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PD-AAU-658

INTERNATIONAL DEVELOPMENT COOPERATION AGENCY :

AGENCY FOR INTERNATIONAL DEVELOPMENT

WASHINGTON, D.C. 20523

PROJECT PAPER

BURMA

QUALITY CARE FOR CHILD SURVIVAL

(482-0013)

DECEMBER 1986

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE

A = Add
C = Change
D = Delete

Amendment Number

DOCUMENT CODE
3

COUNTRY/ENTITY

BURMA

3. PROJECT NUMBER

482-0013

4. BUREAU/OFFICE

Asia and the Near East

04

5. PROJECT TITLE (maximum 40 characters)

Quality Care for Child Survival

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)

MM DD YY
11/2 31/9 10

7. ESTIMATED DATE OF OBLIGATION
(Under "B" below, enter 1, 2, 3, or 4)

A. Initial FY 817

B. Quarter

C. Final FY 819

8. COSTS (3000 OR EQUIVALENT \$) =

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT *		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	1,200	300	4,500	7,332	2,168	9,500
(Grant)	(1,200)	(300)	(1,500)	(7,332)	(2,168)	(9,500)
(Loan)	()	()	()	()	()	()
Other U.S.						
1.						
2.						
Host Country	-	26,161	26,161	-	105,157	105,157
Other Donor(s)	4,764	-	4,764	19,045	-	19,045
TOTALS	5,964	26,461	32,425	26,377	107,325	133,702

9. SCHEDULE OF AID FUNDING (\$000)

A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant 2. Loan	D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT *	
			1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) HF	533	510			1,500		9,500	
(2)								
(3)								
(4)								
TOTALS					1,500		9,500	

10. SECONDARY TECHNICAL CODES (maximum 8 codes of 3 positions each)

550 530

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code BR PART TNG
B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To support the expansion and improvement of the Community Health Care delivery system, the Expanded Program for Immunization, and the Vector Borne Disease Control Program of Burma.

14. SCHEDULED EVALUATIONS

MM YY MM YY MM YY
10/88 11/90 10/91

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000 M1 Local Other (Specify)

16. AMENDMENT/NATURE OF CHANGE PROPOSED (This is page 1 of a ___ page PP Amendment)

Revised by ANE/PD/EA
10/23/86

17. APPROVED BY

Signature: *Earl J. Young*
Title: Earl J. Young

AID Representative

DATE RECEIVED
MM DD YY
07 24 86

DATE DOCUMENT RECEIVED
BY AID/W OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MM DD YY

BURMA
QUALITY CARE FOR CHILD SURVIVAL PROJECT (482-0013)

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II. EXECUTIVE SUMMARY

The Problem

The preponderance of disease and related deaths in Burma is concentrated in the vulnerable 0-5 year age group and among women of child-bearing age.

Proposed Solution

This project paper presents a comprehensive plan for the employment of AID resources to support the efforts of the Ministry of Health, Burma in its child survival program. Its adoption would make a significant contribution to AID's 1990 goal of preventing two million deaths from diarrheal disease.

The overall goal of the project is to reduce morbidity and mortality among infants, young children and pregnant women caused by immunizable and diarrheal diseases, malnutrition, malaria and child birth. This can be achieved by increasing the effective use of vaccinations, oral rehydration, anti-malarials and by improving birthing, weaning and feeding practices. To achieve this, the project will support the expansion and improvement of the Community Health Care (CHC) delivery system, the Expanded Program for Immunization (EPI) and the Vector Borne Disease Control Program (VBDC) of the Ministry of Health.

A new, major training effort will establish an in-service training system for improved mid-level management and supervision. This will complement the efforts initiated under prior AID-financed health projects (PHP II) to establish State/Division training teams for improving the content and process of Volunteer Health Worker training.

Support will be provided to the national Expanded Program for Immunization for the new Universal Child Immunization Project. Under this project, the Government of Burma plans to fully immunize 85% of infants and 70% of the pregnant women nationwide by 1990. AID assistance will include support for measles vaccine, cold chain supplies and equipment, transportation and training; assistance which will complement activities undertaken by UNICEF.

Background

The major diseases and illnesses among the target population in Burma are largely preventable. Malaria, tuberculosis, diarrhea, anemia, septic abortions, tetanus, measles, typhoid and diphtheria are the most prevalent. Medical

experience indicates that proper preventative health measures, appropriate treatment and public awareness of the availability of medical assistance can significantly prevent or ameliorate these health problems.

The Government of Burma has made significant progress in installing a rural primary health care infrastructure. This infrastructure must now be strengthened and improved through better logistics, management and planning.

Project Data:

Life of Project: 4 years; start-up: 2nd quarter FY 1987
Cost Data (\$000):

	<u>Bilateral</u>	<u>Central</u>	<u>Total</u>
Commodities	4,058,900	-	4,058,900
Local Support Costs	2,167,700	231,000	2,398,700
Technical Assistance	1,317,500	580,300	1,897,800
Training	525,600	-	525,600
Evaluation	150,000	-	150,000
Contingency/Inflation	<u>1,280,300</u>	<u>-</u>	<u>1,280,300</u>
Total Cost	9,500,000	811,300	10,311,300

Waivers:

The Project Paper requests the Administrator to approve a waiver of competition, of source/origin of commodities, and source of transportation services from Code 000 to Code 935 for the procurement of health worker kits and equipment sets supplied by UNICEF for rural health facilities. The paper also requests the Assistant Administrator for Asia and the Near East to approve a source/origin waiver for motorcycles.

ABBREVIATIONS AND ACRONYMS

ADAB	Australian Development Aid Bureau
ADB	Asian Development Bank
AID/Burma	AID Representative Office at Rangoon, Burma
AID/W	Agency for International Development, Washington
AMW	Auxiliary Midwife
BHS	Basic Health Services
BPI	Burma Pharmaceutical Industries
CHP	Country Health Program
CHW	Community Health Worker
CIDA	Canadian International Development Agency
CMSD	Central Medical Stores Division
CY	Calendar year
DCD	Disease Control Division
D/S	Division/State
D/STT	Division/State Training Team
DG	Director General
DOH	Department of Health
DPSC	Defense Personnel Supply Center
EPI	Expanded Program for Immunization (Project)
FERD	Foreign Economic Relations Department, Ministry of Planning and Finance
HA	Health Assistant
HEALTHCOM	Communication for Child Survival Project (S&T/Health)
HDO	Health Development Officer, AID/Burma
IMR	Infant Mortality Rate
JCHP	Joint Committee on Health Policy
JICA	Japanese International Cooperation Agency
LHV	Lady Health Visitor
MCH	Maternal Child Health
MOH	Ministry of Health
MOPF	Ministry of Planning and Finance
ORT	Oral Rehydration Therapy
PHC	Primary Health Care
PHN	Public Health Nurse
PHP	People's Health Plan
PHS	Public Health Supervisors I and II
PIO/C	Project Implementation Order/Commodities
PIO/P	Project Implementation Order/Participant Trainees
PIO/T	Project Implementation Order/Technical Services
PO	Purchase Order
PSC	Personal Services Contract
RHC	Rural Health Center

SRUB	Socialist Republic of the Union of Burma
TEA	Traditional Birth Attendant
THO	Township Health Officer
TMO	Township Medical Officer
TMP	Traditional Medicine Practitioner
UCI	Universal Childhood Immunization
UNICEF	United Nations International Children's Emergency Fund
UNIPAC	United Nations Procurement Office, Copenhagen
USDH	United States Direct Hire Employee
VBC	Vector Biology Control Project (S&T/Health)
VBDC	Vector Borne Disease Control (Project)
VTPC	Village Tract People's Council
WHO	World Health Organization

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523PROJECT AUTHORIZATIONName of Country/Entity: BurmaName of Project: Quality
Care for Child SurvivalNumber of Project: 482-0013

1. Pursuant to Section 104(c) of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Quality Care for Child Survival Project ("the Project") for Burma ("Cooperating Country") involving planned obligations of not to exceed Nine Million Five Hundred Thousand U.S. Dollars (\$9,500,000) in grant funds ("Dollar Grant") over a three year period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs of the Project.
2. The Project will support the expansion and the improvement of the Burmese community health care delivery system, the Expanded Program for Immunization and the Vector Borne Disease Control Program. Commodities will be furnished in the form of health kits, cold chain equipment and supplies, vaccines, materials for training and supervision, data processing equipment and rural health center and sub-center equipment. A.I.D. will also support technical services to the Burmese Health Assistants Training School and the Department of Health's Health Information Service.
3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.
 - a. Condition Precedent to Execution of Project Agreement

Prior to execution of the Project Agreement, the Cooperating Country must furnish A.I.D. a written request for assistance.
 - b. Source and Origin of Commodities, Nationality of Suppliers of Commodities and Services

Commodities financed by A.I.D. for the Project under the Dollar Grant shall have their source and origin in the United States or in the Cooperating Country except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services financed by A.I.D. under the Dollar Grant shall have the United States as their place of nationality, except as A.I.D. may otherwise agree in writing.

Ocean shipping financed by A.I.D. for the Project under the Dollar Grant shall, except as A.I.D. may otherwise agree in writing, be financed on flag vessels of the United States. Training financed under the Dollar Grant may be undertaken in the United States or in third countries in accordance with the provisions of A.I.D. Handbook 10.

c. Condition Precedent to Disbursement

Prior to any disbursement, or the issuance of any commitment documents under the Project Agreement, the Cooperating Country shall furnish, in form and substance satisfactory to A.I.D., (1) a statement identifying the various agencies and offices of the Cooperating Country responsible for implementation of the Project and designating individuals in each such agency or office responsible for coordinating Project components and (2) a plan for ensuring that imported Project commodities are cleared through customs in timely fashion to station hospitals, rural health centers, sub-centers and voluntary health workers under the Project.

d. Covenants

1) The Cooperating Country shall covenant that it shall process and clear expeditiously, and store and distribute properly, all goods and commodities financed under the Project.

2) The Cooperating Country shall covenant that it shall ensure that the Ministry of Health or other entities of the Cooperating Country to which the goods are destined will pay any and all taxes and duties on A.I.D.-financed commodities, and/or exempt such commodities from such costs.

3) The Cooperating Country shall covenant that it shall ensure that each agency and office of the Cooperating Country responsible for carrying out the Project will cooperate to the maximum extent possible with the Ministry of Health in carrying out the Project.

4) The Cooperating Country shall covenant that all positions to which salary support shall be included in the Project, if deemed appropriate and worthy upon the completion of the Project, will be continued and their costs financed by the Cooperating Country.

4. Waivers

Based upon the justification and findings set forth in the waiver accompanying this authorization, I hereby:

a. Approve a waiver of source and origin requirements from A.I.D. Geographic Code 000 (U.S. only) to Code 899 (Free World) for the procurement of motorcycles and helmets in the amount of \$350,000 and certify that exclusion of procurement from Free World countries other than the Cooperating

Country would seriously impede attainment of U.S. foreign policy objectives and objectives of the foreign assistance program.

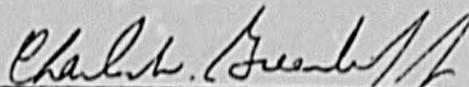
The following waivers have previously been approved by A/AID:

a. A waiver of source and origin from A.I.D. Geographic Code 000 (U.S. only) to Code 899 (Free World) for the procurement of medical supplies and equipment to be supplied by UNICEF in the amount of approximately \$1,600,000 and certify that exclusion of procurement from Free World countries other than the Cooperating Country would seriously impede attainment of U.S. foreign policy objectives and objectives of the foreign assistance program;

b. A waiver of source and origin for transportation services from A.I.D. Geographic Code 000 (U.S. only) to Code 935 (Free World) flag of registry for the medical supplies and equipment to be supplied by UNICEF; and

c. Authorization of noncompetitive negotiation to procure such medical supplies and equipment from UNICEF for the Project.

Signature



Charles W. Greenleaf, Jr.

Assistant Administrator

Bureau for Asia and Near East

12/17/86

Date

IV. PROJECT BACKGROUND AND RATIONALE

A. Statement of Problem

The health problems affecting Burma are not unlike those of neighboring countries with low per capita incomes, a tropical environment, poor sanitation facilities, lack of clean water, underdeveloped communication and transportation systems and predominantly a rural agricultural economy. Burma, however, has several advantages with a high literacy rate, fertile land, a rich natural resource base, and an expanded rural basic health program, supported by the Village People's Councils.

There is a considerable amount of debate about the stated mortality and morbidity levels in Burma. The official infant mortality rate is 50 deaths per thousand live births; however, estimates vary from 40 to greater than 90 ^{1/} deaths per thousand. Regardless of the actual level of mortality, four points can be made with confidence:

(1) The majority of morbidity and mortality in Burma continues to be concentrated in the 0-5 year age group and among women of reproductive age;

(2) Much of the morbidity and mortality in Burma continues to be caused by diseases which are largely preventable. The major disease problems, as identified by the SRUB, are malaria, tuberculosis (all forms), diarrhea, anemia, abortions, haemorrhaging due to pregnancy and child birth, and early childhood diseases such as tetanus, measles, typhoid, and diphtheria. It is estimated that 27% of all infant and young child deaths are due to tetanus, measles, and diarrhea and that 30 out of every 1,000 live births will not survive due to immunizable diseases. A productive-years-of-life-lost analysis indicates that the greatest reduction in mortality would be made with planned interventions in infectious diseases and pneumonia in young children and infants. It is likely that measles alone accounts for over 20% of all pediatric hospital admissions and at least 20% of all infant and young child deaths. Malnutrition plays a strong contributing role in infant and child mortality;

(3) There is a tremendous amount of variation in the mortality/morbidity conditions within Burma with the most remote, underdeveloped areas usually being the worse off; and

^{1/} See International Bank for Reconstruction and Development, Department of Economic Analysis and Projections, "Social Indicators", June, 1984, UNICEF, State of the World's Children, 1986 and Annex D, table 1A "Basic Health Indicators" to this project paper

(4) The infant mortality rate, even at 90 deaths per 1,000 live births, is comparatively low given the level of economic development.

Access to and use of key services is still low. Regular use of oral rehydration therapy (ORT) remains limited. Current national immunization levels vary from a high of 39% for BCG to virtually no coverage for polio and measles. Between 9% and 18% of children under the age of three are severely malnourished and 20% of infants are born with low birth weight. Only 38% of urban residents and 15% of the rural population have access to clean drinking water.

The planned project, Quality Care for Child Survival, cannot hope to remedy all of the health problems and circumstances affecting the target population, i.e., children in the 0-5 age group and women of reproductive age. However, the project is designed to focus planned interventions in support of certain of the activities under the SRUB People's Health Plan which will have the greatest impact on the target population, stress the improvement of quality of services offered, continue assistance to improve the management information and logistics systems, provide needed funding for "demand creation" efforts and complement those activities currently being implemented by and through other bilateral donors.

B. Description of The People's Health Plan

In 1978, the Socialist Republic of the Union of Burma (SRUB) embarked on a new health care initiative, the People's Health Plan (PHP). The purpose of PHP was to strike a better balance between preventive and curative care and to extend basic health services to underserved areas. The goal is to reduce morbidity and mortality, especially among ... "infants, children, mothers, and working people". The Ministry of Health is currently finalizing plans for PHP III (1986 - 1990) which is a continuation of PHP I and PHP II. Stated objectives are to continue to focus on the reduction of morbidity and mortality. This will be accomplished through further expansion and improvements in the quality of basic health services.

Table 1 reflects the quantitative results of PHP I and PHP II as well as the projected accomplishments under PHP III.

Table 1

PHP MANPOWER AND FACILITIES DEVELOPED UNDER
PHP I AND PHP II AND PLANNED FOR PHP III

<u>MANPOWER</u>	<u>PHP I</u> (1978/82)	<u>PHP II</u> (1982/86)	<u>PHP III</u> (1986/90)	<u>TOTAL</u> (end 1990)
Basic Health Workers (BHws)	14,800	2,280	5,100	22,180
Community Health Workers (CHws)	14,000	22,400	28,000	64,400
Auxiliary Midwife Workers (AMWs)	4,600	5,900	8,000	18,500
Traditional Birth Attendants (TBAs)	2,500	15,000	4,000	21,500
 <u>FACILITIES</u>				
Rural Health Clinics (RHCs)	1,267	140	140	1,547
Sub RHCs	5,219	520	720	6,459
Maternal Child Health (MCH) Clinics	336	40	-	376
Urban Health Centers (UHC)	62	4	8	74
School Health Teams (SHT)	72	16	-	88

These are quantitative measures of health staff and facilities. Several assessments of the first two PHPs have praised these quantitative gains but urged further attention to quality; PHP III reflects this subtle shift in emphasis. ^{2/}.

The Department of Health (DOH) defined four service programs and four support programs to carry out PHP II, and will follow this same course in PHP III. The service programs are:

- Community Health Care (CHC)
- Disease Control (DC)
- Environmental Health (EH)
- Hospital Care (HC)

The Quality Care for Child Survival Project proposes to support Community Health Care and Disease Control; the former cover the village health worker program, CHC support systems and health-worker training and the latter cover Expanded Program of Immunization (EPI), Vector Borne Disease Control (VBDC) Program and Diarrhea Disease Control, (CDD).

^{2/} See Oot, Fairbank and Baker, "A Review of AID's Health Sector Strategy in Burma", February, 1985, and O'Brien, Mays and Reynolds, "Primary Health Care I -- End of Project Evaluation", February, 1985

The support programs are:

- Health Education
- Supply/Logistics and Maintenance and Repair
- Laboratory Services
- Health Manpower Development

The proposed project will also support efforts in Health Education with the promotion of a health communication campaign focussed on EPI and ORT.

The Disease Control Division within the DOH has responsibility for the expanded program of immunization, vector borne disease control, tuberculosis, leprosy, acute respiratory diseases, diarrheal disease, sexually transmitted diseases, skin diseases, and zoonoses. This project proposes major new support for the EPI and VBDC. Detailed descriptions of these programs can be found in the project description.

C. Organization of Health Services in Burma

The pyramidal organization of Burma's health sector reflects the country's general administrative structure. The country is divided into seven states and seven divisions. The divisions are the administrative units in the central plains areas, whose population consists of ethnic Burmese. The states are inhabited primarily by ethnic minority groups. Burma's 14 states and divisions are sub-divided into 314 townships and 13,756 village tracts. Each village tract is comprised of about five villages.

The Ministry of Health, ultimately responsible for the nation-wide delivery of health services, is comprised of four Departments: Health, Medical Research, Medical Education, and Sports and Physical Education. The DOH which administers 80% of the total MOH budget is charged with the design and implementation of the People's Health Plan. At the Central level, health care services delivery is limited to tertiary care hospitals and urban clinics mostly in Rangoon and Mandalay (See Organizational Chart).

At the State/Division level, health services are administered by the State/Division Health Director with the assistance of public health and other personnel. At this level, curative services delivery is provided on a referral basis by the 14 State/Division Hospitals staffed by medical specialists.

The Township Medical Officer (TMO) is in charge of the Township Health Department and in some cases is assisted by a

Township Health Officer who supervises Public and Community Health Programs throughout the Township. While curative services are provided through Township Hospitals, which are staffed by general medical officers and have 16-150 beds, the Township Health Department also implements the Basic Health Center network. The average township population is 120,000.

Basic Health Services (BHS) represent the most peripheral level of Burma's formal rural health sector -- that is, the lowest level of the health delivery system which is financed by the Government. In rural areas, Basic Health Services are provided by a network of 315 Station Hospitals plus 1,407 Rural Health Centers (RHCs) and 6,259 Sub-Centers. Station Hospitals, whose staff includes a medical officer, usually have about 16 beds and provide curative services. Rural Health Centers provide outpatient health care, and are staffed by para-professionals including a health assistant, one Lady Health Visitor, one Midwife, and one to four Public Health Supervisors. RHC has four (4) sub-centers on average each with a midwife.

The RHC is responsible for the provision of preventive services, and an array of curative health services. It also acts as a referral mechanism to the Township level. Making referrals, however, is often difficult unless the RHC is near the Township Hospital. Therefore, Health Assistants are charged with providing and supervising most curative medical work in Village Tracts. On average, each RHC serves 20,000 people.

The final rung on the organizational ladder of Basic Health Services in Burma is the Rural Health Sub-Center. For each RHC there are, on average, four satellite sub-centers staffed by a midwife, and in some instances, a public health supervisor. Sub-centers are often located in the homes of the midwives. So a Rural Health Sub-center services about 4,000 people.

The RHC and sub-center staffs make regular visits to villages. They do not wait passively for people to come to them. Normally the centers are closed three days per week in order for the staff to make their visits. Where there are VHVs, the center staffs visit them to check on their work and to provide advice.

Despite the existence of the Basic Health Services in Burma, and the outreach service described above, rural villages receive inadequate health care. Large numbers of Village Tracts are still underserved by Basic Health Services (RHCs and sub-centers). In some cases RHC staff are overburdened and short of equipment and supplies, thus limiting the efficiency

of the system in meeting health needs. And, traditionally, preventive health activities have been over-shadowed by curative activities.

To provide health services equitably to rural dwellers, Burma conceived a new tier of health services termed primary health care, to be provided by community-supported volunteer health workers (VHWs). Two new types of workers have been deployed at the village level and village tract levels: Community Health workers (CHWs) and Auxiliary Midwives (AMWs). In addition, a third component of this health worker scheme involves the training of traditional birth attendants (TBAs). Usually elderly, TBAs have been serving their communities in the absence of other obstetrical care. Only the CHWs and AMWs are truly "new" Volunteer Health Workers. TBAs have existed for centuries and receive remuneration for their services.

Administratively, AMWs and CHWs are recruited by and are responsible to the lowest government administrative unit, the Village Tract People's Council. For all technical matters they are supported by the DOH health system and trained by and supervised by Township and RHC staffs, who have been trained for that function by their respective State/Division Training Teams and provided with equipment and initial expendable supplies by the DOH. Funds for resupply and other needs are the responsibility of the Village Tract People's Council.

Community participation in primary health care implementation is encouraged by the Government of Burma. Village and Village Tract Councils are actively involved through their Health and Social Welfare committees. People's Councils monitor and report on the progress of implementation. Such feedback is valuable in refining intervention strategy.

The major responsibilities of the various health workers within the community are summarized below:

Auxiliary Midwife

- Antenatal and postnatal care;
- Home delivery;
- Communicable disease surveillance;
- Vital health statistics reporting;
- Assistance with immunization; and,
- Minor treatment, management of emergencies and referral of severe cases;
- Nutrition surveillance;
- Dissemination of Health Education;
- Health Education in Family Health;

Table 2
PROJECTED FUNDING FOR PHP
(US\$ 000's)

<u>Source/CY</u>	1986-87	1987-88	1988-89	1989-90	Total
CHC	2,600	2,612	2,625	2,688	10,525
EPI	595	614	628	724	2,561
VBDC	836	870	904	941	3,551
Total DOH <u>a/</u>	4,031	4,096	4,157	4,353	16,637
Community <u>b/</u>	22,130	22,130	22,130	22,130	88,520
AID	1,500	3,500	3,500	1,000	9,500
UNICEF <u>c/</u>	2,389	2,505	2,600	2,600	10,094
WHO <u>d/</u>	1,175	976	1,000	1,000	4,151
Italy <u>e/</u>	1,200	1,200	1,200	1,200	4,800
Total <u>f/</u>	32,425	34,407	34,587	32,283	133,702

-
- a/ For CHC includes recurrent costs of BHS employees and other limited costs. For EPI and VBDC includes only recurrent costs.
- b/ Taken from PHP III, Executive summary, p.4. Assuming US\$ 1.00 = K8.00. Includes community support for CHC, but not for environmental health.
- c/ UNICEF projected budget for health and nutrition, (See Annex C)
- d/ The WHO program for 1988-89 is only in the planning stage. The levels of funding above are based on the assumption that WHO funding levels will remain relatively constant.
- e/ This is the \$6 million 5-year Nutrition Support Program jointly monitored by UNICEF and WHO, evenly apportioned by year.
- f/ This includes donor inputs to CHC, EPI, and VBDC. This budget does not include the support for environmental sanitation by UNICEF (\$3.5 million) or the Australian Government (\$20.0 million) over the PHP III period.

Community Health Workers

Medical care for minor ailments and first aid;
Referral of severe ailments to nearest BHS unit;
Motivation of the community for environmental sanitation improvement including vector control;
Assistance in communicable disease control including immunization;
Dissemination of health education emphasizing nutrition and family health;
Assistance in family health activities;
Assistance in reporting vital events; and,
Support and assistance to the BHS in their activities in the community.

The Director General (DG) of DOH has responsibility for over-all health administration and planning which includes implementation of the People's Health Plan III (1986-1990). A Director for Public Health oversees the Basic Health Services (BHS) and Primary Health Care (PHC) projects, while the Director for Disease Control is responsible for EPI and VBDC. The Central Health Education Bureau, the focus for the project's media activities, is a support program within the DOH.

As over-all manager of the Primary Health Care III Project, the Director General of the DOH will be responsible for providing leadership and momentum in achieving project purpose and for coordination of relevant elements of the project within the People's Health Plan III (1986-1990).

Coordination at the intermediate and peripheral levels is the responsibility of the Division/State Health Director who oversees both the Township Medical Officer (TMO) and Township Health Officer (THO). A number of programs and health centers are within their jurisdiction. The extension of health services to the village level through the training and supply of CHWs, AMWs and TBAs relies on this structure being in place. Both technical training and supervision of Voluntary Health Workers are the responsibility of the rural health center staff assisted by Township Health Officers and by a cadre of Division/State Trainer-supervisors. CHWs and AMWs will be supervised by Public Health Supervisors and Midwives, respectively, from the rural health center.

Recruitment of volunteer health workers is the responsibility of the Village Tract People's Councils (VPCs) whose membership is informed of the goals of the People's

BURMESE ORGANIZATION FOR THE DELIVERY OF PUBLIC HEALTH SERVICES

Department of Health

Director General

Director
Hospital Care

Director
Environmental Health

Director
Public Health

Director
Disease Control

Deputy Director
Occupational Health

Assistant Director
Environmental Sanitation

Deputy Director
Rural Health, MCH,
School Health

Assistant Director
Nutrition
FHC Project

Assistant Director
Health Education

BHS/PHC Project

Division/State Health Director

Township Medical Officer

Station Hospital(s) Health Units

RHC Sub-Centers

Village Tract People's Councils

AMWs (One per village tract)

INTERMEDIATE/PERIPHERAL LEVEL

Rural Health Center(s)*

RHC Sub-Centers**

VILLAGE/VILLAGE TRACT LEVEL

CHWs (One per village)

.et-thes

* RHCs are staffed by Medical Officers/Assistants, Lady Health Visitors, Midwives, and Public Health Supervisors I and II.

**RHC Sub-Centers are staffed by Midwives.

issues to the attention of the Councils as well as to higher levels. The project will fund the production of health orientation materials for use by Council members and by other village leaders, who have been effective in recruiting CHWs and AMWs; overseeing their daily activities; and, raising and/or managing funds for replacement of CHW medical supplies. The project will encourage the VPCs to continue mobilizing and motivating villagers for both collective and individual service. Emphasis will be on preventive health programs.

D. History of AID Assistance in Health

AID resumed assistance in the health sector in Burma in 1980. At that time the SRUB Primary Health Care Project was already underway with the assistance of UNICEF and WHO. The AID-financed Primary Health Care I (PHC) Project (482-0002) was signed in 1980 and included funding in the amount of \$4,720,000 (amended) to import commodities (mostly health worker kits) and provide a small amount of overseas training and technical assistance in support of the larger SRUB effort. Kyats 9,498,000 were also provided in order to finance the local costs of health worker training.

Prior to the completion of PHC I, PHC II was designed and signed in 1983. The amended total AID funding provided under PHC II is \$9,320,000. PHC II continues the central theme of PHC I, basic support of the SRUB Primary Health Care activity, but introduces long-term technical assistance, in the form of a training advisor, increased amounts of participant training, a preliminary health management information system and an opportunity to assist directly in malaria training and support activities. In addition to expanding coverage of health services provided, attention to quality aspects of the program, particularly to the amount and type of supervision received, is also an aim of the project.

E. Performance to Date

It is envisioned that this project will build upon the substantial progress to date in establishing and expanding the village health workers program under PHP I and II. Continued support will be provided for the expansion of the community health care program through the deployment, training, and equipping of additional volunteer health workers (VHWs). More importantly, this project will accelerate the efforts initiated under PHP II, and identified under the Primary Health Care I evaluation, to improve the quality of the PHP program. Support will be provided to improve the management information and logistics systems of the CHC, begun under the Primary Health Care II Project, and to do operations research. Major

initiatives are proposed in training, mass media and in support of specific disease control efforts in EPI and malaria control. Under an amendment to the Primary Health Care II project, executed in 1985, AID is providing some assistance to the Vector Borne Disease Control Unit of the MOH. However, it is too early to tell what impact this assistance has had.

F. Relationship To SRUB Priorities and AID Development Assistance Strategies

As noted earlier, under PHP III the SRUB plans to continue efforts to expand the Community Health Care program supported under PHP I and II. However, as the CHC program has already covered some portions of all townships by March, 1986 (about 130 of a total of 314 townships have 100% village coverage), future program plans place much more emphasis on improvement of quality of services. In particular, the expansion of coverage under PHP III will focus on major technical interventions such as MCH services, nutrition surveillance, EPI, and ORT; and the further reduction of morbidity and mortality of the problem diseases of women and children.

This project has been designed in content and timing to provide assistance which directly supports the PHP III and the objectives described above. Project assistance for the training and equipping of VHWS and for equipping RHCs is based directly on needs identified in the PHP III plan. Other project assistance for CHC including the establishment of in-service training, improvement of CHC support systems (MIS, logistics, and operations research) and the introduction of media campaigns has been designed in consultation with MOH staff to address the central issue of PHP III, specifically, quality improvement of services offered.

The project assistance for EPI has been taken directly from a plan proposed by the EPI staff. AID assistance is in direct support of this major SRUB initiative. Malaria control is also a SRUB priority program where more resources are being sought.

The project clearly conforms to the Agency health strategy goal of infant and young child mortality reduction. The focus of CHC is to bring essential new services to infants, children, and women in the rural areas where services have not been previously available. The priorities in this project attached to improvement of quality of services and to the reduction of specific preventable diseases conform to AID objectives. The in-service training program of the basic health staff is designed to improve management, supervision and service delivery of key interventions such as ORT, EPI, ante natal care, and nutrition. These are Agency priorities.

The focus on EPI and the close coordination with UNICEF are directly in line with the Agency priority related to child survival. Direct and substantial AID assistance for EPI represents a new area for AID support in Burma. The ambitious media campaign to promote ORT and EPI compliments the Agency's strong interest in demand creation and social marketing. The project support for malaria control also conforms to AID health assistance priorities given the magnitude of the malaria problem in Burma.

The project supports the four initiatives of the Agency: institution building, technology transfer, policy dialogue, and, to a lesser degree, the private sector.

Specifically:

- (1) Institution Building - The in-service training program is designed specifically to improve supervision/management and service delivery of the basic health staff.
- (2) Technology Transfer - Through technical assistance the following technologies will be introduced into the PHP: management/supervision training, mass media campaign for ORT and EPI, expansion of a modern MIS, and improved management of cold chain logistics and EPI evaluation.
- (3) Policy Dialogue - The project provides assistance for two activities of central importance that had not previously been emphasized: management training for Basic Health Service (BHS) staff and media campaigns for EPI and ORT. The introduction of these activities is a result of negotiations between AID and SRUB.
- (4) Private Sector Involvement - The project proposes to work with the Burma Medical Association, a private association of Burmese physicians, to support workshops on the case management of diarrheal disease and the use of ORT.

V. DETAILED PROJECT DESCRIPTION

A. Project Goal and Purpose

The overall goal of the project is to reduce morbidity and mortality among infants, young children, and women of reproductive age caused by immunizable and diarrheal diseases, malnutrition, malaria, and child birth. This can be achieved by increasing the effective use of vaccinations, ORT, anti-malarials; and by improving birthing, weaning, and feeding practices. To achieve this the project will support the expansion and improvement of the Community Health Care (CHC) delivery system, the Expanded Program for Immunization (EPI), and the Vector Borne Disease Control Program (VBDC) of the SRUB.

