As a result of drought, total grain production fell from 260,000 metric tons in 1992 to 86,000 metric tons in 1993 (a 66 percent decrease). However, even in a "good" year, Eritrea needs to import approximately 20% of its foodgrain needs.

The World Bank estimates Eritrea's GDP per capita to be somewhere between \$70 and \$150 per capita. With approximately 80 percent of the population dependent on agriculture for their livelihoods, with widespread and extreme poverty, and with foodgrain production far below subsistence level even in a relatively favorable year, food insecurity is a major constraint to improving the delivery, utilization, and quality of health and population services.

Many Eritrean health care providers, both the EPLF health personnel and many of the Eritreans working under the Ethiopian health system during the war, have basically been isolated from the rest of the world for decades. Consequently, health personnel and policy makers have not been exposed to global developments in health and family planning and are only now able to learn about the experiences of other countries. Greater exposure to other experiences could strengthen the health system by bringing in new ideas. For example, learning about decentralization policies and practices in other countries could widen the options under consideration for implementation here. In addition, exposure to the population and family planning programs in nearby Muslim countries could change the attitude held by many in Eritrea that family planning is not accepted by Muslims.

### **C. GOE and Other Donor Activities in Health**

#### **1. GOE Activities**

Since 1991, the MOH has focused on both expansion and improvement of health services - particularly primary care. EPLF health workers at all levels have been deployed throughout the country in health stations and centers and have been working without salaries alongside the paid civilian workers. Consequently, almost two thirds of the MOH budget has been able to go towards the purchase of drugs, supplies, and equipment, and for the rehabilitation of damaged health facilities and the construction

of new ones

The Ministry of Health has also emphasized human resource development and is in the midst of developing a comprehensive training plan. In 1993, two classes of EPLF field-trained health workers were enrolled in a one year upgrading program in the Nursing School so that they could be formally credentialed and take assignments as certified nurses once demobilized. This program will continue for another two years until over 700 nurses have graduated. At that point, the regular program of nursing training will recommence. Plans for similar upgrading and credentialing of other levels of field-trained health workers are underway.

## **2 Other Donor Activities**

There is only partial information available on the level of donor resources going to the health sector in Eritrea. However, in 1993, nine-tenths of the annual health budget of 265 million Birr was for capital expenditures -- the equivalent of \$40 million. Over the past two years, it is estimated that donors have contributed \$30 million, mainly for construction, vehicles, equipment and supplies. In 1993, an estimated \$3 million was provided by donors to the MOH for recurrent expenditures.

At the present time there is no single source within the GOE for information on foreign assistance. A new department - Macroeconomic Policy and International Economic Cooperation - has been created in the Office of the President to coordinate donor inputs. In the MOH, the Projects Office of the Planning and Evaluation Bureau is developing a computer data-base to track all capital projects and donor inputs. At present, only infrastructure projects are handled by this office, operating inputs (drugs, vaccines, training, etc) are handled by the donor agency directly with the appropriate MOH department. In the future, this information will also be copied to the Projects Office.

Not only is there no single source of information on donor funded activities in health, but there is no consistency among the donors in terms of reporting on their activities. Many donors seem not to have even annual reports with basic descriptions and budgets. It is impossible, at this time, to determine future donor inputs as most have not yet established multi-year plans and are still working on an ad hoc basis. UNICEF is currently preparing its country program for the period 1996-2000. When this is complete, it will provide a more complete picture of planned donor inputs over the time period of the USAID EHP Project. UNICEF's 1994/5 budget is \$7.4 million (including specific bilateral support). (See Annex S for a summary of donor programs.)

Although it is not yet possible to quantify accurately donor assistance to the health sector for the reasons given above, the information on donors collected during the health sector review (see Annex S for a summary of donor and NGO programs) indicates there are a considerable number of donors, including NGOs, which are making contributions to the Eritrean health sector in one way or other. In the area of facility rehabilitation there are a number of NGOs and bilateral donors (Italian Cooperation, the EU and UNICEF, to name a few) which are providing support, often guided by the GOE in selection of the provinces where their support goes. As of April 1994, these donors were supporting the construction or rehabilitation of three hospitals, 11 health centers and 14 health stations at a cost of around \$7 million.

Donors have also provided support in the area of health training. UNICEF is supporting primary health care management for regional coordinators and the participation of a small number of health personnel in short courses or one year courses abroad. The Israelis and Australians have provided scholarships to their health training institutions for a small number of students.

Health interventions, such as EPI, malaria control, ORT, AIDS control, as well as family planning, have made slow headway in the country, partly due to shortages of supplies and lack of facilities and trained staff. A number of major donors and NGOs (UNICEF, Save the Children and the Italians) have been involved (or intend to be involved) in strengthening these programs, but it has not been possible to determine to what extent this has occurred. The Australians are interested in contributing to a national AIDS laboratory, but this has not yet happened. In family planning, the lack of support for the Family Planning Association of Eritrea (FPAE) from the International Planned Parenthood Federation (IPPF) from 1991 until 1994 and the delay of support from the United Nations Population Fund (UNFPA) has seriously impeded the program. The Ministry of Health Family Planning Program has received little support as well, although MOH is expecting assistance from UNFPA in the very near future in the form of a one year grant for contraceptives and limited IEC activities. The Hollows Foundation of Australia has supported the construction and operation of an interocular lens factory in Asmara.

In terms of support for planning and administration (in the MOH), Save the Children (UK) has provided a health planner who works in the MOH and UNICEF has supported a number of planning seminars. The head of the MOH Planning Section attended a short course at Harvard in 1993. His participation was organized by the Eritrean Medical Association in North America and funded partially by the Unitarian Universalists.

A number of donors have contributed drugs and/or medical supplies to the MOH in an ad hoc manner - Qatar, Saudi Arabia, Denmark -

but have no ongoing programs of support

There are a number of mission run clinics in the country. The Eritrean Catholic Secretariat has the largest number (24 clinics). There is also a Cheshire Clinic for handicapped children. Llamba, a US-based NGO, has just begun an ophthalmology program in Eritrea.

The World Bank (IDA) is currently in the process of identifying a potential \$20 million program in human resource development to improve MCH, nutrition practices, basic health services and family planning through improving the incomes of poor women.

