

PDBBT010

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET				1. TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete		Amendment Number		DOCUMENT CODE 3		
2. COUNTRY/ENTITY Chad				9. PROJECT NUMBER 677-0064						
4. BUREAU/OFFICE AFR				5. PROJECT TITLE (maximum 40 characters) Chad Child Survival						
6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 11 23 19 94				7. ESTIMATED DATE OF OBLIGATION (Under "B:" below, enter 1, 2, 3, or 4) A. Initial FY 89 B. Quarter 4 C. Final FY 94						
8. CCSTS (\$000 OR EQUIVALENT \$1 =)										
A. FUNDING SOURCE			FIRST FY 89			LIFE OF PROJECT				
			B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total		
AID Appropriated Total			2,000	700	2,700	5,080	3,420	8,500		
(Grant)			(2,000)	(700)	(2,700)	(5,080)	(3,420)	(8,500)		
(Loan)			()	()	()	()	()	()		
Other	1.									
U.S.	2.									
Host Country							143		143	
Other Donor(s)										
TOTALS			2,000	700	2,700	5,080	3,563	8,643		
9. SCHEDULE OF AID FUNDING (\$000)										
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		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. Grant	2. Loan	
(1) DFA	500	510				8,500		8,500		
(2)										
(3)										
(4)										
TOTALS					8,500		8,500			
10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)										
520			420		440		11. SECONDARY PURPOSE CODE			
							530			
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)										
A. Code		BRW		BLW						
B. Amount		2,000		1,500						
13. PROJECT PURPOSE (maximum 480 characters)										
<p>Develop the institutional capacity of the National Maternal and Child Health and Child Spacing Unit at the Ministry of Public Health and improve the quality and increase the usage of an integrated package of maternal child health and child spacing services initially in the Moyen-Chari Prefecture and then in the Salamat Prefecture.</p>										
14. SCHEDULED EVALUATIONS										
Interim		MM YY	MM YY	Final		MM YY	15. SOURCE/ORIGIN OF GOODS AND SERVICES			
		11 09 91				06 09 93	<input checked="" type="checkbox"/> 000	<input checked="" type="checkbox"/> 941	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Other (Specify) 935
16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)										
<p>Payment Verification Concurrence <i>E. Hardy</i></p>										
17. APPROVED BY						Signature		18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DCMENTS, DATE OF DISTRIBUTION		
						<i>Bernard D. Wilder</i>				
						Title		Date Signed		
						Bernard D. Wilder A.I.D. Representative		MM DD YY 06 12 97		
								MM DD YY		

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LIST OF ABBREVIATIONS AND ACRONYMS

ABS	- Annual Budget Submission
ADB	- African Development Bank
AID	- Agency for International Development in Washington
AIDS	- Acquired Immuno-Deficiency Syndrome
ATP	- Agence Tchadienne de Presse
BEPC	- Brevet d'Etudes du Premier Cycle
BEF	- Bien-Etre Familial
BELACD	- Bureau d'Etudes et de Liaison d'Activite Caritative et de Développement
BSPE	- Bureau de la Statistique, de la Planification et des Etudes
CAFS	- Center for African Family Studies
CCSP	- Chad Child Survival Project
CDD	- Control of Diarrheal Diseases
CFAF	- Franc de Communauté Financière Africaine (equals 50 French Francs)
CM 2	- Cours Moyen 2
CNNTA	- Centre National de Nutrition et de Technologie Alimentaire
COP	- Chief of Party
CPR	- Contraceptive Prevalence Rate
CS	- Child Survival
CSIS	- Commission du Systeme d'Information Sanitaire
CYP	- Couple Years Protection
DAAF	- Direction des Affaires Financières, Administratives et Materielles
DFA	- Development Fund for Africa
DFPES	- Direction de Formation Professionnelle et de l'Education pour la Santé
DMD	- Dietary management of diarrhea
DMPSR	- Direction de la Médecine Preventive et de la Santé Rurale
DPLAM	- Direction des Pharmacies et des Laboratoires Medicaux d'Analyse
ENSPSS	- Ecole Nationale de Santé Publique et de Service Social
EDF	- European Development Fund
EOPS	- End of Project Status
EPI	- Expanded Program for Immunization
FAC	- Fonds d'Aide a la Cooperation (French Cooperation Agency)
FAO	- (United Nations) Food and Agriculture Organization
FED	- Fonds Europeen de Développement
FHI	- Family Health Initiatives
GDP	- Gross Domestic Product
GOC	- Government of Chad
HCF	- Health Care Financing
HIID	- Harvard Institute for International Development

- HIS - Health Information Systems
- IB - Infirmier(e) Brevetée
- IDE - Infirmier(e) Diplômée d'Etat
- IEC - Information, Education and Communication
- IMR - Infant Mortality Rate
- INTR... - (University of North Carolina Program for) International Training in Health
- IST - In-Service Training
- JHPIEGO - Johns Hopkins Program for International Education in Gynecology and Obstetrics
- JHU/PCS - Johns Hopkins University /Population Communication Services
- KAP - Knowledge - Attitude - Practice
- LOP - Life of Project
- LTTA - Long Term Technical Assistance
- MCH - Maternal and Child Health
- MPC - Médecin Chef de Préfecture
- MOPH - Ministry of Public Health
- MSAWW - Ministry of Social Affairs and Women's Welfare
- MSF - Médecins Sans Frontières(PVO)
- NGO - Non Governmental Organization
- NTT - National Training Team
- OB/GYN - Obstetrics and Gynecology (or specialist in this area)
- OFUNIR - Organization des Femmes de l'Union pour l'Indépendance et la Revolution
- ORS - Oral Rehydration Salts/Solution
- ORT - Oral Rehydration Therapy
- PACD - Project Assistance Completion Date
- PASP - Pharmacie d'Approvisionnement du Secteur Public
- PEV - Programme Elargi de Vaccination
- PHC - Primary Health Care
- PID - Project Identification Document
- PIO/C - Project Implementation Order/Commodities
- PMI - Protection Maternelle et Infantile
- PNIES - Programme National d'Information et d'Education pour la Santé
- PP - Project Paper
- PRICOR - Primary Health Care Operations Research
- PRITECH - Technologies for Primary Health Care
- PRO AG - Project Agreement
- PVO - Private Voluntary Organization
- RAPID - Resources for the Awareness of Population Impact on Development
- REACH - Resources for Child Health
- REDSO/ESA - Regional Economic Development Services Office/East and Southern Africa