The major new training effort will be to establish an in-service training system for improved mid-level management and supervision. This will complement the efforts initiated under PHP II with AID assistance to establish state/district training teams for improving the content and process of VHW training. The in-service training program now being proposed is designed to improve the management and supervision skills of the mid-level RHC staff and to improve their technical performance, especially in priority areas of EPI, Diarrhoeal Disease Control (DDC), Nutrition, and Mother/Child Health (MCH). This is an essential component of the MOH's effort to improve the quality of supervision and services in PHP III. The in-service training plan has four distinct components addressing system needs at four different levels, including: (1) the establishment of in-service capability at the central level, (2) the improvement of planning and coordination of in-service training at the state and division levels, (3) an increase in the numbers of trained supervisors at the township level, and (4) an improved in-service training course for RHC staff focussed on supervision and delivery of priority services.

Assistance will also be provided to establish a national mass media campaign to stimulate the use of EPI and ORT. Specific messages based on behavioral studies will be used to form the basis of a marketing effort to improve and increase the use of ORT, to increase the acceptance of EPI and decrease the immunization drop out rate. Messages will be simple, direct, and frequent. All possible channels of communication will be used including radio, newspapers, pamphlets, posters, and word of mouth.

Support will be provided to the national EPI program for the new Universal Child Immunization (UCI) Project. Under this very ambitious program the SRUB plans to fully immunize 85% of infants and 70% of the pregnant women nationwide by 1990. Extra resources will be required. The project's focus on EPI

is both needed and appropriate as it is estimated that almost 40% of all infant deaths can be prevented with a successful UCI. AID assistance will complement activities undertaken by UNICEF and include support for measles vaccine, cold chain supplies and equipment, transportation, and training.

AID support for the anti-malaria program will be for training, anti-malarials, operations research, and technical assistance to help the SRUB cope with the increasing malaria problem. The program is faced with increasing drug resistance problems, growing insecticide resistance and with shortages of trained staff. Additional epidemiological and entomological information is needed to improve the efficiency and effectiveness of control measures. AID assistance will be used to strengthen the expertise of the staff and improve the cost-effectiveness of the planned interventions.

B. Project Outputs

1. Expanded Community Health Care and Basic Health Services

The proposed project will continue the support initiated in the AID-assisted Primary Health Care I and Primary Health Care II projects for expansion of both community health care and basic health services in order to further expand the coverage of these services. The outputs associated with this component of the project are as follows:

(a) Pre-service training: A total of 3,000 TBAs, 3,000 AMWs and 7,000 CHWs will be trained to provide health services in the same number of villages, all of which are presently without any trained health personnel. Training for TBAs and CHWs is of one month duration, while that of AMWs is for 6 months. These numbers represent all of the TBAs and half of the AMWs SRUB plans to train during the project period (the last three years of the PHP 1987-1990) and half of the CHWs planned for the two years from 1988-1990.

(b) Equipping of VHWs: The volunteer health workers trained by the project will also be provided with a set of supplies and equipment and, for AMWs and CHWs, an initial supply of essential drugs. These kits are intended to be provided upon graduation from training. The contents of each kit are appropriate to the function of each category of worker. The drugs are provided as a starter supply, with replenishment to be arranged by the Village People's Councils by purchase from Cooperative stores or from the open market with funds provided by the community.

(c) Equipping of BHWs: A total of 335 Lady Health Visitors, 650 Midwives, and 130 Health Assistants working at Rural Health Centres and Sub-Centres will be provided with basic equipment kits appropriate to their tasks on completion of their training. This number represents all the new LHVs, MWS and HAS who are expected to graduate from training institutions and be employed in Rural Health Centres and Sub-Centres during the period of the project.

(d) Equipping of new Rural Health Centers and Sub-Centers: A total of 105 Rural Health Centers and their corresponding 525 Sub-Centres will be provided an appropriate set of basic supplies and equipment. These equipment sets are largely essential non-expendable items and do not include drugs. The facilities in which the equipment will be used are provided by local communities, an arrangement which is said to be working very well, and are staffed by health workers assigned and supported by the Ministry of Health.

2. Establishment of an in-service training system for improved mid-level management and supervision

The MOH is interested in "strengthening and improving the Basic Health Services and staff" during the third implementation phase of the Peoples Health Plan. To improve the quality of services provided, the Ministry has placed particular importance on supervision and service delivery skills at the rural health centers. The Ministry's supervisory system has recognized inadequacies including staff shortages, insufficient training and poor coordination. Further, service studies ^{1/} indicate the need to improve the technical performance of basic health workers, especially in the areas of immunizations, antenatal care, control of diarrheal disease, and nutrition ^{1/}.

The MOH plans to improve the quality of supervision and service during the next four years to include the establishment of new posts for supervisors at the township level. It is envisioned that two senior health workers, a health assistant and a lady health visitor will be responsible for the supervision and training of rural health center staff in each of the 314 townships.

^{1/} Reynolds, Jack et al. End of Project Evaluation - Primary Health Care I (482-0002), February, 1985

^{1/} a) Review of the Control of Diarrhoeal Diseases in SRUB June, 1985 and b) Health Systems Management (Burma), The JCHP Task Force (II) May, 1985

The Ministry of Health staff at the central level will be responsible for the development, technical direction and coordination of this in-service training program which involves orientation and training at both the division/state and township levels. The project support for improvement of in-service training capacity has four distinct sub-components, addressing the in-service system needs at different levels, i.e., central, division/state, township and rural health centers. Project support will include long- and short-term technical assistance, participant training, commodities and local costs for field training activities.

(a) Increased capability of central MOH training and supervision: Currently, in-service training responsibilities are shared by the Public Health Division and the Training Division of the DOH. The Central Coordinating Unit (CCU), established to support and coordinate the Division and State training teams, has representatives from both divisions and is the link between service needs and training. During this project the role of the CCU will be broadened to include responsibility for development, coordination and evaluation of in-service training activities. In addition, the resources of the Unit will be extended to include a Representative from the Medical Education Unit which has expertise in management training and evaluative research. The most immediate issues to be addressed through in-service training are supervision, management and improvement of service skills related to child survival and maternal care, i.e., immunizations, antenatal care, control of diarrheal disease, and nutrition, since these issues have been identified for special emphasis by the CHC Project during PHP III.

(b) Improved planning and coordination of in-service training at the state and division level: The in-service training and supervision of RHC staff by the State/Division (S/D) staff is constrained by lack of integration, logistics problems and unrealistic expectations for supervision given the size and environmental situation of states and divisions.

The State and Division Training Teams (S/DTT), trained and deployed during PHP II to have a role in training and supervision, have suffered from the loss of personnel through transfers as well as reduced productivity due to other responsibilities. Since their deployment S/DTTs have concentrated their energies on training of trainers but they have played only a small role in supervision. Further, responsibility for supervision and technical training of RHC workers is also held by the technical officers and specialists at the State and Divisional headquarters. This situation leads to a rather fragmented approach to in-service training and lack

of attention to supervision. Therefore, as part of this project, workshops will be conducted for the health teams at the state and division. These workshops will provide the staff with an opportunity to plan and coordinate manpower development and supervision activities at the state level so that in-service training programs are integrated rather than vertical and respond to community needs. The data consolidation and analysis capabilities of State/Division Health teams will also be expanded through these workshops. These needs are the SRUB's priorities.

In addition to participating in the planning and coordination of training and supervisory activities the S/DTT will link the central government with the in-service training activities at the township level and participate in the training and follow up supervision of the newly appointed township supervisors.

(c) Increased number of trained supervisors at the township level: Direct supervision of the RHC workers is currently the responsibility of the Township Health Officer who, although designated as the public health officer in charge of rural services, is rarely trained in public health and has limited time to manage the rural health services. His additional responsibilities frequently include hospital administration and curative services which he shares with the township medical officer, the only other medical officer in smaller townships. As a result, supervision of the rural health centers occurs when problems arise or when the health assistant makes his monthly administrative visit to the township. Further, there are no supervisory protocols, performance standards or assessment tools available to guide performance monitoring and skill development among staff at the rural health centers.

During PHP III the MOH is planning to emphasize the role of the township in supervising RHC by training and posting a senior health assistant and a senior lady health visitor to the township with the specific assignment for supervision and inservice training of rural health center staff. To provide an example of excellence and a model for replication, the Ministry is planning to initiate this approach in the 60 Model Townships throughout the country as a first step in improving management capabilities.

The proposed project will support this initiative by providing salary support, transportation, and training supplies for supervisors in 45 model townships. In addition, all township supervisors (628) will receive training in supervision, health center management, technical skills and appropriate training technologies. In keeping with the

Ministry's emphasis on maternal and child health services, the training will stress management and mobilization for immunizations including cold chain maintenance, management of diarrheal diseases, nutritional assessment and counselling, and antenatal care. Other important content areas include problems of drug supply and resupply and information systems and supervision.

(d) Improved performance of rural health center staff in management and supervision of VHWs and health care delivery: By direct service or through the supervisory chain, the rural health center staff is a key element in ensuring the quality of services provided to the rural population. The staff of the rural health centers provide services to their immediate community, supervise the work of midwives at sub centers and train and supervise voluntary health workers. They have been equipped with bicycles which enable them to reach many sub-centers and villages; but, during the rainy season and in extremely difficult terrain, reliable transport is very difficult and supervision suffers as a consequence.

The quality of services provided by RHC workers varies widely and is influenced by the quality of supervision they receive, years of service, and time since retraining. Since there is little opportunity for regular supervision from the township and no routine performance assessment there is little documentation regarding the skills of these workers. A recent study ^{2/} indicates that service performance related to diarrheal diseases needs improvement but most information concerning the performance of RHC staff is anecdotal.

Renewed emphasis on the training of RHC staff has also been stimulated by the Ministry's concern for improving the services provided by the voluntary health workers. The Ministry is planning to improve the training of VHWs in recognized areas of weakness such as growth monitoring and nutrition education, health education related to diarrheal diseases, personal hygiene and community mobilization.

For these reasons, support in the form of local cost financing for retraining of the RHC workers will be included in this project. The training will be conducted by newly trained township supervisors and concentrate on four areas that have a direct effect on quality of service. Performance assessment and staff development (in-service training) as part of the supervisory role, work planning, management of health center operations, and using information for operational planning.

^{2/} Review of the Control of Diarrhoeal Diseases in the SRUB
June, 1985 - Report of the Joint Government, WHO & UNICEF
Review Team

3. Improved Management Support Systems and Research Capability

(a) Improved health and management information systems for community health care at State/Division and township levels: This project will continue to support the information efforts initiated in the AID-financed Primary Health Care II project. These efforts are aimed at simplifying and consolidating the health information system at the community and basic health services levels, and its consolidation, use, and feedback at township and State/Division levels. The main output will be a more rational and manageable health information system throughout the country. A system which facilitates the efficient collection and use of information by CHWs, AMWs, RHCs, and Sub-centers. This system will also reduce the number of overlapping forms and records now being used by these workers as they strive to meet data demands from the several poorly coordinated special programs, including nutrition, immunization, malaria, trachoma, tuberculosis, and leprosy, in addition to their own Community Health Care activities.

The data consolidation and analysis capabilities of State/Division Health teams will also be expanded through these workshops and by the provision of 10 data processors for electronic data management to those 10 States/Divisions not included in the trial initiated under PHC II. Technical assistance in health information systems and in electronic data analysis will be provided for introduction of these systems. In addition, a management systems analyst will assess the management information needs and assist SRUB in designing an integrated health and management information system to support community health care, using the State/Division electronic data systems as appropriate. Finally, local cost support will be provided for three studies/surveys in areas of special concern to the Community Health Care/Basic Health Services information activities to supplement routine data collection.

(b) Supply and distribution system for drugs and vaccines to BHS and VHWs analyzed, and alternatives identified and tested to ensure resupply: With the technical assistance of a drug logistics analyst, the present Ministry of Health logistics system will be reviewed, and feasible actions to improve it will be identified. As a part of this broad review, particular attention will be paid to the resupply of drugs to VHWs, and an action research study will be designed and implemented to test the most promising options identified in this area. During the final year of the project, a follow-up study will be undertaken on a national scale to determine the current availability of drugs among CHWs and AMWs, the sources being used, costs, and the appropriateness of drug use by these

workers for selected indicator conditions. This study will update the studies undertaken during 1982-86, and will provide a basis for planning any needed modifications in drug supply for the next People's Health Plan.

(c) Health systems research capabilities increased and research studies completed for replanning in critical problem areas: A key element in ensuring continual improvement in the quality and effectiveness of health services is a regular investment in health systems research in areas of current priority. The project will support local costs for three studies, and provide the technical support of the health systems research and evaluation specialist for the design and analysis of these studies. A series of technical "gaps" where further research is needed to improve quality has been identified by the Community Health Care program. The studies undertaken will be selected from these areas, which include identification of optimal manpower configurations for Basic Health Service institutions, assessment of determinants of health status (with emphasis on the effectiveness of health service inputs in influencing it), impact evaluation studies, cost-benefit studies on the use of VHWs (including perhaps a comparison of their impact in areas with CHWs alone vs. those with CHWs and AMWs), and studies of community financing and organization (and their impact on the health of the community).

4. Mass Media Campaigns and Information for Immunization and Oral Rehydration Therapy Introduced

The three main health-education outputs will be to establish and maintain a media campaign in support of EPI and ORT; to prepare and distribute health-education material to health staff and public; and to introduce a nationwide series of ORT seminars for both SRUB and private physicians.

(a) Establish and maintain a media campaign for EPI and ORT: The media campaign will complement and strengthen the health-education work now being done by VHWs, and will reinforce and focus the training that VHWs have received relating to EPI and ORT. The existence of this primary health care network makes an expanded use of mass media particularly appropriate at this time. Careful research has shown the complementary relationship between health workers and media. Both have their own strengths--the media in disseminating knowledge and awareness, health workers in changing attitudes and behavior. Burma's centrally organized society, its high level of literacy, its uncomplicated media situation, and its commitment to self-reliance in health argue strongly for a coordinated media campaign, featuring radio and print. Experience from other countries, much of that experience funded

by AID, has produced a body of knowledge about health communications that could be incorporated by this project. This approach is characterized as a social-marketing approach, centered on an understanding of the audience and seeking specific behavioral change.

The supply of ORT packets in Burma is adequate, due to the work of UNICEF and BPI. A goal of the media component is to stimulate their distribution as widely as possible. Observations in several health facilities revealed large supplies of packets and little evidence of distribution to mothers of sick children. SRUB policy has not been clarified on home-made ORS.

(b) Prepare and distribute health education material to health staff and the public: Part of the media campaign will be the production of useful reference materials that can be retained by BHS and VHWS and mothers as reminders of important health messages and as teaching aids at the periphery of the health system. The lack of such materials is an evident gap that the communication component can address.

(c) Provide training in ORT for SRUB and private physicians: The ORT seminars for physicians represent the project's recognition of the cardinal role of doctors in the health care system and the need to approach doctors in a professional way when proposing that they change their clinical management of diarrhea. These seminars would be well integrated into the national medical community to the degree they worked with and through the Burma Medical Association, the private physician's organization that has regional branches throughout Burma. The Department of Medical Research, the Department of Medical Education, and the Department of Child Health at the Institute of Medicine, Rangoon, also have skills that might be very useful for this effort. Particular attention will be given to the country's physicians, for whom the project will provide training and materials relating to ORT. The use of internationally respected ORT clinicians and the provision of up-to-date ORT literature from equally respected medical journals will be the basis for these seminars. In addition, the seminars will put ten dozen ORT packets into the hands of each physician.

The media campaign for EPI will support the Government's ambitious new Universal Child Immunization Program (UCI) which is described in detail elsewhere in this paper.

5. Expanded Coverage of Effective Immunization Services

The Expanded Program of Immunization (EPI) was initiated in 1978 for the prevention of diphtheria, pertussis, childhood

tuberculosis (BCG) and tetanus (including neonatal tetanus). Over the period covered by first two People's Health Plans (1978-1986) the EPI has expanded to include 176 out of the 314 townships in Burma (principally in those areas considered safe from insurgents). Polio immunization was introduced in 1982 but its use has been confined to cities and large urban area. Measles immunization has now been pilot tested and will be introduced into the EPI in 1986.

The EPI is based on a National Plan of Action developed in 1977, and revised in 1982, which provides an immunization strategy, immunization schedule, cold chain, logistics and the financial requirements. The EPI is fully integrated into the PHC system to the village level. The central management responsibility for EPI rests with the Deputy Director (Epidemiology) in the Disease Control Division of the Department of Health. The EPI unit consists of 38 full time staff, 12 at the Central Unit, 8 at the Mandalay Regional office and 18 at the State/Divisional units. At the state/division level the Health Directors are in charge of the program as are the township medical officers at the township level. These individuals have many other responsibilities in addition to EPI and are usually able to spend only 25% or less of their time on EPI.

The immunizations are delivered through village outreach clinics initiated and managed from the RHCs and urban health centers. Each center has two vaccination teams directed by a HA or a LHV and assisted by other BHS, AMWs or CHWs. EPI immunization sessions are held the first week of each month and planned such that every village is covered at least once every three months. A small portion of vaccinations are performed at a limited number of fixed centers (Station Hospitals, RHC with electricity, and UHCS); however the program is essentially an outreach activity.

National coverage rates are still relatively low. Recent surveillance reports indicate that in the 176 program townships vaccination coverage is as follows: BCG, 79%; diphtheria, pertussis, tetanus (DPT) (3), 26%; polio (3), 40%; and tetanus toxoid (TT) (2) (for pregnant woman), 26%. However, when the reported rates are applied to the whole eligible population in Burma, including the uncovered townships, the rates are much lower: BCG, 41%; DPT, 14%; Polio, .03%; and TT, 16%. Measles vaccination coverage is effectively 0%. There is a tremendous amount of variation in the coverage rates among EPI townships in various States/Divisions. In the case of DPT the rate varies from 85% to 0.4%. Drop out rates remain quite high in Burma: 46% of the infants who receive a first DPT vaccination drop out before the third injection and 31% of pregnant mothers who receive an initial TT shot fail to receive a second.

In late 1985 the SRUB decided to revise its plans for EPI under PHP III and accelerate efforts in order to achieve at least 85% coverage by 1990. This major commitment called the Universal Child Immunization (UCI) Program, was announced by the Foreign Minister at the 40th UN General Assembly in September, 1985.

A detailed plan of action for UCI has already been drafted. The specific goals include: (1) By 1990 to fully immunize with 6 vaccines at least 85% of children under age one year; and at least 80% of pregnant women with TT in the 248 "secure" townships which contain 90% of the national population; (2) to establish a system to maintain full EPI coverage after 1990; and (3) to use the infrastructure developed for UCI for other primary health care activities after UCI is achieved. After pilot testing the UCI in six townships in 1986; DOH plans to rapidly initiate the program throughout the country. UCI will be phased in between now and 1990 by converting "normal" EPI townships included in PHP III to UCI "campaign" townships and eventually to maintenance townships. In campaign townships five vaccination teams will be established and all available resources of the health sector, and other sectors if necessary, will be mobilized to achieve the full coverage targets within a maximum of one year.

Substantial amounts of additional resources will be needed to achieve the very ambitious goals set by UCI. There will be needs for assistance with vaccines, syringes, needles, and related equipment, cold chain equipment, planning and management, transportation, training, media and information, and surveillance. The project provides for over four million doses of measles vaccine in 10 dose vials. Because of the rapid projected increase in coverage levels and in program townships there will be a need for massive numbers of new syringes, needles, and cotton wool and related equipment. The project provides financing for measles vaccine, some cold chain equipment, needles, syringes, and EPI kits.

Plans for AID assistance for EPI have been closely coordinated with the other major donors, particularly UNICEF. UNICEF will provide complementary assistance to AID's in support of other external needs. UNICEF has not yet finalized its next 3-year support plan; however, tentatively they are planning on providing around \$5 million for the EPI during PHP III for vaccines (except for measles vaccine), cold chain equipment, coldroom storage, supplies and equipment, training and planning. WHO plans to support orientation training for new EPI township staff. Because of the timing of this project AID commodity support to UCI will be restricted to the last two years of PHP III, i.e. 1988/89 and 1989/90. AID support for

local cost activities and technical assistance will be provided over a period of three years beginning in the second year of the PHP III. Expected outputs are as follows:

(a) Expand and strengthen the cold chain and logistics systems to ensure timely, safe delivery of vaccines to all 314 townships on a regular basis: The existing cold chain system with electric refrigerators is dependent on the availability of uninterrupted electrical supply; however 184 townships still have electricity for less than 12 hours a day. Following the recommendations from a recent UNICEF/Centers for Disease Control Analysis, the DOH plans to purchase only compression type refrigerators/freezers driven by electricity backed up with gasoline generators where necessary. Compressor drive refrigerators/freezers will operate for year with little maintenance with adequate electricity. In areas with the least dependable supply of electricity the cold chain will be organized around the gasoline generator based freezers and cold box systems that are independent of electricity.

In the past there has been inadequate transport for vaccines and transportation of State/Division supervisors. The SRUB is requesting assistance for extra vehicles at the central and State/Division level for EPI supervision and vaccine transport.

(b) Ensure adequate supply of measles vaccine, needles, syringes, and EPI kits for Universal Child Immunization (UCI) campaign. With the exception of 50% of TT, and some DT which have been produced by the Burma Pharmaceutical Industries (at a cost much greater than the international price), vaccines have been supplied by UNICEF. There will be a need for purchasing approximately \$1.2 million of measles vaccines for UCI under the proposed project.

(c) Provide in-service training to township and BHS staff on new UCI Campaign: UCI will bring about many changes including the introduction of new vaccines (measles, polio), and new immunization schedules, additional outreach clinics, and use of new cold chain equipment. It will be necessary to train the state, township, BHS, and VHW staffs on their new roles in EPI. The project will provide for retraining all BHS and township staff on the UCI.

(d) Improve EPI MIS, Surveillance, and Evaluation Systems: The surveillance system needs to be simplified to focus on EPI coverage. A more accurate monitoring of coverage levels is needed to maximize the efficiency of EPI program planning and management. It is likely that immunization cards will be provided to mothers as part of growth monitoring

charts. Such a system should allow field workers to more carefully monitor the immunization status of the target population. A series of State/Divisional and Township Evaluation Workshops will be held to monitor and improve performance. The project will support 11,000 township and 700 State/Division workshops, provide technical assistance and EPI surveillance and MIS, and support three observation tours. Because of the tremendous variation in local areas around the country there is need to tailor the cold chain and logistics system's design to the local terrain, transportation and communication systems, and the health manpower situation. This requires good planning and organization at the local level. For this purpose the UCI is planning to hold a series of micro/planning workshops between the central EPI staff and the State/Division and township staffs responsible for EPI. Assistance is not needed for the special State/Division based workshops. Technical Assistance for EPI micro planning will be provided with centrally administered AID funding.

6. Increased Availability of Malaria Treatment and Malaria Control Expertise:

According to the 1986 - 1990 People's Health Plan, malaria is ranked as the number one health priority of the top ten diseases chosen to be tackled during the next four years. Technical responsibility for malaria control activities lies with the Vector Borne Disease Control Program of the Disease Control Division, DOH. Operational responsibilities are taken by the State/Division and township health personnel and BHS staff, under the administrative direction of the health director at each level. There are 10-12 full-time VBDC staff at each State/Division level headed by a VBDC medical officer or a malaria (VBDC) supervisor. Below the township level, multi-purpose Station Hospital and Rural Health Center staff and VHW have malaria control activities included in their job descriptions.

During the period of PHP I (1978/82) and PHP II (1982/86) many previously unipurpose VBDC personnel have been retrained as multi-purpose Public Health Supervisors. These PHS provide the backbone of malaria control skills within the Basic Health Services. During recent years, many of former VBDC staff now responsible to State/Division and township health directors have continued on salaries from the central VBDC project. During the PHP III (1986/90) financial responsibility for these staff will also be assumed by the Community Health Care budget. Thus the Central VBDC Project is in the midst of a gradual transition from a direct operational role to one of providing technical guidance, specialized support, and supervision to State/Division health teams and of monitoring

and evaluating program strategies, achievements and effectiveness.

VBDC activities have received substantial external support from the early days of malaria efforts beginning in the 1950's. As a result of country health programming activities begun in 1976 with WHO assistance, a new malaria control plan was developed in 1977 and amalgamated with other vector-borne disease control activities in 1978 in a common Vector Borne Diseases Control Project. In addition to WHO and UNICEF support, CIDA has provided substantial assistance to VBDC through WHO for essential commodities such as drugs and insecticides, spraying equipment, and vehicles. Continuation of this support will be essential for further progress in malaria control, particularly in the face of the high foreign exchange costs of drugs and insecticides. The Japanese International Cooperation Agency has also indicated an interest in supporting the VBDC Project.

Presently, the long-term technical assistance of one malaria specialist has been provided to VBDC through WHO, with support from the Royal Dutch Government. However, this malaria specialist will conclude his service within a year. VBDC is also receiving some support from AID's Primary Health Care II Project based on the May, 1985 Project Amendment. This support primarily addresses the serious shortages of trained entomological and malaria control staff identified during the 1985 WHO/CIDA/JICA/AID program evaluation.

(a) Adequate supply of second line drugs for treatment of referred cases of malaria: Quinine tablets and injections and fansidar tablets to meet Burma's estimated requirements for two years will be provided for treatment of malaria cases not responding to initial treatment with chloroquine. Drugs will be supplied through VBDC staff to Station and Township Hospitals and Rural Health Centers in areas where chloroquine resistance is prevalent.

(b) Operational research on malaria control: New approaches to malaria control through more effective action by communities and basic health services will be developed, tested, and evaluated. Two to four studies will be carried out on subjects such as comparison of the effectiveness of different control measures in drug only and spray areas, comparison of the effectiveness of different regimens for chemoprophylaxis in different population groups, operational studies to improve the effectiveness of basic and community health services in carrying out malaria control measures, studies of the cost-effectiveness of different methods of malaria control, and studies of the effect of different malaria

control interventions on malaria-specific and total mortality and morbidity among infants, children, and pregnant women. Inputs will include support for local costs and technical support in the design and evaluation methods used for the studies.

(c) Greater supervision of malaria control activities from the township level: Forty motorcycles and 200 bicycles will be provided for the use of malaria inspectors and malaria supervisors working at township level to facilitate the support and supervision of RHC and community health personnel engaged in malaria control activities, including local environmental control measures, chemoprophylaxis programs included in MCH activities and treatment and blood slide collection activities at all levels. The distribution of vehicles will be based on the terrain and the type and magnitude of malaria activities.

(d) Specialized malaria control training (local): Two courses in control of vectors by bio-environmental measures, three workshops on vector borne disease control for entomology staff, one course in advanced medical entomology, and two workshops for preparation and revision of operational manuals for VBDC and basic health services staff will be supported. Support will include local cost support and technical inputs for preparation and conduct of the courses and workshops. In addition, a limited amount of participant training in entomology and epidemiology is included in output no. 2 above.

C. Project Inputs

Technical Assistance: The Quality Care for Child Survival Project will require an estimated 142 person months of technical assistance (of which approximately 103 person months will be directly funded by the project). AID will provide a full time training advisor for two years (24 person months) and two mass media specialists who will each serve one 11-month assignment (for a total of 22 person months). Additional short-term technical assistance totalling 96 person months will be required to support efforts in mass media, training, EPI, VBDC, information and logistics systems and research under the project.

Training: It is estimated that 180 person months of participant training will be included under the proposed project. This will encompass training for one MPH in Health Education, one MPH in Management, two MPH in maternal and child health, two MPH in epidemiology, two MSc in entomology, three EPI observational tours and seven management/planning/supervision tours.

Commodities: The project will include commodities such as cold chain equipment, vaccines and vaccine supplies, sterilization equipment, health worker kits, training and supervision materials, data processing equipment, motorcycles, vehicles and vehicle spare parts, bicycles, and materials in support of mass media campaigns.

Local Cost Support: These funds will be required to finance the anticipated costs associated with in-country training, evaluation and planning workshops and the studies/surveys to be completed. Costs include salary support, per diems, honoraria, transportation and related training materials.

Evaluation: One of the critical aspects associated with health projects in Burma is the lack of reliable baseline data. Of course this situation is not unique to Burma, however, in order to properly gauge the affect our planned interventions are having, it is important that we attempt to understand the environment in which this project will operate. It is therefore recommended that a baseline survey be completed prior to any contracting for services or goods required under the project. The results of such a survey will direct the timing and focus of our planned project inputs and provide us with a reliable statistical base to measure the affect of those interventions over the life of the proposed project. The project will also provide for one mid-term and an end of project evaluation.

D. Project Beneficiaries

Building on the accomplishments of PHC I and PHC II, this project will have a direct and positive effect on Burma's rural population, particularly on infants, children under five years of age, mothers, and women of reproductive age. Collaborating with the Ministry of Health's People's Health Plan III and its commitment to universal childhood immunization by 1990, the Quality Care for Child Survival project will train health workers, provide national health education in EPI and ORT, assist with EPI, and upgrade health support services such as information systems, management, and training capacity.

The immediate beneficiaries of this project include:

- a. Rural people in the 37% of all villages that are currently without a village health worker, bringing VHW coverage to 100% of all villages, covering the entire population by 1990;
- b. 3,000 new AMWs, 7,000 new CHWs, and 3,000 TBAs who will be trained, equipped, and mobilized;

- c. Rural people serviced by the 450 RHCs and 1,050 RHC sub-centers to be upgraded and equipped;
- d. 628 township-level medical staff to be retrained;
- e. 85% of Burmese children under 1, or 3,446,000 infants, who will be included in EPI for six immunizable diseases;
- f. 80% of all Burmese pregnant women, or 3,000,000 women, who will be vaccinated by EPI for tetanus toxoid;
- g. Most of Burma's 10,000 public and private physicians, who will be trained in ORT for diarrhea;
- h. One-half to two-thirds of all Burmese children under 5, or between 2,357,017 and 3,142,690 children whose diarrhea will be treated properly with ORT as a result of widespread health education and health-worker training; and
- i. Specific DOH staff who will be trained abroad, as well as DOH staff who will be trained as counterparts to project technicians.

E. Donor Coordination

Donor coordination in the health sector in Burma is excellent. AID/Burma works closely with UNICEF, WHO and CIDA to ensure close cooperation. Donor Coordination in Burma is made somewhat easier because all donors support the overall SRUB DOH program. Working from the People Health Plan, donors are able to support different parts of the same program. Donors do not, as a general rule, have projects that are outside of the PHP.

All donors except the Japanese discuss their future program with the others. Monthly meetings are held to discuss program coordination and mutual cooperation. In the health field all except the Japanese directly support Primary Health Care.

VI. COST ESTIMATES AND FINANCIAL PLAN

A. Project Costs

The total cost of the project is the equivalent of \$133,702,000 as can be seen in Table 2, page 32. That amount includes the dollar grant funds provided by AID directly under the proposed project, the Department of Health's recurrent cost budgets for BHS, EPI, and VBDC, the contributions of rural communities which can be attributed to the project and the inputs of other major donors supporting primary health care, EPI, and VBDC programs. There are additional in-kind contributions of the SRUB and the community which cannot be quantified.

AID will contribute \$9.5 million in grant funds during the first three years in support of the project. In addition, \$336,300 deobligated from Primary Health Care I and \$320,000 in FY 1986 OYB will be obligated under the Communication for Child Survival (931-1018) and Vector Biology Control (936-5948) projects in support of this activity. The Communication for Child Survival project will also provide an additional \$155,000 from centrally administered funds in support of the communication component of the proposed project. AID's FY 87 dollar grant contribution is expected to be \$1.5 million.

An estimated breakdown of AID project funding can be found in Table 3, while Table 4 provides the estimated project cost anticipated under each intervention. Table 5 provides a projection of AID project expenditures by U.S. fiscal year.

B. Other Donor Assistance

Other donors in the Burma health sector include UNICEF, WHO, the Asian Development Bank, UNDP, and the governments of Australia, Canada, Great Britain, Italy, Japan, and the Netherlands. Of particular interest are donor programs like UNICEF's and WHO's which complement AID's assistance in support of PHP. Projected donor funding for PHP is included in Table 2. UNICEF is now developing its assistance plan for 1987-1990 and believes that its overall budget will be approximately \$6.6 million a year which would include continued assistance estimated at \$1 million per year for the CHC, equipping and training VHVs and helping to improve urban MCH programs. In addition, UNICEF plans to increase its support for EPI, providing up to \$5 million over the next four years for vaccines, cold chain equipment, supplies, cold stores, and training. AID has closely coordinated with UNICEF in the design of its support for EPI and CHC. UNICEF is seeking funding for a 'noted' project on malaria control which CIDA is

considering funding. UNICEF also plans to support other programs including nutrition, school health, water supply and sanitation activities, education, ORS production, and social welfare projects.