#### **D Experience with Similar Projects in Eritrea**

USAID has recently provided a grant of \$2.3 million to UNICEF for the rehabilitation of the PHC program and delivery of EPI in Barka, Sahel, and Dankalia provinces. This project is in the first phase of construction of facilities, so it is too early to comment on its implementation. Most donor assistance in the health sector has been either through emergency programs or on a small scale, there is little experience with large projects thus far. Among the donors and organizations working in the sector, however, there is widespread appreciation of the dedication and organizational abilities of the health cadres, especially at the provincial and district level. Construction and rehabilitation projects have been proceeding efficiently and without wastage, most with significant community participation. The thirst for training and upgrading of skills among health personnel is impressive. Assistance has been used effectively and corruption is virtually nonexistent. One concern of donors has been the shortage of personnel and the fledgling administrative capacity in the Ministry.

#### **E Relationship to USAID Strategy Statements**

The Eritrean strategy for health and population described above is very consistent with USAID worldwide and Africa Bureau strategies for population and health (PH), child survival and economic growth.

By supporting Eritrea's health policy through human resource and both public and private institutional development in the health sector, the proposed EHP Project will be in congruence with USAID's strategies for sustainable development in the areas of population and health, child survival, and economic growth. All three strategies call for a clearly focused effort in countries that demonstrate economic need, where the health conditions stand as a major impediment to economic development, where the potential for sustained impact is greatest, and where political commitment and will appear strong. The project is also consistent with the emphasis on local involvement in Building

Democracy USAID's Strategy in that it supports decentralization of decision making in the PH sector

Stabilizing World Population Growth and Protecting Human Health USAID's Strategy emphasizes the critical areas of the general health needs of infants and young children and the reproductive health needs of women and adolescents, the reduction of population growth rates to levels consistent with sustainable development, and the development of programs that are responsive and accountable to their consumers. The strategy stresses increased access, choice, and quality of care, and particularly recognizes the synergies that exist in an integrated approach to the delivery of essential health services.

Then too, USAID's draft Child Survival Strategy for Africa underscores the need for a dual approach: strengthening of institutions and basic health systems to achieve sustainability, which benefit not only child survival programs, but also family planning and preventive and curative health services, as well as the provision of integrated services for people level impact. The strategy emphasizes support for efforts both to increase public demand for services and to encourage community involvement in health management and health financing at the local level.

Encouraging Broad-based Economic Growth USAID's Strategy recognizes the importance of investments in health as a means of strengthening the productive capacities of people, particularly the lesson that improved health can significantly contribute to a country's sustained economic growth performance.

Eritrea's PH policies are emerging very close to the above USAID PH policies and these policies enhance the potential to maximize the impact of donor assistance in the PH sector. With an epidemiological profile that places its health status among the worst in the world, the GOE has developed a progressive health policy to improve the health status of Eritreans. This policy parallels USAID's PHN and child survival strategies with similar emphasis on an integrated approach, development of institutional and technical capacity, and the achievement of sustained impact.

#### **F Relationship to GOE Development Priorities**

To meet the formidable challenges of the health and population sector the MOH has developed a national health policy based on the principle of making primary health care available to all citizens. The policy emphasizes maternal and child well-being, a decentralized and integrated approach to services, and community involvement and support.

To accomplish this goal, the MOH has identified a number of priorities which include 1) expansion of primary health care

services to underserved populations, particularly those at greatest risk women of reproductive age (15-44 years), children under five, and returning refugees of all ages, 2) functional restoration of health care facilities damaged or neglected by the war, and the refurbishing of health care training facilities and construction of student housing, 3) training of all types of health care providers, with particular priority given to the training of ex-combatants who already have health care experience, 4) control of communicable diseases (malaria, TB and HIV/AIDS), 5) strengthening of the management of health services, and 6) establishment of an effective health information system for health surveillance and management. The GOE/MOH has successfully translated these priorities into action plans and interventions, and is seeking donor assistance to implement its plans.

Acknowledging the negative health implications of high fertility and high annual population growth rate of over 3% (which, if not reduced, will result in a doubling of the population in 23 years), the GOE plans to expand population awareness and integrate family planning services into all levels of primary health care services. Based on the foundation laid by the Eritrean Peoples Liberation Front (EPLF) efforts in family planning during the war, and considering Eritrea's low contraceptive prevalence rate (less than 1%), this effort will involve extensive awareness raising, training of health care staff, provision of commodities and logistical support, and participation of both private and public sectors to increase usage of family planning services.

The proposed EHP Project is consistent with the goals and priorities of the Eritrean Government and is specifically designed to help address most of these priorities through a series of interventions and activities which will help lay the necessary foundations for development of a sustainable health care delivery system.

### III. DETAILED PROJECT DESCRIPTION

#### A. Introduction

The EHP project is a five year, \$15 0 million project to increase the demand for and the quality and utilization of essential health and family planning services, especially by the most vulnerable groups, Eritrean women of reproductive age (15-44 years), infants and children, while laying the necessary foundations for a sustainable health care delivery system. The terms "health system and health delivery system", as used in this PP, subsumes both health and family planning. The project will focus both at the national and provincial levels of the health system. The four contiguous central provinces of Asmara, Akele Guzai, Hamasien, and Senhit have been selected as the focus area for project implementation. The detailed rationale for selecting these four provinces is explained in section III B.

The EHP Project has been designed to achieve the above objectives while carefully considering such factors as the number and difficulty of tasks included in the project, the limitations of GOE absorptive capacity, USAID and project management burden, GOE/donor budgetary resources, and the time frames required for human resource development and institutional development.

The PP Design Team recognized absorptive capacity as an absolutely critical limitation and decided that the Project should consist of two phases over the five year LOP. During the first two years of the project, Phase I, the project will focus on those things for which current absorptive capacity is considered adequate and for which sufficient information exists to proceed in a cost effective manner. This first phase will focus on those aspects of systems building which will lay foundations for rational systems expansion during the second phase. Assuming sufficient headway is made, this first phase should also lead to a greater absorptive capacity by the health system during the latter half of the project, as the systems developed or refined should be poised for expansion in the target provinces. A detailed description of the project phasing is included at the beginning of **Section C Project Outputs and Inputs** below.

The Project Design also takes account of the critical need to simultaneously design and implement system strengthening and improve service delivery in the provinces and at the center. Improved systems such as planning, HMIS, and logistics will not be developed in the center and then transmitted to the provinces for implementation. The fallacy of the centralized design approach was amply demonstrated in the failed new reporting system described under **Section c Health Management Information System** below. The central ministry and the provincial health

department, down to the community level, will work together in conducting studies and in designing improved systems and approaches prior to their implementation at the provincial level. Likewise, evaluations of the operation of systems will be jointly conducted for continued refinement and to verify effectiveness at all levels.