- REDSO/WCA - Regional Economic Development Services Office/West and Central Africa
- RFP - Request for Proposal
- RNT - Radiodiffusion Nationale Tchadienne
- RR - Radio Rurale
- SFRMP - Sahel Financial Regional Management Project
- SMI/BEF - Santé maternelle et Infantile/Bien-Etre Familial
- SONASUT - Societe Nationale Sucriere du Tchad
- SOW - Scope of Work
- SPI - Sahel Population Initiatives
- ST/POP - A.I.D. Bureau for Science & Technology/Office of Population
- STT - Societe Tchadienne des Textiles
- STTA - Short Term Technical Assistance
- TA - Technical Assistance
- TOT - Training of Trainers
- UNAD - Union Nationale des Activites Diocesaines
- UNDP - United Nations Development Program
- UNFPA - United Nations Fund For Population Activities
- UNICEF - United Nations Children's Fund
- USAID - United States Agency for International Development, field offices
- VAT - Vaccination anti-tetanos(Tetanus Toxoid)
- WB - World Bank
- WHO - World Health Organization

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I. EXECUTIVE SUMMARY

The Chad Child Survival Project (CCSP) (Projet Santé Maternelle et Infantile/Bien-Etre Familial--SMI/BEF) is the first phase of a proposed ten-year program to develop the institutional capacity of the national SMI/BEF Unit at the MOPH and to improve the quality and increase the usage of an integrated package of SMI/BEF services at the préfecture level of Moyen-Chari and later Salamat (see attached map, Figure 1). It is the product of many months of collaboration between the Government of Chad (GOC) and USAID/N'Djamena. The Project takes into account the strategies of other donor organizations in Chad and consolidates many of the activities that were initiated by centrally and regionally-funded USAID projects.

I.A. Institution Building

The Project will establish a national SMI/BEF Unit, which will develop Chad's first national plan for an integrated maternal and child health/family well-being program. It will strengthen program elements at the national level that are critical to the success of the SMI/BEF program. These include:

1. health information systems (HIS);
2. population and family well-being policy and strategies;
3. curriculum development and training of trainers (TOT); and
4. IEC strategies and materials.

The Project will reinforce the capability of the Bureau de la Statistique, de la Planification et des Etudes (BSPE) to operate a national Health Information System for the MOPH and to add SMI/BEF data and analysis capability to the system. Expected achievements are to improve the BSPE management and technical ability to the point that long-term technical assistance can be phased out; to attain a level of 90 percent of health facilities reporting regularly; and to reach a level of 80 percent of SMI/BEF professional staff interpreting data from the HIS correctly.

The Project will facilitate the adoption of a national population policy and implementation of child spacing programs initially in the urban areas of N'Djamena and of the Moyen-Chari Préfecture. An expected achievement will be the development of a work plan that shows how the national policy will be implemented.

The Project will upgrade the skills of personnel from the Ministry of Public Health (MOPH) and the Ministry of Social Affairs and Women's Welfare (MSAWW) through the development and implementation of SMI/BEF curricula at the Ecole Nationale de Santé Publique et de Service Social (ENSPSS) and through the training of trainers. Expected achievements are:

- Two pre-service SMI/BEF curricula developed for ENSPSS;
- Two in-service training curricula developed for health and social workers covering SMI/BEF interventions; and
- The training team is continuing training without outside technical assistance.

The Project will improve the MOPH's capability to design, produce and distribute accurate and culturally relevant SMI/BEF information to well-identified audiences, using appropriate channels of communication, in order to increase the demand for services. Expected information, education and communication (IEC) achievements at the national level are: development of an IEC program to support SMI/BEF; the production of related audiovisual materials; and the development of an IEC pre-service module to teach health workers how to promote SMI/BEF interventions.

I.B. Service Delivery

Project service delivery activities will initially focus on three interventions:

- * the dietary management of diarrheal diseases and the prevention and treatment of dehydration through oral rehydration therapy (ORT);
- * the implementation of risk assessment and referral through prenatal care; and
- * the support and expansion of child-spacing services.

The delivery of the three targeted interventions in the field will provide feedback to the national SMI/BEF Unit to provide input to ameliorate the national program. The result will be a realistic and field-tested program for SMI/BEF service delivery for the entire country.

Expected achievements pertaining to ORT in the project area include:

- 75 percent of diarrheal cases presented to health facilities will receive effective diarrhea case management;
- 268,500 children with diarrhea correctly treated with ORT;
- 90 percent of project-trained health and social workers will be able to explain effective diarrhea case management correctly; and
- Of mothers who report children under 5 as having diarrhea during the last two weeks, 20 percent will have used ORT.

Prenatal care is an important avenue for reaching women of child bearing age with messages about family health. By heightening the visibility and increasing the availability of prenatal services, the CCSP will promote awareness and use of available SMI/BEF services, including ORT and child spacing.

Expected achievements in prenatal care in the project area are:

- 60 percent of pregnant women register for prenatal care (up from current level of 47 percent); and
- 30 percent of facilities are correctly assessing pregnant women for risk factors and are making the appropriate referrals for those at high risk.

Expected achievements in child spacing in the project area are:

- the contraceptive prevalence rate increases from less than 1 to 3 percent;
- 60 percent of women and 40 percent of men can name at least three advantages of child spacing; and
- 40 percent of women and 25 percent of men can name at least two modern contraceptive methods.

The CCSP will strengthen infrastructure and management support services for service delivery at the Préfecture level by upgrading 19 and equipping 30 health facilities and providing in-service training to 200 existing personnel. Information education and communication (IEC) activities will be designed to promote SMI/BEF interventions, and two IEC areas in the social centers of Moyen-Chari will be refurbished and equipped. It is expected that 60 percent of health facilities will be using some form of SMI/BEF teaching aid, that 90 percent of mothers will have heard about ORT, prenatal care and child spacing through project-sponsored IEC activities and that the radio station in Moyen-Chari will be broadcasting at least two features per week on aspects of SMI/BEF. It is expected that at least two supervisory visits per year to all health facilities will demonstrate that 60 percent of trained personnel are delivering SMI/BEF services correctly and providing accurate information to clients. Expected achievements in cost recovery are that five health facilities in the Moyen-Chari will have cost recovery systems under local management, which are recovering at least the full cost of drugs and medical supplies.

I.C. Project Inputs

The life of project funding will be \$8,643,450 of which \$8,500,000 will be provided by USAID. The Government of Chad will contribute 43,035,000 CFA francs (\$143,450) and in-kind services.