WHO's total budget for 1986-87 is \$4,850,000 of which \$1,550,000 is for PHC, including support for EPI, health education, overseas fellowships, support for BHS, logistics improvement, nutrition, and MCH. WHO is also providing a substantial amount (\$600,000) of support for malaria control training, evaluation, supplies and equipment, and one long-term entomologist advisor. WHO and UNICEF also administer the \$6.0 million Joint Nutrition Support Program for the Italian Government (See Annex D, table 10A, "UNICEF Funding for Burma" and table 11A, "WHO Funding for Burma").

CIDA and the Netherlands support the malaria control effort. CIDA has provided insecticides, drugs, and equipment. The Netherlands has provided technical assistance for malaria control.

Other donor support in the health sector includes:

- (1) WHO administers UNDP Projects including, rehabilitation of the disabled \$1,030,000; Manpower Development \$829,000; Traditional Medical Manpower Development \$305,000; and Toxicology of Traditional Plants \$690,000.
- (2) Australia provides \$5 million annually for water programs with the development of wells and water supplies in 3,000 villages covering a population of 2.5 million persons in the dry zone of Burma;
- (3) Japan supports the Department of Medical Research, Rangoon General Hospital and the nurses training school with large infrastructure projects totalling over \$37 million and urban water supply development;
- (4) The Asian Development Bank (ADB) supports the rehabilitation and equipping of station and township hospitals with approximately \$18.5 million and is proposing a \$35 million loan for extension of the Rangoon General Hospital; and
- (5) Save the Children Fund of the United Kingdom supports the Expanded Program of Immunization (EPI) by providing quantities of polio vaccine.

C. DOH Counterpart Contribution

The DOH does not have an amount specifically earmarked for primary health care or counterpart funding for this proposed project. The recurrent cost budgets for the Basic Health Staff of CHC, EPI and VBDC total \$16.6 million over the four year period of the PHP III. This serves as a minimum measure of the DOH contribution to the project. The planned total DOH expenditures for public health over the life of PHP III is much larger, totalling \$75.6 million. This figure includes all DOH expenditures for public health at the central, state/division, township, and BHS levels both capital and recurrent costs. Over 85% of the government's expenditures under the public health budget are for CHC and disease control which are the two programs supported by this project.

The SRUB budget projections for public health expenditures are not unrealistic based on previous levels of central expenditures; however, the actual future expenditures could be less.

D. Community Contribution

Community financial inputs are an important component of total public resources for the sector. While the specific level of community contribution is not well documented on a large scale basis, it is clear that communities have been contributing substantially to the PHP as well as the AID-financed PHC I and PHC II. These contributions are particularly important in support of the community based VHW program, both through village contributions for the essential drugs for resupply through the VHWs and through village efforts in constructing rural health center buildings. Table 2 indicates a planned community input of the equivalent of \$88.5 million over the four-year period. This reflects a significant portion of funding for PHP III.

E. Assessment of Methods of Financing

It is anticipated that all contracts originating under this proposed project will follow a direct AID contracting mode. The financing method contemplated for a contract for long-term technical assistance will be direct payment utilizing a PSC arrangement. The short-term TA to be provided from "buy-ins" from various S&T centrally administered contracts will be financed by direct transfer. The remaining short-term TA, which will be contracted on a competitive basis, will be financed by a direct payment in the case of the Contractor being a profit making concern and by direct letter of commitment (direct L/COMM) in the case the Contractor is a

not-for-profit organization. In the case of a contract for procurement services, the preferred method of financing the commodities will be a bank letter of commitment (bank L/COMM), due to the number of commodity items. The actual procurement services will be financed by direct payment. Commodities procured from GSA contracts, such as certain medicines and pharmaceuticals, and UNIPAC, in the case of health kits, will be financed by direct payments. The financing method recommended for evaluation services and the generation of baseline data under the proposed project is direct payment utilizing either an IQC or PSC arrangement. Local support costs will be financed by direct payments. It is envisioned that AID will contract with WHO to schedule, conduct and evaluate most of the in-country training in the form of seminars and workshops included in this proposed project. In so doing, arrangements to import training materials and travel of trainers can be facilitated. To finance long-term and short-term participant training, it is recommended that standard S&T/IT procedures be used, or where S&T Bureau centrally administered contracts are utilized, direct transfer be the preferred method of financing. Table 6 on page 36 illustrates the various methods of financing contemplated under the proposed project.

F. Audits

Responsibility for audits for all programs of the SRUB lies with the Central Accounts Office of the Council of the People's Inspectors. Representatives of this office are assigned to monitor financial and procurement activities of major departments and Corporations of Burma. The SRUB is ready to cooperate in any audit activity under this project with the Inspector General's Office in Manila (RIG/Manila). Local costs will need to be audited; however, there is no indication at this time that this project will require special audit coverage.

Table 2
PROJECTED FUNDING FOR PHP
(US\$ 000's)

<u>Source/CY</u>	1986-87	1987-88	1988-89	1989-90	Total
CHC	2,600	2,612	2,625	2,688	10,525
EPI	595	614	628	724	2,561
VBDC	836	870	904	941	3,551
Total DOH ^{a/}	4,031	4,096	4,157	4,353	16,637
Community ^{b/}	22,130	22,130	22,130	22,130	88,520
AID	1,500	3,500	3,500	1,000	9,500
UNICEF ^{c/}	2,389	2,505	2,600	2,600	10,094
WHO ^{d/}	1,175	976	1,000	1,000	4,151
Italy ^{e/}	1,200	1,200	1,200	1,200	4,800
Total ^{f/}	32,425	34,407	34,587	32,283	133,702

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- ^{a/} For CHC includes recurrent costs of BHS employees and other limited costs. For EPI and VBDC includes only recurrent costs.
- ^{b/} Taken from PHP III, Executive summary, p.4. Assuming US\$ 1.00 = K8.00. Includes community support for CHC, but not for environmental health.
- ^{c/} UNICEF projected budget for health and nutrition, (See Annex C)
- ^{d/} The WHO program for 1988-89 is only in the planning stage. The levels of funding above are based on the assumption that WHO funding levels will remain relatively constant.
- ^{e/} This is the \$6 million 5-year Nutrition Support Program jointly monitored by UNICEF and WHO, evenly apportioned by year.
- ^{f/} This includes donor inputs to CHC, EPI, and VBDC. This budget does not include the support for environmental sanitation by UNICEF (\$3.5 million) or the Australian Government (\$20.0 million) over the PHP III period.

Table 3

EXPECTED AID BUDGET

		Total Amount
1. Technical Assistance		
24 PMs long-term	200,000	
79 PMs short-term [±]	\$1,117,500	
Total Technical Assistance		\$ 1,317,500
2. Participant Training		
6 MPH degrees (108 person months)	\$ 259,200	
2 MS degrees (36 person months)	86,400	
12 short-term participants (36 person months)	180,000	
Total Participant Training		\$ 525,600
3. Commodities		
Health Kits	\$1,503,000	
Medicines, Vaccines and Supplies	1,205,300	
Cold Chain & Miscellaneous Equipment	648,600	
Data Processing Equipment	100,000	
Motorcycles	339,000	
Vehicles and vehicle spare parts	163,000	
Bicycles	100,000	
Total Commodities		\$ 4,058,900
4. Local Support Costs [±]		\$ 2,167,700
5. Evaluation		\$ 150,000
6. Contingency & Inflation (approx. 15% of grant)		\$ 1,280,300
TOTAL		\$ 9,500,000

[±] an additional 39 pm (estimated) will be provided from Communication for Child Survival Project (931-1018) and the Vector Biology Control Project (936-5948) from funding provided from deob/reob (\$105,300), AID/Burma FY 1986 OYB (\$320,000) and direct contributions from the central projects (\$155,000 from Communication for Child Survival)

[±] does not include \$231,000 from deob/reob provided to Communication for Child Survival Project (931-1018) for local costs associated with campaign/research, media materials/production, etc.,

Table 4
PROJECT INPUT COST PER CALENDAR YEAR (\$000's)

	1987/88	1988/89	1989/90	TOTAL
<u>CHC EXPANSION</u>				
Commodities	197	247	1,152	1,596
Local Costs	272	479	479	1,230
TOTAL	<u>469</u>	<u>726</u>	<u>1,631</u>	<u>2,826</u>
<u>IN-SERVICE TRAINING</u>				
Technical Assistance	45*	422.5	377.5	845
Commodities	44	126.5	126.5	297
Local Costs	152.1	197.3	179.8	529.2
Participant Training	--	311.7	52.5	364.2
TOTAL	<u>241.1</u>	<u>1,033</u>	<u>719.3</u>	<u>2,035.4</u>
<u>IMPROVED MANAGEMENT SUPPORT</u>				
Technical Assistance	45	90	127.5	262.5
Commodities	100	30	--	130
Local Costs	25	50	110	185
TOTAL	<u>170</u>	<u>170</u>	<u>237.5</u>	<u>577.5</u>
<u>MASS MEDIA & INTERVENTION CAMPAIGN FOR IMMUNIZATION AND ORT</u>				
Technical Assistance	*	*	*	
Participant Training	30	43.2	43.2	116.4
Local Costs	*	61.3*	--	61.3
TOTAL	<u>30</u>	<u>104.5</u>	<u>43.2</u>	<u>177.7</u>
<u>EXPANDED COVERAGE OF EFFECTIVE IMMUNIZATION SERVICES</u>				
Commodities	743	596.4	84.5	1,423.9
Technical Assistance	90	75	45	210
Local Costs	61.3	63	10.3	134.6
Participant Training	15	15	15	45
TOTAL	<u>909.3</u>	<u>749.4</u>	<u>134.8</u>	<u>1,813.5</u>
<u>MALARIA CONTROL</u>				
Commodities	246	246	120	612
Technical Assistance	*	*	*	*
Local Costs	3.8	10	13.8	27.6
TOTAL	<u>249.8</u>	<u>256</u>	<u>133.8</u>	<u>639.6</u>

*totals are greater than indicated as certain items partially or entirely funded outside of the project from deob/reob, FY 1986 OYB, and contributions from centrally-administered projects totalling \$811,300

Table 5

ESTIMATED AID PROJECT EXPENDITURES BY U.S. FISCAL YEAR
(US Dollars)

Source	<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u> ^{1/}	<u>Totals</u>
Technical Assistance ^{2/}	172,500	600,300	670,000	365,000	90,000	1,897,800
Training	5,000	20,000	252,800	237,800	10,000	525,600
Commodities	170,000	1,534,000	1,604,000	650,900	100,000	4,058,900
Local Support Costs ^{2/}	300,000	954,300	890,400	204,000	50,000	2,398,700
Evaluation	20,000	65,000	----	----	65,000	150,000
Contingency & Inflation	----	500,000	550,000	194,300	36,000	1,280,300
TOTALS	667,500	3,673,600	3,967,200	1,652,000	351,000	10,311,300

^{1/} period includes first quarter of FY 1991

^{2/} includes TA and local cost support funding from the Communication for Child Survival Project (931-1018) and the Vector Biology Control Project (936-5948) from contributions, FY 1986 OYB and deob/reob resources

Table 6
METHODS OF FINANCING

<u>Project Element/ Method of Implementation</u>	<u>Method of Financing</u>	<u>Approximate Amount</u>
Long-term TA (PSC)	direct payment	\$ 200,000
Short-term TA "buy-ins"	direct transfer	790,300
direct		
profit organization	direct payment	907,500
not-for-profit	direct L/COMM	
PASA	direct transfer	
Commodities		
GSA or UNIPAC procured <u>1/</u>	direct payment	2,105,650
PSA procured	bank L/COMM	1,816,523
Procurement Services <u>2/</u>	direct payment	136,727
Evaluation	direct payment	150,000
Local Support Costs <u>3/</u>	direct payment	2,398,700
Training		
S&T/IT arranged <u>4/</u>	direct transfer	345,600
Part of Short-term TA <u>5/</u>	direct payment	180,000
Contingency and Inflation	-----	1,280,300
TOTAL		\$10,311,300

1/ Assumes that all the health kits and 1/2 of the medicines, vaccines and supplies will be procured through GSA and UNIPAC

2/ Assumes a fee of 7% of the commodities not procured by GSA/UNIPAC

3/ includes \$231,000 from non-project resources

4/ Assumes that all long-term training will be implemented through S&T/IT

5/ Assumes that all short-term training will be implemented through centrally administered contracts

VII. PROJECT ANALYSIS

A. Technical Analysis

Training: The SRUB's major service project for primary health care, the Community Health Care Project (CHC), was initiated during the second cycle of the People's Health Plan (PHP) in 1982-86. A SRUB review of PHP II indicated some shortcomings especially in the areas of planning, supervision, technical skills and evaluation^{1/}. Based upon this review and others, the third PHP 1986-90 is placing great emphasis on improving the quality of services. To date the CHC has committed its resources to expanding the coverage of health services throughout the country. During PHP II an effective training system produced and deployed thousands of volunteer and basic health workers throughout the country. At this time the CHC Project is interested in establishing a more effective supervisory system which will be capable of improving individual performance, ensuring adequate coordination, and providing training and in-service training as a continuous and regular process throughout the year.

During PHP II, the CHC Project established one of the foundation elements for such a system by developing and training the State and Division Training Teams (S/DTTs). Although the S/DTTs teams are a necessary element in the inservice training and supervisory support structure they are not sufficient in number, span of influence or technical focus to meet the current needs.

In the third PHP, the CHC plans include a continuing education program for the Basic Health Workers (BHWs) and Village Health Workers (VHWs). The training emphasis for BHWs is improvement of skill and knowledge as well as training in supervision and management. The task facing CHC is challenging since no supervisory framework currently exists and supervision is interpreted as administrative oversight at most levels of the health system. In order to meet this challenge the CHC project is planning to provide technical direction and resources at four levels of the system i.e. Central, Division/State, Township and Rural Health Centers.

The major constraints to successful implementation of this effort include:

^{1/} Health Systems Management (Burma), The JCHP Task Force (II)
Rangoon, May, 1985

-- Support and coordination of in-service training at the central level

Coordination between service needs and training is accomplished by the Central Coordination Unit (CCU), established in 1983 to support the training of the SDTTs. The Unit draws its staff resources from the Training Division, Public Health Division i.e. CHC Project, Nutrition unit etc, and the Medical Education Unit of the Department of Medical Education. At this time the CCU is not actively involved in development but serving as an administrative unit for the SDTTs. In order to meet the demands of the new inservice training program the CCU should be revitalized. The project will support and equip the CCU and provide technical assistance for the design and development of training courses for supervision, resources management, planning and management of operational systems such as drug supply and information. The project will also support evaluative research to assess the effects of training and supervision.

-- Integration of training and service needs at the State and Division

Presently, training and supervision from the state to townships staff is intermittent. The S/DTT's primary responsibility is to train trainers of voluntary health workers, they have no responsibility for technical skill training or supervision of service delivery. Technical training and supervision is the responsibility of the medical officers and technical experts in areas such as immunization, nutrition, health education and disease control. This approach has resulted in a lack of planning for manpower development at the state/division. Further, in place of integrated planning and training activities for BHW's, training is often project related and funded, promoting vertical program goals rather than service integration.

In order for in-service training and supervision systems to be successful, there must be integrated planning for manpower development at the State/Division level. In addition, information concerning needs and resources must flow between the townships and states and between the states and central ministry. This project will support annual planning workshops for state and division health teams.

-- Lack of Supervisors for Rural Health Centers

Supervision of RHC personnel is presently the responsibility of township health officers whose functions also include many administrative and curative tasks. Supervision occurs in response to a problem or during the monthly township visits by Health Assistants when reports, pay and supplies are exchanged. In this environment it is useless to consider effective supervision of the rural health centers. During PHP III and CHC project plans to post two health workers, a senior health assistant and lady health visitor to each township. They will be specifically charged with responsibility for supervision and continuing education of the rural health center staff. All of these workers will be trained and in place by 1990 thereby establishing an appropriate personnel ratio for effective supervision of the health center staff.

-- Quality of Training

The Ministry has been involved in management training activities in Rangoon and in the States/Divisions over the last few years and evaluations by participants have been favorable. Management Courses for medical officers and administrators selected from Central and State/Division levels have been conducted with support from WHO. In addition, management training has recently been added to the curriculum for Health Assistants and Lady Health Visitors. The methodologies used for management training vary widely from participative problem solving approaches to didactic presentations on record keeping and reporting.

The MOH is committed to improving the quality of performance among basic health workers and volunteers. Some of the organizational elements to support a supervisory and inservice training system are in place and the SRUB is planning to continue development during the next four years. AID assistance can make a difference in the rate of progress toward improved performance and is justifiable given the importance of well trained workers in the rural areas and the potential for supervision and training to have a lasting effect on performance.

Improved Management Support Systems and Research Capability:

-- Health and Management Information Systems

This project proposes to continue the inputs to improving the health information which were begun in the PHC II project and to extend them further to analyze the management information systems needed for an effective

rural health service and suggest ways in which the health and management information systems can be best improved and integrated. The activities proposed are compatible with current SRUB concerns about the development of a simplified health information system for monitoring Community Health Care/Basic health services activities, and the eventual inclusion of other management information needs as well, such as drug, vaccine and supplies status, personnel, and finance.

The future direction of these efforts is under active consideration at this time within the Ministry of Health, which is attempting to identify a minimum health information set for the peripheral health services. This effort is supported by technical inputs from PHC II, and involves all of the main community health and disease control programs operating in Burma. Because of this, the project has made its best guess as to project future needs. In the absence of definitive decisions at the time of project development, the detailed inputs will need to be tailored to the actual pace of developments closer to the time of implementation.

There is, however, an established and growing micro-computer base in the Health Information Service of the Ministry of Health, which would be available for central support to information activities. Staff training of HIS personnel has been supported by WHO and other sources. The extension of micro-computer based information processing to State/Divisional levels raises some questions because of the limited and unreliable electrical supplies, and low feasibility of a well-controlled environment. However, portable, battery powered systems which can be recharged intermittently, and which are designed to tolerate the environmental conditions found in Burma, are now available with all capabilities needed for data processing needs at State/Division levels. These have been procured on the recommendation of PHC II information specialists, and SRUB will deploy 2-4 at State level on a trial basis during June/July 1986. Assuming success in implementing this trial, its further extension as proposed in this project is considered both feasible and desirable.

-- Drug and vaccine logistics

The supply of drugs and vaccines in Burma is both complex and problematic. Problems in this area were identified at the time of both PHC I and PHC II projects, and in subsequent reviews. Progress has been made in some

areas, such as the development of adequate production capacity for oral rehydration salts, but a 1984 review of the resupply of drugs to CHWs indicated that the situation is not fully satisfactory, although the availability of drugs at the community level certainly been greatly augmented by the previous expansion of Community Health Services. There have been problems in standardization of drug kits in different years and from different sources, and excessive burdens placed on Central Medical Stores for repackaging of kits which were not fully assembled for distribution on receipt. Nearly all of the townships in which CHWs were established for several years were purchasing replenishment kits, but only half of those with CHWs for only 1-2 years did so, raising questions about the level of utilization, and possibly about the usable life of some of the drugs. Experience indicates that some of the poorer areas may not be able to afford resupply, some contents of the drug kits may be inappropriate, and replenishment kit procurement procedures (requiring that BPI supply adequate amounts for replenishment) may be too complex.

In addition to the specific problems of VHW drug replenishment and procurement, the limited production capacity of BPI and its selection of drugs in relation to Burma's essential drug needs and distribution of drugs pose continuing constraints on the effective provision of essential health services. Both UNICEF and WHO are continuing to provide some support to increase capacity for drug and logistic support. The additional inputs proposed by this project will be complementary to these efforts. Further progress in this area is essential to the effective use of the drug inputs supplied by the project, as well as to the quality of care provided, with particular attention to the provision of essential drugs such as iron, chloroquine, penicillin for acute respiratory infections, and ORS for diarrhea. The proposed technical assistance and the further studies proposed are aimed at ensuring such progress.

-- Health systems research

The SRUB and its health system have a self-established capacity for credible health systems research. The research and evaluation carried out during PHP I (1978/82) and PHP II (1982/86) have made important contributions to understanding and decision making in the development of Burma's primary health care strategies so far. However, most of the research to date has been descriptive. The need for more analytic studies is increasingly recognized

as prerequisite for further developments in quality and effectiveness of the health services. While studies in specific areas are included in several other sections of this project, the project will also address the need for a more analytic approach by providing technical collaboration in designing and analyzing several studies aimed at assessment and evaluation of critical health program areas.

Mass Media: The proposal to provide health education through mass media rests on several existing situations in Burma which make such a proposal appropriate right now. The high literacy rate, 70% among women and 86% among men, means that printed materials can be useful, even in rural villages. Radios are available in relatively few rural homes, 10-15%; but communal radio listening is widely reported so that radio is another opportune channel. While the Central Health Education Bureau has used radio in the past, experience from other countries now offers them innovative ways to broadcast messages, and to coordinate radio within a focussed educational campaign. The presence of VHWs in over 60% of Burmese villages and the projected 100% village coverage by 1990 represents perhaps the most effective health-education channel in terms of actual behavior change. These workers can be supported mightily by print and broadcast channels. And, finally, the primary health care philosophy argues for enabling people to do as much for their own health care as possible, particularly preventive measures. Giving people information can do just that -- alerting them to the use of already available foods for better nutrition, weaning, and ORT, for example.

The Central Health Education Bureau (CHEB), which will provide counterparts to health educators provided under this project, has been recommended for assistance by other donors in the past, but none has been forthcoming. Support for the CHEB is long overdue, and its capacities have been diminished. At the start of this project, it will not provide a strong institutional base. But it is the focus of health education in the DOH and its augmented role is solidly backed by PHP III.

The radio section of the Burmese Broadcasting Service (BBS) is the only transmitter within Burma and only transmits a few hours each day. Accordingly, Burma has particularly uncluttered airwaves, in which lively, useful health-education messages could clearly stand out. Like the CHEB, the BBS could do a great deal more in providing health education.

ORT seminars for Burmese physicians will address the scientific basis for oral rehydration, to give doctors the authoritative support they need to recommend this new regimen for diarrhea management, a regimen that differs from their medical-school education and/or their established practice.

Expanded Coverage of Effective Immunization Services:
The SRUB's EPI program, now in its eighth year, is well established. A detailed Plan of Action for implementation has been developed and, with a few exceptions, implemented according to a time schedule. EPI is fully implemented through the BHS and PHC system which enables the program to reach the village level. Specific PHC staff have been identified at the state/division, township, and RHC level to be the focal point of the EPI program. In over 1/2 of the country's 314 townships an immunization program for the prevention of childhood tuberculosis, diphtheria, pertussis, and tetanus, including neonatal tetanus, has been introduced. A polio vaccination program has been introduced in the urban areas and a vaccination program to prevent measles will be initiated in 1986. More than 60% of eligible infants and nearly 40% of pregnant women in EPI operational areas receive their first dose of immunization series. While complete coverage rates on a national level are much lower, in some areas full coverage is quite high. For example, in Magwe Division 85% of the eligible population have completed the series of three DPT vaccinations. Much progress has been made with the cold chain and logistics system to ensure that program supplies and vaccines are available when and where needed.

In late 1985 the SRUB established the Universal Child Immunization (UCI) program, revised the EPI plans under PIP III, and raised its target coverage levels to 85% for all six vaccines for infants and to 70% for TT for pregnant women by 1990. It will take a major effort to achieve this very ambitious goal as coverage levels will have to increase during the next four years by a measure of magnitude well beyond previous increases. While it's true that the EPI program is well established as pointed out above, there are still major program needs for increased provision of manpower, transport, and financial resources. In addition the cold chain, logistics, and technological systems need strengthening. There needs to be more training, better supervision, and improved planning. An information campaign should be mounted. Specifically, the major constraints to achieving UCI targets include the following:

(1) While it is clear that the MOH supports the UCI, political support from the Buram Socialist Programme Party is still limited. Without the support of the Party it will be difficult to get enough local and community support to achieve the targets.

(2) Because of tremendous variations in conditions and manpower within Burma, local planning is essential for EPI management and logistics. However, local planning capabilities are weak. The central staff is planning a series of joint micro/planning workshops.

(3) The cold chain system must be rapidly expanded and improved to handle the more sensitive vaccines like measles and polio. Since a small proportion of townships have a dependable electrical supply, gasoline fueled generators will be used as back up to ensure that the vaccines remain sufficiently cold. It may, however, be difficult to obtain petrol when it is needed. This is another area where Party support could make the difference.

(4) A strong information campaign needs to be established. Without political support such a campaign may be restricted to the DOH education bureau which has limited resources for such a program.

(5) The SRUB budget has provided limited resources for EPI. More is needed for supervision, transport of vaccines, and maintaining the cold chain.

These constraints make the UCI targets somewhat optimistic. With AID and UNICEF assistance the EPI program will have a greater chance of achieving its targets. AID assistance can make a difference and is justifiable given (1) the magnitude of the problem of the immunizable diseases, (2) the existence of a proven technology that can save thousands of lives, and (3) the existence of a comprehensive delivery system extending to the village level. Clearly this important program is a priority for AID assistance.

Malaria Control: According to the 1986 - 1990 People's Health Plan, malaria is ranked as the number one health priority of the top ten diseases chosen to be tackled during the next four years. The present malaria control activities are based upon stratification of the country into 5 strategic areas: drug (only) area (high prevalence, poor accessibility and infrastructure -- 22% of population), spray area (high prevalence accessible, vector susceptible to insecticides -- 14% of population)

surveillance area (low prevalence, good accessibility and infrastructure -- 41% of population), vigilance area (no indigenous malaria reported for at least two years -- 14% of population); and, originally malaria free area (Rangoon, Mandalay, other large cities, no malaria transmission -- 9% of population). This stratification was based on epidemiologic factors, development of health infrastructure accessibility, and resource availability. The existing stratification is being reviewed and suggestions for revision are planned in the near future.

The key malaria control approaches are case detection and treatment, malaria chemoprophylaxis in high risk groups, and anti-vector measures utilizing insecticides and environmental methods. With the expansion of BHS and VHWS, annual blood slide examination rates have increased in recent years, indeed they often exceed the laboratory capacity for timely examination. Questions were raised at the time of the 1985 review regarding the appropriateness of present levels of blood slide examination and particularly of active case detection activities in vigilance areas. The questions are being addressed in the re-stratification.

The epidemiology of malaria is undergoing change as a result of numerous activities such as rural dam construction and clearing of forest areas for fuel and timber. The frequent population movements particularly from vigilance or surveillance areas into drug and spray areas place further importance on timely case investigation. At present, DDT has been the only insecticide used by the program. However, there is increasing evidence of significant DDT resistance, particularly of An annularis. It is planned to initiate trials with alternative insecticides in selected areas during PHP III. However, no support from this project will be going into any spraying activities.

Another major control problem is the evidence of increasing chloroquine resistance. Ad hoc seven day in vivo tests have been carried out in selected areas and in vitro testing is also being undertaken on a limited scale. It is apparent that resistant P. falciparum occurs in most areas of Burma. However, the degree of resistance is variable although RII level is increasing and resistance at RIII level has been reported, both signs of increasing seriousness. It has also been noted that the reported case fatality rates for malaria in hospitals increased between 1981 and 1984, although the percentage of clinically suspected malaria cases was reduced. This may be due to increasing resistance to chloroquine.

The population under malaria chemoprophylaxis has also been gradually increasing since its introduction in 1979, although still substantially below target. However, there appears to be much local variation in the actual application of chemoprophylaxis and in the target groups for its use. In view of the increasing chloroquine resistance, and the possibility of further accentuation of the spread of resistance through widespread prophylactic use, it is important to ensure that chemoprophylaxis is restricted to pregnant women and selected high risk workers and not to children and workers in general as is sometimes the case.

The main drugs used for chemotherapy are chloroquine and amodiaquine, which are available at all levels, including CHWs. Although there are said to be clear VBDC guidelines on treatment regimens, the recent review indicates continued use of low dose presumptive treatment rather than the full therapeutic dose of chloroquine indicated in the light of the present occurrence of chloroquine resistant P. Falciparum. It was also noted that hospital use of quinine was haphazard and that appropriate drugs for treating resistant cases of malaria should be more widely available. This project directly addresses the availability of second-line drugs including quinine and Fansidar, for treating chloroquine resistant cases. The VBDC, as part of its ongoing technical guidance, will need to take further steps to ensure that the doctors at township and station hospitals using these drugs know how and when to use them properly. Depending upon the evolution of the drug resistance situation and in particular the signs of increasing resistance to Fansidar (a 1984 study showed 14-40% Fansidar resistance at RIII level in Karen State), the drugs proposed for this project should be reviewed again at the time of procurement and consideration may need to be given to partial substitution of Fansimef, a combination including mefloquine, a newer antimalarial of potential value in Fansidar resistance cases. Appropriate attention will need to be paid by the Ministry of Health to carefully control the use of these second-line drugs. Also, wider education is needed for both SRUB and private physicians in the proper use of these drugs to avoid excessive drug pressure that might accentuate the development of resistance which is already recognized to Mefloquine, as well as to Fansidar.

In addition to supply of drugs, the project will contribute to township level supervision by provision of motorcycles and bicycles for Malaria Inspectors and

Malaria Supervisors and will support several operational research studies aimed at evaluating and improving the effectiveness of control and treatment activities at township level and below. It will continue the PHC II efforts to raise the level of skills of VBDC staff at various levels by supporting several local courses in entomology and vector control for State/Division, township and BHS staff as well as by supporting participant training in epidemiology and entomology. All of these efforts attempt to meet recognized needs within the VBDC and the Department of Health which are not being addressed by other inputs at present.

B. Economic Analysis

Economic analysis of health projects is difficult because the calculation of economic benefits requires accurate measures of the health impact of various project interventions. Data for this kind of analysis are not available. There are virtually no reliable data on health status and changes in health status. Furthermore, it is not possible to attribute specific efforts or change to project inputs. The project proposes to support the improvement of management information systems to improve the availability of data, so better data for evaluation will be available in the future.

Thus, because of the lack of data, a formal comparison of costs and benefits cannot be attempted. It is clear, however, from the preventive nature of the interventions supported, that the potential benefits of the project far outweigh the costs. Alternative approaches of dealing with the same public health problems are more costly. For example, in the case of measles vaccination which costs less than a couple of dollars per infant, the costs of treating an unimmunized child with measles or the much more serious problems that frequently follow measles, exceeds the cost of immunization. This is also the case with polio vaccine where the cost of vaccination can be compared to the costs of lifelong lameness to the individual and society. It is much less expensive to provide a packet of ORS for dehydration than to use an I.V. solution in a hospital. The same case can be made for costs of the prevention of malaria versus the effect that the disease has on worker's productivity.

Economic viability can also be assessed by looking at the relative cost-efficiency of the course of action proposed. The PHP supported by this project, is based on the deployment of volunteer, non-governmental, VHWS to

extend basic health services to all villages. The VHW has limited initial and recurrent costs and costs relatively little compared to the substantial investment already made in establishing and maintaining the BHS structure. After initial deployment, recurrent costs for which the DOH is responsible include in-service training for VHWs and training for VHW replacements, the costs of handling referral cases, supervision of VHWs by BHS staff, and the costs of program administration by DOH headquarters. The proposed project will attempt to improve the cost effectiveness of the PHP by establishing a strong in-service training program for the BHS to improve its management/supervision capabilities and technical skill of its personnel for key preventive interventions. Furthermore, the project proposes to increase utilization of the BHS by stimulating demand for services through an aggressive media campaign for EPI and ORT. The EPI program is able to take advantage of the substantial infrastructure of the CHC without additional staffing costs to deliver services.

The initial costs of establishing the in-service training program and mass media campaign are in excess of the recurrent costs necessary to maintain these activities. The EPI program will continue to have substantial recurrent foreign exchange costs mostly for vaccines. However, the substantial benefits of EPI provide strong justification for support in this area.