Regarding the concerns about USAID project management burden and the number and complexity of project activities, it should be noted that the EHP project is highly focused on those elements of the Eritrean health and population systems which are critical to policy setting, management, administration, and control. The two project outputs and the several inputs are closely inter-related and will be implemented, to the greatest extent possible, in an integrated manner. This close integration of project activities makes the project more compact (despite the number of activities) and therefore more manageable. For example, in many cases studies and analyses will be combined and training workshops will be designed to cover a range of related topics (for example, HMIS, health management, supervision would be taken together).

The selection of focus provinces contiguous to Asmara will facilitate proper oversight and management of project activities. Also, the development of replicable models in such areas as health care financing (e.g., user fee retention schemes), and the strengthening of decentralized provincial health planning and administration will also be more easily supported and managed due to greater accessibility. The focus provinces, while primarily highland, do include significant lowland areas and, while primarily Tigrinya and Tigre speaking (the two majority ethnic/linguistic groups), they also include other minority ethnic as well as nomadic populations. This diversity within the focus provinces will permit testing the applicability of systems strengthening approaches in a variety of climatic regions and with a variety of linguistic/ethnic groups.

There are areas of the health and population sectors for which the EHP project will not provide direct funding or other assistance, but for which the project will play a catalytic as well as strong donor coordination role.

The EHP project is not providing funding for refurbishing of the central laboratory or provincial laboratories, though it is supporting training of laboratory technicians and providing basic laboratory equipment for the focus provinces.

With the exception of warehouse rehabilitation or construction in the focus provinces and minimal repairs to training facilities to be done during the first phase, the EHP project is deferring the decision regarding potential EHP funding of all types of construction until Phase II.

Any additional facilities construction would be added to the project by a formal amendment to the project

The EHP project will not support vertical disease-specific programs or interventions for such diseases as malaria, AIDS, ARI, and vaccine preventable and diarrheal diseases, as the focus of the project will be on an integrated program of case management and preventive services covering all of these

The EHP project will not contribute the bulk of the drugs, medical supplies, and equipment required in the focus provinces over the next five years, but will endeavor to fill the gaps to ensure the system at all levels will be able to deliver the integrated package of basic services

By not supporting these activities directly the EHP Project will be reducing its management burden, while still supporting those activities which will allow for the attainment of the objectives of the Project. At the same time, however, the project will support crucial strategic planning and coordination of other donor inputs to help ensure these other aspects of the health system program are also strengthened

#### **B. Focus Provinces**

One of the criteria for selecting the four focus provinces of Akele Guzai, Hamasien, Senhit and Asmara has already been discussed in section III A above, i.e., the fact that a small contiguous geographical area, which is fairly readily accessible from Asmara, will facilitate proper oversight and management of project activities. There were three other principal reasons for their selection

First, the outlying provinces are now being served by a number of donor development efforts. USAID, through a grant to UNICEF, is already supporting an expanded program of immunization and rehabilitation of the primary health care program in the three provinces of Sahel, Barka, and Dankalia. In addition, over this next year, USAID may be providing additional support in the Barka, Sahel, and Gash Setit provinces to deal with the health problems of returning refugees (not yet finalized). Africare has a proposal to support and strengthen the primary health care program in the province of Dankalia, including upgrading the health center in Galelo and establishing a new health station at Bada. This activity might be supported by USAID assistance from USAID/W. Gash Setit province is being assisted by Save the Children (UK) and Lutheran World Federation, while Seraye will be a focus province for UNICEF. Semhar province has received support from the Norwegian Red Cross to reconstruct the Masawa hospital and Norwegian Church Aid has provided support for

Semhar's primary health care program

Second, the four central provinces are in critical need of improved health services. Because the central provinces have been considered better served with health services they have been afforded a lower priority for donor assistance in the health sector. Nevertheless, according to MOH statistics, the combined populations of the selected provinces account for nearly half of Eritrea's population and are still characterized by an extremely high population to health facility ratio (31,933 per functioning MOH health station and 95,800 per functioning MOH health center, compared with 43,720 per health station and 89,833 per health center for the other six provinces of the country). Of the 74 new health stations and 32 health centers which the GOE wants to construct in all ten provinces over the next several years, 27 of the former and 13 of the latter are scheduled to be built in these four provinces. With respect to staffing, excluding the national referral hospital in Asmara, these four provinces also are more underserved than the rest of the country. For example, only 24% of the specialists, 43% of the nurses, 31% of the lab technicians and 40% of administrative staff are found in these four provinces, although approximately 47% of the population is resident there.

Third, the central provinces are the optimal place to model an improved and integrated health system for expansion to the rest of the country, while at the same time reaching the largest number of people with at least minimal health and family planning services. The fact that these central provinces are more densely settled has traditionally meant that their populations have had more real access to health services because greater numbers are in closer proximity to health facilities and the transport infrastructure in these areas is more developed. The outlying provinces not only have sparser populations, but also large components of their populations are nomadic, further reducing the population reach of static health facilities.

The development of replicable models in other areas, such as health care financing (e.g., user fee retention schemes), and the strengthening of decentralized provincial health planning and administration will also be more easily supported and managed due to greater accessibility.

It is fully recognized that the health needs of the populations of the outlying provinces are in some ways greater, especially with regard to having access to health services. However, from the standpoint of building foundations for a sustainable health delivery system, while at the same time starting to have a positive impact on health status, it is obviously far better to focus the efforts of the project on those geographic areas and populations where this can most readily be done.

The principal beneficiaries of this project are women of reproductive age (aged 15-44) and children under age 5. The four selected provinces account for around 48% of Eritrea's population of both groups.

The four selected provinces cover a relatively small geographic area, have a good transportation infrastructure, are readily accessible from Asmara, and have a population of just under 1.5 million, less than half the population of Addis Ababa.

### **C Sector Goal and Project Purpose**

The goal of the EHP Project is to bring about a sustained improvement in the health status of the Eritrean population, with particular emphasis on improving the health of the most vulnerable groups, women and children. It will achieve this through strengthening the capacity of the health delivery system to make the most effective use of national and donor resources in providing for the basic health needs of the population.

The purpose of the project is to increase utilization of an integrated package of basic health services, especially by Eritrean women and children in four target provinces. Basic health services, as defined here, include EPI, ORT, family planning, pre- and post-natal care, AIDS control, nutrition, ARI and malaria.