1. USAID Inputs:

The USAID inputs will assist the Government of Chad to plan, manage and strengthen delivery of SMI/BEF services at the central and préfecture levels. The CCSP will provide long and short-term technical assistance to assist the GOC in policy development; program planning, design and implementation; training and curriculum development; development of a health information system and a cost-recovery system. The long-term TA will include the following:

One senior MCH Specialist	54 months
One Préfecture MCH Coordinator	54 months
One Population Advisor	24 months
One Training Specialist	24 months
One ORT Advisor (local hire)	12 months
One HIS Specialist (local hire)	30 months
Two Accountants (local hire)	108 months

The budget components include the following:

a. Technical Assistance	4,275,000
Long-term (306 person months)	2,700,000
Short-term (63 person months)	1,575,000
b. Commodities	774,000
c. Training	883,000
Short-term, U.S. & third country (29 person months)	232,000
Study tours, Africa	75,000
In-country training	576,000
d. Other Direct Costs (including Operating Expenses):	1,188,000
e. Construction	680,000
f. Research & Studies	450,000
g. Evaluations & Audits	250,000
h. GRAND TOTAL	<u>\$8,500,000</u>

2. Chadian Inputs:

The Chadian Government plans to contribute staff, buildings (rent) and some operating costs of the total cost of Project. The total value of the Chadian contribution is 43,035,000 CFA francs (FCFA) which includes the following in-kind services:

a. Rental of building facilities	4,680,000 FCFA
b. Utilities	13,425,000 FCFA
c. Staff at national and préfecture SMI/BEF Units (total: 10)	9,180,000 FCFA
d. Operating costs of BSPE during years 4 and 5	<u>15,750,000 FCFA</u>
e. GRAND TOTAL	<u>43,035,000 FCFA</u>

II. PROJECT BACKGROUND

II.A. Country Setting

The Republic of Chad, with an area of about 500,000 square miles, is the largest of the four independent states that emerged from French Equatorial Africa. The northern half lies in the Sahara Desert. The remainder is divided between the marginally productive Sahelian zone and the agriculturally richer Sudanian zone. Chad's total population is relatively small considering its large area and is concentrated in the southern half of the country. Population estimates vary between 4.7 and 5.3 million; the Project Paper uses the assumption of 5.3 million in 1989.

Traditionally Chad has been a focal point for trans-Saharan and equatorial trade routes, but its economic development has been restricted by its landlocked location, harsh climate, lack of infrastructure and human resources and persistent internal and international conflict. As a consequence, Chad ranks as one of the world's poorest countries, with an estimated per capita income of less than \$125.

At the time of its independence in 1960, Chad was poorly prepared to initiate economic development. Its road network was underdeveloped. Education and health were at low levels of service. Its citizens had not gained sufficient experience in managing economic activity. Unfortunately, a series of internal and external conflicts, that followed independence and lasted to the present, have added to Chad's difficulties. The present government came to power in 1982, has consolidated its control and has unified most of the country. However, the potential for renewed conflict continues to exist.

In 1985 and 1986, Chad was forced to grapple with a major economic crisis when the world market price collapsed for cotton, historically its primary export. COTONTCHAD, the parastatal that controls cotton production in Chad, suffered even greater losses due to poor management. The company (and therefore the country) accumulated huge arrears to the domestic banking system. Recovery and repayment of these debts is not expected until the 1990s.

Nevertheless, Chad does have development potential. In the 1950s its economy expanded at an annual rate of two percent. During the 1960s and the 1970s the country was generally self-sufficient in food production. A multi-year drought in the early 1970's shrank average Gross Domestic Product (GDP) growth to less than one percent per year, and real GDP growth was negative during the 1979-82 civil war. GDP growth has varied in the period between 1982 and 1987, increasing with record cotton crops and favorable world prices in some years, decreasing with nationwide droughts and depressed cotton prices in other years. For 1988, cotton prices remained

depressed, but bumper cereal harvests led to a twelve percent increase in real GDP, according to World Bank reports.

1. The Child Survival Crisis in Chad

Maternal and infant mortality are at unacceptable levels in Chad. The infant mortality rate (IMR) for the age group 0 to 11 months is estimated at 134 per 1,000 live births*. In 1988 the maternal mortality rate at the Maternity Hospital in N'Djamena, one of a few such facilities in Chad, was 768 per 100,000 births, a rate unequalled by most third world countries. Over 1,000 cases of neonatal tetanus, a universally fatal disease, were reported by Chadian health facilities in 1987.**

Morbidity among children is high. For children under one year of age in 1987, diarrhea, cough and fever accounted for almost 60 percent of the complaints among the new cases*** of health problems reported to the Ministry of Health (MOPH). Diarrheal disease, including dysentery, accounted for a quarter of these new cases (Table II.A.), the most frequent health problem for infants, 0-11 months. This translates to an age- and symptom- specific rate of 200 cases of diarrhea/ dysentery per 1,000 infants under one year of age. Among reported infants with diarrheal disease, nine percent arrive at health centers with dehydration.

Cough of less than 15 days duration and fever are other leading health problems for infants as shown in Table II.A. Cough for less than 15 days generally indicates acute respiratory infection, some cases of which may be tuberculosis. Perhaps, half of those with fever have malaria.

* STATE OF THE WORLD'S CHILDREN 1988, UNICEF. A BSPE committee estimated the IMR at 210/1,000 for 1987.

** The figures in this section and other parts of the PP, unless otherwise noted, are from the Health Statistics Yearbook produced in December 1988 with AID funding by the Bureau of Statistics, Planning, and Studies (BSPE) of the Chadian Ministry of Public Health. These statistics are based on users of health services. Because many elements of the population lack access to health facilities and because only 85 percent of the existing health units have reported, the incidence of mortality and morbidity among the total population is underestimated. Regional differences and out-of-date census figures make it difficult to extend projections to the total population. (The last partial census was in 1964.)

*** Total number of new cases reported was 184,042 among the estimated 224,400 infants under one year of age.

TABLE II.A.: RATE AND FREQUENCY OF SYMPTOMS AMONG CHILDREN WHO CAME TO REPORTING HEALTH FACILITIES IN 1987

Condition	Estimated Rate per 1000 Infants under age 1	Proportion of New Cases Reported Among Infants under 1
Diarrhea & dysentery	200	24.4%
Cough (less than 15 days)	168	20.5%
Fever	112	13.6%

Only about 14 percent of infants are estimated to receive all three doses of diphtheria-pertussis-tetanus and polio vaccines by age one and measles vaccine coverage for this age group is estimated at only 16 percent. Substantial numbers of diseases preventable by immunization are occurring. Surveys by the National Center for Nutrition and Food Technology (CNNTA) have revealed that approximately 10 percent of the children under five are malnourished, as defined by less than 80 percent of the mean weight for height ratio. Malnutrition in conjunction with episodes of diarrhea is a major health problem nationwide since episodes of diarrhea result in weight loss and render the child more susceptible to the next bout of disease.

2 Constraints to Resolving the Crisis

Internal and external conflicts during the past 20 years have drastically reduced the capacity of the Chadian MOPH to deliver services. During the 1979 to 1982 civil war, many health facilities were destroyed, and the MOPH effectively ceased to exist. The present government in Chad established itself in 1982, initiated the return to civil order and reformed the MOPH. Since then, internal strife has diminished greatly, but efforts until recently have been dedicated to the struggle against Libya, thereby limiting the resources available to the health sector among others.

The world economic crisis of the 1980's has seriously affected Chad. The GOC is taking measures to improve the economy. In the short term it is implementing an IMF-approved structural adjustment program, which includes the development of new sources of tax revenue and the imposition of ceilings on government

expenditures. Together, expenditures for military outlays and civilian salaries account for 75 to 80 percent of total government expenditures. Despite the measures, the GOC will continue to rely heavily on donor support to maintain basic government services for at least the next ten years.