Costs borne by individual communities are modest when disaggregated, as well. AMWs AND TBAs receive a modest fee for each delivery and the communities make small donations per family to replenish the CHW's expendable supplies and drugs as well as provide a stipend when they are away for training. The supply replenishment costs have been estimated at kyat 600-800 per CHW per year and kyat 300-400 per AMW annually.

In sum, with the exception of recurrent foreign exchange costs of EPI and malaria control, the SRUB and local communities will be able to shoulder the recurrent costs of primary health care services once established in each township.

C. Financial Analysis

Recurrent Costs: During the four year period 1980-1981 to 1983-1984, while the total DOH recurrent budget increased by only 8.7% per year, the total Basic Health Services budget (health services at township level

and below) increased by 10% yearly. More importantly, budgets for the following BHS programs which are critical to the success of the People's Health Plan increased at rates well exceeding the DOH average: Rural Health Centers - 11%, MCH Centers - 17%, and Station Hospitals - 22%. A number of centrally managed programs which benefited the PHP III rural target population also had superior rates of growth: Environmental Sanitation - 26%, Health Assistants Training School - 15%, Nutrition Service - 14% and Malaria Service - 13%. In contrast, funds allocated for the Health Information Services were increased by 4% per year and 10% for the Central Medical Stores Department (CMSD). The CMSD budget actually declined by 5% over the last two years following a 35% gain the previous year.

The DOH budget for PHP III shows only a 3% increase in recurrent costs for BHS staff salaries between 1986-87 and 1989-90. The Public Health Budget of DOH which includes all planned expenditures for CHC and Disease Control at all levels is projected to increase by 5.5% over the same four-year period. Most of this budget is for recurrent costs. The Government budget for recurrent costs for EPI and VBDC are projected to increase by 22% and 12% over the four years of PHP III. During the same period the DOH hospital care budget is projected to increase 25%. Much of the increase is in capital expenditures and increased recurrent costs associated with the opening of a large new urban hospital in 1987 - 1988.

It can be concluded that the SRUB is continuing to direct increased resources towards the rural population, especially for EPI and VBDC. However, the rate of increase of providing additional resources to rural areas through CHC seems to be leveling off during PHP III. On the other hand, resources for hospital care are proposed to increase rapidly during PHP III. Furthermore, the hospital care program will increase to 65% of the DOH budget by 1990 while the budget for public health will decline from a level of 33% in 1986 - 1987 to 30% of the total in 1989 - 1990. Even with the projected decline in the proportion of resources for public health programs, the SRUB's contribution to public health will continue to increase.

The SRUB appears to be capable of covering the recurrent costs of the primary health care program and numerous programs which support the primary health care initiative, such as Rural Health Centers, MCH Centers, Station Hospitals, nutrition, malaria and Environmental

Sanitation services. A nagging problem remains in some rural townships, however, with drug resupply. Nevertheless, the problem is often the actual availability of drugs through CMSD or the Cooperative Stores and not the availability of funds. Communities are able to supplement what is available from the SRUB by purchasing in the open market but at significantly higher cost.

SRUB Spending On Health: Table 14A in Annex D provides a summary of the levels of SRUB expenditures on health during the past decade. It is evident that although per capita spending has increased 2 1/2 times in the decade, the level of spending relative to gross domestic product (GDP) and to the total state budget has been relatively steady. SRUB spending for health has not been far from 1% of (GDP) or from 8% of the total budget at any time during the decade. Chances of any appreciable increase in these levels in the future are reported to be slim.

D. Social Soundness Analysis

The utilization and provision of health care services are affected by Theravada Buddhism, the dominant religion of Burma. Burmese Buddhists believe that one's present state of health and well-being are the results of actions in previous incarnations. Health in this context includes physical, mental, and emotional states of being, as well as spiritual health. This view of health status is coupled with the Buddhist concept that suffering is an inescapable and essential element of life and that there are few events which are not painful. The inescapability of disease and pain does not, however, deter the Burmese from seeking treatment to alleviate pain and other symptoms of disease. Thus, demand for medicines is high, and village people seek services when they are ill, or at the time of birth (delivery). However, there is less demand for prevention services.

The planned EPI program, to which this project will substantially contribute, apparently runs counter to the Buddhist belief that illness cannot be prevented. To date, however, EPI efforts in selected townships allay this concern -- in fact, coverage rates seem to vary according to the usual variables of cold chain, vaccine availability, and access. Project monitoring should be alert to this Buddhist belief as the EPI develops and, if necessary, the EPI media component can address the issue -- with religious spokesmen, if possible. The same applies for other preventive measures, like ORT.

For Buddhists, the provision of health care is a meritorious act. In Buddhist cultures like Burma, an important element of reincarnation consists of merit or ku-tho earned in voluntarily providing a service to the community. However, volunteerism in the Burmese context simply means independence from SRUB payrolls, not necessarily the absence of any remuneration. In fact, Village Tract People's Councils (VPCs) do provide some financial compensation to volunteer health workers. Most AMWs receive payment in cash or kind commensurate with remuneration paid to the let-the or traditional birth attendant. Status in the community is also a powerful incentive to volunteer one's services.

Practitioners of traditional medicine in Burma include a variety of therapists ranging from licensed (7,000) and non-licensed (18,000) Ayurvedic practitioners, herbalists, and birth attendants to faith healers who recite incantations. When illness occurs, the Burmese choose from available indigenous and western practitioners. Even if rural Burmese know they are suffering naturally caused illnesses, they frequently do not consult western-style practitioners, in part due to their scarcity in rural areas. For mild disorders, and in areas without modern medical facilities, the traditional practitioner is the only source of health care.

The focus on self-reliance that characterizes the Burmese primary health care program also characterizes the policies of the Burmese Socialist Programme Party (BSPP). Recent experiences of subjugation by the British and the Japanese have given the Burmese the determination to set their own path according to their own interests -- as indeed they have done with their Burmese Path to Socialism. Therefore, the project supports further self-reliance in the health sector.

The use of the mass media, recommended heavily in this project for the first time, also contributes to a decentralization of health knowledge and a promotion of self-reliance. The media complement the health education being done by BHS and VHWs while giving encouragement and support to the health staff. The print media take full advantage of the high levels of literacy achieved by the National Literacy Program of 1972 and the high enrollment levels in primary school.

The project strategy of expanding the availability of health services through increasing the quantity of CHWs and AMWs, and improving the quality of care they offer

through regular in-service training, improved supervision, and media support will expand and upgrade rural health services. Promotion of these workers' activities and their recruitment by the Village People's Councils will enhance their acceptability.

Of the 314 townships in Burma, approximately 250 are considered secure by the SRUB. Accordingly, the project will restrict itself to those areas considered safe by the SRUB.

The Role of Women In Burma's Rural Health Care System: Women constitute a large proportion of the rural health services' cadre. AMWs, Midwives, and Lady Health Visitors are the backbone of maternal and child health services. Since rural Burmese women prefer to receive health services from women, it is expected that utilization of AMWs for ante-natal, delivery, post-natal, infant and child care, for nutrition and growth surveillance, and for treatment and control of diarrheal disease will continue to increase. Mothers skilled at mothercraft are also being enlisted by CHWs and AMWs to serve as information givers, health educators, and demonstrators of effective techniques for treating and preventing infant and child diarrhea, for sound feeding practices, and for the interpretation and application of growth-chart data.

Several traditional child care practices, such as universal and extended breastfeeding and the giving of breast milk, other fluids, and soft foods to children with diarrhea, provide a sound basis for mothers to understand more about ORT and proper feeding during diarrhea. The substantial minority of malnourished children, on the other hand, argues for further education about weaning foods and nutrition. Generally, from some field observation, lack of food in the home is not the problem; the problem is lack of understanding what to feed the child.

The recruitment of women as AMWs, and as an increasing number of CHWs, is consistent with the generally high status of women in Burma. Burmese women are equal to men under all aspects of the law. The female is dominant in the household. Women generally control the family economy and most of the retail trade throughout the country as well. Female literacy rate is 70% compared to 86% for males.

Women are accepted into all sectors of the economy including education, law, commerce, engineering, and agriculture as well as medicine. Traditionally, however, women doctors concentrate on obstetrics, gynecology, and pediatrics. Today, women make up half of all medical students, and female doctors are no longer confined to a restricted range of specialization.

There appear, however, to be few women Health Assistants, Public Health Supervisors, Township Medical and Health Officers, or District Health Officers. Also, women seldom appear as members of People's Councils. It may be possible that women will increasingly filter into leadership roles as a result of their educational progress and the personnel requirements of an expanding public health system.

Conclusion: The concept of a community-supported volunteer primary health care service is already well rooted in Burma. Villagers participate actively in the actual conduct of the program. Thus, the project is socially feasible and will directly benefit Burma's rural population. Proposed strategies are socially sound and will be effective in helping to improve the role of village-level workers and to integrate appropriate concepts from western medicine into the health system - a system that has reached much of rural Burma and, during the third People's Health Plan, seeks to reach all secure areas of the country.

In addition to the Buddhist value of volunteerism for earning merit and the long tradition of local healers, Burma's emphasis on education for children, literacy for all, and village-level leadership provide a solid basis for Primary Health Care. PHP I and PHP II testify to this. An adroit integration of social, cultural, and political tradition and philosophy has brought about good working relationships at all levels of the health system, and within the People's Councils and the BSPP itself. This integration has in fact smoothed the way for what has been a gradual introduction, over the years, of western approaches to the prevention and care of disease. At a similar measured pace, PHP III will follow this proven course.

E. Institutional Analysis

Government Administrative Arrangements: Principal coordinative and budgetary responsibility for the project lies with the Ministry of Planning and Finance, and in

particular with the Director General of the Foreign Economic Relations Department. Over-all responsibility for managing and implementing the project rests with the Department of Health, one of four departments within the Ministry of Health. The Ministry will assure implementation coordination with other departments within the MOH and within other ministries.

Cost Rationale

a. Imported equipment and supplies: Goods to be purchased from UNICEF are estimated at current prices provided by UNICEF multiplied by a factor of 28% for freight and insurance. Other goods carry estimated prices plus 28% for freight.

b. Technical Assistance: The cost of the long-term consultant is calculated at \$100,000/year. This includes costs for salary support (including post differential), international and in-country transportation, shipment of personal effects, education allowance, per diem expenses and insurance. Other costs associated with the long-term advisor i.e., housing costs, vehicle, etc., are included in commodities. Costs of short-term consultants are calculated at \$15,000 per month.

c. Participant Training: Costs for long-term training in the United States are \$2,400 per month and short-term training is budgeted at \$5,000 per month.

d. Local Costs: All travel, per diem, and salary costs are calculated on the basis of expected level of activity times established SRUB rates by grade or category of staff involved. Costs of materials to be purchased or produced, construction, or rentals are based on estimates provided by the DOH according to its experience.

F. Environmental Analysis

The proposed project will strengthen the existing basic health care initiative by expanding the geographic focus of the program, improving the quality of health care and by strengthening AID high-priority child survival elements such as oral rehydration therapy, immunization and malaria control. The project will also include an initiative dealing with health information and health education system through mass media channels. The activities of the project include a great deal of training and retraining of various types of health workers through in-service training programs, training in new technologies

such as oral rehydration therapy workshops and similar initiatives. Another activity includes equipping health workers with various types of health kits containing medical instruments, supplies and medicines (tablets to be taken orally). A third activity is expanding existing immunization programs by increasing geographic coverage and introducing new vaccines. And a fourth activity envisions the design, production and dissemination of health information and education programs through printed matter or through a radio programming. Additional activities include malaria control and management support systems and research.

To the extent that environmental protection measures are required within the project, such as ensuring the safe delivery of vaccine to project areas, these measures will be built into the project.

The project will not finance any insecticides or other chemical agents, and no activities in vector control such as spraying will be undertaken under the project. However, the project will provide technical assistance and training to the MOH entity involved in the use of chemical agents in vector control.

The disposition of disposable syringes and the safeguards needed to be taken to ensure that proper sterilization procedures are carried out during immunization programs are concerns which must be addressed. Burma, like most underdeveloped countries, has a culture which appreciates the value of almost all commodities, even those designed to be disposed of after use. The use (or in this case misuse) of intended medical equipment can produce problems related to the spread of infectious disease. AID/Burma is aware of this concern and has budgeted for syringe sterilization equipment, training and for monitoring of sterilization and immunization procedures within the proposed project. These materials are already used by personnel at the level which will be deployed, so there is no new introduction of disposable syringes here, only the assurance that the syringes are disposed of in the appropriate manner.

The Vector-Borne Disease Control Section (VBDC) is a unit of the Disease Control Division of the MOH. VBDC is a well-established, mature organization that has had a great deal of experience and involvement with international organizations. At present, VBDC has a WHO long-term resident advisor and receives support from the Canadian International Development Agency (CIDA) and the

Netherlands. Other international donors, including AID, have periodically participated in evaluations and review of VBDC and its activities.

In order to enhance the institutional capacity of VBDC, the project will provide the short-term services of a bio-environmental control trainer under the project, and the project will support training including two courses in bio-environmental control and workshops on improving VBDC's entomology staff. These activities will be monitored and evaluated along with other project activities as project implementation progresses.

Based on the foregoing analysis, the project as envisioned will not have any significant, foreseeable effect on the environment of Burma or the international environment. Consequently, an initial environmental examination (IEE) indicating a negative determination is recommended (see Annex K).

VIII. IMPLEMENTATION AND MONITORING PLAN

A. Implementation Schedule

Pre-Obligation Actions: The project is designed with a four-year implementation period. It is expected that authorization by AID/W will take place not later than the end of September, 1986, leaving at least three months for AID/Burma to negotiate and sign the project agreement by the beginning of the second quarter of FY 1987. The project's PACD would be December 31, 1990.

There are several actions that AID/Burma will undertake between the dates of project authorization and obligation that will give the project momentum for expeditious implementation. These will be routine actions that, with the exception of (a) below, will involve no expenditures or commitments by AID. Such actions include but are not limited to the following:

a. AID/Burma has already authorized AID/W to issue PIO/Ts to obligate funding from AID/Burma FY 1986 OYB and deob/reob to Communications for Child Survival and Vector Biology Control projects;

b. Identification of trainee candidates: AID/Burma will work with the MOH to begin the process of identifying, screening and selecting qualified candidates for long-term and short-term training positions;

c. Preparation of PIO/Ps for long-term training: This is particularly important if university level trainees are intended to begin with the start of the 1988 Autumn semester. The HDO will prepare detailed descriptions of training to be incorporated into PIO/Ps and sent by the Training Assistant to the Office of International Training, AID/W, as soon as possible to permit placement of these candidates before the semester begins;

d. Agreement with the MOH on the terms of reference (TOR) for the short-term and long-term Technical Assistance Advisors;

e. Preparation of a PIO/T for long-term TA. A CBD notice will be drafted requesting expressions of interest to be submitted.

f. Preparation of PIO/Ts and a request for technical proposals (RFTP) for short-term technical

assistance and procurement services. AID/Burma will seek the assistance of the ACO in Bangkok, Thailand, to develop a RFTP for the procurement of these services;

g. Preparation of specifications for bicycles, motorcycles vehicles and vehicle spare parts;

h. The drafting and prepositioning of PIO/C's for the health kits to be procured from UNIPAC;

Calendar of Major Events. Following is a table of major implementation events and the approximate time they will take place using the date of project agreement signature as a reference:

<u>Action</u>	<u>Timing (months)</u>
Pre-Obligation Actions	-6
Project Authorization	-3
Negotiations with SRUB	-3 to -0-
Project Agreement Signed	-0-
Conditions Precedent Satisfied	+1
Issue PO's/Contracts to unilaterally obligate funds	+1
Issue PIO/T for baseline survey	+2
Issue PIO/T for Long-Term TA consultant (PSC)	+2
Issue PIO/T for 8(a) PSA services	+2
Issue PIO/P for long-term training	+2
Issue PIO/C for health kits	+3
Advertise in CBD for TA contract	+4
Contract (PSC) for baseline data survey	+5
SER/CM negotiate and Award PSA contract with 8(a) firm	+5
Issue PIO/C to PSA for cold chain and other equipment	+6
Issue PIO/C for vaccines and supplies (GSA)	+6
Issue PIO/C to PSA for bicycles, motorcycles and vehicle spare parts	+7
Receive Curriculum vitae for long-term TA PSC candidates	+7
Receive and analyze baseline data	+8
Arrival of short-term consultants	+8 to +45
Mgt./planning/supervision tours (7)	+10 to +42
Negotiate/Award/Sign TA PSC	+10
Arrival of health kits	+10
Arrival of Long-term TA (PSC)	+12
Convening of evaluation workshops	+13 to +22
Arrival of first Media Consultant	+13
Convening annual State/Division planning workshops	+14 to +38
Arrival of cold chain and other equipment	+15
EPI Observation tours (3)	+16 to +40
Arrival of vaccines and supplies	+16
Arrival of Short-term TA (training)	+17
Arrival of bicycles, motorcycles and	

vehicle spare parts	+18	
Begin processing short-term training	+18	to +42
Initiate in-service training program at CCU	+18	to +40
Departure of long-term trainees (Autumn 1988)	+21	
Departure of first Media Consultant/Arrival of second Media Consultant	+24	
Mid-Project Evaluation Commences	+24	
Departure of second Media Consultant	+35	
Long-term TA completed	+36	
All long-term trainees complete training	+39	to +32
Project close out procedures initiated	+42	
End of project evaluation commences	+45	
PACD	+48	

B. Project Management

Four major participants in project implementation and monitoring are envisioned: AID/Burma, the MOH, the long-term consultant (Contractor) and AID/W offices which will administer and program activities directed from central projects in support of this proposed project. The roles of these major participants are discussed below:

AID/Burma: AID/Burma will assign the Health Development Officer (HDO) as the project officer. He/she will assist the SRUB in project implementation, oversee project monitoring, work closely with counterparts in the MOH and be the main contact point between AID/Burma and the long-term consultant. The HDO will assist in developing a detailed project implementation plan and will monitor project progress based on that plan. He/she will be assisted by the AID/Burma Project Development Officer as well as regional personnel.

It is expected that the HDO will carry out all pre-obligation actions, will work to see that conditions precedent are satisfied and will assure expeditious implementation of procurement and training plans. He/she will work closely with the MOH in identifying and screening candidates for training. The HDO will work with the long-term consultant and be responsible for internal project progress reports.

Regional and AID/W Assistance. Project implementation, particularly initial implementation actions, will depend greatly on assistance to be provided by the Regional Legal Advisor (RLA), the Area Contracting Officer (ACO), the Controller's Office (O/FIN) and the Regional Commodity Management Officer (RCMO). The RLA is located in Colombo, Sri Lanka; the ACO, O/FIN and RCMO are located in Bangkok, Thailand. They will provide timely assistance in their areas

of responsibility. Because a significant portion of the short-term TA will be provided from resources available from the centrally administered projects mentioned heretofore, it is important that the scheduling and appropriateness of TA will be coordinated between AID/Burma, ANE/TR and S&T/Health.

Additionally, AID/Burma may require the services of personnel in the areas of training, preparation and development of specifications, etc. These services will be provided directly either by AID/W or through IQC services.

Host Country Role. Primary coordinating and budgetary responsibility for the project will be with the Ministry of Planning and Finance and in particular with the Director-General of the Foreign Economic Relations Department. Overall responsibility for managing and implementing the project will rest with the Director General, Department of Health, Ministry of Health.

C. Procurement Plan

There will be several procurement actions to be undertaken under the project which will require careful planning and coordination. These include the procurement of commodities including vaccines and vaccine supplies; motorcycles, bicycles and vehicle spare parts; participant training and training materials/services; and technical assistance. The different approaches envisioned for the procurement of the services and commodities are discussed below.

Based on AID/Burma experience, host country contracting is not practical in Burma. Preliminary discussions indicate that the SRUB anticipates and accepts the direct AID contracting mode for all project procurement actions. Consequently, except where procurement will be through buy-ins in existing central contracts, PSC and IQC arrangements, or where a participating agency services agreement (PASA) could be justified, all procurement for commodities and services will be on a competitive basis using the direct AID contracting mode. Such a contracting mode does not exclude contracting with 8(a) firms, small business or Gray Amendment firms as prime or sub-contractors. Such firms will be encouraged to participate to the maximum extent possible in providing services and commodities under the project.

Technical Assistance: Technical assistance (TA) services involving a variety of experts will be required under the project. The total technical assistance package to be directly supported under the project is estimated at 103 person months (pm) of which 24 pm are long-term and the remaining 79 pm

short-term. In addition, 39 pm of short-term TA will be provided and funded under the Communication for Child Survival and Vector Biology Control Projects from deob/reob funds, AID/Burma FY 1986 OYB and direct resources from the Communication for Child Survival Project. Approximately 14 pm of additional short-term TA will be directly financed under the proposed project with additional "buy-ins" into the REACH and Technologies for Primary Health Care (936-5927) centrally administered projects. The remaining TA, approximately 65 pm, will be procured on a competitive basis. The following is a brief discussion of each of these approaches.

(a) Personal Services Contract

The one long-term resident advisor (24 pm) team leader and training and management advisor will be procured under a PSC arrangement. This is contemplated because of the SRUB refusal to permit a long-term consultant to be attached to the Ministry of Health. The Mission had considered a JCC arrangement but determined that such a position could not be supported by Mission OE funds.

It is envisioned that AID/Burma will prepare a PIO/T, and in conjunction with the ACO, advertise the requirement in the Commerce Business Daily. Upon receipt of completed SF 171s and curriculum vitae, the ACO will negotiate/award the contract for 24 pm of effort.

(b) Buy-ins into Existing Centrally-Funded Contracts

Approximately 53 pm of TA will be secured through buy-ins into four existing centrally funded contracts: Communication for Child Survival (HEALTHCOM); Technologies for Primary Health Care (PRITECH), and Vector Biology Control (VBC), and the REACH Immunization projects. Of this total, it is estimated that 39 pm of assistance will be provided to the project from AID/Burma FY 1986 OYB, deob/reob and direct contributions (\$155,000) to the project. Expertise secured through buy-ins will include the two 11-month media consultants. A minimum of 14 pm of short-term advisors (who will visit Burma for short durations of 2-3 months) in the areas of management services, mass media, research and evaluation, oral rehydration therapy, malaria operations, bio-environmental control, medical entomology, malaria immunology and immunization cold chain management and logistics will also be funded from buy-ins.

Prior to project authorization, AID/Burma will prepare one or more PIO/Ts for "buying into" these contracts. Once PIO/T(s) are processed in AID/W, these services could be made available readily thus saving the several months it would take to procure these services using normal procedures.

(c) Participating Agency Services Agreement (PASA)

It is conceivable that immunization related and/or Vector-borne disease control services (9 pm each or a total of 18 pm) may be obtained from the Center for Disease Control (CDC) in Atlanta, Georgia, either through a Participating Agency Services Agreement (PASA) or through centrally-funded contracts. CDC is well-known and well-respected in Burma, and Burmese officials have indicated a preference for its services.

(d) Competitively Procured Services

The remaining short-term TA services (approximately 65 pm) will be procured in one package on a competitive basis and will follow standard AID contracting procedures (i.e. publication of notice in the Commerce Business Daily (CBD), issuance of RFP, evaluation of proposals, selection, and contract signature). The procurement will be undertaken on a competitive basis from firms and institutions (or joint ventures of firms and/or institutions) of U.S. source and origin.

These services will include a variety of short-term consultants in management training, course design, material development, health information, electronic data analysis, management system analysis, drug logistics analysis, and health research and evaluation.

Procurement Services Agent (PSA): Given the expected types of equipment and commodities required under the project (with the exception of the health worker kits), the contract for procurement services under the project has been designated as an 8(a) opportunity. As such, it is recommended that the procurement of a PSA contract follow informal competitive procedures where a reasonable number of capable and experienced 8(a)-designated firms compete for the contract. AID/Burma will prepare and issue the PIO/T for contracting by AID/W with the Small Business Administration.

All contracting actions under the project will be undertaken by the area contracting officer (ACO) stationed in Bangkok, Thailand, on behalf of AID/Burma. AID/W offices such as ANE/PD, ANE/TR or SER/AAS will assist as may be requested by AID/Burma and the ACO.

The MOH has agreed to provide all expatriate technical assistance personnel, both long-term and short-term, with office space, office furnishings and equipment, secretarial and administrative support, fuel, drivers and in-country travel expenses. This applies to TA personnel whose services will be secured through buy-ins into existing contracts and to those selected on a competitive basis.

Housing, household furnishings, and a vehicle will be provided under the project for the one long-term PSC advisor. The vehicle may be used for the personal use of the long-term advisor; however, operating costs identified for personal use will be collected and payment made to the US Embassy. The vehicle will be imported and registered by the MOH. This arrangement is necessitated by the difficulties and long delays experienced in importing privately-owned vehicles into Burma and the extremely high custom duties and import charges (300%) imposed on incoming vehicles (as all project vehicles will enter Burma under the Colombo Plan, no duties will be assessed to the implementing agency).

Commodities and Vehicles: Commodities will be divided into four groups for procurement purposes as follows:

(a) Health Worker Kits

These include community health worker (CHW) kits (7,000), traditional birth attendants (TBA) kits (3,000), immunization (EPI) kits (860), auxiliary midwives (AMW) kits (3,000), health assistance (HA) kits (130), 650 MW kits, and 335 LHV kits, with a total estimated CIF value of about \$1.1 million (excluding freight costs). These kits have been obtained through the United Nations Children's Fund (UNICEF) in the past. Burmese health workers at all levels are familiar with the kits and have used them effectively. Although it would be possible to obtain similar kits from U.S. sources, it is doubtful, given the number of individual items contained in each kit, whether this could be accomplished on a timely basis and at a reasonable price. In addition, switching to a new kit, which may have a different size, color and configuration, may be disruptive to relatively unsophisticated health workers and may require retraining or at least reorienting them in the use of new kits. This would rob the project of valuable momentum. Consequently, all kits under the project will be procured through UNICEF using a PIO/C. Waiver requests of competition, of source/origin, and of source of transportation services are included in the project paper for approval (by the Administrator since the value is over \$1 million) at the time of project authorization (see Annex I, "Waivers").

(b) Medicines, Vaccines and Vaccination Supplies

Medicines to be procured under the project consist exclusively of second-line anti-malaria drugs used to treat referral cases that do not respond to first-line drugs and suppressants. These include quinine tablets and ampules and faraidar and fansimef tablets.

Approximately 4.4 million doses of measles vaccine marketed in 10 dose vials will be procured under the project. In addition, an assortment of needles and sterilizable plastic syringes will be procured to deliver the vaccine.

It is not clear whether measles vaccine will be available from U.S. firms. Although one U.S. firm, Marck Sharpe and Donne, has been the only American producer of measles vaccine in recent years, this firm has indicated on several occasions that it would be unable to provide it for some Africa Bureau projects. There are no known code 941 (developing) countries producing measles vaccine. Alternatively, UNICEF is a possible source for quality, reasonably priced and readily available measles vaccine.

It is also not clear whether any U.S. firms currently produce anti-malaria drugs, and there are no known code 941 countries which do. Several European countries, however, do produce it, particularly Switzerland. Until further information is available, no waiver request for this item is included in Annex I, "Waivers".

These medicines and vaccines, estimated to cost \$600,000 each, or a total of \$1,200,000, will in the first instance be procured from U.S. firms, if any manufacture them. If not, procurement from UNICEF or competitive procurement from Code 899 countries by the GSA under a PIO/C will be undertaken. It is likely that prices offered by overseas suppliers may be substantially lower than prices charged if procurement is made through U.S. agents of these suppliers (i.e. U.S. source). GSA will be instructed by AID to limit eligibility to products which meet stated quality, safety and efficacy standards and to companies with responsible representation in the U.S. Where necessary, a procurement source waiver from Geographic Code 000 (U.S.) to Code 899 (Free World) will be required.

Vaccination needles and reusable plastic syringes are manufactured in the United States. However, recent Africa Bureau experience has shown that vaccination needles can be obtained from code 941 source and origin (India) at approximately 10% of the cost of the best available U.S. price. Similarly, reusable plastic syringes may be available from Code 941 countries (Mexico and Brazil) at approximately 25% of U.S. prices. Handbook 1, Supplement B, permits procurement from Code 941 countries for goods for which the lowest delivered price from the U.S. is reasonably estimated to be 50% or more higher than the delivered price from Code 941 countries. A waiver request to permit the procurement of vaccination needles and disposable syringes from Code 941 is included in Annex I. Again, it will be considered approved

upon authorization of this project. These supplies, estimated to cost approximately \$150,000, will be procured competitively from Code 941 countries.

(c) Cold Chain Equipment and Other Commodities

Cold chain equipment and other commodities include refrigerators, ice-pack freezers, vaccine cold boxes, thermometers, voltage regulators, compressors, miscellaneous rural health center equipment and supplies (sterilizers, weight scales, kerosene stoves, disposable supplies etc.) and training supplies and equipment. In all, there are approximately \$650,000 worth of these commodities. It is understood that the refrigerators will require a source/origin waiver to permit procurement from Code 899 (Sweden), although from U.S. suppliers. In addition, ten micro computers, and accessories, will be procured in support of the expanded health information system. It is estimated that this data processing equipment will cost \$100,000 and will require a waiver permitting less than full and open competition. All of the remaining commodities in this category will be procured from U.S. suppliers on a competitive basis either through the services of a PSA or through GSA available contracts.

(d) Bicycles, Motorcycles, Vehicles and Vehicle Spare Parts

It is estimated that the project will require 1,000 bicycles, 113 motorcycles, two refrigerated trucks, and one project vehicle for the PSC long-term advisor besides vehicle spare parts to enhance the outreach capability of the project.

All bicycles will be procured from the U.S. on a competitive basis, if possible. Ideally, all bicycles procured for the project from U.S. suppliers should reflect the Burmese-assembled bicycles in specifications so that the availability of spare parts does not become a major problem. The Burmese bicycle industry, basically one parastatal, cannot assemble the quantity of bicycles requested in this project. In addition, as the vehicle spare parts are for US-manufactured jeeps exclusively, it may be possible that these parts are only available from one U.S. supplier, American Motors Corporation. If that is the case, then a sole source waiver will be required. The estimated cost of the bicycles and vehicle spare parts is \$200,000.

Based on extensive Agency experience in this area, motorcycles are not available from U.S. manufacturers. Consequently, it is anticipated that all required motorcycles will be procured in one package from Japan. The total cost is estimated at \$350,000.

The refrigerated trucks will be needed to transport needed vaccines to major vaccine storage depots and sub depots at ten State/Division or sub regional headquarters and enhance the cold chain distribution system. It is estimated that such vehicles will cost approximately \$48,000 and are available from U.S. suppliers.

Training: It is envisioned that training under the project will be coordinated through the Office of International Training, AID/Washington. Some training may be arranged and administered through S&T Bureau's centrally funded projects which are supporting this proposed activity.

D. Training Plan

Long-term Training. AID/Burma will work with the MOH immediately after authorization to identify as many of the eight long-term training candidates as possible at the earliest possible time. Every effort will be made to admit those candidates identified and judged to have the required English language proficiency to appropriate U.S. training institutions as early as possible. It is anticipated that all candidates will be selected for study beginning the fall semester of 1988. Those candidates who do not have the required English language capacity will be provided some short-term training at the expense of the MOH. The AID office will prepare PIO/Ps to cover all long-term training and the Office of International Training will assist in processing and backstopping these candidates. At present, it is not anticipated that the TA team will be involved in placing the long-term trainees.

Short-term Out of Country Training. Approximately seven candidates from the Ministry of Health will be selected for short-term training and five for observation study tours. Short-term training will involve periods anywhere from 1-4 months per person, and will include academic courses, seminars conducted by other than universities, familiarization tours, etc. The exact training vehicle will be selected to meet the particular requirements of the candidate and the training objective.

The Burmese process for identification, selection and placement follows.

1987 Feb/March	Call for Applications
1987 Sept/Oct	Selection
1988 Jan.	TOEFL
1988 Feb	Submit Applications to U.S.
1988 Sept.	Start study
1990 June	End of Study

The same procedures for the identification and screening of candidates for long-term training described earlier will apply to short-term training. However, short-term training will be conducted in accordance with a training plan based on the recommendations of the MOH and the TA team. The TA team will be responsible for all short-term training and their home office will assist in the identification of suitable courses and observation study experiences and other training possibilities to meet the goal of the training. Short-term training could be conducted in the U.S. or in third countries. It is anticipated that the majority of this training will take place in the U.S. A list of participant training can be found in Annex F.