### **D End of Project Status**

By the end of the project it is expected that the following will have been achieved:

- the central Ministry of Health and the departments of health in the four target provinces will have the capability to effectively plan and budget for more efficient utilization of material, financial and manpower resources

- an effective health management information system (HMIS) will be fully functional both at the center and in the four target provinces

- a good demographic data base will be available on Eritrea's population

- the logistics system for acquisition, storage, and distribution of drugs and health commodities will be fully functional at the center and in the four target provinces

- a number of health financing schemes will be operative in support of the public sector system both nationally and in the

focus provinces

- knowledge and awareness of the interventions of the basic health package will be essentially universal throughout the target provinces and will result in improved home management of care

- the proportion of women and children in the target provinces actually utilizing the basic health services will be considerably increased

- the MOH will possess an in-house capability to continually develop and carry out appropriate IEC campaigns and activities related to the basic package of health services

- contraceptive services will be much more widely available throughout the country, and the up-take of family planning services and contraceptive prevalence will be considerably increased

- NGOs in the target provinces will be playing a much greater role in the delivery of health services and information

## **E Project Outputs and Inputs**

The EHP Project has two major, inter-related outputs (**Strengthened System and Improved Services**) which address the principal constraints to providing high quality basic health services

### **Project Phasing**

The EHP Project outputs/inputs will be implemented in two phases, the first lasting approximately two years and the second running for the remaining three years. As indicated in the below, there are a number of activities and actions which must be completed early in the project in order to make a valid determination of how the project should proceed in a number of areas. For example, a comprehensive strategic health plan must be developed (which includes valid projections of manpower needs, drug requirements, facility requirements) before deciding to proceed with additional assistance for upgrading training institutes. Most of these early actions, which would take place during the first two years of the project, relate to capacity building at the provincial and central levels so that the system will be able to more effectively use and absorb EHP Project assistance (as well as other donor assistance) in providing more people with better quality health services. In a number of cases the project will assume an exploratory approach to the development of the health delivery system in that it will assist the MOH in

investigating various options open to them, e g , research will be undertaken to determine the best way to proceed with locating and building health facilities, and for determining the most suitable and cost effective designs for particular population distributions and climatic zones

Both phases will strike a balance between the two outputs of System Strengthening and Delivery of Improved Services -- a balance between laying the foundations for system sustainability and meeting short term health needs such as provision of medical equipment and supplies and relatively short term improvements in service delivery

The first phase of the project will focus on "capacity building" through provision of substantial technical assistance to develop and strengthen management systems, training a cadre of personnel in crucial skills, increasing the knowledge and data base needed to rationalize the health delivery system with respect to drugs, manpower, and facilities, and providing much needed logistics infrastructure and medical supplies. In particular, the following actions will be taken in the first phase: building the strategic planning capability and producing the strategic health plan, developing and testing the HMIS at province and central levels, conducting the nationwide demographic and health survey, upgrading the logistics system for drugs and medical supplies at provincial and central levels, with warehouses upgraded or built in focus provinces, participant training to upgrade capacity of training schools and management capacity for implementing decentralization, conducting an assessment for IEC and developing national communications plan, expansion of the family planning network of the PPAAE, conducting operations research on expandable health facilities and integrated approach to service delivery, and procurement of vehicles and an initial quantity of drugs and equipment for provincial health facilities

While many of the first phase activities will continue into the second phase of the project, it is expected that EHP Project Managers will have sufficient information available on which to make judgements regarding how to proceed with certain major components, such as health and training infrastructure strengthening and the approach to take in primary health care service delivery. The second phase will focus on the implementation of the lessons learned and the consolidation of the capacity strengthening at all levels down to the community in the focus provinces. During this phase the following actions will take place: a mid-term evaluation during the third year of the project, some upgrading or construction of health facilities and training facilities, depending upon the assessments of need conducted during the first phase, implementation of the IEC program in the focus provinces, expansion of the accepted (integrated) approach to PHC service delivery in the focus provinces, implementation and expansion of the community level

health worker program in the focus provinces, assessment of the potential in the private sector to implement a social marketing program for contraceptives, initiating NGO grants for systems strengthening and health outreach in the focus provinces, and a nationwide demographic and health survey to be conducted during year five

Output 1                    **STRENGTHENED SYSTEM**    Strengthened public health delivery system capable of delivering basic health and family planning services

The principal focus of this output will be on increasing the capacity of the public health delivery system, at both central and provincial levels, to more effectively manage the resources at its disposal - finances, manpower, commodities, transport, facilities - so that it is able to provide a greater portion of the population with quality services on a sustained basis

Constraints Addressed    Lack of strategic planning capability at central and provincial levels, weak health reporting system and lack of functioning health management information system, weak and inflexible logistics system, lack of trained manpower in all areas of health, lack of sufficient and appropriately designed health facilities, lack of an adequate demographic and health data base on Eritrea's population, poorly functioning supervision system at all levels, lack of finance to support the health delivery system

Project Actions

**a    MOH Strategic Planning and Budgeting**

The MOH has established a Planning Bureau, presently staffed by seven members and an expatriate advisor sponsored by SAVE the Children (UK). The director of the bureau reports directly to the Minister of Health while the advisor has been charged with the development of a new health management information system. With the exception of these two individuals, no other member of the central MOH Planning Bureau has formal training in health planning. None of the provincial administrations have trained health planning personnel and therefore the provinces currently have no capability to prepare satisfactory long-term health plans. Planning capability at lower levels of the health system (i.e., for individual facility plans) is also lacking.

The EHP Project will assess the planning needs of both the central Ministry of Health and the four target provinces and, based upon the results, will develop a package of short and possibly long-term technical assistance and training to provide the skills needed. It will also support research and technical assistance at the sub-province level to develop guidelines and manuals to assist the various levels of the health system in

meeting their planning needs. Expectations are that upgrading the planning capabilities at the different levels will require approximately two years, although this is likely to be achieved in a much shorter time at the central level. It is envisioned that at least at the central and provincial administration levels there will be a need for some computer equipment and software, as well as training on these to support the planning effort.

A very important component of the planning effort is that of financial planning, which is currently handled by the MOH Finance Department. Since successful planning for such aspects of the system as manpower and facilities obviously has long-term financial implications, long-term financial planning (and consequently, budgeting) must go hand-in-hand with strategic planning in other areas of the health system. The package of training and TA mentioned above will therefore focus on the integration of these different components of planning at both central and provincial levels.