In 1987, MOPH expenditures accounted for slightly less than three percent of central government expenditures. In the MOPH, personnel costs have varied between 88 and 92 percent of the budget from 1985 to 1988. This leaves very little for operating expenses and nothing for investment. The Chadian government contribution to MOPH expenditures in 1987 amounted to \$2.4 million or \$0.44 per capita. Donors contributed an additional \$15.8 million, including all investment costs, i.e. 87 percent of total MOPH expenditures.

The country's health centers are few in number and poorly equipped. There are a total of 418 health facilities, of which 66% are managed by the public sector, 24% by religious groups and 10% by other private and parastatal organizations (such as COTONTCHAD). Equipment is in short supply and many facilities lack running water. Most do not have electricity nor any means of rapid communication, i.e. radio or telephone.

Health personnel are few, and substantial numbers of personnel are poorly trained. This problem occurs at all levels of the health system but is most acute at the periphery. Chad currently has only 137 physicians (of whom 53 are expatriates), 848 qualified nurses and 38 nurse midwives. This translates to 2.6 physicians and 16 qualified nurses per 100,000 inhabitants. There is one qualified midwife per 6,000 births.

Qualified health personnel are concentrated in N'Djamena and other urban areas, where less than 20% of the population live. Only 28 percent of physicians work in small urban or rural areas. Approximately a quarter of all qualified nurses and three quarters of the nurse midwives work in the N'Djamena area.

Many people working in the health system have not had adequate technical training. For example, of the 2,600 people employed as health professionals or technicians, only 55 percent have two or more years of professional training, while 39 percent have no professional training. Of those without professional training, less than half have the equivalent of a sixth grade education in the U.S. system. Only 23 percent of those occupying specialized health service positions have had training that qualifies them for the work.

The MOPH administrative system is poorly developed and executed. All recent evaluations of activities with the MOPH point out the lack of supervision and monitoring and the need for

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improved management. Until recently the MOPH did not have an accurate list of health facilities or health personnel. The MOPH was reorganized in 1986 and still is finding its way in managing relations between the regions and the central level, among directorates at the central level and with other ministries that deal with health matters such as the Ministry of Social Affairs and Women's Welfare (MSAWW). Donor programs often create project-specific management structures that are not well integrated into an overall MOPH program.

II.B. Other Donor Assistance

Virtually every major donor agency is present in Chad. These organizations often work within the same directorates or units in the MOPH and with the same Chadian counterparts. In this respect, a major objective of the Project will be to encourage coordination of donors in the health sector to avoid a duplication of international assistance.

Donor agencies are currently contributing 87 percent of total MOPH expenditures. As shown in Table II.B.1., donor agencies financed in 1988 the entire MOPH investment budget of 5.43 billion FCFA. Most of these resources were used to fund investments in the area of rural and primary health care as summarized in Table II.B.2. A survey of other donor assistance is provided below. A map showing the geographic distribution of donor assistance is in Figure II.B.

TABLE II.B.1.:

ANALYSIS OF MOPH INVESTMENT EXPENDITURES BY TYPE, 1987 AND 1988

Type of Expenditure	1987		1988	
	FCFA (millions)	% of Total	FCFA (millions)	% of Total
Rural and Primary				
Health	2,129.03	44.3%	2,302.53	44.4%
Hospital Sector	1,301.55	27.1%	1,480.36	27.2%
Central MOPH support	782.32	16.3%	1,269.68	23.4%
Schools and Training	547.07	11.4%	324.75	6.0%
Pharmacy System/Drugs	49.50	1.0%	22.20	0.4%
Other	0	0.0%	35.59	0.7%
TOTAL	4,809.47	100.0%	5,435.10	100.0%

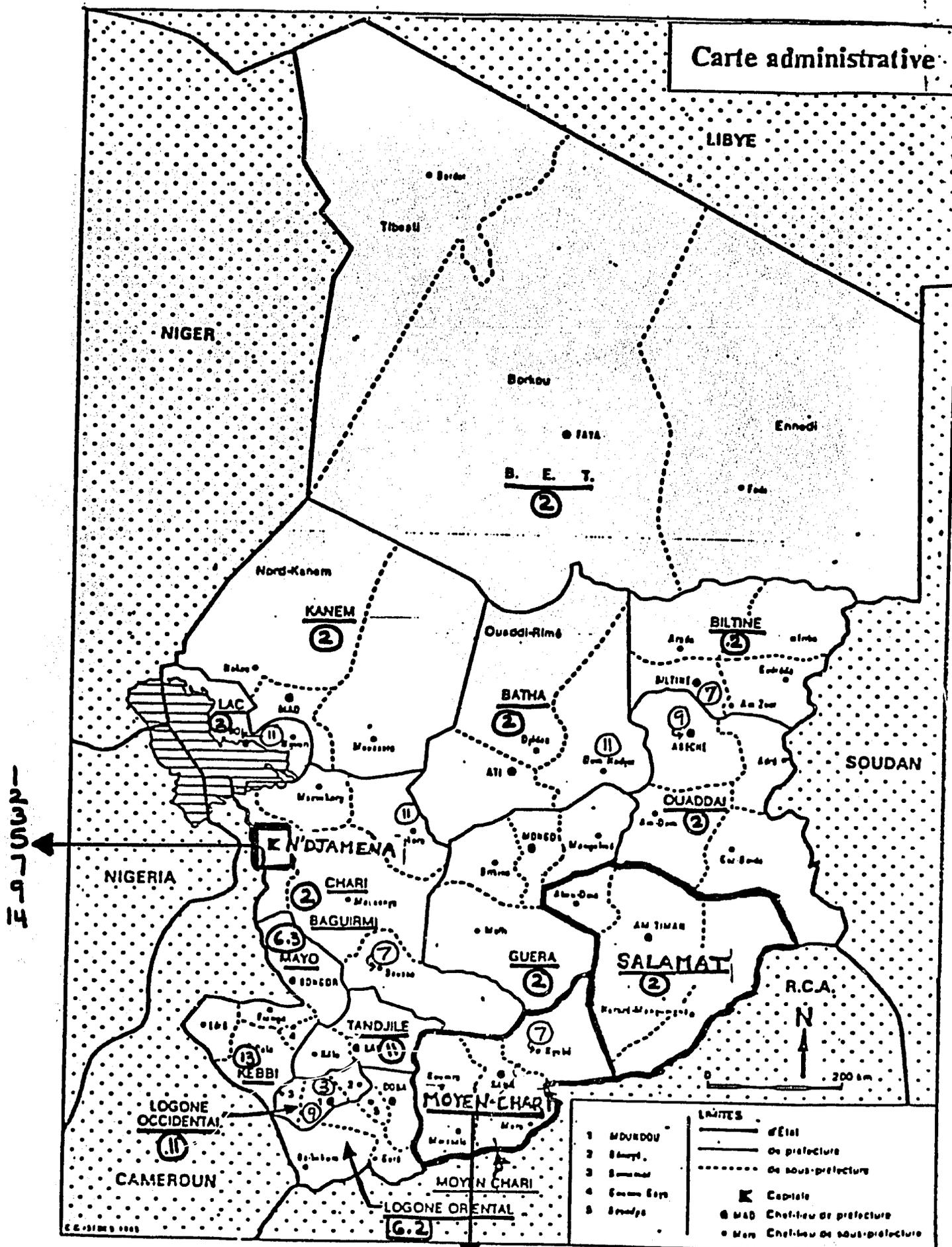
SOURCE: Budget General de l'Etat pour 1988, Tome III