E. Evaluation Plan

The evaluation plan for the Quality Care for Child Survival (QCCS) Project will include several evaluative activities undertaken jointly by AID and the QCCS Management to gather essential data. The Project will also benefit from independent evaluations by contractors who will work in support of the QCCS Project through centrally-administered AID projects. The plan will depend for most of its data on information which is routinely available from a national health program monitoring system being tested and installed by the Ministry of Health with the cooperation and assistance of the Western Consortium for the Health Professions under the AID-financed Primary Health Care II Project.

Users of the Information

The major users of information collected under the QCCS will be: (1) the various teaching, research and operations elements (both integrated and vertical) of the Ministry of Health; (2) the various teaching, research and operations elements of the Divisional of Health Offices; (3) other donors and their counterpart organizations involved in the People's Health Plan; (4) project management; (5) AID/Burma; and (6) AID/Washington.

Project Goals, Purposes and Outputs

The goal of the project is to reduce morbidity and mortality among infants, young children, and pregnant women caused by immunizable and diarrheal diseases, malnutrition, malaria, and child birth.

The project purpose is to expand and improve the Community Health Care (CHC) delivery system, the Expanded Program for

Immunization (EPI), and the Vector Borne Disease Control Program (VBDC) of the SRUB.

Following are the Project outputs:

1. Expanded community health care and basic health services
 - (a) Pre-service training for a total of 3,000 TBAs, 3,000 AMWs and 7,000 CHWs.
 - (b) Provision of volunteer health workers with a set of supplies and equipment appropriate to the function of each category of worker.
 - (c) Provision of a total of 335 Lady Health Visitors, 650 Midwives, and 130 Health Assistants working at Rural Health Centers and Sub-Centers with basic equipment kits appropriate to their tasks.
 - (d) Provision of 105 new Rural Health Centers and their corresponding 525 Sub-Centers with an appropriate set of basic supplies and equipment.
2. Establishment of an in-service training system for improved mid-level management and supervision
 - (a) Increased capability of central DOH training and supervision through broadened responsibility for the Central Coordinating Unit (CCU) to support and coordinate the division and state training teams and develop, coordinate and evaluate their activities.
 - (b) Improved planning and coordination of in-service training at the state and division level through training workshops designed to provide opportunity to staff to plan and coordinate manpower development and supervision activities at the state level.
 - (c) Increased number of senior health assistants, lady health visitors and township supervisors (628) trained in health center management, technical skills and appropriate training technologies, stressing management and mobilization for immunizations including cold chain maintenance, management of diarrheal diseases, nutritional assessment and counselling, antenatal care, drug supply and resupply and information systems, and supervision.
 - (d) Improved performance of rural health center staff in management and supervision of VHWs and health care

delivery achieved through training of VHWS in growth monitoring and nutrition education, health education related to diarrheal diseases, personal hygiene and community mobilization. The training will also concentrate on: performance assessment and staff development as part of the supervisory role, work planning, management of health center operations, and using information for operational planning.

3. Improved management support systems and research capability
 - (a) Improved health and management information systems for community health care at state/division and township levels (A system which facilitates the efficient collection and use of information by CHWs, AMWs, RHCs, and Sub-centers; and reduces the number of overlapping forms and records now being used by these workers).
 - (b) Supply and distribution system for drugs and vaccines to BHS and VHWS analyzed, and alternatives identified and tested through an action research study which tests promising options for modifications in the drug supply system.
 - (c) Health systems research capabilities increased and research studies completed for replanning in critical problem areas, e.g.:
 - (1) identification of optimal manpower configurations for Basic Health Service institutions;
 - (2) assessment of determinants of health status (with emphasis on the effectiveness of health service inputs in influencing it);
 - (3) impact evaluation studies; and
 - (4) cost-benefit studies on the use of VHWS (including perhaps a comparison of their impact in areas with CHWs alone vs. those with CHWs and AMWs); and studies of community financing and organization (and their impact on the health of the community).
4. Mass media campaigns and information for immunization and oral rehydration therapy introduced
 - (a) A media campaign established and maintained for EPI and ORT which maximizes a complementary relationship between health workers and media.
 - (b) Health education material prepared and distributed to health staff and the public.

(c) Training in ORT for SRUB and private physicians implemented in ORT seminars for physicians through the Burma Medical Association. (The seminars will put ten dozen ORT packets into the hands of each physician.)

5. Expanded coverage of effective immunization services as follows:

	1986 Applied to Area Program	1986 Applied to whole Eligible Pop. of Burma	1990 Goal
BCG	79%;	41 %	85%*
diphtheria, pertussis, tetanus (DPT) (3)	26%;	14 %	85%*
polio (3)	40%;	0.03%	85%*
tetanus toxoid (TT) (2-for pregnant woman)	26%	16 %	75%**
measles	0 %	0 %	85%*

*85% of children under age one year

**80% of pregnant women in the 264 "secure" townships which contain 90% of the national population;

Related goals:

- (a) Establish a system to maintain full EPI coverage after 1990;
- (b) Use the infrastructure developed for UCI for other primary health care activities after UCI is achieved.
- (c) Expand and strengthen the cold chain and logistics systems to ensure timely, safe delivery of vaccines to all 314 townships on a regular basis.
- (d) Adequate supplies of measles vaccine, needles, syringes, and EPI kits ensured for Universal Child Immunization (UCI) campaign.
- (e) In-service training to township and BHS staff on new UCI Campaign provided.
- (f) EPI MIS, Surveillance, and Evaluation Systems improved through a simplified surveillance system which focuses on EPI coverage; more accurate monitoring of coverage levels; provision of immunization cards to mothers as part of growth monitoring charts; 700 state/divisional and 11,000 township evaluation workshops; observation tours; and better adapted cold chain and logistics systems.

6. Increased availability of malaria treatment and malaria control expertise.
- (a) Supply of quinine tablets and injections and fansidar tablets adequate to meet Burma's estimated requirements for two years for treatment of malaria cases not responding to initial treatment with chloroquine.
 - (b) Operational research on new approaches to malaria control through more effective action by communities and basic health services developed, tested, and evaluated. (2 to 4 studies on subjects such as comparison of the effectiveness of different control measures in drug only and spray areas, comparison of the effectiveness of different regimens for chemoprophylaxis in different population groups, operational studies to improve the effectiveness of basic and community health services in carrying out malaria control measures, studies of the cost-effectiveness of different methods of malaria control, and studies of the effect of different malaria control interventions on malaria-specific and total mortality and mortality among infants, children, and pregnant women.)
 - (c) Greater supervision of malaria control activities from the township level.
 - (d) Specialized local malaria control training. (2 courses in control of vectors by bio-environmental measures, 3 workshops on vector borne disease control for entomology staff, 1 course in advanced medical entomology, and 2 workshops for preparation and revision of operational manuals for VBDC and basic health services staff completed.)

Managers' Priority Questions

Goal Level:

To what extent is the project contributing to reduced morbidity and mortality among infants, young children, and pregnant women caused by immunizable and diarrheal diseases, malnutrition, malaria, and child birth? Can/will the progress be maintained/sustained?

Purpose Level:

1. In what ways and to what extent is the project expanding the Community Health Care (CHC) delivery system, the Expanded Immunization (EPI), and the Vector Borne Disease Control (VBDC) Programs of the SRUB?

2. In what ways and to what extent is the project improving the Community Health Care (CHC) delivery system, the Expanded Immunization (EPI), and Vector Borne Disease Control (VBDC) Programs of the SRUB?

Output Level:

1. How are community health care and basic health services being expanded?
 - (a) How many of the 3,000 TBAs, 3,000 AMWs and 7,000 CHWs have received pre-service training? Are they retaining what they have been taught and using the new skills acquired in their work?
 - (b) What percentage of volunteer health workers have been equipped with a set of supplies and equipment? Are the supplies and equipment appropriate to the function of each category of worker? Are the supplies and equipment being used appropriately? Is there an effective resupply system?
 - (c) How many of the 335 Lady Health Visitors, 650 Midwives, and 130 Health Assistants receiving training under the Project working at Rural Health Centers and Sub-Centers have received basic equipment kits? Are the kits appropriate to their tasks? Are they using them appropriately? Is there an effective resupply system?
 - (d) How many of the 105 new Rural Health Centers and corresponding 525 Sub-Centers described in the Project have been equipped with an appropriate set of basic supplies and equipment? Are the kits being used appropriately? Is there an effective resupply system?
2. Is the in-service training system for improved mid-level management and supervision established, and is it effective?
 - (a) Have the CCU's responsibilities been broadened to include development, coordination and evaluation of state and division training teams and to assure that in-service training improves supervision, management and service skills related to child survival and maternal care?

- (b) Has in-service training and supervision of RHC staff by the state/division staff in workshops provided new opportunity for planning and coordination of manpower development and supervision activities at the state level? What has been the result? Can positive results be seen in area health data?
 - (c) Have a senior health assistant and a senior lady health visitor with the specific assignment for supervision and in-service training of rural health center staff been trained and posted to 60 model townships? What has been the result? Can positive results be seen in area health data?
 - (d) How many of the planned 628 township supervisors have been trained? Do student evaluations indicate improvements in supervision, health center management, technical skills and appropriate training technologies? Has their training stressed management and mobilization for immunizations, cold chain maintenance, management of diarrheal diseases, nutritional assessment and counselling, antenatal care, drug supply and resupply and information systems? What is indicated by post-training, in-service evaluations? Has operational behavior changed? Are improvements evident in the health data?
 - (e) Is improved management and supervision of rural health center staff evident in improved performance in areas such as growth monitoring and nutrition education, health education related to diarrheal diseases, personal hygiene and community mobilization?
 - (f) What is the evidence that the above training and improved supervision is having a positive effect on supervision, management and service skills? Can positive results be seen in aggregated geographic area health data? Can positive results be seen in health data gathered prior to and after training? Is there evidence that persons trained are doing a better job than those who have not been trained?
3. In what ways is the Project contributing to improved management support systems and research capability?
- (a) Has a system been installed at state/division and township levels which facilitates the efficient collection and use of information by CHWs, AMWs, RHCs, and Sub-centers; and reduces the number of overlapping

forms and records used by these workers? How many state/division and township level offices have begun to use the new system? Has the old system been discontinued? How many such forms/records/questions were used in the old system? How many in the new? What portion of the information collected is transmitted to the state/division and central levels? How much is maintained in the townships? How is it contributing to management and supervision of the primary health care program?

- (b) Has an analysis of the supply and distribution system for drugs and vaccines to BHS and VHWS been completed? Have alternatives been identified and tested through an action research study? What are the most promising options? Has a national scale follow-up study determined with any precision the source, availability, appropriateness and costs of drugs for the CHWs and AMWs? What modifications in the drug supply system have been indicated? What modifications have been made?
 - (c) Have research studies been completed which will provide basis for replanning in the critical problem areas noted in Section 3.(c) on page 65? What have been the findings? What changes are indicated? What modifications have been or are being made?
4. What has been the effect of mass media campaigns and information on immunization and oral rehydration therapy programs? Are there comparative tests indicating the relative effectiveness of the programs in areas where there is mass media and where there is not? Is there a positive correlation between improved health statistics in areas reached by the media campaigns and the media campaign areas? Is there negative correlation with areas not included in the campaigns? If so, are there other possible explanations for the correlations?
- (a) Is the complementary relationship between health workers and media proving successful? What is the relative difference in effect of the media campaigns on health statistics between areas in which rural health workers have received training and where they have not?
 - (b) How much and what kind of health education material has been prepared and distributed to health staff and the public? What is the reaction of the people receiving the material? Are they absorbing the messages and changing their behavior as a result?

- (c) What percentage of the SRUB and private physicians have attended ORT seminars? What has been the effect of the seminars on their use of ORT packets? Have they begun to distribute the packets to their patients for use at home? What has been the draw-down on supplies? How are supplies being replenished?
5. What is the evidence that immunization services are being expanded and that they are becoming more effective? What are the factors contributing to the expansion and improvement? Have coverage rates increased for each of the program diseases in the 176 program townships included in the special program? What are the rates of coverage? What is the evidence that the coverage is effective? Do health information statistics confirm the effects? What has been the progress toward program goals?
- (a) To what extent has the pilot UCI program been phased into "normal" EPI townships included in PHP III UCI "campaign" townships? Have five vaccination teams been established and have other resources been mobilized to achieve the full coverage targets in each campaign township?
 - (b) Is the cold chain and logistics system ensuring timely, safe delivery of vaccines to all 314 townships on a regular basis? What are the checks on the system? Are breakdowns or failures regularly and systematically reported? Are problems remedied? Is there a regular correlation check made on the reports of disease which would indicate unreported breakdowns in the system?
 - (c) Is there an effective logistics and supply feedback system which would confirm that adequate supplies of measles vaccine, needles, syringes, and EPI kits for the Universal Child Immunization (UCI) campaign are being delivered and used?
 - (d) What portion of the township and BHS personnel have been provided in-service training on the new UCI Campaign? Was their understanding of UCI concepts evaluated? Is there evidence of the effective absorption of the training in the improved performance of these health personnel?
 - (e) Are there simplified EPI management information systems, surveillance, and evaluation systems installed which focus on EPI coverage, provide more accurate monitoring of coverage levels, and use

immunization cards maintained by mothers as part of growth monitoring charts? What has been determined from and imparted to workers through 700 state/divisional and 11,000 township evaluation workshops? Does testing indicate what they have learned from the workshops? Is there evidence of change in the operational behavior of health personnel who have attended the courses? How are the improved cold chain and logistics system effectiveness tested by the surveillance systems evaluations?

6. How has the increased availability of malaria treatment and malaria control expertise affected malaria prevalence?
 - (a) Are quinine tablets and injections and fansidar tablets being distributed to appropriate areas of Burma? On what basis are we assured that these supplies are used appropriately? What are the assurances that fansidar tablets are being used only after it becomes evident that malaria cases are not responding to initial treatment with chloroquine?
 - (b) What new approaches to malaria control through effective action by communities and basic health services have been developed, tested, and evaluated through operations research? What has been learned? What is the comparative effectiveness of different control measures in drug only and spray areas? What is the comparative effectiveness of different regimens for chemoprophylaxis in different population groups? How can the effectiveness of basic and community health services in carrying out malaria control measures be improved? What is the relative cost-effectiveness of different methods of malaria control? What is the effect of different malaria control interventions on malaria-specific and total mortality and mortality among infants, children, and pregnant women?
 - (c) Has supervision of malaria control activities from the township level increased? What evidence is there that the increased supervision is positively affecting suppression and improving health status of populations in areas served by the expanded program?
 - (d) Have the two courses in control of vectors by bio-environmental measures, three workshops on vector borne disease control for entomology staff, 1 course in advanced medical entomology, and two workshops for preparation and revision of operational manuals for

VBDC and basic health services staff been evaluated for effectiveness? Does testing indicate that participants have improved their knowledge of subject matter? Does follow-up evaluation indicate improved performance? Is there evidence of change in the operational behavior of health personnel who have attended the courses?

Key Indicators and Administrative Data to Answer Managers' Questions

Following are the key indicators, administrative data, studies, and/or information resources from which project managers will derive verifiable indication of progress (or lack of progress) under the QCCS:

Goal Level:

To what extent is the project contributing to reduced morbidity and mortality among infants, young children, and pregnant women caused by immunizable and diarrheal diseases, malnutrition, malaria, and child birth? Can/will the progress be maintained/sustained?

Under the Primary Health Care II Project, the Western Consortium for Health Professions, Inc. has worked with the Ministry of Health to design a reliable, simplified health information system which relies on a Cluster Population Coverage method using midwives for birth and death data, a total count of all encounters with the rural health care delivery system, and a 10 percent hospital sample for description of relative frequency of specific disease. This new system will provide the basis for determining morbidity and mortality among the Burmese population served by the public health system.

The new system, including revised questionnaires, data collection methods and systems, and collation and dissemination procedures, is currently being tested in Pegu Division. Based on the results of this pilot effort, the system will be modified as necessary and expanded to other pilot divisions. Within the next two years, the new information system should be operating throughout most of Burma and providing baseline and comparative data to reflect changes in rates of morbidity and mortality among infants, young children, and pregnant women caused by immunizable and diarrheal diseases, malnutrition, malaria, and child birth.

The proposed new monitoring system also includes recommendation for deployment of a Rapid Survey Team in the

national-level Health Information Service. If deployed, this team can be used to develop essential baseline data for the Project.

The SRUB has recently completed and will soon publish results of the 1983 Burma Census. These results, combined with results of the 1973 census and a proposed mid-term 1988 census sample will provide clues to the effect of Burma's primary health care programs.

Though the new information system will provide the basis for knowing whether improvements have occurred and whether they are being maintained; it cannot predict good management or commitment. Part of the task of midterm and final Project evaluators will be the identification of problems having the potential to undermine sustained effect of the program.

Purpose Level:

1. In what ways and to what extent is the project expanding the Community Health Care (CHC) delivery system, the Expanded Immunization (EPI), and the Vector Borne Disease Control (VBDC) Programs of the SRUB?

This question will be answered by Ministry of Health reports of health personnel visits and treatments and by the indication, derived from the new health data system, that disease levels are dropping in rural communities.

Time available for expanding service delivery will increase in indirect proportion to the time spent by health workers on reporting tasks. To the extent that the new health information system reduces reporting, it may also serve as an indicator of increased service delivery.

2. In what ways and to what extent is the project improving the Community Health Care (CHC) delivery system, the Expanded Immunization (EPI), and Vector Borne Disease Control (VBDC) Programs of the SRUB?

Current reporting systems from the EPI and VBDC programs provide basis for measuring improvements in the programs, both in terms of quality of operational methods and effects on health. Improved data collection programs begun under the Primary Health Care II Project and continued under this Project will increase the reliability of measurements of improvement in the CHC program.

Output Level:

1. How are community health care and basic health services being expanded?

- (a) How many of the 3,000 TBAs, 3,000 AMWs and 7,000 CHWs have received pre-service training? Are they retaining what they have been taught and using the new skills acquired in their work?

Training figures will be obtained from the training institutions. The first indicator of absorption and retention of subject matter will be in-school testing. A more important indicator will be supervisory monitoring reports prepared by township, state/division, and central monitoring and evaluation teams, and reports of the proposed Health Information Service Rapid Survey Team.

- (b) What percentage of volunteer health workers have been equipped with a set of supplies and equipment? Are the supplies and equipment appropriate to the function of each category of worker? Are the supplies and equipment being used appropriately? Is there an effective resupply system?

These questions will be answered by informal visits to the field. If considered of sufficient importance by the Department of Public Health, they may also be addressed by a rapid survey.

- (c) How many of the 335 Lady Health Visitors, 650 Midwives, and 130 Health Assistants receiving training under the Project working at Rural Health Centers and Sub-Centers have received basic equipment kits? Are the kits appropriate to their tasks? Are they using them appropriately? Is there an effective resupply system?

Same as (b) above.

- (d) How many of the 105 new Rural Health Centers and corresponding 525 Sub-Centers described in the Project have been equipped with an appropriate set of basic supplies and equipment? Are the kits being used appropriately? Is there an effective resupply system?

Same as (b) above.

2. Is the in-service training system for improved mid-level management and supervision established, and is it effective?

Program commencement will be evident from visits to the Central Coordinating Unit (CCU) and state and division training teams. Supervisory effectiveness can be monitored by field visits and discussions with supervisors and their subordinates. Health data will presumably also provide indication of management and supervisory effectiveness. One of the CCU's tasks will be to evaluate division and state training teams' activities.

- (a) Have the CCU's responsibilities been broadened to include development, coordination and evaluation of state and division training teams and to assure that in-service training improves supervision, management and service skills related to child survival and maternal care?

This question can be answered by a visit to the CCU.

- (b) Has in-service training and supervision of RHC staff by the state/division staff in workshops provided new opportunity for planning and coordination of manpower development and supervision activities at the state level? What has been the result? Can positive results be seen in area health data?

CCU coordinators and state and division training teams, as well as township-level health personnel will be able to answer this question. A review of the health data alone will probably not prove conclusive, but could be a useful indicator.

- (c) Have a senior health assistant and a senior lady health visitor with the specific assignment for supervision and in-service training of rural health center staff been trained and posted to 60 model townships? What has been the result? Can positive results be seen in area health data?

This will be determined by Department of Public Health records and field visits. Again, a review of the health data alone will probably not prove conclusive, but could be a useful indicator.

- (d) How many of the planned 628 township supervisors have been trained? Do student evaluations indicate improvements in supervision, health center management, technical skills and appropriate training technologies? Has their training stressed management and mobilization for immunizations, cold chain maintenance, management of diarrheal diseases,

nutritional assessment and counselling, antenatal care, drug supply and resupply and information systems? What is indicated by post-training, in-service evaluations? Has operational behavior changed? Are improvements evident in the health data?

This information will be obtained through rapid sample survey, informal field visits, discussions with senior field medical officers, review of pre- and post training evaluations, and review of the health data.

- (e) Is improved management and supervision of rural health center staff evident in improved performance in areas such as growth monitoring and nutrition education, health education related to diarrheal diseases, personal hygiene and community mobilization?

Surveys by the CCU and the state and division training teams, as well as field visits by other officials will provide indication of improved management and supervision.

- (f) What is the evidence that the above training and improved supervision is having a positive effect on supervision, management and service skills? Can positive results be seen in aggregated geographic area health data? Can positive results be seen in health data gathered prior to and after training? Is there evidence that persons trained are doing a better job than those who have not been trained?

Though it may not be possible to disaggregate the causes of improved health statistics, the statistics will reflect improved management and supervision. It should therefore be possible to see differences in statistics gathered before and after training and in areas served and not served by the program. It is more likely that evidence of improvement will be derived from anecdotal information gathered from Township Medical Officers and the state and division training teams themselves.

3. In what ways is the Project contributing to improved management support systems and research capability?

- (a) Has a system been installed at state/division and township levels which facilitates the efficient collection and use of information by CHWs, AMWs, RHCs, and Sub-centers, and reduces the number of overlapping forms and records used by these workers? How many state/division and township level offices have begun to use the new system? Has the old system been

discontinued? How many such forms/records/ questions were used in the old system? How many in the new? What portion of the information collected is transmitted to the state/division and central levels? How much is maintained in the townships? How is it contributing to management and supervision of the primary health care program?

This information will be derived from consultant reports and from field discussions with collectors and users of health data.

- (b) Has an analysis of the supply and distribution system for drugs and vaccines to BHS and VHWS been completed? Have alternatives been identified and tested through an action research study? What are the most promising options? Has a national scale follow-up study determined with any precision the source, availability, appropriateness and costs of drugs for the CHWs and AMWs? What modifications in the drug supply system have been indicated? What modifications have been made?

If the proposed analysis is completed, it will answer all but the last of the above questions. Discussions with public health officials, field visits, and surveys will answer the final question.

- (c) Have research studies been completed which will provide basis for replanning in the critical problem areas noted in Section 3.(c) on p.65? What have been the findings? What changes are indicated? What modifications have been or are being made?

If the proposed studies are completed, they will answer all the questions but the last one. Discussions with public health officials, field visits, and surveys will answer the final question.

4. What has been the effect of mass media campaigns and information on immunization and oral rehydration therapy programs? Are there comparative tests indicating the relative effectiveness of the programs in areas where there is mass media and where there is not? Is there a positive correlation between improved health statistics in areas reached by the media campaigns and the media campaign areas? Is there negative correlation with areas not included in the campaigns? If so, are there other possible explanations for the correlations?

The monitoring of the health-education activities is a part of the HEALTHCOM contract which will be used for this component of the Project. It will presumably involve reviews of health statistics, surveys of audience behavior, readership and listener surveys, sampling, etc.

- (a) Is the complementary relationship between health workers and media proving successful? What is the relative difference in effect of the media campaigns on health statistics between areas in which rural health workers have received training and where they have not?

Consultant reports.

- (b) How much and what kind of health education material has been prepared and distributed to health staff and the public? What is the reaction of the people receiving the material? Are they absorbing the messages and changing their behavior as a result?

Consultant reports.

- (c) What percentage of the SRUB and private physicians have attended ORT seminars? What has been the effect of the seminars on their use of ORT packets? Have they begun to distribute the packets to their patients for use at home? What has been the draw-down on supplies? How are supplies being replenished?

These questions will be answered by field visits with SRUB and private physicians, by review of ORT distribution reports, and, if considered of sufficient importance by the Department of Public Health, a rapid survey.

5. What is the evidence that immunization services are being expanded and that they are becoming more effective? What are the factors contributing to the expansion and improvement? Have coverage rates increased for each of the program diseases in the 176 program townships included in the special program? What are the rates of coverage? What is the evidence that the coverage is effective? Do health information statistics confirm the effects? What has been the progress toward program goals?

It will require the use of every component of the new health information system to gather data necessary to answer these questions satisfactorily. Ministry of Health and consultant analyses as well as planned Project evaluations will provide indication of progress toward program goals.

- (a) To what extent has the pilot UCI program been phased into "normal" EPI townships included in PHP III UCI "campaign" townships? Have five vaccination teams been established and have other resources been mobilized to achieve the full coverage targets in each campaign township?

This information will be obtained through informal field visits, discussions with senior national and field medical officers.

- (b) Is the cold chain and logistics system ensuring timely, safe delivery of vaccines to all 314 townships on a regular basis? What are the checks on the system? Are breakdowns or failures regularly and systematically reported? Are problems remedied? Is there a regular correlation check made on the reports of disease which would indicate unreported breakdowns in the system?

These questions will be answered by logistics and supply consultants' reports, field visits, periodic sample surveys, periodic reviews of health statistics, and field reports.

- (c) Is there an effective logistics and supply feedback system which would confirm that adequate supplies of measles vaccine, needles, syringes, and EPI kits for the Universal Child Immunization (UCI) campaign are being delivered and used?

Field visits, supply distribution reports, sample surveys, discussions with central and field medical personnel, and consultants' reports will answer this question.

- (d) What portion of the township and BHS personnel have been provided in-service training on the new UCI Campaign? Was their understanding of UCI concepts evaluated? Is there evidence of the effective absorption of the training in the improved performance of these health personnel?

Training figures will be obtained from the training institutions. The first indicator of absorption and retention of subject matter will be in-school testing. Training quality questions will be answered by reports prepared by township, state/division, and central monitoring and evaluation teams and reports of the Health Information Service Rapid Survey Team, as well as field visits, discussions with field medical officers, and health statistics reports.

- (e) Are there simplified EPI management information systems, surveillance, and evaluation systems

installed which focus on EPI coverage, provide more accurate monitoring of coverage levels, and use immunization cards maintained by mothers as part of growth monitoring charts? What has been determined from and imparted to workers through 700 state/divisional and 11,000 township evaluation workshops? Does testing indicate what they have learned from the workshops? Is there evidence of change in the operational behavior of health personnel who have attended the courses? How are the improved cold chain and logistics system effectiveness tested by the surveillance systems evaluations?

Same as above.

6. How has the increased availability of malaria treatment and malaria control expertise affected malaria prevalence?

Health information reports.

- (a) Are quinine tablets and injections and fansidar tablets being distributed to appropriate areas of Burma? On what basis are we assured that these supplies are used appropriately? What are the assurances that fansidar tablets are being used only after it becomes evident that malaria cases are not responding to initial treatment with chloroquine?

Surveys in areas receiving the supplies, discussions with prescribing physicians, supply reports, reports from the Department of Health, field visits and records from the Rural Station Hospitals, Rural Health Centers and sub-centers, and supervisory assessments will provide answers to these questions.

- (b) What new approaches to malaria control through effective action by communities and basic health services have been developed, tested, and evaluated through operations research? What has been learned? What is the comparative effectiveness of different control measures in drug only and spray areas? What is the comparative effectiveness of different regimens for chemoprophylaxis in different population groups? How can the effectiveness of basic and community health services in carrying out malaria control measures be improved? What is the relative cost-effectiveness of different methods of malaria control? What is the effect of different malaria control interventions on malaria-specific and total mortality and mortality among infants, children, and pregnant women?

The operations research program itself, if undertaken, will address these questions.

- (c) Has supervision of malaria control activities from the township level increased? What evidence is there that the increased supervision is positively affecting suppression and improving health status of populations in areas served by the expanded program?

Answers to these questions will be obtained from Health Information Service reports, operations research program findings, and discussions with program supervisors and their subordinates.

- (d) Have the two courses in control of vectors by bio-environmental measures, three workshops on vector borne disease control for entomology staff, 1 course in advanced medical entomology, and two workshops for preparation and revision of operational manuals for VBDC and basic health services staff been evaluated for effectiveness? Does testing indicate that participants have improved their knowledge of subject matter? Does follow-up evaluation indicate improved performance? Is there evidence of change in the operational behavior of health personnel who have attended the courses?

This information will be obtained from pre- and post-training evaluations, post-training visits with participants, and from operations research findings. It should also be reflected in area health statistics.

Other Appropriate Methods to Answer Managers' Questions

Project managers will work with host country institution(s) involved to identify other methods for obtaining information necessary to effective management of the project. Project designers believe that the monitoring and evaluation system presented here is reasonably comprehensive.

Host Country Support

It will be the responsibility of AID and DOH project managers, working with the Ministry's Health Information Service, to assure that the monitoring systems established in this plan are carried out on a continuous basis and according to the periodicity necessary to achieve the objectives of this monitoring and evaluation plan.

The concept of evaluation is not new to the DOH or to officials tentatively identified within the QCCS project management team. SRUB officials have actively participated in the mid-project evaluation of the Primary Health Care II Project as well as the Health Sector Review carried out in 1985.

Feedback Procedures

Annual project reports will be issued by the DOH. Formal project reviews should be held quarterly, perhaps as frequently as monthly during initial implementation activities, and will be attended by AID, UNICEF, WHO, other bilateral donors, i.e., Italy and the United Kingdom. Meetings will be chaired by the DOH.

Budget

	<u>A.I.D.</u>	<u>Government of Burma*</u>
	\$150,000	\$ 75,000
<hr/>		
Totals	\$150,000	\$ 75,000

* Although funds for evaluation services are not identified specifically within the People's Health Plan, the DOH is cognizant of the need for evaluation and will support such services from recurrent budget allocations.

Project funds will be used to pay for the costs of (1) U.S. consultants required to assist in acquisition of baseline data, (2) local institutional contracts, and (3) foreign information management experts and evaluation consultants for joint evaluations scheduled for the mid-term evaluation in October, 1988, as well as the final Impact Evaluation scheduled for 1990. It is estimated that up to \$150,000 in grant funds plus Burmese Government-funded local costs will be adequate to cover these costs. AID/Washington technical assistance and guidance will most likely be needed from such offices as PPC/E and ANE/DP/E to help in defining the scope of the evaluations and to help identify and recruit qualified evaluation team members.

Evaluation Schedule

The responsibility for project evaluation will rest with AID/Burma and the QCCS project management, assisted by the DOH. The formal evaluations are planned. The first, a formative evaluation, would occur toward the end of the first

phase of active implementation, i.e., at about 20th month following signing of the agreement. It will evaluate progress at the goal, purpose and output levels. It will provide basis for the decision regarding extension of the program into its second phase. The second and final evaluation will be designed to measure the impact of this and the previous AID-financed health activities in Burma. This evaluation will begin about three months prior to the PACD.

IX. CONDITIONS, CONVENANTS AND WAIVERS

A. Conditions Precedent to Disbursement

Except as A.I.D. may otherwise agree in writing, prior to any disbursement or the issuance of any documentation pursuant to which disbursement will be made, the Cooperating Country shall furnish, in form and substance satisfactory to A.I.D., a statement identifying the various agencies and offices of the Cooperating country responsible for implementation of the Project and designating individuals in each such agency or office responsible for coordinating Project components.

B. Covenants.

1. The Cooperating Country shall covenant that it shall process and clear expeditiously, and store and distribute properly, all goods and commodities financed under the Project.

2. The Cooperating country shall covenant that it shall ensure that the Ministry of Health or other entities of the Cooperating Country to which the goods are destined will pay any and all taxes and duties on A.I.D.-financed commodities, and/or exempt such commodities from such costs.

3. The Cooperating Country shall covenant that it shall ensure that each agency and office of the Cooperating Country responsible for carrying out the Project will cooperate to the maximum extent possible with the Ministry of Health in carrying out the Project.