To support long-term financial planning the project will also support a number of studies and operations research activities in the area of health financing, as well as TA and training to assist the MOH to deal more effectively with health financing issues. Currently, the MOH is implementing a cost recovery policy in which fees are charged for services provided both by hospitals and other health facilities. However, in early 1994 a "Health Finance Committee" was formed to draw up a new policy of cost recovery which would attempt to recover a much greater portion of the cost of providing services. The present "free care" system, where those who cannot afford to pay are exempted, would be altered in that provincial authorities would be given responsibility for covering costs of this "free care". Also, while hospitals would continue to remit all revenue to the MOF, health centers and stations would revert their revenue to provincial authorities to use for facility maintenance and renovation, and for payment of hospital "free care".

The EHP Project will assist the MOH in the implementation and evaluation of this health financing plan while at the same time supporting

- the development of a uniform reporting system for donors' and NGOs' planned capital and recurrent support to the health sector. This reporting system would be linked with the MOH's current reporting system for actual capital and recurrent expenditure.

- a cost accounting study of Eritrean hospitals in the focus provinces to establish the actual operating costs of these hospitals in order to provide information for more accurately pricing services.

- a study to estimate the volume and cost of "free care" proposed under the new health financing policy

- a cost study of health centers and stations to establish not only current levels of resources but also levels of required resources. A cost accounting approach would allow for comparison of unit costs between facilities in different areas, and between different types of facilities

- a household level study of income and health expenditures to understand more about private health expenditures in Eritrea. This study would also examine utilization of various types of providers and services (traditional versus modern), expenditure in both urban and rural areas, and measure the importance of non-monetary factors in the utilization of curative and preventive services

#### **b Development of a Demographic and Health System Information Base**

Recently, the MOH released its health policy which outlined its philosophy for providing health services to the population and stated the principal means by which this was to be achieved. It has also prepared a health plan which has not been released. Based on the fact that there are tremendous gaps in the information base on practically every aspect of the health system and the demographic and epidemiologic situation of Eritrea, it is almost certain that this plan will not be sufficiently detailed to accurately project the needs of the system with respect to manpower, facilities, commodities, and finances. Considerably more information will be needed before a plan can be produced which will provide an accurate basis for good medium-term to long-term planning for health system development.

The EHP Project will assist the MOH to develop an information base which will facilitate the refinement of the national health plan and make possible accurate strategic planning and program development. It will accomplish this in a variety of ways. First, in conjunction with upgrading the capacity for health and financial planning, the project will support the collection of comprehensive information on all operational health facilities (including those managed by the NGO and private sectors). This will start with a mapping and inventory of all existing facilities, including the physical structures, equipment, staffing, services, the population actually being served by the facility, the distances clients travel for service, the presence and extent of any outreach (i.e., CHWs or TBAs directly supervised by the facility and/or outreach visits by staff), the utilization of the services of the facility, their nearness to other health facilities and referral points, and the disease patterns in their catchment areas.

Second, a study of the extent to which patients by-pass lower level facilities to use higher level services (by-pass phenomenon) will be studied. This has direct ramifications for over- and under-utilization of the different levels of the health system. Third, a study will be conducted to determine the most important factors in particular geographic or climatic areas of Eritrea to be considered in locating new health facilities to ensure they will be able to effectively serve the population for which they are intended. Data from these studies will be directly relevant to the strategic planning process and will show the extent to which the current and projected health facilities will actually be able to provide coverage for the population. Data should provide clues for examining alternative types of facilities which might be better suited for different areas. They will also provide the basis within the overall strategic plan for determining future staffing patterns both for different types of facilities and for the health system as a whole. This information should serve to ensure the most rational utilization of available personnel as well as future personnel and training requirements for the health system.

A major contribution to the national health data base will be made by the nationwide demographic and health survey (DHS) scheduled to be completed during the first year of the project (partially funded through the EHP Project). This survey will provide excellent baseline data on which specific targets and benchmarks will be determined for the project with respect to such indicators as contraceptive prevalence and ORS usage. It will also provide the first nationwide data on which to begin development of appropriate health programs. A second DHS will be conducted during the last year of the project as part of the final impact evaluation and as a possible baseline for a follow-on project in health.

### **c. Health Management Information System**

During the last two years the MOH has replaced two reporting systems previously used by the EPLF and the Ethiopian government with a new reporting system. The MOH has prepared new forms, guidelines and manuals for the preparation of reports and field-tested the system. Unfortunately, health center and health station personnel charged with preparing the reports were not involved in its design. As numerous problems were encountered during the test, implementation of the new system is still in abeyance and the MOH is actively seeking assistance in developing a system which will serve the needs of the Eritrean health system.

There are a number of problems with this proposed new system: there is no system of source documents (registers, journals), there are no means for verification of reported data, far more data are collected than needed for managing the system, the

system perpetuates a one-way flow of information from periphery to national level, with no provision for feedback to provinces and health facilities

In summary, a simple system is needed which provides the peripheral facilities with the information needed to plan and manage its activities while providing each succeeding organizational level with progressively more aggregated data required for broader range planning and management. The Planning Bureau of the MOH has just developed a plan entitled "A Health Information System for Eritrea", which outlines a five year program for expanding the MOH capacity for managing an HMIS and for effectively utilizing the information generated by such a system at all levels of the ministry. This proposed HMIS would, in essence, be intended to address all of the issues discussed above and provide the information needed for monitoring the health status of the population as well as for program management.

The EHP Project will assist the MOH in the development, implementation (at the central level and in the focus provinces), evaluation, and use of a national HMIS. In doing this the project will assist the MOH in designing an HMIS which is appropriate for the Eritrean environment and which meets the needs of each level of the MOH health delivery system. The first step in this process will be to clearly define the objectives of health service delivery and the priorities of the primary health care program. This will provide the basis for determining what information is really needed about morbidity and mortality patterns, health service delivery, and for selecting key indicators with which to track system performance. To facilitate the design of this system and its implementation, the EHP Project will provide assistance for

- data needs assessment
- systems design and testing
- computers and software
- staff training on use of the system
- monitoring and evaluating the system during its early stages

Oversight of these activities would be provided by the MOH and its resident long-term planning advisor (funded by Save the Children, UK). The project would provide short term TA by an HMIS expert for design and testing, as well as for staff training.