TABLE II.B.2.: SUMMARY OF DONOR ASSISTANCE IN THE HEALTH SECTOR

DONORS	HEALTH INFRASTRUCTURE									GENERAL		CHILD SURVIVAL				MATERNAL HEALTH			
	HLTH PLAN	HIS	MNGT	LOG	ED	HCF	TRNG	CONS	OR	PHC	CURATIVE	H ₂ O	EPI	ORT	NUTR	HRB	PNC	MTY	CHSP
1.AFR DEV BANK	TA*		TA						X										
2.EUR DEV FUND (Med. Sans Frontieres)			X MED DIR	X	TA	TA	X	X											
3.FONDS D'AIDE A LA COOP.	TA		TA						X		TA								
4.German Aid (CARE)												X							
5.OXFAM												X							
6.PVO's										X	X							X	
7.SWISS TROP. INSTITUTE							X**				X							X**	
8.UNDP	X	X								X			X						
9.UNFPA							X	X	X		X						X	X	Conf
10.UNICEF							X**	X	X			TA	X	ORS	X				
11.WORLD BANK			X REG DIR	X	X	X	X	X										X	
12.WHO							TA**			TA			TA						
13.USAID AFRICARE		X		X	X		X	X	X				X						TA Conf

* TA = Long-term Technical Assistance. ** Assistance to ENSPSS.
 HLTH PLAN = Health Planning; HIS = Health Information System; MNGT = Management; LOG = Logistics; ED = Essential
 Drugs; HCF = Health Care Financing; TRNG = Training; CONS = Construction; OR = Operations Research; PHC = Pri-
 mary Health Care; H₂O = Water; EPI = Expanded Program of Immunization; ORT = Oral Rehydration Therapy; NUTR =
 Nutrition; HRB = High Risk Births; PNC = Prenatal Care; MTY = Maternity; CHSP = Child Spacing.

Figure II.B Geographic Distribution of Donor Assistance



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Figure II.B Geographic Distribution of Donor Assistance

1. AFRICAN DEVELOPMENT BANK: N'Djamena (MOPH), Country-Wide
2. EUROPEAN DEVELOPMENT FUND: N'Djamena (Hospital), 9 Sahel Prefectures
3. FONDS D'AIDE A LA COOPERATION (FRENCH GVT) N'Djamena, Moundou (Hospital)
4. GTZ/CARE: Moyen-Chari (Wells)
5. OXFAM: N'Djamena
6. CHURCH-RELATED GROUPS:
 - 6.1 BAHAI: Moyen-Chari
 - 6.2 BAPTIST: Moyen-Chari, Logone Oriental
 - 6.3 CATHOLIC: Moyen-chari, Mayo-Kebbi
7. SWISS TROPICAL INSTITUTE: N'Djamena (Hospital), Biltine, Kyabe, Bousso
8. UNDP: Country-wide
9. UNFPA: N'Djamena (Assiam Vamtou Center), Abeche, Moundou
10. UNICEF: Country-Wide
11. WORLD BANK: Prefectures of Logone Occidental, Tandjile; Sous-Prefectures of Oum-Hadjer, Bokoro, Bol Rural, Moundou Rural
12. WHO: Country-wide
13. MSF: Mayo-Kebbi
14. USAID: N'Djamena (MOPH), Moyen-Chari, Salamat

The African Development Bank (ADB) will provide a \$1.8 million loan, of which \$600,000 will finance a health sector study to serve as the basis for elaborating national health policies and programs. The remaining \$1.2 million will finance a general institution-building effort consisting of two long-term advisors (health planner and health administrator), training in planning and administration, operating costs, and equipment and supplies. The study began in the summer of 1989.

The European Development Fund (EDF), using Médecins Sans Frontières as the implementing agency, rehabilitated health facilities and restored health services in the Sahelian region. The Sixth EDF project is providing \$14 million over four years to strengthen general health services and the capabilities of the medical directors at the préfecture level in the nine Sahelian préfectures. The project provides a medical counterpart to the regional medical director, training for other directors and logistical support. This project is also assisting the Public Services Pharmacy Supply (PASP) to supply and distribute essential drugs and to introduce a cost-recovery system. Currently, the EDF project has several long-term technical advisors working in N'Djamena, including a health economist and a pharmacist. The health economist's responsibility is principally the preparation of background documents and discussion guides for the Chad Cost Recovery Commission that is exploring health financing issues.

French Cooperation (FAC) is providing technical assistance and operating funds to various health institutions, including a health planning advisor to the Minister of Health. FAC activities in the past have emphasized endemic disease control, such as of leprosy, and have funded doctor-administrators and provided general operational support. The FAC is reorienting its assistance in the health sector toward horizontal programs and will plan its future assistance according to gaps in the pattern of donor support. It has no plans for activities in child survival.

German aid is funding CARE's well project in Moyen-Chari. This activity emphasizes community participation and development. OXFAM is assisting in the development of water and sanitation in the N'Djamena area.

Private voluntary organizations (PVOs), including religious groups, play an important role in delivering health services in Chad. These organizations own or run about a third of the health facilities in the country and are implementing a number of primary health care programs. The MOPH has not always been well informed of these activities, but private organizations now participate in the health reporting system and in the Moyen-Chari, they participate regularly in the meetings of the Préfecture's Health Commission. Since no national policy exists for most interventions, the strategies followed by the private sector are not uniform and may not conform to those of the MOPH.

The Swiss Tropical Institute is providing support to the midwifery section of the National School of Public Health (ENSPSS), and the WHO is supporting other sections of the school. The Swiss Tropical Institute also finances clinical services in the Biltine préfecture and two other Sous-Préfectures.

The UNDP provided \$165,000 for the joint AID-UNDP-UNICEF Expanded Program of Immunization (EPI) that the MOPH implemented. The UNDP (\$100,000) and USAID (\$200,000) have funded, jointly, a one-year continuation of the Health Planning Restoration Project. The UNDP will contribute \$600,000 for a primary health care project that will deliver services in 4 health Sous-Préfectures (10 villages per Sous-Préfecture) over a two-year period. A WHO-financed doctor will furnish technical assistance for this activity.

UNFPA has contributed \$690,000 towards the Development of a National Family Health Service. This project funded the rehabilitation and operations of the Assiam Vamtou Center that was conceived as the headquarters for the "national" maternal and child health (MCH)/family well-being program* and a training and demonstration center. Child spacing was to be the main intervention, but MCH clinical services have been the focus in practice. The development of a national program, other than participation in the USAID-sponsored family well-being conference, has been somewhat neglected. UNFPA plans to support the center in the next 5-year phase of its program, which was scheduled to begin in mid-1989 but has been delayed. However, family well-being services will be concentrated in the Assiam Vamtou Center and other facilities in the N'Djamena area, though plans are to expand to Abeche and Moundou. WHO is the implementing agent for UNFPA activities.