4. The Cooperating Country shall covenant that all positions to which salary support shall be included in the Project, if deemed appropriate and worthy upon the completion of the Project, will be continued and their costs financed by the Cooperating Country.

C. Waivers

All waiver requests are included in Annex I, "Waivers, of this project paper. Further, the waiver recommendations have been included in the draft authorization to the project.

D. Negotiating Status

The above conditions and covenants have been discussed with and agreed upon by the Ministry of Health. During Project Agreement negotiations, the AID/Burma Representative will incorporate into the Agreement, appropriate language to cover their terms and conditions.

ANNEXES

- A. Logical Framework
- B. Grantee's Request for Assistance
- C. PID Review Issues
- D. Background Data
- E. Budget Tables
- F. TA Draft Scopes of Work
- G. Additional Background Information
Mass Media and In-service Training Activities
- H. Summary of TA and Participant Training
- I. Waivers
- J. Statutory Checklist
- K. Initial Environmental Examination
- L. References

ANNEX A
Logical Framework

PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK

Project Title & Number: Quality Care for Child Survival (482-0013)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project or Sector Goal: To reduce morbidity and mortality among pregnant women, young children and infants caused by immunizable diseases, diarrheal disease, and malnutrition.</p>	<p>Measures of Goal Achievements:</p> <p><u>Morbidity</u></p> <p>1985 % change:</p> <p>Diarrhea #/1,000</p> <p>Malnutrition:</p> <p>Normal wt/age #/1,000</p> <p><u>Immunizable Diseases</u></p> <p>#Children < 1 yr old immunized against 6 diseases.</p> <p><u>Mortality</u></p> <p>Diarrhea #/1,200</p> <p>Maternal #/1,000</p> <p>Immunizable diseases #/1,000</p>	<p>- Records of AMW/MW weight clinics</p> <p>- Sample surveys</p> <p>- Hospital admission records</p> <p>- AMW/MW logs</p> <p>- Rural health center and sub-center records</p>	<p>Assumptions for achieving goal targets:</p> <p>- Data collection is extensive, accurate and timely to measure morbidity and mortality decline.</p> <p>- Volunteer Health Workers (VHWs) are supported and supplied by Village People's Councils.</p> <p>- The curative care health chain is strong enough to accept and care for refunds from VHWs.</p>

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p> <p>To expand and improve the quality of services provided under Primary Health Care with emphasis on nutrition, ORT, EPI, and maternal care.</p>	<p>Conditions that will indicate purpose has been achieved: End-of-Project status.</p> <p><u>End-of-Project Status</u></p> <ol style="list-style-type: none"> 1. VHVs trained and equipped in all 314 townships. 2. MOH Training and Supervision core trained with increased numbers of trained supervisors at the Township level. 3. Improved health and management information systems for community health care at State/Division and Township levels. 4. Drug/vaccine and cold chain logistics strengthened. 5. Demand for use of ORT and immunizations created and sustained. 6. Adequate supply of measles vaccine supplies, and second line drugs for treatment of malaria available. 	<p>MOH, UNICEF/WHO records, mid-term evaluation, procurement receiving reports.</p>	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> 1. That job oriented training of VHVs with regular in-service training and supervision will be sufficient to enable workers to influence villagers. 2. Villages will recognize and utilize competent medical assistance. 3. Influencing supervisory techniques will result in better supervision and hence, a better system of managing available resources. 4. Cooperation between UNICEF/WHO and AID will be maintained and that the DOH will coordinate with the BSPP, other ministries and the Village People's Councils. 5. A pool of participant training candidates exists sufficient to select adequate numbers with technical and language capability. 6. Other donor support is forthcoming as described.

COMPARATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Outputs:</p> <ol style="list-style-type: none"> 1. Expanded Community Health Care and Basic Health Services. 2. Establishment of an in-service training system for improved mid-level management and supervision. 3. Improved management support systems and research capability. 4. Mass media and information for Immunization and ORT established. 5. Expanded Coverage of Effective Immunization Services. 6. Increase availability of malaria treatment and control expertise. 	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> 1. 9,000 AMMs, 3,000 CHWs, and 3,000 TBAs trained and equipped. 105 RHCs and 525 RHC sub-centers upgraded and equipped. 2. 335 LHVs, 650 MWs, and 130 HAs retrained and equipped. 628 township health staff retrained. 3. 14 team development seminars among S/D staff completed. 10 micro computers installed in S/D offices. 4. 10,000 doctors attending ORT seminars, media messages presented to 70% of known audience. 5. 85% of children under one immunized against diseases. 65% of diarrhea cases treated with ORT. 6. 15 persons upgraded in bio-environmental techniques, 30 persons from entomology staff trained; 4 health services and operational research studies completed. 	<p>MOH records, field checks, evaluation results, UNICEF/WHO statistics and records.</p>	<p>Assumption for achieving Outputs:</p> <ol style="list-style-type: none"> 1. Training and Commodities are timely and appropriate. 2,3 and 6. Training Candidates permitted to utilize newly learned skills and are in a position to influence needed change in supervisory techniques. 4. Sufficient number of ORT packets and vaccine available to adequately respond to "demand creation" results. 5. Cold Chain network will be operable and vaccines procured in a reliable, expeditious manner.

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Inputs: AID Funding</p> <p>1. Technical (\$1,317,500) Assistance</p> <p>2. Participant (\$525,600) Training</p> <p>3. Commodities (\$4,058,900)</p>	<p>Implementation Target (Type & Quantity)</p> <p><u>Technical Assistance</u></p> <p>a) 24 pm long-term b) 79 pm short-term c) 39 pm additional short-term financed by central funding</p> <p><u>Participant Training</u></p> <p>a) 6 MPH degrees (108 pm) b) 2 MS degrees (36 pm) c) 12 short-term participants (36 pm)</p> <p><u>Commodities</u></p> <p>a) Health kits \$1,503,000 b) Medicines, Vaccines, and Supplies \$1,205,300 c) Cold Chain & Miscellaneous Equip. \$ 648,600 d) Data Processing Equipment \$ 100,000 e) Motorcycles \$ 339,000 f) Vehicles & Vehicle Spare Parts \$ 263,000</p>	<p><u>AID</u></p> <p>1. Contractor records and quarterly reports; AID financed documents (vouchers, etc.)</p> <p>2. Contractor records and quarterly reports; SRUB project records; AID/Burma participant training records.</p> <p>3. AID procurement and shipping records; MOH procurement, shipping, unloading records and monthly inventory reports</p> <p>Contractor (PSA) procurement reports; AID financial records and MOH reports.</p> <p>4. MOH reports and records, AID financial reports and centrally administered project account data.</p> <p>5. AID financial data</p> <p>6. All of the above, depending on allocation and use of contingency/inflation.</p>	<p>Assumptions for providing Inputs:</p> <p><u>AID</u></p> <p>1. Project is approved on schedule and funds made available on a timely basis.</p> <p>2. Contractor selection, procurement, and coordination proceeds on schedule.</p> <p>3. Participants are named, qualified, and processed on schedule.</p> <p>4. Commodities are shipped, cleared, and provided to project sites expeditiously.</p> <p><u>SRUB</u></p> <p>1. Project budget resources are realized and available on schedule.</p> <p>2. SRUB staff personnel and AID contractors can be assigned and remain on the project as planned.</p>

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Inputs:	Implementation Target (Type & Quantity)		Assumptions for providing Inputs:
4. Local Cost Support \$2,167,000	<u>Local Cost Support</u> Costs include salary support, per diem, honoraria, in-country training, evaluation and planning workshops and three studies/surveys.	<u>SRUB</u> MOH monthly expenditure reports, annual budgets and other financial data.	<u>Other</u> 1. Project resources are maintained at budget levels and available on a timely basis.
5. Evaluation \$ 150,000	<u>Evaluation</u> One mid-term and one final evaluation with provision for re-design, if needed.	<u>Other</u> UNICEF, WHO financial statements and expenditure data.	2. Coordination among AID, SRUB, UNICEF and WHO is maintained throughout project life.
6. Contingency & Inflation \$1,280,300	<u>Contingency & Inflation</u> Funds resource for unanticipated costs, cost overruns and inflation.		
<u>SRUB/Community Funding</u> \$105,157,000	<u>SRUB/Community</u> Recurrent cost budgets, plus costs related to construction of rural health centers and essential during re-supply.		
<u>Other Funding</u> UNICEF \$10,094,000 WHO \$ 4,151,000 Bilateral \$4,800,000	<u>Other Funding</u> Funding in support of the programs included in the SRUB People's Health Plan III (1986-1990).		

ANNEX B

Grantee's Request for Assistance

GRANTEE'S REQUEST FOR ASSISTANCE

The Ministry of Health has been in close contact with AID/Burma during the development of the proposed Quality Care for Child Survival Project. They are supportive of the project and it is expected that the Burmese Government will submit an official REQUEST FOR ASSISTANCE when AID funding authorization is confirmed.

ANNEX C

PID Review Issues

ACTION: AID-2 INFO: AMB DCM CHERON

VZCZCMJAS64ETA899
 PP RUMJRC
 DE RUEHC #9841/01 0110647
 ZNR UUUUU ZZH
 P 110646Z JAN 86
 FM SECSTATE WASHDC
 TO AMEMBASSY RANGOON PRIORITY 7736
 BT
 UNCLAS SECTION 01 OF 02 STATE 009841

LOC: 055 658
 13 JAN 86 0201
 CN: 18275
 CHRG: AID
 DIST: AID

ACTION: *Gary / John*DATE: *1-18*

AIDAC

E.O. 12356: N/A

TAGS: N/A

SUBJECT: BURMA - STRENGTHENING HEALTH CARE DELIVERY
 SYSTEM (482-0013) PID ANPAC REVIEW

1. ASIA AND NEAR EAST BUREAU PROJECT ADVISORY COMMITTEE (ANPAC) REVIEWED THE SUBJECT PID ON DECEMBER 19, 1985. ANPAC APPROVED THE PID. MISSION IS AUTHORIZED TO PROCEED WITH THE PREPARATION OF THE PROJECT PAPER (PP) FOR AID/W REVIEW IN FY 86. THE FOLLOWING GUIDANCE IS PROVIDED FOR PP DEVELOPMENT.
2. FAMILY PLANNING COMPONENT: THE INCLUSION OF FAMILY PLANNING COMPONENTS IN PREVIOUS AID-ASSISTED PRIMARY HEALTH CARE PROJECTS WAS NOT POSSIBLE BECAUSE BURMESE GOVERNMENT (SRUB) HAS BEEN VERY SENSITIVE TO THIS ISSUE AND REFUSED TO ACCEPT ANY ASSISTANCE FOR FAMILY PLANNING. WHILE IT DOES NOT APPEAR THAT SRUB WILL BE ANY MORE RECEPTIVE TO THE IDEA NOW, PP DESIGN TEAM SHOULD AGAIN EXPLORE POSSIBLE OPPORTUNITIES FOR PROVIDING VOLUNTARY FAMILY PLANNING ASSISTANCE AS PART OF THE PROJECT.
3. PREVENTIVE CARE: PP SHOULD DESCRIBE THE EXTENT TO WHICH PREVIOUS PROJECTS HAVE BEEN SUCCESSFUL IN INTRODUCING PREVENTIVE HEALTH CARE MEASURES TO TARGET GROUPS. PP SHOULD HIGHLIGHT PROGRESS ACHIEVED IN THIS AREA, AND SHOULD BUILD ON IT SO THAT THE DELIVERY OF PREVENTIVE HEALTH CARE SERVICES BECOMES A MORE PROMINENT ELEMENT OF OUR PRIMARY HEALTH CARE INITIATIVES.
4. HEALTH SECTOR BUDGET: PP SHOULD INCLUDE, TO THE EXTENT POSSIBLE, A LINE ITEM BREAKDOWN OF SRUB'S HEALTH CARE BUDGET, PARTICULARLY LEVELS ALLOCATED FOR PREVENTIVE AND CURATIVE CARE. SUCH INFORMATION IS TO BE USED AS BACKGROUND TO PUT OUR ASSISTANCE IN THE PROPER CONTEXT AND IN ORDER TO ILLUSTRATE THE COMPETING DEMANDS FOR BUDGET RESOURCES. BUDGET BREAKDOWN SHOULD INCLUDE THE REQUIREMENTS OF OTHER DONOR ASSISTANCE SUCH AS THOSE OF JAPANESE-BUILD HOSPITALS.
5. ASSISTANCE/INVOLVEMENT WITH BURMA PHARMACEUTICAL

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INDUSTRIES (BPI): A) INCREASED PRODUCTION OF NEONATAL TETANUS VACCINE: INVOLVEMENT OF BPI AND ANY ASSISTANCE IT MAY RECEIVE UNDER THE PROJECT SHOULD BE BASED ON (1) WHETHER BPI IS ABLE TO MANUFACTURE THE REQUIRED PROJECT MEDICAL SUPPLIES AT AN ACCEPTABLE LEVEL OF QUALITY; AND (2) WHETHER QUALITY SUPPLIES COULD BE MANUFACTURED ECONOMICALLY. IF THE ANSWER TO BOTH IS A STRONG YES, THEN PERHAPS WE CAN PROVIDE SOME TECHNICAL ASSISTANCE TO BPI IF THE NEEDS OF OUR PROJECT REQUIRE IT. B) AVAILABILITY OF KEY DRUGS AT VILLAGE LEVEL: WE UNDERSTAND THAT, AFTER INITIAL SUPPLY OF KEY DRUGS TO VOLUNTEER HEALTH WORKERS IS EXHAUSTED, RESUPPLY IS NOT TAKING PLACE. IT APPEARS THAT BPI HAS A VIRTUAL MONOPOLY ON THE SUPPLY OF MEDICINES IN BURMA AND THAT ITS FOCUS IS ON ANTIBIOTICS AND SIMILAR DRUGS THAT ARE IN DEMAND, BUT NOT ON MEDICINES AND SUPPLIES NEEDED FOR PREVENTIVE HEALTH CARE. PP SHOULD ADDRESS THE INVOLVEMENT OF BPI AS THE SUPPLIER OF MEDICINES AND MEDICAL SUPPLIES NEEDED FOR THIS AND SIMILAR PROJECTS IN THE LONG RUN. PP ANALYSIS SHOULD ILLUSTRATE HOW OUR INVOLVEMENT AFFECTS AVAILABILITY OF KEY CHILD SURVIVAL DRUGS SUCH AS ORAL REHYDRATION SALTS AND VACCINES INCLUDING ANY INFLUENCE ON BPI'S FOCUS AND THE EXTENT THAT WE CAN INFLUENCE ITS PROCESSES. PP SHOULD ADDRESS ISSUES OF LONG-TERM SUSTAINABILITY OF THE PROVISION AND DELIVERY OF KEY MEDICINES AND SUPPLIES AT THE VILLAGE LEVEL.

6. TECHNICAL ASSISTANCE (TA): DESIGN OF THE TA PACKAGE SHOULD BE FLEXIBLE AND MINIMIZE RESIDENT ADVISORS IN ORDER TO MEET HOST GOVERNMENT CONCERNS BUT INCLUSION OF THOUGHTFUL TA EFFORT IS A MUST FOR THE PROJECT. DESIGN

TEAM SHOULD EXPLORE WAY TO RECONCILE THE RELUCTANCE OF THE SRUB TO PERMIT THE INCLUSION LONG-TEAM RESIDENT ADVISORS AND THE REQUIREMENTS OF THE MISSION AND THE PROJECT FOR SUCH ADVISORS. ONE POSSIBILITY WOULD BE TO HOLD BACK TA MONIES AND MAKE THEM AVAILABLE OUTSIDE THE PROJECT GRANT AGREEMENT AND PROVIDE LONG TERM TA ADVISORS THROUGH A DIFFERENT MECHANISM. TEAM SHOULD EXPLORE OTHER POSSIBILITIES IN CONSULTATION WITH THE SRUB AND THE MISSION. HOWEVER, PLEASE NOTE THAT, TO THE EXTENT PROJECT FUNDS ARE OBLIGATED UNILATERALLY (I.E. OUTSIDE ANY PROAG), THE QUESTION OF ACCOMMODATING CERTAIN A.I.D. RIGHTS SUCH AS INSPECTION, AUDIT AND REFUNDS MUST BE RESOLVED. THIS ISSUE HAS BEEN THE SUBJECT OF PREVIOUS COMMUNICATIONS BETWEEN US. IT IS OUR RECOLLECTION THAT AIDREP AND RLA ALLEN HAD FOUND SOLUTION. IN ANY EVENT, IF ANY TA OR CONTRACTOR SUPPORT COSTS ARE OBLIGATED IN THIS FASHION, YOU WILL HAVE TO ASSURE U.S. HAS NECESSARY PROTECTION THIS REGARD.

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7. COORDINATION WITH CENTRALLY-FUNDED ACTIVITIES: PP SHOULD INCLUDE A MECHANISM FOR COORDINATING PROJECT ACTIVITIES WITH RELATED CENTRALLY-FINANCED PROJECTS, PARTICULARLY NEW ACTIVITIES NOT INCLUDED IN PREVIOUS BASIC HEALTH CARE PROJECTS.

8. PROJECT ELEMENTS: WITH THE PROPOSED EXPANSION OF GEOGRAPHIC FOCUS, IMPROVEMENT IN QUALITY, AND NEW INITIATIVES IN REHYDRATION THERAPY IMMUNIZATION EXPANSION, MALARIA CONTROL, TUBERCULOSIS, AND HEALTH INFORMATION SYSTEMS, WE MAY BE TAKING ON TOO MUCH UNDER THE PROJECT. PP DESIGN TEAM SHOULD EXPLORE THIS POINT, AND, IF APPROPRIATE, LIMIT NUMBER OF PROPOSED ACTIVITIES, RETAINING HIGH PRIORITY CHILD SURVIVAL ELEMENTS (ORAL REHYDRATION, IMMUNIZATION, AND PERHAPS MALARIA CONTROL) AS KEY ELEMENTS OF THE PROJECT.

9. ENVIRONMENTAL CONCERNS: PID DOES NOT PROVIDE SUFFICIENT INFORMATION TO SUPPORT INITIAL ENVIRONMENTAL EXAMINATION (IEE) RECOMMENDATION FOR AN ENVIRONMENTAL ASSESSMENT (EA). IF DDT/SUMITHION IS NOT FINANCED BY AID, AN EA WILL NOT BE REQUIRED UNDER AGENCY ENVIRONMENTAL PROCEDURES. INSTEAD, ENVIRONMENTAL PROTECTION PROCEDURES SHOULD BE BUILT INTO PROJECT DESIGN, AND IN PP, FOCUSING ON (A) SRUB TECHNICAL AND INSTITUTIONAL CAPABILITY TO IMPLEMENT ACCEPTABLE PUBLIC HEALTH AND SAFETY MEASURES IN THE USE OF CHEMICAL AGENTS IN VECTOR CONTROL; (B) MEANS BY WHICH AID ASSISTANCE CAN STRENGTHEN SUCH CAPABILITY THROUGH TECHNICAL ASSISTANCE AND TRAINING UNDER THE PROJECT; AND (C) MONITORING AND

EVALUATION COMPONENTS FOR THE VECTOR BORNE DISEASE CONTROL INITIATIVES THAT WILL REDUCE ENVIRONMENTAL AND PUBLIC HEALTH RISKS ASSOCIATED WITH THE USE OF CHEMICAL CONTROL AGENTS. ANE/PD/ENV HAS POUCHED TO MISSION A MEMO DETAILING THE ABOVE AND RECOMMENDING THAT IEE BE SUBMITTED FOR THE RECORD. SHULTZ

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PID Review Issues

1. Family Planning Component

Official SRUB policy remains unchanged regarding family planning programs. The SRUB does not have a policy of setting demographic targets; nor does it provide family planning services. The reason cited is the relatively small Burmese population compared to its populous neighbors, especially China, India, and Bangladesh. The family-planning component of PHC II, called Family Health Counselling, was removed from the project even though this component had been in the PP. MOH officials made it clear that any new project should not include a family planning component.

Unofficially, contraceptives, including oral contraceptives and depo-provera, are available in the open market fairly commonly in the towns and cities, though often of uncertain source and value. It appears that contraceptives are in use and that families are controlling their fertility more than one would expect given the official SRUB policy. Abortions continue to be performed at a very high rate*, with a terrible toll on unborn children and mothers. Complications from abortions continue to be a major public health problem. The incidence of maternal deaths due to abortion is reported to be 2.1 per 1000 abortions in Rangoon Hospitals. The number of maternal deaths which occur outside government hospitals due to infection from abortion is very high. Clearly, there is widespread demand for fertility control, but public policy does not reflect that demand. AID through Westinghouse will continue to provide assistance to the Census Bureau for demographic analysis.

2. Preventive Care

The proposal for PHC III has major elements specifically for prevention of diseases. The heavy commitment to UCI will provide protection to children under one and pregnant women. The new emphasis on health education through the mass media and through health workers will further promote UCI and also provide information on ORT. Training provided to BHS under this project will concentrate on preventive measures -- EPI, diarrheal disease management for prevention of dehydration, ante-natal care for the prevention of maternal anemia and low birth weight, and nutrition training for the prevention of stunting and wasting and the vulnerability to infection that is heightened by malnutrition.

While outputs from previous projects in the preventive areas have been limited, those projects have gone a long way toward putting the PHC system into place so that PHC III can mobilize that system for preventive care. The new direct educational outreach to mothers promotes preventive care almost exclusively.

* cf. End of Project Evaluation - Primary Health Care I. p.10.

3. Health Sector Budget

(cf. sections on economic and financial analysis and other donor assistance)

4. Assistance/Involvement with Burma Pharmaceutical Industries (BPI)

A. Should AID provide assistance to BPI to increase production of tetanus toxoid vaccine?

A separate analysis by an earlier consultant team concluded that, both in terms of acceptable level of quality and of economical manufacture, the BPI does not represent a promising institution for current AID investment. The cost of TT produced by BPI, at least, is eleven times the current international price. ^{1/}

B. What can be done to ensure resupply of the essential drugs at the village level? ^{2/}

This complex but important problem has not yet been resolved. The project addresses this issue in two ways: (1) Assistance (local funding and technical assistance) will be provided to analyse the problem, and to identify and test alternatives to ensure appropriate resupply of essential drugs; and (2) together AID (measle vaccine and anti malarials) and UNICEF (vaccines and ORS packets and production) assistance assures that an adequate supply of drugs are available for the key priority programs, EPI, treatment of malaria, and oral rehydration, during the PHP III.

5. Technical Assistance

In addition to substantial amounts of short term TA in a variety of areas, the PP recommends long-term (24 pm) TA in health education. In the judgment of AID/Burma, the training and health-communications component requires long-term TA. The central issue of course, is in what form the long-term TA should take as the MOH is against any long-term advisor, (i.e., 12 months or more, from being assigned to the Ministry. As was stated previously in this PP, AID/Burma had considered a JCC but decided that our OE budget could not support such an arrangement. By contracting on a PSC basis, the Ministry is not responsible for visa and other travel and administrative requirements of the advisor. The MOH has stated that office space, secretarial services etc., will be provided to the advisor by the MOH.

^{1/} cf. Manclark and Cooper

^{2/} (An excellent short summary review of this problem can be found on page 10 of A Review of AID's Health Sector Strategy in Burma; April, 85)

6. Co-ordination with Centrally Funded Activities

The PP design takes into consideration the resources available through central projects, including HEALTHCOM, PRITECH I, REACH, and the Vector Borne Disease Control Project. AID/Burma intends to "buy-in" into each of these contracts. Furthermore, it is anticipated that these contracts will provide an additional \$831,300 worth of central resources to the project.

7. Project Elements

The scope of activities suggested in the PID has been reduced by eliminating proposed assistance for acute respiratory infections and tuberculosis. The rest of the project components proposed in the PID have been included either because of the SRUB priorities (continued VHW expansion) or because of the opportunities offered for improving the quality of the PHC program and the potential for reducing infant and child mortality.

8. Environmental Concerns

(cf. Section VII, Project Analysis on Environmental Analysis)

ANNEX D

Background Data

Table 1ABASIC HEALTH INDICATORS, BURMA ^{1/}

Total population		37,600,000
Infant mortality rate (under 1)		1960 - 165; 1983 - 70
Infant + child mortality rate (under 5)		1960 - 250; 1983 - 95
Births annually		1,406,000
Deaths (0-4) annually		136,000
Life expectancy		55
Literacy	male	86%
	female	70%
Primary-school enrollment	male	75%
(% of age group)	female	70%
% of infants with low-birthweight		20
% of mothers breastfeeding at 12 months		90
% of children under five with mild- moderate/severe malnutrition		50
Prevalence of wasting, 12-23 months		48
% of population with access to drinking water		21
No. of radio receivers per 1000		22
Immunizations		(cf. Table 8A)

^{1/} Source: UNICEF, State of the World's Children, 1986

Table 2A

RURAL HEALTH CENTER EXPANSION AND SELECTED STAFF
DURING EXPANSION FOR BHS/MANPOWER DURING PHC III

	<u>Existing 1986</u>	<u>Proposed 1990</u>
Rural Health Centers	1,267	1,547
<u>Staff of RHCs</u>		
Health Assistant	993	1,286
Lady Health Visitor	936	1,601
PHS I	320	340
PHS II	260	3,410
Midwife	6,483	8,005
MCH Centers	336	360
<u>Staff of MCH Centers</u>		
MCH Officers	40	84
Lady Health Visitors	295	359
PHS I	130	180
PHS II	94	184
Midwife	791	959

Table 3A
LEADING CAUSES OF MORTALITY IN BURMA

Rank	Cause	Percent
1	Other fever	15.8
2	Symptoms associated with brain, heart and blood vessels	14.3
3	Pneumonia/Asthma	7.0
4	Diarrhoea	5.5
5	Other pain and swelling (including cancer)	4.8
6	Malaria	4.3
7	Acute Abdomen	4.4
8	Serious injuries	3.8
9	Fever with skin symptoms	3.5
10	Tuberculosis	3.3
11	Still-birth causes of perinatal mortality	3.0
12	Jaundice/infectious jaundice	2.7
13	Tetanus	2.3
14	Anemia and general weakness	1.5
15	Abortion and complications of pregnancy	1.2
16	Typhoid	1.7
17	Renal and urogenital disorders	0.5
18	Rabies	0.5
19	Poisonings	0.5
20	Other	20.8

Source: Khin Maung Thwin, p.46

Table 4A
SELECTED CAUSES OF MORTALITY AMONG CHILDREN
0-4 YEARS OF AGE

Rank	Cause	Percent	
		0-1	1-4
1	"Other" Fever	.18	.24
3	Pneumonia	.09	.15
3	Diarrhoea	.09	.13
3	Tetanus	.09	--
4	Fever with skin symptoms	.07	.13
2	Perinatal causes	.15	--

Sources: Khin Maung Thwin, 1983, p.46; and LeSar, 1984, p.5

Table 5A
VITAL STATISTICS FROM THREE SOURCES

	1981-82 (Survey)	1981-82 (AMW)	1982-83 (MW)
Crude birth rate	26.7	27.4	24.1
Stillbirth rate	8.7	18.2	11.5
Infant mortality rate	40.5	71.4	38.6
Child mortality (1-4) rate	8.7	5.8	4.9
Crude death rate	6.3	7.9	4.4
Maternal mortality rate	2.3*	13.5	0.6
Abortion rate	60.8	30.99	
Population Covered	65,218	172,763	4,367,693

* Sample too small to compute accurate data. Assumed to be between 0-4.6

Sources: Health and Demographic Information Bulletin for States and Divisions, HIS, 16 November, 1982, (based on AMW Reporting System, see Appendix D); Table for 1982-83 obtained from HIS in January, 1985 (based on MW Reporting System, see Appendix E). Data from "Survey" are from Khin Maung Thwin, Table 37, p. 41.

Note: International Bank for Reconstruction and Development, Department of Economic Analysis and Projections, "Social Indicators, June, 1984, the Infant Mortality Rate is 95.6

Table 6ACHWs TO BE TRAINED DURING PHP III
By STATE/DIVISION

<u>State/Division</u>	<u>Already Trained</u>	<u>To Be Trained</u>	<u>% +</u>
Kachin	919	1,557	169
Kayah	199	360	181
Karen	432	1,518	351
Chin	828	306	37
Sagaing	4,467	1,341	30
Tenasserim	876	312	36
Pegu	4,463	1,781	40
Magwe	3,541	798	23
Mandalay	4,350	975	22
Mon	901	209	23
Rakhine	2,573	988	38
Rangoon	3,784	500	13
Shan	2,394	12,730	532
Irrawaddy	6,642	4,625	79
	<hr/>	<hr/>	<hr/>
	36,369	28,000	77
	*****	*****	***

Table 7AAMs TO BE TRAINED DURING PHP III
By STATE/DIVISION

<u>State/Division</u>	<u>Already Trained</u>	<u>To Be Trained</u>	<u>%+</u>
Kachin	406	200	49
Kayah	28	50	179
Karen	294	250	85
Chin	282	130	46
Sagaing	1,318	740	56
Tenassarim	173	150	85
Pegu	1,164	900	77
Magwe	1,290	900	70
Mandalay	1,312	900	69
Mon	265	250	94
Arakan	828	550	66
Rangoon	703	180	26
Shan	832	1,000	120
Irrawaddy	1,627	1,800	111
	<hr/>	<hr/>	<hr/>
	10,522	8,000	76
	*****	*****	***

Table 8AIMMUNIZATION COVERAGE, 1984 - 1990I. EPI Townships Coverage Rates %

BCG	79
DPT (1-3)	59 - 31
DT (1-2)	75 - 58
OPV (1-3)	-0-
Measles	-0-
TT (1-2) (Pregnant Women)	38 - 26

II. Estimated Country-wide Coverage Rates %

	<u>1984</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
<u>Under-1</u>						
DPT - 3rd	14	47	62	72	76	80
OPV - 3rd	.03	47	62	72	76	80
BCG	41	47	62	72	76	80
Measles	Nil	51	66	77	80	85
TT - 2nd	16	33	49	60	62	66

Table 9AINFANT POPULATION, PREGNENT WOMEN, AND TOWNSHIPS
TO BE COVERED BY UCI

	<u>1986-87</u>	<u>1987-88</u>	<u>1988-89</u>	<u>1989-90</u>
Infants (000)	783	1,672	2,641	3,677
Pregnant Women (000)	1,055	2,252	3,557	4,951
Townships	210	245	279	314

Table 10A

UNICEF FUNDING FOR BURMA
Projected (000's)

<u>Activity</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Child Care	71	45	50	36	36	36
Non-Formal Education	118	20	40	30	30	30
Primary Education	1,561	911	971	900	900	900
Environmental Sanitation	562	501	600	600	600	600
Rural Water Supply	1,556	1,815	1,700	1,700	1,700	1,700
Health	1,770	2,034	2,055	2,150	2,150	2,150
Nutrition	608	355	450	450	450	450
PSC/Country Programming	184	150	200	200	200	200
Freight	820	756	850	850	850	850
Total	<u>7,250</u>	<u>6,587</u>	<u>6,916</u>	<u>6,916</u>	<u>6,916</u>	<u>6,916</u>
5% Freeze	- 362	- 329	- 346	- 346	- 346	- 346
	<u>6,888</u>	<u>6,258</u>	<u>6,570</u>	<u>6,570</u>	<u>6,570</u>	<u>6,570</u>

Table 11A

WHO HEALTH FUNDING FOR BURMA
PROJECTED (000's)
Related to PHP

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
<u>EPI</u>	26,200	26,200		
<u>VBDC</u>	312,550	299,050		
<u>Health Education</u>	59,600	41,000		
<u>PHC/BHS</u>	445,300	370,000		
<u>MCH</u>	131,550	139,450		
<u>Nutrition</u>	92,000	62,000		
<u>Supplies, etc.</u>	<u>105,900</u>	<u>39,100</u>		
<u>Total</u>	<u>1,173,100</u>	<u>976,800</u>		

Though no funds are put into line items for 1988 or 1989 yet, the overall WHO budget for all health in Burma is projected to approximate 1987 funding level.