#### **d Logistics for Drugs and Medical Supplies**

The MOH is making an attempt to improve drug availability, which is probably the prime criterion by which the community assesses the credibility of a primary health care system. To date, it has

adopted an essential drugs list although it has not yet adopted a comprehensive drug policy. While this is an important first step, success of an essential drugs program (and the primary health care program which it supports) is heavily dependent upon the efficient management of drug supply, storage and distribution at every point, from procurement and/or manufacturing to the ultimate dispensing or administration of the drugs to patients. An effective logistics system must provide the practitioner with concise, accurate and comprehensive information on the products included on the drugs list. The adoption of diagnostic and therapeutic guidelines, training on the use of these protocols, and effective clinical supervision can also contribute to more rational prescriptive practices, rationalize drug consumption and, in the process, minimize wastage. The MOH has indicated that they plan to adopt such guidelines and train staff in their use but this has not yet taken place. The EHP Project will assist the MOH in doing this through the provision of technical assistance to develop, implement and evaluate appropriate guidelines and to train staff in their use.

The MOH logistics system already possesses the basic ability to procure and distribute pharmaceutical supplies throughout the health system. At the same time, its inventory control and distribution systems continue to suffer from major weaknesses which, if not dealt with, can only become more acute as the health system expands and reaches a greater portion of the population. Currently, with a few exceptions, there are inadequate provisions for storage and transportation of commodities, including a lack of logistics management systems and trained warehouse staff. There is also a lack of available vehicles for transporting drugs within the system. These weaknesses result in both wastage of drugs as well as stock outages at the national, provincial and sub-provincial levels. The MOH is already receiving assistance to improve the inventory controls at the MOH Central Medical Stores (the new system is to go into effect in 1995). The EHP Project will draw on this experience and extend the inventory control system down to the health station level in the focus provinces. This effort will require TA in the areas of logistics management and training of staff in proper logistics procedures, reporting and warehousing at the various levels, as well as some computer hardware and software. It will also support the upgrading and/or building, as needed, of the principal warehousing facility in each focus province in order to better safeguard drug stocks, as well as support the provision of vehicles at the province level (four multi-purpose vehicles for each of the four provinces) for transporting drugs to health facilities within the provinces, for supervision, and outreach.

Most health facilities in Eritrea continue to requisition drugs based on consumption and estimated needs, but drugs are actually allocated based on a fixed formula unrelated to consumption,

service area population or patient caseload. This results in some facilities being allocated too much while others receive too little, which is directly related to stock outages and wastage. The data on service area population and utilization which will be collected in the planning process should form the basis for more flexible drug allocation procedures. The EHP Project will provide the ministry with technical assistance to develop, implement, and evaluate such procedures.

The MOH has a very limited fleet of vehicles to use in transporting commodities and supervisory personnel. A number of these vehicles are off the road at any one time for repairs or because of lack of spare parts, placing even greater pressure on those which are operational. While the MOH does need additional vehicles for the system to function satisfactorily, it recognizes that it may be more important for the long-term to develop a better capability to maintain its fleet in order to keep more vehicles on the road and extend their life. As the EHP Project intends to provide approximately 16 multi-purpose vehicles to the focus provinces, with spare parts, it will be in the interest of the project to ensure they are properly maintained. Consequently, the project will also send two MOH personnel for training on automotive maintenance and proper handling and accountability of spare parts. It will also provide TA to assist the MOH in establishing a maintenance facility for its fleet of vehicles with proper procedures for preventive maintenance.

The project will assist the MOH in assessing the requirements for establishing a repair and maintenance facility for basic medical equipment. Once this assessment is complete the project will support the ministry in identifying possible sources of assistance (among other donors) to establish such a facility and train staff.

#### **e. Supervision**

Periodic, systematic supervision at all levels is a prerequisite for a well-managed health system. It is also a major determinant of the quality of the services provided. As the term implies, supervision is the process of "overseeing" the operation of an organizational entity to ensure compliance with performance standards. It must be timely and systematic in order to identify deviations from expected performance and to initiate appropriate corrective action.

While supervisors in the Eritrean health system appear motivated, their effectiveness is impeded by a lack of transport to facilitate supervisory visits and by a lack of supervisory protocols and standards of performance. Moreover, there are no supervisory checklists to serve as guidelines for supervisors during their supervisory visits, nor standardized reporting formats to both record and facilitate the supervision process as

well as provide information for management of the system at higher levels

The EHP Project will assist the MOH in defining performance standards and indicators, including job descriptions for health workers, primary supervisors and secondary supervisors, and in developing associated guidelines, supervisory checklists, visit schedules, and standardized reporting formats. It will provide TA to properly evaluate these protocols and to train staff at the different levels of the system in their utilization. It is intended that these activities will occur in the focus provinces with central MOH participation. Once the supervision program is considered satisfactory it is expected that the MOH will expand it nationwide and incorporate the supervision program into the regular training of all new health providers.

#### **f Health Services Training**

The health system suffers from both a dearth of trained manpower in every specialty as well as a maldistribution of health manpower from a demographic perspective. At this time, however, the MOH does not have a long-range manpower and development training plan to address these problems. Its current plans, which focus largely on training ex-fighters to fill vacant positions, are only up to 1996/97.

As discussed above, manpower planning should form a part of strategic planning to ensure the proper types and number of health providers are trained to fill existing and future new facilities. Once this plan is completed it will provide a much better idea about future training requirements for the country over the next decade. As the training which is going on at present is mainly "catch-up", it is unlikely to result in over-production of providers in any category in the next few years. Therefore, it will continue as planned until the new strategic health plan, which will incorporate a manpower plan, is ready.

The EHP Project cannot and probably should not seek to speed up the production of health manpower until such time as there are valid manpower projections. What it will do, however, is strengthen the capacity of the MOH training program to produce the best quality health providers possible whose technical knowledge of the most important primary health care interventions (including family planning, HIV/AIDS and post-abortion counseling) and clinical skills are up-to-date. In total an estimated \_\_\_ months of short term and \_\_\_ years of long term participant training in the broad area of health services provision will be provided under the EHP Project.