UNICEF/Chad is funding the EPI and nutrition activities and is providing oral rehydration salts (ORS). It contributed \$2,209,391 to the EPI from 1986 through 1988. UNICEF plans to increase its yearly contribution to the EPI to approximately \$1,300,000 for the current and following programming periods. This level of funding should meet most of the program's operating costs and provide needed vaccines. However, it does not include substantial technical assistance. UNICEF supplied 223,000 ORS packets in February 1989 which will be followed by one million in July 1989 and has reserved \$40,000 for ORT training in 1989. The future support for a National Diarrheal Disease Control Program is not yet clear. UNICEF's nutrition program is just beginning. The CNNTA center has been rehabilitated, but its nutritional activities are not yet well identified. UNICEF is also providing

* Family well-being is the Chadian concept which includes child spacing and related maternal and family health issues.

assistance to ENSPSS and long term technical assistance (LTTA) in water and sanitation though the latter activities have not yet started.

Under the Social Effects of Adjustment Program, the World Bank (WB) is proposing to follow the EDF model in providing assistance to the Tandjilé Préfecture in the South. The WB is also proposing to restructure the network of primary health care and social services in N'Djamena and improve their coordination. This includes the renovation of four health or social centers and the construction, equipping and staffing of three integrated health-social centers and three dispensaries. Assistance will be provided for training, planning, community development, a limited cost-recovery program, essential drugs, and improving the referral program. The cost of these activities is estimated at \$7.6 million.

Several WHO activities were mentioned above. In addition, WHO is providing LTTA to the ENSPSS, to the EPI and to the UNDP PHC program.

In planning this project, USAID has taken other donor activities into consideration and has coordinated with other donors. The proposed project will not duplicate but will complement the child survival activities of the private sector, EDF, UNFPA, UNICEF, WHO and other donors. It will assist the MOPH to plan, manage and coordinate the implementation of child survival activities. The Project will in turn benefit from the WB, ADB and EDF's efforts to strengthen planning and management at the MOPH and introduce cost-recovery to sustain health programs.

II.C. Project Relation to Mission Strategy

The Africa Bureau of A.I.D. has developed a Child Survival Action Program in response to high rates of infant mortality, high fertility, endemic diseases, malnutrition, dehydration from diarrheal disease, inadequate water supplies, and low investments by African governments in health. The principal interventions of this program are ORT and immunization, but child spacing, breastfeeding, growth monitoring and related interventions are included in an integrated package. The Bureau's 1988 Child Survival Implementation Report states that these interventions are working. To improve the performance of ORT, the Africa Bureau will also emphasize dietary management of diarrheal disease and promotion of appropriate hygiene, sanitation and weaning practices.

The Primary Health Care Operations Research (PRICOR) Child Survival Report has stressed that the success of child survival programs depends on the timely availability of information to monitor and evaluate service delivery. An AID guidance cable emphasizes that child survival programs should include support for institutional development and complementary inputs. It also

states that child survival projects should run for 8 to 10 years to allow for the development of sustainable systems.

This Project was included in the Mission's ABS Program Rationale that was approved by AID/W in September 1988. The PID was approved in February 1989 at a planning level of \$6.5 million. In the design process, it became evident that \$2.0 million of additional resources were needed to adequately provide for a substantial training component recommended by the PID review team.

This project comprises the bulk of the Mission's activities in the basic human needs area. The Mission's involvement will be a long-term commitment (on the order of 10 years or more) that will consolidate many of the regional and central activities in the present portfolio. Selected activities have been initiated to provide a link between the Mission's health portfolio and this Child Survival Project. These activities are described below.

The Strengthening Development Ministries Program (677-0052), a series of cash transfers, has provided budgetary support to pay salaries of GOC employees working in development-related ministries including the MOPH. At present, records indicate that 752 MOPH employees in N'Djamena and 1908 MOPH employees in provinces (préfectures) are eligible for U.S. budget support. It is envisioned that due to the inability of the GOC to finance basic government services, these cash grants will continue for the next several years.

USAID-sponsored activities in health planning and information systems under the Health Planning and Restoration Activity (677-0041.8) have established the capacity of the MOPH's Bureau of Statistics, Planning and Studies (BSPE) to collect, store and analyze routine health information as a tool for rational health planning and management at the central and provincial levels. This \$2 million activity was extended from December 31, 1988 to October 31, 1989 with additional financing from the Mission and the UNDP.

Africare, through a \$ 350,000 cooperative agreement with USAID, has undertaken training and an education campaign to promote oral rehydration therapy. This Project, which has been implemented in conjunction with the MOPH, ended March 31, 1989. An evaluation completed in April 1988 recommended additional training in ORT for health workers, more supervision, and a different approach to communications efforts.

USAID has assisted the MOPH to initiate a family well-being program with funding from central and regional sources. Coordinated by a population advisor funded through the Sahel Population Initiatives Project, activities have focused on needed legal changes, policy formulation, data collection, training, information, education and communication. Family Planning International Assistance, the Pathfinder Fund, the Bureau of the Census, the Johns Hopkins University/Population Communications

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Services, Columbia University, the Options Project, the Johns Hopkins Program for International Education in Gynecology and Obstetrics and the Program for International Training in Health (INTRAH) have all implemented activities in Chad during the last two years.

The October Family Well-Being Conference brought together representatives from the Chadian government, political and religious groups, other countries and international organizations who participated in developing the objectives of a family well-being program in Chad. These activities have succeeded in creating a demand for family well-being services in the capital. Progress has been made toward changing the contraceptives law, but further work is needed to assure that the new law, which has been approved by the Ministry of Justice, is signed and that a program to deliver services is developed and implemented.

In conjunction with the UNDP and the World Health Organization (WHO), A.I.D. has provided funding (\$1,123,000) from the Africa Child Survival Fund for the EPI. This activity, whose funding ended in February 1989, was recently evaluated, and several accomplishments were cited, such as a functioning cold chain, a means of transport and some trained personnel. However, evaluators were unable to verify whether the program had met its goal of 40 percent coverage. Problems included a general lack of planning, management and supervision as well as an unclear delineation of responsibility between the program heads at the intermediate level. In view of UNICEF's plans to increase funding for this program, USAID will discontinue its support for the EPI although coordination will continue under the CCSP.

A.I.D. has assisted the Chad AIDS program through funds provided to the WHO for training and for the purchase of condoms. It is believed that some central funds will continue to support the AIDS program in Chad. Though the threat of AIDS is important, currently it is not affecting a major percentage of the Chadian population, (estimated prevalence among high risk groups is 1-2 percent).