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Table 12A

BURMA - DEPARTMENT OF HEALTH - EXPENDITURE BUDGET
(excluding foreign aid)
(1982/83 - 1989/90 financial period)
(000's Kyats)

Program	PHP II period				PHP III (Budget Estimate)				
	1982/83 Actual Ex	1983/84 Actual Ex	1984/85 Actual Ex	1985/86 Actual Ex	1986/87 (Plan)	1987/88 (Plan)	1988/1989 (Plan)	1989/90 (Plan)	
1. Hospital Care (%)	203385 (59.6)	201605 (59.7)	237180 (61.8)	245440 (59.9)	272930 (61.5)	329690 (65.0)	330330 (65.0)	340160 (65.0)	
2. Public Health (%)	123707 (36.6)	119045 (35.3)	124197 (32.6)	143870 (35.1)	148670 (33.5)	152170 (30.0)	152470 (30.0)	156990 (30.0)	
a. Community Health Care	82237	78800	85594	99150	102460	104880	105100	108200	
b. Disease Control	25357	25270	27883	32300	33400	34160	34230	35250	
c. Support Services	16113	14915	10720	12420	12810	13130	13140	13540	
3. Administrative (%)	13819 (4.1)	16874 (5.0)	21193 (5.0)	20495 (5.0)	22200 (5.0)	25360 (5.0)	25410 (5.0)	26170 (5.0)	
TOTAL	340911	337524	382570	409890	443800	507220	508210	523320	

Source: Budget section, Department of Health, February 1986.

Table 13A

PLANNED BUDGET AND ACTUAL EXPENDITURE, DEPARTMENT OF HEALTH

BUDGET/EXPENDITURE	P H P (II) Million Kyats					Total PHP (II) 1982-86
	1981-82	1982-83	1983-84	1984-85	1985-86	
1. Planned Health Budget	318.0	397.0	414.3	446.7	476.2	1735.2
2. Actual Health Expenditure	317.6	342.6	337.0	N/A	N/A	
3. (2) as percentage (1)	99.9%	86.3%	81.1%	N/A	N/A	

Table 14A
CHANGES IN SRUB HEALTH EXPENDITURE BY YEAR

YEAR	Government Health Expenditure			
	Annual Increase Rate Percent	as % of GDP	as % of State Budget	Per Capita
1974-75		1.0	7.7	6.2
1975-76	3.8	0.8	7.7	6.4
1976-77	17.8	0.8	7.3	7.3
1977-78	4.7	0.8	8.1	7.5
1978-79	32.1	1.0	7.7	9.7
1979-80	3.7	0.93	6.8	10.3
1980-81	2.9	0.8	6.8	N/A
1981-82	34.0	1.0	6.5	12.3
1982-83	27.7	1.18	8.4	N/A
1983-84	2.5	1.13	8.7	15.7

Table 15A

SRUB BUDGET FOR EPI
(Kyats 000's)

	<u>1986-87</u>	<u>1987-88</u>	<u>1988-89</u>	<u>1989-90</u>	<u>TOTAL</u>
Recurrent	4,757	4,909	5,024	5,791	20,481
Capital	-	-	-	-	-
Total	4,757	4,909	5,024	5,791	20,481

Table 16A

TOTAL SRUB INPUTS FOR COMMUNITY HEALTH CARE
 Millions of kyats
PHP III (1986 - 1990)

Yr.	SOURCE	PHP III/ FIFTH FOUR YEAR PLAN PERIOD				TOTAL
		1986 - 87	1987 - 88	1988 - 89	1989 - 90	
1. GOVERNMENT (ADDITIONAL)						
	a). Salary for additional staff	3.7	3.7	3.7	4.1	15.2
	b). Allowances and other expense	1.0	1.0	1.0	1.0	4.0
	c). Supplies for additional facilities	1.0	1.0	1.0	1.0	4.0
		5.7	5.7	5.7	6.1	23.2
2. GOVERNMENT (EXISTING)						
	Salaries/Allowances/Supplies	14.1	14.2	14.3	14.4	57.0
	TOTAL	19.8	19.9	20.0	20.5	80.2

Table 17A
ESTIMATED SRUB BUDGET FOR YBDC

<u>Fiscal Year</u>	<u>Amount (Kyats)</u>
1986 - 87	6,690,517
1987 - 88	6,958,138
1988 - 89	7,236,463
1989 - 90	7,525,922
Total Kyats	28,411,040
US \$	3,551,380 <u>1/</u>

1/ converted at KB=US\$1

ANNEX E

Budget Tables

ESTIMATED DETAILED BUDGET TABLES
BY INTENDED INPUT
(\$000's)

1. EXPANDED COMMUNITY HEALTH CARE AND BASIC HEALTH SERVICES

1.1. Additional 7,000 CHWs, 3,000 AMWs, and 3,000 TBAs trained and equipped:

	1987/88	1988/89	1989/90	TOTAL
COMMODITIES:				
1. TBA Kits (1,000)(1,000)(1,000) @ \$ 25	25	25	25	75
2. AMW Kits:(1,000)(1,000)(1,000) @ \$130	130	130	130	390
3. CHW Kits: (0) (0) (7,000) @ \$118	--	--	826	826
Sub-Total	155	155	981	1,291
LOCAL COSTS: (US\$ @ K8/\$)				
TBA training: (1,000)(1,000)(1,000) (3,000 TBAs x 30d @ K10/day + 5% local training costs)	40	40	40	120
AMW training: (1,000)(1,000)(1,000) (3,000 AMWs x 180d @ K10/day + 3% local training costs)	232	232	232	696
CHW training: (0)(3,500)(3,500) (7,000 CHWs x 30d @ K15/day + 5% local training costs)	--	207	207	414
Sub Total	272	479	479	1,230

1.2. Additional 335 LHVs, 650 MUs, and 130 HAs equipped:

	1987/88	1988/89	1989/90	TOTAL
COMMODITIES:				
MCH Kits MUs (216)(216)(217) @ \$115	25	25	25	75
MCH Kits MUs (111)(112)(112) @ \$120	13	13	13	39
HA Kits HAs (45) (45) (45) @ \$ 80	4	4	4	12
Bicycles (0)(500)(500) @ \$100	--	50	50	100
Sub-Total	42	92	92	226

1.3. 105 RHCs and 525 sub-centres upgraded and equipped:

	1987/88	1988/89	1989/90	TOTAL
COMMODITIES:				
RHC Equipment (0)(0)(105) @ \$300	--	--	32	32
RH Sub-Centre Eq(0)(0)(525) @ \$ 90	--	--	47	47
Sub-Total	--	--	79	79

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2. ESTABLISHED IN-SERVICE TRAINING SYSTEM

2.1 Increased Capacity of Central MOH Training and Supervision Core Group:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
TECHNICAL ASSISTANCE				
Long-term 24pm @ \$100,000/yr		100	100	200
Short-term 43pm @ \$15,000/pm				
Management Training (9pm)	15	60	60	135
MCH Mgt systems (5pm)		45	30	75
Supervision (9pm)	15	75	45	135
Research/Eval (7pm)	15	37.5	52.5	105
Course Design (7pm)	-	60	45	105
E. Technology (6pm)	-	45	45	90
Imm. Program Mgt* (5pm)	(30)	(45)	-	(75)
CDD Program Mgt* (5pm)	(22.5)	(30)	(22.5)	(75)
Sub-total	45	422.5	377.5	845
LOCAL COSTS				
Central Office Salaries				
Medical Officers (3) @ K9,480/yr	3.6	3.6	3.6	10.8
Drivers (2) @ K2,400/yr	.6	.6	.6	1.8
Secretary Typists (2) @ K3,600/yr	.9	.9	.9	2.7
Training of trainers	.5	.5	.5	1.5
Rangoon & S/D				
per diem K10 X 10 days X 8				
participants X 14 S/D				
Travel allowance	.5	.5	.5	1.5
Rangoon K200 X 42 trips +				
S/D K50 X 70 trips				
Renovation/Lease Costs				
for TA Contractor house	17	25	17	59
Training modules	--	2.7	--	2.7
Develop/Print				
Sub-total	23.1	33.8	23.1	80

* Excluded from project grant totals; financed from resources made available from deob/reob and AID/Burma FY 1986 OYB

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	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
COMMODITIES				
Vehicle Spare Parts	-	50	50	100
Long-term TA vehicle	15	--	--	15
Household furnishings	20	--	--	20
Training Supplies & Equipment (\$7,000 per yr X 3 yrs & 28% Shipping	<u>9</u>	<u>9</u>	<u>9</u>	<u>27</u>
Sub-total	44	59	59	162
PARTICIPANT TRAINING				
Academic @ \$2,400/mo				
1 MPH/Mgt (18m)	--	43.2	--	43.2
2MPH/MCH (18m)	--	86.4	--	86.4
1MPH/Epi (18m)	--	43.2	--	43.2
2MSc Entomology (18m)	<u>--</u>	<u>86.4</u>	<u>--</u>	<u>86.4</u>
Sub-Total	--	259.2	--	259.2

2.2 Improved Planning and Integration of In-service Training by State/Division:

LOCAL COSTS

Workshops (1 per year
X 14 state/div)

Per diem State/Division (K10/person) X 10 people X 14 townships X 10 days)	1.8	1.8	1.8	5.4
---	-----	-----	-----	-----

Travel Allowance
Township

(K50 X 4 people X 14 trips)	.4	.4	.4	1.2
Rangoon (K200/trip X 82 trips)	.7	.7	.7	2.1

Supplies (K15,000/yr)

Other Costs (ie., fuel at (K1,000/trip X 42 trips)	1.9	1.9	1.9	5.7
---	-----	-----	-----	-----

Sub-Total	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>	<u>19.8</u>
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	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
PARTICIPANT TRAINING				
Short-term (21pm @ \$5,000/m 7 management, planning supervision courses @ 3mos	--	52.5	52.5	105.0
2.3 Increased Numbers of trained supervisors at the Township level:				
LOCAL COSTS				
Salaries				
Senior HAs (45 X K6,300/yr)	35.4	35.4	35.4	106.2
Senior L.H.Vs (45 X K 5,400/yr)	30.4	30.4	30.4	91.2
Per diem				
Participants	7.3	7.3	7.3	21.9
Retraining for supervisors (K10/person X 28 days X 628)	--	2.4	2.4	4.8
Follow-up				
(K10 X 3 days X 628 people X 2 yr)	--	2.4	2.4	4.8
Trainers				
Courses & F/U K10 X 3 people X 30 days X 25 Courses + 1 person X 3 days X 25 courses)	1	1	1	3
Supervisory Visits to RHCs				
by HA/LHV (K10 X 24 days/yr X 2 yr X 628)	--	18.8	18.8	37.6
Travel Allowance				
Participants (Initial & F/U) (K50/trip X 5 trips X 628 people)	6.5	6.5	6.5	19.5
Trainers (Initial & F/U) (K200 X 3 people X 25 courses)	.6	.6	.6	1.9
Other Costs				
Supplies, subsistence K200/Township X 314)	2.6	2.6	2.6	7.8
Fuel				
(36 trips X 14 K X 314 townships)	--	<u>13.3</u>	<u>6.5</u>	<u>19.8</u>
Sub-total	63.8	118.3	111.5	313.6

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	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
COMMODITIES				
Motorcycles (and helmets) 1/model township (45 @ \$3,000)	--	67.5	67.5	135
2.4 Improved Performance of RHC staff in the management & supervision of VHW:				
LOCAL COSTS				
Per diem				
LHV (K10 X 1256 X 10 days)	5.2	5.2	5.2	15.6
MW (K10 X 2500 X 10 days)	10.4	10.4	10.4	31.2
PHS II (K10 X 1,400 X 10 days)	5.8	5.8	5.8	17.4
Travel Allowance K50 X 5,156 people	10.7	10.7	10.7	32.1
Other Costs (Fuel, supplies subsistence K100 X5 RHC X 314 Townships)	<u>6.5</u>	<u>6.5</u>	<u>6.5</u>	<u>19.5</u>
Sub-total	38.6	38.6	38.6	115.8

3. IMPROVED MANAGEMENT SUPPORT SYSTEMS AND RESEARCH CAPABILITY

3.1. Improved health and management information systems for community health care at State/Division and township levels:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>
COMMODITIES			
Paper for patient-retained records and for reporting forms and records for VHWs and BHS staff	--	30	--
Electronic data management devices at State/Divisional level	<u>100</u>	<u>--</u>	<u>--</u>
Subtotal	100	30	--
LOCAL COSTS			
Workshops on implementing revised health information system for State/Division and township health personnel 5,000/yr	--	20	20
Studies and surveys to supplement routine data collection 3 @ \$10,000	<u>--</u>	<u>10</u>	<u>20</u>
Subtotal	--	30	4
TECHNICAL ASSISTANCE			
Health Information Specialist 3 x 1pm @ \$15,000/pm	15	15	
Electronic Data Analyst/Trainer 1 x 1 pm @ \$15,000/pm 1 x 1.5 pm 1 x 2 pm	15	22.5	
Management Systems Analyst 2 x 1.5pm @ \$15,000	<u>--</u>	<u>22.5</u>	
Subtotal	30	60	

3.2. Supply and distribution system for drugs and vaccines to BHS and CHWs analyzed and alternatives identified and tested to ensure resupply:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
LOCAL COSTS				
Follow up study of drug availability, sources and utilization by CHWs and AMWs	--	--	30	30
Action research study to test alternative CHW/AMW resupply systems	--	<u>20</u>	<u>--</u>	<u>20</u>
	--	20	30	30
TECHNICAL ASSISTANCE				
Drug logistics analyst	--	30	30	60
1 x 2 pm @ \$15,000				
2 x 1 pm @ \$15,000				

3.3. Health systems research capabilities increased and research studies completed for replanning in critical problem areas

LOCAL COSTS:

Health systems research studies	25	--	50	75
3 studies @ \$25,000				

TECHNICAL ASSISTANCE

Health research/evaluation specialist	15	--	30	45
3 x 1pm @ \$15,000				

4. MASS MEDIA AND INTERVENTIONS CAMPAIGN FOR IMMUNIZATION AND ORT

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
PARTICIPANT TRAINING				
Two long-term MPH 18 mo @ \$2,400/mo	--	43.2	43.2	86.4
Short-term observation tour, @ \$5,000/pm X 6 pm	<u>30</u>	<u>--</u>	<u>--</u>	<u>30</u>
Subtotal	30	43.2	43.2	116.4
TECHNICAL ASSISTANCE <u>1/</u>				
27pm short-term @ \$15,000/pm project dir., 1.5pm administration	105 5 3.3	195 10 6.7	105 -- --	405 15 10
travel	<u>7.5</u>	<u>7.5</u>	<u>--</u>	<u>15</u>
Subtotal	120.8	219.2	105	445
LOCAL COSTS <u>1/</u>				
campaign costs	20	20	--	40
media and mat'l production communication	80 2.5	80 2.5	-- --	160 5
administrative costs	3	3	--	6
other direct costs	10	10	--	20
Central ORT seminars per diem (56 people X K10X4days)	.3	--	--	.3
travel (56XK900)	6.3	--	--	6.3
Regional ORT Seminars per diem (10,000people xK10x2days)	25	--	--	25
Seminar materials				
educational materials 10,000 reprints	10 <u>20</u>	-- <u>--</u>	-- <u>--</u>	10 <u>20</u>
Subtotal	177.1	115.5	--	292.6

1/ \$676,300 of the technical assistance and local costs will be financed outside of the project from deob/reob funds (\$336,300), FY 1986 OYB (\$185,000) and from central resources for the Communication for Child Survival Project (\$155,000)

5. EXPANDED COVERAGE OF EFFECTIVE IMMUNIZATION SERVICES

5.1 Expand and strengthen the cold chain and logistics systems to ensure timely, safe delivery of vaccines to all 314 townships on a regular basis:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
COMMODITIES				
Refrigerator (100) (100) (-) @ \$705 ea LRTCW or 1151 Electrolux E3/24	70.5	70.5	--	141
Ice Pack (34) (35) (-) @ \$632ea Freezer TFW 791 Electrolux E3/26	21.5	22.1	--	43.6
Vaccine Cold Box (34) (35) (-) @ \$223 ea RCW 25 Electrolux E4/05	7.6	7.8	--	15.4
Vaccine Cold Box (550) (310) (-) @ \$96.50ea 2 E4/36	53.1	30	--	83.1
Vaccine Carrier (350) (310)(-) @ \$12.15 ea EPI/PF/1.5, E4/19	6.7	3.8	--	10.5
Ice pack (33,000) (18,600) (-) @ \$.38 ea polyfoam chemist E5/02 NC1 holes	12.5	7.1	--	19.6
Ice pack (7,000) (7,000) (-) @ \$.29 ea polar maxi 600 Runsven AB E5/04	2.1	2.1	--	4.2
Vaccine thermometer (100) (100) (-) @ \$2.03 ea S. Brown & Sons F6/08	.2	.2	--	.4
Bimetal thermometer (170) (130) (-) @ \$1.00 ea Moeller therm E6/07	.2	.2	--	.4
Voltage regulator (95) (96) (-) @ \$136 ea (FF 1000 SS Galatrek) E7/11	13	13	--	26
Compressors for refrigerator repair (75) (60) (-) @ 66.56 1/8 to 1/4 HP 220V/50	5	4	--	10

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
Refrigerant (R12) for repair litres (100) (110) (-) @ \$13.31 ea	1.3	1.5	--	2.8
Motor cycles (14) (-) (14) @ \$3,000 ea (plus helmets)	42	--	42	84
Light truck (1) (-) (1) @ \$24,000	<u>24</u>	<u>--</u>	<u>24</u>	<u>48</u>
Sub-total	259.7	162.3	66	488
Sub-total with cost of shipping (+28%)	332.4	207.7	84.5	624.6
TECHNICAL ASSISTANCE				
Cold Chain Mgt (2 pm) (1 pm)(-)	30	15	--	45
Logistics (1 pm) (2 pm) (1 pm)	15	30	15	60
Sub-total	<u>45</u>	<u>45</u>	<u>15</u>	<u>105</u>
LOCAL COSTS				
Training on Cold Chain (40) (40) (40) Maintenance (K40 X 7 days)	1.4	1.4	1.4	4.2

5.2 Ensure adequate supply of measles vaccine, needles, syringes, and EPI kits for Universal Child Immunization (UCI) campaign:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
COMMODITIES				
Measles Vaccine + 30% wasted (10 dose vials) (2,168,000) (2,210,000) (-) @ \$.09/dose	195.1	198.9	--	394
Hypo Needles (61,000)(63,700) (-) @ \$.33 ea (23 g) (30 mm/236)	20.1	21.1	--	41.2
EPI Kit (1,100) (620) (-) (standard UNIPAC) @ \$50 ea Boiling kit & Syringe	55	31	--	86
Sterilizable (48,800) (50,960) (-) @ \$.46 ea plastic syringe, E 8/02 (1 ml)	22.5	23.4	--	45.9
Sterilizable (48,800) (50,960) (-) @ \$.46ea plastic syringe (BCG) E 8/01 0.1 ml	22.5	23.4	--	45.9
BCG needle (12,200) (12,800) (-) @ \$.34, 10 mm/26G	4.1	4.4	-	8.5
Sterilizable plastic syringe (12,200) (12,800) (-) @ \$.12 ea (E8/03) 5 ml recap syringe	1.5	1.5	-	3
Sub-total	320.8	303.7	-	624.5
Sub-total with cost of shipping (+28%)	410.6	388.7	-	799.3
5.3 Provide in-service training to township and BHS staff on new UCI Campaign:				
LOCAL COSTS				
Reorientation training For BHS staff in all (1,500) (6,000) (400) townships (K 20 X 3 days)	5.7	2.3	1.5	9.5
Reorientation training for medical officers on all (120)-(120)-(120) townships (K 20 X 7 days)	<u>2.1</u>	<u>2.1</u>	<u>2.1</u>	<u>6.3</u>
Sub-total	7.8	4.4	3.6	15.8

5.4 Improve EPI MIS, Surveillance, and Evaluation Systems:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
TECHNICAL ASSISTANCE				
Short-term Surveillance/Evaluation (-) (-) (1 pm)	--	--	15	15
MIS (-) (-) (1 pm)	<u>-</u>	<u>-</u>	<u>15</u>	<u>15</u>
Sub-total	-	-	30	30
PARTICIPANT TRAINING				
Observation Tours (1) (1) (1) @ \$15,000 (3 tours X 3 mth X 5,000 mth)	15	15	15	45
LOCAL COSTS				
Evaluation Workshops State/Division 1988/90 (K40 X 3) (350) (-) (350)	5.3	--	5.3	10.6
Evaluation Workshops Township 1987/89 (4995) (6099) (-) (K 25 X 3)	<u>46.8</u>	<u>57.2</u>	<u>--</u>	<u>106</u>
Sub-total	52.1	57.2	5.3	114.6

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
I. REACH ^{1/}				
TECHNICAL ASSISTANCE				
Surveillance/Evaluation (2 pm) (1 pm) (-)	30	15	--	45
Micro/Planning EPI (1 pm) (-) (-)	15	--	--	15
MIS (-) (1 pm) (-)	--	<u>15</u>	<u>--</u>	<u>15</u>
Sub-total	45	30	--	75

^{1/} Buy-in using project funds

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6. INCREASED AVAILABILITY OF MALARIA TREATMENT AND MALARIA CONTROL EXPERTISE

6.1. Adequate supply of second line drugs for treatment of referred cases of malaria available:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
COMMODITIES:				
Quinine tabs(4,000)(4,000)(0) tins (1,000s) @ \$24.5	98	98	--	196
Quinine inj.(4,000)(4,000)(0) ampoules @ \$1	4	4	--	8
Fansidar (4,000)(4,000)(0) tins (1000s) @ \$36	<u>144</u>	<u>144</u>	<u>--</u>	<u>288</u>
	123	123	0	492

6.2. New approaches to malaria control through more effective action by the community and basic health services developed and tested:

LOCAL COSTS

Health services and operational research studies (0)(2)(2) studies @ \$5,000	--	10	10	20
--	----	----	----	----

TECHNICAL ASSISTANCE:

Malaria operations research specialist <u>1/</u> (1)(0)(2) x 1 pm @ \$15,000	--	--	30	30
--	----	----	----	----

6.3. Greater supervision of malaria control activities from township level:

COMMODITIES:

Motorcycles and helmets (0) (0) 40 @ \$3,000	--	--	120	120
---	----	----	-----	-----

1/ funded from FY 1986 OYB and not from the project

6.4. Additional staff trained in entomology, bio-environmental measures
and other malaria control technologies:

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
LOCAL COSTS: (US\$ @ K 8/\$)				
Course in bio-environmental control 2 courses x 15 persons x 4 weeks (840 pd @ K10/day + 30 persons @ K200 travel)	.9	--	.9	1.8
Workshop on VBDC activities for entomology staff 2 courses x 30 persons x 2wks (840 pd @ K10/days + 60 persons @ K.200 travel)	1.3	--	1.3	2.6
Course in advanced medical entomolgy 1 course x 27 persons x 4 weeks (756 pd @ K. 10/day + 27 persons @ K.200 travel)	--	--	1.6	1.6
Workshop for preparation of operational manuals for BHS staff 1 wkshop x 27 persons x 4 weeks (756 pd @ K10/day + 27 persons @ K.200 travel)	<u>1.6</u>	<u>--</u>	<u>--</u>	<u>1.6</u>
	3.8	--	3.6	7.6

	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>Total</u>
TECHNICAL ASSISTANCE:				
(1) Bio-environmental control trainer <u>2/</u> (0) (0) (1) @ 15,000	--	--	30	30
(0) (0) (1*) x 2pm @ 15000 VBDC training and procedures specialist	<u>--</u>	<u>--</u>	<u>15</u>	<u>15</u>
Subtotal	--	--	45	45

2/ funded from FY 1986 OYB and no: from the project

ANNEX F

TA Draft Scopes of Work

Scope of Work for Long-Term
Technical Assistance

Training and Management Advisor (24 PM)

The training and management advisor will work with counterparts within the Public Health division, Training division and Medical Education Unit and collaborate, as appropriate, with other donor agencies particularly WHO.

The training and management advisor will carry out the following activities in collaboration with counterparts.

1. Analysis of the supervisory system and development of supervisory protocols, performance standards, needs assessment tools, and performance evaluation documents for the supervision of basic and voluntary health workers;
2. Preparation and pilot testing of management guidelines for health center operations;
3. Design and field testing of an evaluation scheme to monitor the impact of training upon the performance of personnel and coordination of evaluative research studies;
4. Development of management training workshops for state and division health teams;
5. Preparation of training teams to conduct township supervisor training;
6. Development of teaching cases to highlight the management and supervision issues encountered at the townships and RHCs;
7. Preparation pilot testing and revision of training modules in operational management, supervision, and selected technical areas for township supervisors;
8. Coordination of short-term technical assistance to ensure that assistance is appropriately timed and meets the project needs;

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Scope of Work for Short-Term
Technical Assistance

Health Communicator (2 persons for 11 months each (22 pm))

The Health Communicator will work with counterparts within the Central Health Education Bureau and collaborate, as appropriate, with other donor agencies, particularly UNICEF.

The Health Communicator will carry out the following activities in collaboration with CHEB counterparts:

1. Determination of the health advice to be advocated by the campaign, along with a specific plan for acquiring, distributing, and monitoring the resources (printing facilities, paper, radio time, etc.) needed to disseminate that advice;
2. Production of pilot materials (sample radio programs, draft graphic materials, preliminary training designs) for pilot testing with representative members of the target population;
3. Pilot testing of draft campaign materials with representative members of the target population, using both individual and small-group testing situations;
4. Revision of draft materials based upon results of pretesting and final production of campaign materials;
5. Development of a broadcast and distribution schedule for all campaign elements;
6. Precampaign preparation of health personnel, including orientation of health workers, delivery of health materials to decentralized distribution points, final scheduling of radio broadcasts, and development of a plan to monitor campaign implementation;
7. Implementation of the campaign activities, transmission of radio programs, distribution and placement of graphic materials, contact between health workers and the target population, and monitoring of all campaign elements with particular focus on behavior change.
8. Co-ordination of short-term consultants (8 pm are proposed) who will provide specific project support in media production and audience research.

ANNEX G

**Additional Background Information
Mass Media and In-service Training Activities**

Mass Media

1. The first two outputs ("Establish and maintain a media campaign for EPI and ORT" and "Prepare and distribute educational material to health staff and the public") rest upon a common rationale. That rationale is the tremendous Burmese effort in primary health care during PHP I and PHP II.

A growing consensus among health educators and mass communicators recognizes the value of an integrated approach, using all media channels in coordinated and complementary fashion. Though rarely called as such, the systematic training of health workers right down to the level of village volunteers is a mass medium, a communication channel reaching out and down to areas and people previously beyond the coverage of the health system. Among the services these health workers provide, health education is a key element in the primary-health-care goals of self-help and self-reliance. In recent experience with national health-education efforts, careful research has highlighted the role of basic health staff and primary-health-care workers as crucial agents of behavioral change among villagers.

So an extensive system of primary-health-care workers, like the system being implemented and strengthened in Burma, is one mass channel for health education. A second mass channel is what is generally called "the mass media" - radio, television, cinema, print, graphics, cassettes, and so forth. No less essential than the health-worker channel, these educational outlets complement and support what the health worker can do alone. With the effort to train health workers continuing, the PHP III represents an opportune time to fill out the health-education potential of the DOH.

What do the media offer?

- The mass media create awareness and increase knowledge; the health worker is less able to do so on the scale of the mass media, but is better suited for convincing people to put their new knowledge into practice.
- The mass media have authority and credibility. They provide information which bears the mark of science and recommendations of experts in the DOH.

- The mass media provide the glue to the primary-health-care system. Villagers recognize that the VHW is part of a large, national system and that her advice is sound. Health workers feel a part of something larger than themselves, reducing their isolation and encouraging them in their work.
- The mass media can give focus to particular PHC interventions, like EPI or ORT or nutrition, by emphasizing key messages and repeating those messages with great frequency.
- The mass media reinforce one another, as they reinforce that other "mass medium", the VHWs. Messages on radio can be repeated in posters, which can be repeated in flyers handed out to mothers, which can be repeated in cinema slides or plays or songs, and so forth. The unity provided by a sung jingle or a painted logo contributes to clear, focussed, reinforced communication.
- The mass media can create demand from the bottom up. The advantages of EPI and ORT can be drummed out over the airwaves; mothers can be told what to expect and ask for from the health system. Also, the disadvantages of EPI (e.g., some fitful nights, several visits) and of ORT (e.g., the time to give the solution) can be squarely addressed and explained.
- The mass media can provide models with whom villagers and VHWs can identify, either through short dramas with actors portraying fictional village people or through programs actually taped in villages with real mothers and real VHWs.
- The mass media can reinforce what mothers have learned from VHWs and what VHWs have learned from their trainers. Burma has a great untapped health resource in the literacy of its people. Simple flyers and other educational material distributed widely to villagers and health staff, and explained by both radio and trainers, can provide information where and when it is needed. For example, neither the radio nor a VHW may be available to a mother when her child begins to suffer diarrhea, but a printed instruction in the home (on the packet?) can guide the mother at this critical time.

A further element of effective communications is its audience-orientation, or its basis in research. Simply put, an effective communicator listens as well as speaks. Indeed, an effective communicator listens before she speaks. For this reason, straightforward village research should precede the production of broadcasts that will be heard by millions or of brochures that will be read by millions. While the goal of message development is a few, simple, actionable messages, the process of message development

is a complex one of asking many questions and paring down long lists of possible messages to that critical few that will make the greatest difference. This means some, indeed most, health problems will not be highlighted through the media or the VHVs at this time. On the basis of village research, certain areas will be chosen and certain ways of speaking about those areas will be chosen. If ORT is a chosen area, communicators need to know:

- how do village mothers deal with infant diarrhea now?
- how do mothers speak about diarrhea?
- do mothers understand dehydration?
- are mothers focussed on stopping diarrhea?
- how do mothers feed a child during diarrhea, if at all?
- what do mothers expect from the VHV re diarrhea?
- how do health staff currently treat diarrhea?
- what is mothers' experience with health staff re diarrhea?
- who are the influential people in the family's decisions about diarrhea treatment?
- who pays for the cost of diarrhea care (medicines, travel, work lost)?

So, in the development of messages, listening to the intended audience is a key to effective communications. This happily is in tune with the Burmese goals of village participation and the organization of the BSPP which has its Village People's Councils.

Research will also go on once messages are developed and disseminated, to ensure their effectiveness and to improve their impact. Rarely have messages been as successful as hoped, but by continuing to listen (do research) as well as speak the communicator can continually improve what she is saying. Like a simple two-person conversation, the give and take of the communication process itself is formative of what is ultimately communicated.

Burma offers solid opportunity, therefore, in the use of mass media for health education in EPI and ORT:

- Burma already has a key mass medium in place for health education through its PHC system;
- Burma has high literacy;
- Burma has socio-political organizations reaching down to village level;
- Burma's BBS radio has adequate air time available and no competition nationally;
- Burma's national literacy campaign of 1972 serves as a precedent for a co-ordinated effort in health;
- Burma has adequate ORT supplies;
- Burma has made a national commitment to Universal Childhood Immunization by 1990.

As stated in the Executive Summary of the PHP III (p.34) "The objective of the Health Education Support Programme is drawn in accordance with the 'Policy Guideline' laid down by the BSPP which is to ensure increased mass participation and to develop the health educational activities through the utilization of all available mass communication media".

2. The third output ("Professional ORT training for government and private physicians") is proposed to enlist the highly respected and highly influential doctors of Burma in the promotion of ORT.

Not only in Burma have doctors been slow, as a group, to endorse ORT. Trained as most were before the ORT breakthroughs and accustomed as most are to thinking of diarrhea as a condition they could cure, doctors are not surprisingly wary of ORT's claims. After all, there used to be a "cure" for diarrhea - antibiotics and antidiarrheals. Doctors gave out these cures, mothers took them and came back for more. Diarrhea did stop, fever was reduced, and dehydration was not the issue.

Now, ORT advocates are saying that there is no "cure" for diarrhea, that most diarrheas are best left to run their course, and that concern, especially when diarrhea occurs in children and infants, should be on dehydration, particularly the prevention of dehydration. Furthermore, say ORT's advocates, prevention and treatment of dehydration can be done by a mother at home, without the assistance of any health worker much less of a doctor, with the simple ORT packet or even with common household sugar and salt.