Some illustrative examples of what such training might entail follow. The project may undertake to send five nurse-tutors for

long-term training in such areas as pediatric nursing, medical/surgical nursing, public health and pedagogical methods and curriculum development. Once these tutors were trained they would be in a position to train their own tutors. In addition, two tutors may be sent for long-term training from the midwifery school and, if it is possible to identify appropriate training for health assistants, then one or two HA tutors may also be sent for long term training. In addition, over the first two years of the project, other teaching staff will be sent for short courses on specialized topics considered relevant for skills upgrading. Not all of this training will be in the United States. Where possible, third country training in the region will take place. In addition, the project will seek in-country training opportunities.

During the first year of the project, the training equipment and materials of the training schools will be upgraded or replaced as needed, the teaching curricula will be reviewed and updated as required, and the libraries will be upgraded with books and journals.

In addition to the three principal health training institutions, assistance will be provided to create a training capability for laboratory technicians to fill vacant positions in the provinces. This will require TA for curriculum development, and assistance for particular training equipment and for training tutors.

Eritrea has less than a handful of personnel in country who are trained in public health, although a few are currently being trained overseas in a program tailored to Eritrea's needs. The project will support public health training for an additional five individuals to the MPH level either in the U.S. or a third country, possibly Ethiopia. These individuals, one from each of the focus provinces and one from the central ministry, will receive training in health management and service delivery. They will be specially selected as persons who will have responsibility for overseeing or contributing to the decentralization of the health system to the provincial level. These same individuals might also be sent for short term courses or workshops, as well as study tours, relevant to decentralization of health systems.

#### **g Physical Infrastructure**

The MOH has no proposals for rehabilitation of training facilities. However, just recently (May 1994) the MOH outlined plans for establishing a new training complex which would bring all the MOH schools and courses into one campus. The plans call for a complex for 800 students, although this number is preliminary and the actual number would be based on present and future manpower needs (which are not known at present).

Initially, it was intended that the EHP Project would substantially rehabilitate the three principal health training facilities, the nursing school, the midwifery school and the health assistants school which, combined, are responsible for training the bulk of the country's health providers. Considering this latest proposal, it is not prudent to proceed with more than emergency repairs to these schools until such time as sufficient information is available on which to make a determination regarding investment in the new complex. As discussed under the planning and information sections (a and b) above, substantial information will be generated in the development of a strategic health plan (which includes manpower projections based on current and future needs taking into consideration staffing patterns and new facilities) to make a valid determination of the future training needs. This, in turn, will determine the size and cost of the proposed new training complex.

From discussions with the MOH it was decided that USAID support for the training complex would be contingent upon two factors (1) it was shown to be more cost effective to invest in the new complex rather than rehabilitate existing training facilities, and (2) USAID's contribution would cover only a portion of the costs, i.e., other donors or the government would contribute a substantial portion for its development. As a consequence, the decision about how the project will support the physical infrastructure for training will not be made until the completion of the strategic health plan.

There is obviously a very real need for additional health facilities in Eritrea to provide health services to the population and a functioning referral system. Evidence, however, indicates that to ensure that additional infrastructure has the desired impact, considerable additional information is required on utilization of current facilities, the best criteria for siting new health facilities, and the most appropriate sizes, staffing and designs for health facilities for particular areas, climates and population distributions. It is expected that much of the former information will be collected during the first year of the EHP Project in conjunction with the enhancement of the strategic planning capability and the building of the demographic and health information data base. The MOH has expressed interest in assistance to experiment with an expandable (or phased) design for health stations (proposed by a USAID consultant) which could not only draw upon community involvement but also allow for the flexibility to adapt the facility to the community's changing (or increasing) health needs, even to the point of eventually developing the station into a health center. The EHP Project will provide the TA and financial support required to experiment with and evaluate such a phased design during the first two years of the project.

The only EHP Project funded infrastructure which will be supported during the first phase of the project will be for rehabilitation or construction of warehouse facilities (as discussed in Section d Logistics for Drugs and Medical Supplies) and minimal repairs to training facilities

Once the strategic health plan is completed and sufficient information is available for making a valid determination regarding the need for new facility construction, USAID will decide what construction to support in the focus provinces Such assistance, if approved, would be added by amendment to the project

**Output 2: IMPROVED SERVICES Increased Demand for, Access to, and Quality of an integrated package of Basic Health and Family Planning Services, especially by women and children in the four focus provinces**

The principal focus of this output will be on raising the awareness of the most vulnerable populations about the need for and availability of basic health services, while assisting the health system to provide these services in an integrated way to ensure that greater accessibility and more effective delivery of these basic services

**Constraints Addressed** Lack of integration of basic health services at service delivery level, lack of essential equipment to support provision of basic health services and lack of adequate equipment maintenance, limited private sector involvement in health sector, lack of comprehensive health education/IEC program and skills needed for developing, managing and implementing IEC activities, limited access to family planning services and contraceptives, lack of effective means for delivery of basic health services to rural communities

#### **Project Actions**

##### **a Improved and Integrated Basic Health Services**

The MOH is interested in providing an integrated package of basic primary health care services which includes EPI, ORT, family planning, pre-natal and post-natal care, AIDS control, nutrition, ARI, and malaria, but the MOH has not yet worked out a way to do so Health workers still use a disease-specific approach which often results in incorrect and incomplete diagnoses and treatment Also, treatment rather than prevention still tends to be emphasized The ministry has been made aware of the WHO/UNICEF Integrated Childhood Illness Management Initiative (ICIMI), which is currently being implemented in a number of countries, including Kenya, and is possibly interested in adapting such an approach for its PHC program (see Annex for a

description of ICIMI) Integration of different services will be developed and implemented as part of the management strategy

The EHP Project will provide TA and financial support for designing, implementing and evaluating the ICIMI approach in Eritrea in conjunction with the preventive aspects of the PHC program. Based on the results of this pilot effort, which will take place during the first two years of the project, and assuming that the MOH at that point wishes to adopt this approach to integrated service delivery, further technical and financial assistance will be provided to modify training curricula or adapt ICIMI training materials which are currently being developed elsewhere. The EHP Project would also provide TA to expand the initiative in the focus provinces

**b Expansion of NGO and Private Sector Role in Health and Family Planning Service Delivery**

The NGO sector is already playing an important role in providing essential health services in Eritrea. This role, however, could be considerably enhanced through provision of appropriate technical assistance to strengthen the viability of smaller NGOs working in the health sector and through support for the expansion of the outreach capabilities of all health NGOs

The EHP Project will support greater NGO involvement in the four focus provinces through provision of subgrants for development and outreach activities in the area of primary health care. This grants program will be administered by the EHP Project's prime institutional contractor with concurrence of USAID and the MOH. Selection criteria for award of grants will be jointly developed and approved by the MOH and USAID. It is expected that four subgrants will be awarded to NGOs for work in these provinces during the first two years of the project. Subgrants will be of the order of \$50,000 to \$75,000. To be effective, these NGO activities will require a minimum life of three years.