Under the now completed Relief and Rehabilitation Project, USAID provided basic medicines and medical supplies to the National Pharmacy for distribution through Chad. The project also financed technical assistance to establish inventory control procedures, inland transportation of commodities, and reconstruction of a pharmacy warehouse, as well as pilot cost recovery activities with five health facilities.

II.D. Chadian Response to Child Survival

Given the short time that has elapsed since reconstruction of the country began, the GOC is still elaborating a systematic

approach to development but has some preliminary plans that indicate priorities. Sectoral development plans are just emerging, and the health sector is no exception.

Leaders in the MOPH are receptive to a child survival project. They are cognizant of the importance of maternal and child health as evidenced by the following MOPH health objectives:

- Improve the quality of life and health status of Chadians by reducing maternal and infant mortality by half by the year 2000; and
- Expand health coverage to the entire population in the long term, concentrating on women of reproductive age and children under five years of age.

Although there is agreement at the level of objectives, a consensus does not exist on the means of reaching the objectives. Because many MOPH divisions are understaffed, a committee approach has been used in which members from different departments are appointed to participate, sometimes with representatives from different ministries. When these committees have had a clearly defined purpose, they have been successful in formulating policies and approaches to problems. For example, a national committee on immunization defined national policy in this area and produced a program guide. A commission on health information developed indicators that the BSPE uses in the health information system.

An interministerial committee on family well-being was established as a result of the October 1988 family well-being conference. Commissions on maternal mortality and on cost recovery also have recently been set up to review issues and to plan programs in their respective sectors. These commissions serve to formulate policies and to build consensus for programs at the national level; implementation is left to donors and the MOPH divisions.

The MOPH produced a document in August 1986 entitled PROGRAMME NATIONAL DE SANTE MATERNELLE ET INFANTILE ET BIEN-ETRE FAMILIAL, (SMI/BEF) (National Program for Maternal and Child Health and Family Well-Being). This document defined concepts and provided guidelines as to how a national program would be implemented. It includes objectives and states a commitment on the part of the GOC to primary health care and SMI/BEF. However, few of the activities mentioned have been realized. The national SMI/BEF Service created in March 1984 has only run the Assiam Vamtou Demonstration Center in the N'Djamena area as described earlier and has not developed a national program. Thus, although a commitment exists, the MOPH needs additional resources to turn their commitment into a program.

III. PROJECT DESCRIPTION

The Chad Child Survival Project (CCSP) (Projet Santé Maternelle et Infantile/Bien-Etre Familial--SMI/BEF) is the first phase of a proposed ten-year program to develop the institutional capacity of the national SMI/BEF Unit at the MOPH and to improve the quality and increase the usage of an integrated package of SMI/BEF services at the préfecture level. The content of this Project Paper is the product of many months of collaboration between the GOC and USAID/N'Djamena. The Project takes into account the strategies of other donor organizations in Chad and consolidates many of the activities that were initiated by centrally and regionally-funded USAID projects.

The Project will establish a national SMI/BEF Unit, which will develop Chad's first national plan for an integrated maternal and child health/family well-being program. The Unit will coordinate SMI/BEF-related donor assistance to the MOPH on a continuing basis to assure that donor programs are in harmony with Chadian goals and objectives. Once operational, the Unit will revise and update the national SMI/BEF program on a regular basis.

While taking into account the whole range of health and social needs of infants, children and their mothers, Project service delivery activities will initially focus on three interventions:

- * The dietary management of diarrheal diseases (DMD) and the prevention and treatment of dehydration through oral rehydration therapy (ORT),
- * The implementation of risk assessment and referral through prenatal care and
- * The support and expansion of child-spacing services.

The strategy of promoting three specific interventions through health education and building the infrastructure to sustain them is feasible and timely in view of the national efforts being undertaken at present. Considering the shortage of personnel (especially in rural areas), their modest capabilities (because of lack of training) and extensive logistical problems, the Project has kept targeted interventions few in number and as simple as possible.

III.A. Project Goal

The Project Goal is to improve the quality of life and health status of Chadian infants, children and women of child-bearing age.

The Project is designed to reduce infant, child and maternal mortality and morbidity in Chad. Project service delivery activities will be initially targeted to the Moyen-Chari Préfecture, one of the most populated areas of Chad containing approximately 12 percent of the population; later on, the Project activities will extend into the Salamat Préfecture, a larger but

less populated region with even more severe health problems.

Project interventions are unlikely to influence national mortality rates significantly within the first five years given the small target area and time required to effect change.* Nevertheless, through the Project's research activities and health information system, data will be collected to measure changes in morbidity and mortality at the préfecture level. (See Annex on Economic Analysis for some preliminary estimates of the Project's impact on these indicators.)

III.B. Project Purpose

The purpose of the Project is to develop the institutional capacity of the national SMI/BEF Unit at the MOPH and to improve the quality and increase the usage of an integrated package of SMI/BEF services initially in the Moyen-Chari Préfecture and then in the Salamat Préfecture.

The Project will provide assistance at two levels: institution building at the central level in N'Djamena and upgrading service delivery, first in the Moyen-Chari Préfecture and eventually also in the Salamat Préfecture. The first phase of the Project will seek to produce results that can be replicated elsewhere in the country by another donor or under a phase II project.

III.C. Project Strategy

1. National SMI/BEF Program

The Project will create a national SMI/BEF Unit to formulate a national SMI/BEF program as well as to support and monitor service delivery.

This unit will plan and coordinate national SMI/BEF activities. It will work with high-level commissions on maternal mortality, cost recovery and the reactivated SMI/BEF commission which will finalize policy related to Chad's first integrated national plan for a maternal and child health and family well-being program.

Program elements that the National SMI/BEF Unit will need to address in the national plan include the following:

- task analyses of current health worker activities,
- services to be provided for each type of SMI/BEF

* GOC Goal = 50% decrease in IMR. If Project achieves 50% decrease X 12% population X half the facilities in Moyen-Chari = 3% decrease of national rates at the maximum.

- intervention,
- manpower needs and job descriptions for staffing facilities and programs,
- supervisory mechanisms,
- standards for quality and efficiency of health care service delivery,
- guidelines for service delivery of each SMI/BEF intervention,
- appropriate information, education and communication (IEC) strategies and materials,
- curricula for pre- and in-service training of health and allied-health personnel,
- critical indicators for monitoring and evaluating achievement of program objectives and modifications to the health information system to track these indicators and
- lists of standard equipment and supplies needed for service delivery at various levels.

The Unit will implement the national SMI/BEF program according to the plan. Based on evaluations, this Unit will revise and update the national SMI/BEF program on a regular basis.

A steering committee consisting of key figures from the MOPH and the Ministry of Social Affairs and Women's Welfare (MSAWW) will guide the activities of this Unit. This will enable it to meet its challenge of formalizing working relationships with other units of the MOPH and other ministries that are involved in similar or overlapping activities. Examples of issues to be addressed include: defining the role of MSAWW in implementing SMI/BEF activities; coordinating with the EPI to assure that tetanus vaccinations are provided to pregnant women; and determining how to incorporate the proposed national ORT program with other SMI/BEF interventions into an integrated program.