Obviously, this goes against a whole complex of understandings and practices that doctors have had. Were they wrong all those years? There used to be cures for diarrhea; why suddenly is it said that there is no cure? Doctors gave mothers what they wanted, did they not - by stopping diarrhea? Mothers came back, did they not? Will doctors lose credibility among mothers if they suddenly withhold anti-diarrheals and offer ORT? How can ORT be called the greatest scientific advance of this century if mothers can make it at home? What is, in fact, the scientific basis for ORT? What about the money doctors have made from previous diarrhea treatments - was that an ill-gotten gain? Must it now be given up? What about the five-percent of diarrhea cases that do need antibiotics - how can these be covered? What will we tell mothers who want to stop diarrhea - will they have recourse to traditional medicines or traditional healers, to the detriment of their children's health?

The effort to help doctors face these questions and put them to rest is a crucial component of a national ORT educational campaign. The basic purpose of that campaign is to change mothers' practices in treating diarrhea. If doctors continue to give mothers advice

and treatment contrary to the campaign, the campaign will be undermined and seriously blunted. If, however, doctors can soberly and sensitively present ORT as the scientific breakthrough that it is, they can make clear to mothers that both doctors and mothers were previously doing what medical authorities recommended. Previous practice was the best possible; now ORT has been discovered and it is better. Since doctors and mothers always try to do what is best for children, together they will adopt ORT.

Doctors deserve in-person communications about ORT, from medical authorities whom they respect. We propose that an internationally recognized ORT physician provide seminars in Rangoon for DOH staff (clinicians and S/D medical officers), who will in turn offer regional seminars for physicians, both private and government physicians, in their jurisdictions. The co-operation and collaboration of the Burma Medical Association will greatly assist this effort. At the seminar, physicians will receive a set of readings about most recent ORT research as well as a supply of ORT packets to be provided by the DOH. With an estimated 10,000 physicians in Burma, approximately 100 seminars might be offered in all.

This training will slightly precede the national ORT media campaign, so that physicians may be in the forefront of the move toward ORT as demand rises among the public. Like VHWs, physicians are most likely to convince mothers to use ORT, once the mothers interest and awareness is stimulated by mass media. The media can also re-inforce this new approach by physicians, and reassure mothers that their physicians are offering the very latest and best medical treatment.

In-Service Training

In-service Training Component
and Summary of
Project Activities & Inputs

ActivitiesCentral

Develop and conduct workshop
for S/D Health staff

Develop management training
courses for township supervisors

Develop training modules
for township supervisors

Select & prepare training teams
for township training

Conduct township training

Develop a supervisory frame work
including protocols, need assessment
documents & performance evaluation

Develop management guidelines for
health center operations

Design an evaluation scheme to
monitor the effects of training and
provide feed back for review & revision
of training activities.

Project Inputs

Support for central
coordinating unit

Salaries 3 medical officers
2/sec./1 driver
Vehicles (2)
Supplies & Equipment

Technical Assistance
Long term 24 mo
Short term 43 mo

Participant Training
6 MPH

State Divisions

S/D Training Workshops (14)

Local costs for training
including per diem/travel
& supplies

Participant Training
(7) short courses
(management)

Township

Courses for 628 township
supervisors

Local costs for Training &
follow up including per diem/
travel & supplies

Per diem for township
supervisors doing RHC
supervision visits

FU supervision by Training Teams

Training materials/supplies
for 314 townships

Development of 45 model township
supervisory teams

Salaries support for 90
model township supervisors

Motor cycles for 45 model
townships

RHC

In-service training for
1256 LHV's
2500 MI
1400 PHSS II

Local costs for training
including per diem/travel/
supplies

Inservice Training Component: Notes On Course Design

- Course:** Planning Workshop for State Divisional Health Teams.
- Goal:** To Improve planning, coordination and integration of manpower development activities (particularly management and supervision) by the state and division staff.
- Participants:** S/D staff including: health officer, Disease control unit personnel (2), training team personnel (1-2). Selected township health officers.
- Training Team:** Central Coordinating Unit (1-2)
S/D Deputy Director.
- Design:** A planning and team development workshop will be conducted in each state/division for 3-5 days each year.
- Development of the workshop will be the responsibility of the CCU with the participation of the S/D Deputy Directors.
- The first set of annual planning workshops will occur prior to the training of township supervisors.
- Supervision protocols and assessment tools are developed prior to this workshop.
- Course:** Supervision and Management training for Township Supervisors.
- Goal:** To Improve the management and supervision of RHC staff.
- Participants:** Newly appointed township supervisory staff including one health assistant and one lady health visitor from each township.

Training Team: Central Coordinating Unit (1)
Township Health Officer
State/Division Training team (1)
Resource People as needed.

Note: The training teams will be selected and prepared by the CCU.

Design: Up to four weeks of training at the S/D including supervised field experience. (preferrable in model townships).

Up to 22 participants in each course, ideally the HA and LHV from a township can be trained together (this should be possible since the positions are new).

Training module for participants, including supervision protocols, assessment tools, guidelines for health center management and technical information, to be prepared in advance by the central coordinating unit.

The supervisors of the model townships will be trained first as a means of pilot testing the course and training modules.

Note: The Township supervisors are expected to prepare a plan for supervising and training the RHC staff and implement the plan upon return to the township. The project will support local costs for training RHC staff in the township as well as supervisory visits by the township supervisors to the RHCs.

ANNEX H

Summary of IA and Participant Training

Technical Assistance (142 PM)Long Term (24 PM)

Training Advisor	24 PM
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Short Term (118 PM)

Media Consultants 2 for 11 months each	22 PM
Media *	10 PM
Training *	53 PM
EPI *	12 PM
VDBC *	3 PM
MIS, Logistics, Research	18 PM

Overseas Participant Training (180 PM)

1 MPH Health Education x 18 mth
2 media observation tours x 3 mth
3 EPI observation tours x 3 mth
1 MPH Management x 18 mth
2 MPH MCH x 18 mth
2 MPH Epidemiology x 18 mth
2 MSc Entomology x 18 mth
7 Management/Planning/Supervision x 3 mth

* Not entirely funded by project

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ANNEX I

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ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR ASIA AND THE NEAR EAST

Through: Earl J. Young, AID Representative to Burma

From: Gary M. Imhoff, Project Development Officer

Problem: Your approval is sought to waive AID policy requiring host country payment of participant international travel costs under the Quality Care for Child Survival Project (482-0013).

Discussion: Handbook 10, Chapter 2, Section B, Paragraph 10 indicates that it is AID policy that: ". . . the host government normally pays for medical examination or certification, international travel, and salary continuation to maintain the Participant's family."

Under the subject project, the Burmese Government, and local communities will contribute nearly 79% of the total project costs. Given the precarious state of foreign exchange available to the Burmese Government, it would be erroneous to believe that the host government could pay for international travel for participant training. With a per capita income level of \$189/year, Burma is one of the world's least developed countries. As export earnings have fallen in recent years, and imports continue to rise, over 50% of the national revenues are targeted for debt servicing. With world rice (the principal agricultural export) prices deflated, it remains doubtful that Burma will be in a position to pay for international travel costs related to training in the near future.

Justification: This waiver is justified by: (1) the host country's significant contribution to the local currency costs of the project and to the training component in particular, (2) the magnitude and increasing size of the disequilibrium in Burma's foreign exchange account, and (3) AID's logical desire not to exacerbate this foreign exchange problem on the one hand while attempting to alleviate it on the other.

Authority: Handbook 10, Chapter 15, Paragraph 15, Section B.1. reiterates the policy and indicates that "the cost of international travel, including incidental costs en route as well as the cost of travel between the Participant's home country, is paid by the host government or other sponsor unless... (a) In the case of Mission-funded programs, Mission Directors have justified and authorized full or partial waivers and have so notified DS/IT." As you hold concurrent authority of Mission Directors, you therefore have the authority to waive this policy.

Recommendation: For the above reasons, I conclude that your approval to waive AID policy requiring the host country payment of participant international training costs as requested above is necessary to the attainment of U.S. foreign policy objectives and the objectives of the foreign assistance program, and I recommend that you approve this request by authorizing the project.

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ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR ASIA AND THE NEAR EAST

Through: Earl J. Young, AID Representative

From: Gary M. Imhoff, Project Development Officer

Problem: Your approval is sought to waive source/origin requirements from Geographic Code 000 U.S. only) to Geographic Code 899 (Free World) for the procurement of cold chain equipment required under the Quality Care for Child Survival Project (482-0013).

- A. Cooperating Country: Burma
- B. Authorizing Document: Grant No. 482-0013
- C. Project: Quality Care for Child Survival
- D. Nature of Funding: Grant
- E. Description of Goods: Electrolux kerosene absorption refrigerators
- F. Approximate Value: \$150,000 (excluding freight)
- G. Probable Source: Sweden
- H. Source/origin waivers granted for Commodity Procurement

Discussion: One of the major components of the Quality Care for Child Survival Project is support for an expanded coverage of effective immunization services for childhood diseases. The extension of immunization technology for most of these diseases requires a refrigeration network sufficient to insure that vaccines are maintained at 4-8°C until they are administered. In areas without electricity, this requires absorption refrigerators normally fueled by kerosene.

Although there are U.S. suppliers of such units, there currently are no U.S. manufacturers of absorption refrigerators, nor are there manufacturers of absorption refrigerators in Code 941 countries whose products have passed WHO/UNICEF testing for vaccine refrigeration equipment. It is expected that non AID-foreign exchange will be made available from UNICEF for approximately 25% of the total required of absorption refrigeration equipment.

The requested waiver totals 1.6% of total project funding.

Authority: In accordance with AID Handbook 1B, Section 5B4A(2), the source/origin requirements from Code 000 to Code 899 may be waived when the commodity is not available from countries or areas included in the authorized geographic code. Pursuant to Delegation of Authority 40.10 (as amended) and Handbook 1B, Section 5B4C(2) you have the authority to issue such a waiver if the value of that transaction does not exceed \$3,000,000.

Primary Justification: The subject equipment is essential to the AID financed project, is not available from the authorized source and non-AID foreign exchange is not available for the purpose.

Recommendation: For the above reasons, I recommend that you (1) certify that exclusion of procurement from the free world countries other than the cooperating country and countries included in Code 941 would seriously impede attainment of U.S. foreign policy objectives of the foreign assistance program; and (2) approve this request for waivers by authorizing this project.

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR ASIA AND THE NEAR EAST

Through: Earl J. Young, AID Representative

From: Gary M. Imhoff, Project Development Officer

Problem: Your approval is sought to waive source/origin requirements for the procurement of reusable (glass or nylon) vaccination syringes from Geographic Code 000 (U.S. only) to Geographic Code 941 (the United States and certain less developed countries).

- A. Cooperating Country: Burma
- B. Authorizing Document: Grant No. 482-0013
- C. Project: Quality Care for Child Survival
- D. Nature of Funding: Grant
- E. Description of Goods: Reusable (glass or nylon) vaccination syringes
- F. Approximate Value: \$100,000 (excluding freight)
- G. Probable Source: Brazil or Mexico
- H. Source Waivers granted for Commodity Procurement:

Discussion: One of the major components of the Quality Care for Child Survival Project is support for an expanded coverage of effective immunization services for childhood diseases. Most vaccinations are administered by injection which require either invasive needle and syringe techniques or jet injection apparatus. In these cases where immunization clinics are integrated into other maternal and child health services, needle and syringe technique is both less costly (by a factor of between 0.1 to 0.25 as much) and more reliable than jet injection apparatus.

The best available U.S. prices for glass reusable syringes of U.S. origin (no nylon reusable syringes are available in the U.S.) is \$2.18 each. Similar syringes of Mexican manufacture are available for purchase in the U.S. at \$0.56 each; 26% of the best available U.S. price. Procurement of the Code 941 origin syringes can be implemented under a PIO/C to GSA and, under their procedures, would be tested to assure that they meet the requisite specification. Similar syringes are also available in Brazil for \$0.45 each if purchased directly on the Brazilian market or at \$0.97 when purchased in the U.S. from their parent company.

It is expected that non-AID foreign exchange will be available from UNICEF for approximately 25% of the total required for purchase of reusable syringes.

The requested waiver totals 1% of total project funding.

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Authority: In accordance with AID Handbook 1B, Section 5B4A(3), the source/origin requirements from Code 000 to Code 941 may be waived when the lowest available delivered price from the United States is reasonably estimated to be 50% or more higher than the delivered price from a country or area included in Geographic Code 941. Pursuant to Delegation of Authority 40.10 (as amended) and Handbook 1B, Section 5B4C(2) you have the authority to issue such a waiver if the value of that transaction does not exceed \$3,000,000.

Primary Justification: The subject supplies are essential to the AID financed project, the best available U.S. price is five times the selected free world price and non-AID foreign exchange is not available for the purpose.

Recommendation: For the above reasons, I recommend that you approve this request for waiver by authorizing the project.

ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR ASIA AND THE NEAR EAST

Through: Earl J. Young, AID Representative

From: Gary M. Imhoff, Project Development Officer

Problem: Your approval is sought to waive source/origin requirements for the procurement of stainless steel vaccination needles from Geographic Code 000 (U.S. only) to Geographic Code 941 (the United States and certain less developed countries).

- A. Cooperating Country: Burma
- B. Authorizing Document: Grant No. 482-0013
- C. Project: Quality Care for Child Survival
- D. Nature of Funding: Grant
- E. Description of Goods: Stainless steel vaccination needles
- F. Approximate Value: \$50,000 (excluding freight)
- G. Probable Source: India
- H. Source Waivers granted for Commodity Procurement:

Discussion: One of the major components of the Quality Care for Child Survival Project is support for an expanded coverage of effective immunization services for childhood diseases. Most vaccinations are administered by injection which require either invasive needle and syringe techniques or jet injection apparatus. In those cases where immunization clinics are integrated into other maternal and child health services, needle and syringe technique is both less costly (by a factor of between 0.1 to 0.25 as much) and more reliable than jet injection apparatus.

The best available U.S. prices for stainless steel vaccination needles is \$0.39 each. Similar vaccination needles of Indian manufacture are available for \$0.04 each, 10% of the best available U.S. price.

It is expected that non-AID foreign exchange will be available from UNICEF for approximately 25% of the total required for purchase of stainless steel vaccination needles.

The requested waiver totals 0.5% of total project funding.

Authority: In accordance with AID Handbook 1B, Section 5B4A(3), the source/origin requirements from Code 000 to Code 941 may be waived when the lowest available delivered price from the United States is reasonably estimated to be 50% or more higher than the delivered price from a country or area included in Geographic Code 941. Pursuant to Delegation of Authority 40.10 (as amended) and Handbook 1B, Section 5B4C(2) you have the authority to issue such a waiver if the value of that transaction does not exceed \$3,000,000.

Primary Justification: The subject supplies are essential to the AID financed project, the best available U.S. price is five times the selected free world price and non-AID foreign exchange is not available for the purpose.

Recommendation: For the above reasons, I recommend that you approve this request for waiver by authorizing the project.

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ACTION MEMORANDUM FOR THE ASSISTANT ADMINISTRATOR FOR ASIA AND THE NEAR EAST

Through: Earl J. Young, AID Representative

From: Gary M. Imhoff, Project Development Officer

Problem: Your approval is sought to waiver to approve less than full and open competition for the procurement of ten Hewlett-Packard portable, battery-powered "Portable Plus" laptop computers with floppy disc drives, "Think-jet" dot matrix printers, and accessories from the United States (Code 000).

- A. Cooperating Country: Burma
- B. Authorizing Document: Grant No. 482-0013
- C. Project: Quality Care for Child Survival
- D. Nature of Funding: Grant
- E. Description of Goods: 10 each Hewlett-Packard portable, battery-powered "Portable Plus" laptop computers with floppy disc drives, "Think-jet" dot matrix printers and accessories
- F. Approximate Value: \$100,000 (excluding freight)
- G. Probable Source: United States
- H. Waivers of Proprietary Procurement and Competition for Contracts valued at or under \$100,000

Background

Under the Primary Health Care II Project, technical assistance related to development of computer capabilities and health information systems has been extended to the Department of Health with substantial progress being achieved. A new Minimum Data Set for monitoring and evaluating Primary Health Care has been defined and is currently being considered by the Department of Health (DOH); reformed and greatly simplified data collection and data flow systems have been defined for review and substantial up-grading of computer-assisted analysis has been proposed. Field trials of the simplified data collection and collateral model for timely data entry, analysis and reporting have been progressing with the use of six Hewlett-Packard computers and accessories purchased under the PHC II project.

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It is now recommended that additional hard and soft ware be made available to the State/Division level with the procurement of ten micro computers and related accessories. The Hewlett-Packard "Portable Plus" again has been selected because:

--it has been certified to perform in temperatures up to 120 degrees Fahrenheit and 95 percent humidity, an essential factor in the operation of computers in Division health offices during the dry and rainy seasons, respectively, in Burma. These offices are not equipped with air conditioning and some are constructed with walls having open air, slat walls which cannot be closed. Temperatures in central Burma regularly rise above 110 degrees Fahrenheit in the dry season and open offices cannot be protected from either this dry season heat or rainy season humidity; and

--it will operate for up to 20 hours on a single charge of batteries. Since electricity is available only intermittently in the Division capitals and even then only with high fluctuations in voltage, it is essential that the computers purchased be able to work from a battery source at all times -- but that the batteries allow operation for a full day in the absence of a any new electricity for recharge. Only the Hewlett-Packard portable is able to perform for this extended period of time. Other portables are limited to periods from 4 - 7 hours in operations from batteries.

We are aware of no other computers on the market which will meet all to the requirements above. This portable, and necessary related items of hard and software, are itemized in the attachment.

The requested waiver totals 1% of total project funding.

Primary Justification: These computers are essential to this AID-financed project and non AID-foreign exchange is not available for this purpose. There is only one computer manufactured in the U.S. for the general market which can perform with the necessary level of reliability under conditions in which this information management system is being developed, i.e., in temperatures on more than 110 degrees, very high humidity, and unreliable and poorly regulated electric power.

Authority: You have the authority, pursuant to A.I.D. Acquisition Regulation (AIDAR) Section 702.-70 to sign contracts up to \$100,000. Therefore, you also have the authority to approve FAR determinations as a U.S. Government contracting officer up to this limit.

Recommendation: For the above reasons, I recommend that you approve this request for waiver by authorizing the project.

attachment: a/s

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DESCRIPTION OF COMPUTER EQUIPMENT AND ACCESSORIES REQUIRED

HP Portable Plus Personal Computer
128K Memory Drawer
Software Drawer
Basic Series 100
dBase II
128K Memory Card
Lotus 1-2-3
Microsoft Word
D.D 3.5 Disc Drive
Think-jet Printer
Think-jet Print Cartridge
Think-jet Printer Paper
System Carrying Case
HP 3.5 D.D Discs (boxes of 10)
IL/IBM Interface
Replacement Battery for Disc Drive
Replacement Battery for Think-jet
Executive Card Manager
Charger 220 Volts 50 HZ
SIG Statistics

ANNEX J

Statutory Checklist

Listed below are statutory criteria applicable to projects. This section is divided into three parts. Part A includes criteria applicable to all projects. Part B1 applies to projects funded from specific sources only; B.2. applies to all projects funded with Development Assistance loans, and B.3. applies to projects funded from ESF. Part C includes the standard item checklist (procurement) including Other Restrictions.

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

Checklist of Statutory Criteria
PROJECT CHECKLIST

A. GENERAL CRITERIA FOR PROJECT

1. FY 1985 Appropriation Act. Sec. 525; FAA Sec. 634A.
(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project. Congressional Notification to be made before authorization.
2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$500,000, will there be:
(a) engineering, financial or other plans necessary to carry out the assistance and
(b) a reasonably firm estimate of the cost to the U.S. of the assistance? (a) Yes.
(b) Yes.
3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance? No further legislative action required.

PROJECT CHECKLIST

4. FAA Sec. 611(b); FY 1985 Continuing Resolution Sec. 501. If for water or water-related land resource construction has project met the standards and criteria as set forth in the principles and Standards for planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.) N/A
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all this assistance for it will exceed \$1 million, has Mission Director certified and regional Assistance Administrator taken into consideration the country's capability to receive, maintain and utilize the project? N/A
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs. No.
7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions. (a) No
(b) Will foster initiative because villages recruit and support Volunteer Health Workers and raise funds for drug supplies.
(c) No
(d) No
(e) N/A
(f) N/A

PROJECT CHECKLIST

8. FAA Sec. 601 (b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise)
- U.S. suppliers will provide all technical advisory services and major portion of FX commodities.
9. FAA Sec. 612(b), 636(h); FY 1985 Continuing Resolution Sec. 507.
Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.
- The SRUB/Community is contributing 79% of the cost of the project. U.S. owned excess foreign currency will be utilized to meet the cost of local currency support
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
- Yes, arrangements to provide local currency needs will be coordinated with the Office of Finance, Bangkok, Thailand
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?
- Yes.
12. FY 1985 Continuing Resolution Sec.522. N/A
If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?

PROJECT CHECKLIST

13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16? Does the project or program take into consideration the problem of the destruction of tropical forests? Yes, see Section VII F of of this PP.
N/A
14. FAA 121 (d). If a Sanel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)? N/A
15. FY 1985 Continuing Resolution Sec. 536. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution? No.
16. ISDCA of 1985 Sec. 310. For development assistance projects how much of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or who are economically or socially disadvantaged (including women)? Procurement Services will be set-aside for an 8 (a) firm. All economically and socially disadvantaged firms will be encouraged to participate in the competitive process in procuring other required services. Furthermore, successful contractors will be encouraged to utilize 8 (a) firms as sub-contractors to the fullest extent possible.

B. FUNDING CRITERIA FOR PROJECT1. Development Assistance Project Criteria

a. FAA Sec. 102(a), 111, 113 281(a). Extent to which activities will (a) effectively involve the poor in development at local level, increasing labor-

(a) through (d) Project will involve the active participation of volunteer health workers and rural communities in expanding

PROJECT CHECKLIST

intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

health services and improving the health status in rural areas. Many of the volunteers are women and the target beneficiaries include women and children 0-5 years of age.

(e) N/A

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

Yes.

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the letter cost-sharing requirement being waived for a "relatively least developed" country)?

Yes. the host country will contribute about 79% of the total resources required (incl. community contributions).

PROJECT CHECKLIST

- e. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth? Yes, the project will develop the greatest of economic resources of Burma, its people, by improving the health status of children from 0-5 years old and women of reproductive age.
- f. FAA Sec 128 (b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? Yes. The project is designed to increase the institutional capacity of the rural health services. Baseline data and continued evaluation of the activities planned will provide a measure of assurance that the target population ultimately benefits.
- g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government. The project directly supports Burmese programs to increase rural health services. The in-service training programs and planned workshops will utilize private physicians, and local experts where applicable.
- B2. DEVELOPMENT ASSISTANCE PROJECT CRITERIA (Loans Only) N/A
- B3. ECONOMIC SUPPORT FUND PROJECT CRITERIA N/A
- C. STANDARD ITEM CHECKLIST (PROCUREMENT)
1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? Yes.

PROJECT CHECKLIST

2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him? Yes. See Annex I
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? The cooperating country does not discriminate.
4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.) N/A
5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? N/A
6. FAA Sec 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates? No.

PROJECT CHECKLIST

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? Yes.
8. International Air Transport. Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? Yes.
9. FY 1985 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? It will.

C1. CONSTRUCTION

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used? N/A
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? N/A
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)? N/A

PROJECT CHECKLISTC2. OTHER RESTRICTIONS

- | | | |
|----|---|--|
| 1. | <u>FAA Sec. 122(b)</u> . If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? | N/A |
| 2. | <u>FAA Sec. 301(d)</u> . If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? | N/A |
| 3. | <u>FAA Sec. 620(h)</u> . Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? | Yes. Where pertinent, a negative determination regarding commingling shall be obtained prior to any AID-financed commodity being procured. |
| 4. | Will arrangements preclude use of financing: | |
| | a. <u>FAA Sec. 104(f) FY Continuing Resolution Sec 527.</u> : (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion? | Yes.
Yes.
Yes.
Yes. |
| | b. <u>FAA Sec. 488</u> . To reimburse persons, in the form of cash payments whose illicit drug crops are eradicated? | N/A |

PROJECT CHECKLIST

- c. FAA Sec. 620(g). To compensate owners for expropriated nationalized property? Yes.
- d. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes.
- e. FAA Sec. 662. For CIA activities? Yes.
- f. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes.
- g. FY 1985 Continuing Resolution, Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel? Yes.
- h. FY 1985 Continuing Resolution, Sec. 505. To pay U.N. assessments, arrearages or dues? Yes.
- i. FY 1985 Continuing Resolution, Sec. 506. To carry out provisions of FAA Section 209(d) (Transfer of FAA funds to multilateral organizations for lending.) Yes.
- j. FY 1985 Continuing Resolution, Sec. 510. To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields? Yes.

PROJECT CHECKLIST

- k. FY 1985 Continuing Resolution, Sec. 511. Will assistance be provided for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? No.
- l. FY 1985 Appropriation Act, Sec. 516. To be used for publicity or propaganda purposes within U.S. not authorized by Congress? No.

ANNEX K

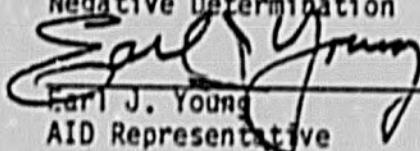
Initial Environmental Examination

Intital Environmental Examination

Project Location: Burma
Project Title: Quality Care for Child Survival
Funding: \$12,000,000 (authorized)
Life of Project: FY 87-91
IEE Prepared By: AID/Burma
Date: July, 1986

Environmental Action Recommended: Negative Determination

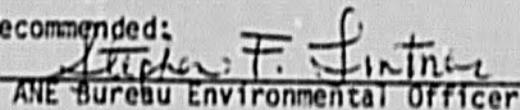
Concurrence:


 Carl J. Young
 AID Representative

Environmental Officer, Bureau for Asia and the Near East Decision:
 Concur Do not Concur

Approval of Environmental Action Recommended:

Date 10/22/86


 Stephen F. Sinter
 ANE Bureau Environmental Officer

Disapproval of Environmental Action Recommended:

Date _____

ANE Bureau Environmental Officer

ANNEX L

References

References

- Broad Programme Budget Proposals for 1988-1989: Burma
WHO: South - East Asia Region, November 16, 1985.
- Burma ORT Country Assessment Report. by John Le Sar, Stephen Fabricant,
and Karen Fox, PRITECH/S&T Health, May 1984
- Burma: Report of Mission on Needs Assessment for Population Assistance.
New York, UNFPA, March 1985.
- Chauls, Donald S. "Volunteers Who Work: The Community Health Care Project
in Burma." MSH: Boston, undated.
- Chin, J and U Maung Thaung. "The Unchanging Epidemiology and Toll of
Measles in Burma" Bulletin of WHO, 63, (3): 551 - 558 (1985).
- Community Health Care PHP II, Project Proposal. Rangoon, DOH, April 21,
1981.
- Community Health Worker's Kit Replenishment Workshop. Rangoon, UNICEF,
March-April 1980.
- Cost Estimates of UCI/1990 in Burma. Rangoon, UNICEF, January 1986.
- Development and Mobilization of Health Resources (Burma). JCHP Task Force
(II). Rangoon, January 1985.
- End of Project Evaluation - Primary Health Care I. # 482-0002. by Helen
O'Brien, Huey Mays, and Jack Reynolds. AID/Burma, February 1985.
- Executive Summary, PHP III (1986/87 - 1989/90) Broad Programmes. Rangoon,
DOH, December 1984.
- Experiences Through Different Mechanisms For Community Financing - Burma.
by Dr. U. Khin Htaing. Hlegu, Burma, May 1985.
- Health and Development: A Case of Ayadaw Township, Burma. by Dr. U Than
Sein. Rangoon, April 1985.
- Health Education Bureau, Burma. WHO/UNDP, January 1983.
- Health Education Programme (Third Cycle People's Health Plan). DOH,
Central Health Education Bureau, undated.
- Health and Medical Cooperation. JICA/Medical Cooperation Department, 1982.

- Health Systems Management (Burma). JCHP Task Force (II). Rangoon, May 1985.
- Improvements in the Cold Chain system, EPI in Burma. by G. Stroh and S. Tomaszunas. Rangoon, UNICEF, November 1984.
- Intersectoral Collaboration and Community Involvement (Burma). JCHP Task Force (II). Rangoon, May 1985.
- Khin Maung Thwin "Household Survey on Morbidity, Mortality, and Health Care," Evaluation Study No. 1 (A Joint SRUB/USAID Study). HIS: Rangoon, July 1983.
- Locational Analysis of Rural Health Centers by Myat Mon (a) Myint Myint Than. Rangoon, Institute of Economics, December, 1984.
- Manpower Development for Primary Health Care and Basic Health Services. WHO/UNDP, September 1983.
- Maternal and Child Health Care Delivery Systems, Burma. Dr. U Ba Tun. Rangoon, DOH, December 1985.
- MOH Draft Plan for UCI/1990, Burma Rangoon, MOH, January 1986.
- Detailed Country Programme for 1986-1987, Burma WHO: South-East Asia Region, undated.
- Nalin, David R. "Trip Report: Burma, July 7 - August 7, 1982." undated.
- National meeting of Health Services Research. Selected Papers. Rangoon, DMR, January 1986.
- People's Health Plan III, Community Health Care Project (1986-1990). FP (CHC) PHP III (2/). Public Health Division, DOH, Rangoon, Burma. December 31, 1985.
- PHC III - Disease Control Programmes (Draft). Rangoon, DOH, March 28, 1985.
- PHC III Expanded Programme on Immunization (Project Proposal). Rangoon, DOH, February 1985.
- PHC III - Environmental Health Programme (Draft). Rangoon, DOH, March 28, 1985.
- PHC III - Hospital Care (Draft). Rangoon, DOH, March 28, 1985.
- Primary Health Care I Evaluation: Mid-Term Report. Rangoon, AID/Burma, April, 1982.

Primary Health Care II, Project Amendment. #482-0004. Rangoon, AID/Burma, May 1985.

Programme Communication for Water and Sanitation in SRUB. by Reesom Haile. Rangoon, UNICEF, January 1986.

Progress in Primary Health Care Implementation. Background document for WHO/UNICEF joint support to the implementation of PHC in selected countries (JSPHC). Rangoon, undated.

Project Document - VBDC Rangoon, DOH, July 1985.

Project Identification Document - Strengthening Health Care Delivery System. #482-0013. AID/Burma, December 1985.

Project Paper - Primary Health Care I. # 482-0002. AID/Burma, August 1980.

Project Paper - Primary Health Care II. #482-0004. AID/Burma, March 1983.

Replenishment System of Community Health Worker's Kits: Evaluation Study. by Aung Tun Thet. Rangoon, Institute of Economics, August 1984.

Report of WHO/CIDA/JICA/USAID Evaluation of the VBDC Programme in Burma. Rangoon, DOH, February 1985.

Review of AID's Health Sector Strategy in Burma. by David Oot, et al. Arlington, Virginia: PRITECH, February 1985.

Review of the Control of Diarrheal Diseases in the SRUB. A Report of the Joint Government, WHO, and UNICEF Review Team. Rangoon, July 1985.

Review of the EPI and Selected PHC Activities in the SRUB A Report of the Joint Government/WHO/UNICEF REVIEW TEAM. WHO: South-East Asia Region, May 28, 1984.

Review of the EPI in Burma. Rangoon, UNICEF, September 1985.

The Role and Performance of Voluntary Health Workers in Primary Health Care in Burma. by Thein Maung Myint, Aung Tun Thet, et al. Rangoon, DMR, May 1982.

Situation Analysis on Training and Utilization of Auxiliary Midwives. Rangoon, DOH, October 1985.

Strengthening Nutrition Activities in PHC: Burma - A Project Protocol for JHSP. Rangoon, DOH, February 1983.

Strengthening of Primary Health Care Delivery Systems. Concept Paper. AID/Burma, undated.

UCI Constraints and Opportunity Analysis in Burma. Rangoon, UNICEF, January 1986.

UNICEF - Country Programme Review. Rangoon, October 1985.

UNICEF - Supplied Kits. by Dr. Aung Tun Thet. Rangoon, Institute of Economics, September 1982.

Utilization of Rural Health Centers. Dr. U Kyaw Sein, et al. Rangoon, DOH, July 1983.