The project will also play a facilitative role in bringing about greater private sector involvement in health and family planning service delivery. It will support research and analysis on the regulatory environment which at this time impedes greater growth of the private health sector. It is expected that this research, which will be conducted in conjunction with the MOH, will lead to a better definition of policy with regard to the private sector's participation in health delivery. It will also support an assessment of the potential for a social marketing program for contraceptives and other basic health commodities through the private sector, to include an examination of private network organizations such as the National Women's Union of Eritrea (NUEW)

The project will also support the development and expansion of

the Planned Parenthood Association of Eritrea (PPAE) which is currently the principal NGO provider of family planning services. Support will be provided for contraceptive commodities (mentioned in the drugs and commodities section above), as well as technical assistance to further develop its training and counseling capability. To assist the PPAE in becoming more sustainable, and depending upon the social marketing assessment, the PPAE may undertake a small pilot social marketing program of its own. The PPAE will also be supported to expand its permanent presence throughout the country to the major population centers, to establish basic family planning clinics in these centers, train local staff for these clinics, and to launch outreach and community-based delivery programs from these centers in the surrounding areas. The PPAE will be supported to play a major role in raising the awareness of population issues in Eritrea.

### **c Health and Family Planning Education (IEC)**

While the MOH fully recognizes the need for an effective health and family planning education program as an integral component of its health service delivery system, at present it lacks the expertise or capability to develop or implement such a program. This situation is made even more difficult by the fact that the population is comprised of nine ethnic groups, each of which speaks its own language and has its own beliefs regarding health, illness and disease, and the extremely limited reach of mass media, with the possible exception of radio. At the same time there are potential channels available for delivering appropriate health education messages that can be developed, i.e., women's and youth organizations, NGOs, PVOs, religious organizations, and a folk media network.

To develop the capacity of health care providers at all levels of the system to be health and family planning educators, the EHP Project will support development and implementation of training-of-trainers curricula and workshops. TA and financial support will be provided to upgrade, where necessary, the curricula and tutors' TOT skills in the health manpower training schools and to develop appropriate in-service training programs for the four focus provinces.

The EHP Project will provide technical assistance to the MOH for developing a broad-based, multi-media and multi-channel health education program which focuses on the highest priority health issues. The first step in this process will be a comprehensive assessment of health education in Eritrea, which will involve the government, private sector and donor organizations involved in health. Based on this assessment, a health education development plan will be drawn up which will identify the requirements (research, personnel, training) for developing a capability at central and provincial levels to produce technologically and culturally appropriate IEC materials and to

launch IEC campaigns in the provinces Working closely and collaboratively with other donors, including WHO, UNFPA, UNICEF and the PPAE, the EHP Project will provide the technical and financial assistance needed to develop this capability Once in place, the project will provide technical assistance to the MOH in the development and implementation of a nationwide Health Communications Plan

One specific topic, reducing the practice of female circumcision, has been identified by PPAE and others as meriting special attention in the developing of health education programs The EHP Project could provide assistance to PPAE or other NGOs to develop a health education approach and materials for informing women of the harmful effects and changing this practice

#### **d Operations Research**

Individual communities are to be responsible for the provision of basic health care in their own communities In the health scheme developed for the country the communities themselves must decide they want a trained community health worker and agree to support such a person once trained The MOH will then train this person, who ostensibly will be supervised from the nearest health station It is also possible that the CHAs will receive an initial quantity of drugs, but after that it will be contingent upon the community to provide for drug costs, either directly or by means of some kind of revolving drug fund While this scheme of self-reliance at the community level is attractive, it is not at all certain how to make it work so that, in fact, many of the basic health problems are dealt with at the community level and not simply shifted to the health station or health center

The EHP Project will support an operations research activity in one highland and one lowland site in order to develop ways in which to operationalize this CHA scheme and to strengthen its chances for sustainability These studies will examine how NGOs might be used to support the development of the community health scheme In particular, it will examine various ways in which the community can support such CHAs and the most effective ways in which to link the CHAs with the formal health system It is expected that these studies will take approximately two years after which the lessons learned will be applied in expanding the program throughout the country

#### **e Commodities**

A review of the drug supply situation indicated that at this time most health facilities have an adequate supply of essential commodities to support the level of utilization of their services However, as outlined in the logistics section above, the current situation may be misleading as a retrospective examination of facility records indicates periodic stockouts

EHP Project support for logistics improvement will attempt to resolve some of these problems so that there is a more rational system of drug procurement (including donated commodities) as well as allocation. The assistance to be provided to the planning section will also be relevant here as it will help the MOH to project its long term drug requirements based on long term development and expansion of the health delivery program and increased utilization of health services and drugs.

Projecting future needs based on current consumption could lead to a serious under-estimation of needs. The MOH estimates drug requirements at \$4-5 million per year. The USAID health sector review prepared a rough estimate of total drug requirements for the country (see Table 1 in Section 2.5.6 of Annex C), but it was not possible to project needs net of donor contributions because the MOH does not routinely impute a fair market value to donated drugs. In summary, at this time and with the current state of the MOH drug procurement system it is impossible to make an accurate determination of what essential drugs contribution the EHP Project will need to make in the focus provinces in support of project objectives. The health sector review estimated that the total requirements for the focus provinces for the five year period 1995-1998 was approximately \$7,850,000 based on an estimated population growth rate of 3% a year. For the purposes here it is assumed that the EHP Project will cover 20% of the drug requirements for these provinces over the life of project, or approximately \$1.5 million in essential drugs/commodities (including contraceptives). This input, however, will not go to support drugs in general, but will cover costs of essential primary health care commodities, such as ORS.

Contraceptives will also be made available to the Planned Parenthood Association of Eritrea to support its family planning efforts throughout the country. Approximately \$500,000 in contraceptive commodities (oral contraceptives, injectables, condoms) will be provided to this organization over the life of project.

In addition, the EHP Project will ensure that health stations and health centers will be fully equipped. As mentioned earlier under development of an information base, project support will be provided for the collection of a comprehensive information on all operational health facilities, including a complete inventory of facilities' equipment available and equipment being provided by other donors. Equipment gaps will be identified and filled through project support.