A unit chief will head the SMI/BEF Unit, which will initially be staffed with three program officers, an administrator and one secretary plus a Project-funded accountant. At least four offices on the central MOPH compound will be refurbished to house the staff. Section IV.B. which follows, discusses Project financing and staffing in greater detail.

The Project will provide a long-term senior health planner to be the counterpart of the unit chief. This consultant will assist the MOPH to establish the SMI/BEF Unit and promulgate the first national program. The senior health planner will work closely with the Unit chief to draft the first SMI/BEF plan and develop linkages with other MOPH Units and outside agencies. Together, the Project technical advisor and the SMI/BEF Unit chief will supervise the three program officers, who will develop service delivery guidelines, standards for staffing and equipping facilities, reporting indicators and other elements of the

national program. The administrator, accountant and secretary will provide support services to the SMI/BEF Unit.

In summary, expected achievements of this element are as follows:

- establishment of the independent SMI/BEF Unit in the MOPH;
- development of a national SMI/BEF plan with the support of interministerial commissions; and
- planning, setup and management of the national SMI/BEF program.

The Project will strengthen four program elements at the national level that are critical to the success of the SMI/BEF program. Each of these is discussed in further detail below.

a. Health Information System

The Project will reinforce the capability of the Bureau de la Statistique, de la Planification et des Etudes to operate a national Health Information System (HIS) for the MOPH and to add SMI/BEF data and analysis capability to the system.

The BSPE, which reports to the Director General of the MOPH, is mandated to collect and analyze health data; assist the Director General to plan health activities; and develop, plan and carry out national projects and studies. Although the BSPE is one of the best-funded and most visible units within the MOPH, its success is due in large part to outside assistance provided through the USAID-funded Health Restoration Planning Project and managed by Harvard Institute for International Development (HIID).

The USAID-funded Health Restoration Planning Project has for three years supported the implementation of the nationwide health information system by training health personnel and developing a computerized data management system in the BSPE. Currently, 84 percent of the health facilities in the country are participating in the system and sending in reports regularly. The culmination of this institution-building effort was the publication in November 1988 of a Statistical Yearbook for Health, the first of its kind since 1977.

Despite the BSPE's achievements, it continues to require outside financing for recurrent costs and outside technical assistance to keep the health information system functioning smoothly. The SMI/BEF Project will continue to support the BSPE with 2.5 years of technical assistance from a locally-hired HIS specialist. This advisor will continue the work initiated by the Health Restoration Planning Project and ensure the necessary training and transfer of know-how to Chadian counterparts so that long-term technical assistance to the BSPE can eventually be phased out. This advisor will help to develop SMI/BEF indicators for the HIS and will assure a free flow of information with the

SMI/BEF unit. This advisor will also assist the BSPE to develop indicators on the population's use of child spacing services. At the same time, the Project will continue to train health workers to collect health service statistics.

A major activity of the BSPE will be the CCSP baseline survey that will more completely inventory the state of health facilities and their equipment needs in the Moyen-Chari, obtain information on the KAP of health workers and the mothers who seek SMI/BEF services. It will include a population survey to show trends in the IMR in the project area.

The CCSP will continue to support the BSPE's operating budget of approximately \$100,000 per year but on a declining basis. The operating budget pays for training, supplies, printing and supervision costs, etc. The Project will support 100 percent of these expenses for three years. At the beginning of the fourth year, the MOPH and other donors will assume an increasing portion of these costs.

Expected achievements of the CCSP in this area follow:

- The BSPE management and technical ability improved to the point that long-term technical assistance can be phased out;
- 90 percent of health facilities nationwide reporting regularly;
- Indicators on SMI/BEF and cost recovery in use;
- BSPE continually producing statistical yearbook but with SMI/BEF and cost recovery data added;
- 70 percent of project-trained health personnel reporting health information correctly; and
- 80 percent of SMI/BEF professional staff are interpreting data from the HIS correctly.

b. Population and Family Well-Being

The Project will facilitate the adoption of a national population policy and implementation of family well-being programs.

In the Chadian context, family well-being refers to child spacing and related maternal and family health issues. The GOC has embraced child spacing as an essential element of maternal and child health. This concept is basically having the number of children that the family is capable of supporting.

Chad's population growth rate of 2.3 percent is less than the average for other African countries only because of its high mortality rate. This situation may soon begin to change, however, as Chad enters the so called "second phase" of demographic transition, where improvements in the health sector cause the mortality rate to decrease. Although lowering the population growth rate is not the foundation of the government's family

well-being program, key officials are aware of the potentially adverse economic consequences of a high growth rate.

The Mission will fund the first year of services of a Population Advisor to be based in N'Djamena beginning in August 1989 through the regional Family Health Initiatives (FHI) II Project. The second, and possibly a third, year will be funded under the CCSP.

The Population Advisor (PA) will rally the support of decision makers, political and religious leaders in the development of a national family well-being policy. This advisor will help organize awareness-raising efforts, including conferences and workshops, necessary to ensure the support of these influential people.

The PA will work with the SMI/BEF Unit, which will have responsibility for developing the national BEF program. (S)He will work with other MOPH staff and donor organizations (such as the UNFPA) in monitoring the first BEF activities that have begun in N'Djamena with the assistance of A.I.D. centrally-funded cooperating agencies. The PA will also help launch interventions in the Moyen-Chari and Salamat Préfectures and formulate a national family well-being program.

Expected achievements in family well-being at the national level are the formulation and approval of a national policy and the development of a work plan that shows how the policy will be implemented.

c. Curriculum Development and Training of Trainers

The Project will upgrade the skills of personnel from the MOPH and the MSAW through the development and implementation of SMI/BEF curricula at the Ecole Nationale de Santé Publique et de Service Social (ENSPSS) and in-service training, and through the training of trainers (TOT).

The CCSP will provide resources to design an integrated SMI/BEF curricula for the two levels of students attending the ENSPSS. Existing pre-service curricula are incomplete and lack sufficient practical instruction. To address this situation, the Project will provide a training advisor for two years, who will be a specialist in curriculum development and training in maternal and child health. Organizationally the training advisor will be located in the SMI/BEF Unit but will support the ENSPSS and the national and regional in-service training efforts.

The CCSP will form two training teams, one at the Moyen-Chari préfecture and one at the national level, capable of conducting in-service training on SMI/BEF by the end of the project. First, the training advisor will put together a curriculum for TOT and

will implement a TOT program for selected candidates drawn from units of the MOPH and the MSAWW at both the national and the Moyen-Chari levels, and the ENSPSS. The result will be a Moyen-Chari Training Team of eleven and a National Training Team of seven. At first, the Project will provide outside trainers to assist the training teams in conducting in-service training, but technical assistance will be phased out as the Chadian trainers gain the competence and confidence necessary to handle the responsibilities themselves.

Expected achievements are the following:

- two pre-service SMI/BEF curricula developed for ENSPSS;
- two in-service training curriculum developed for health and social workers in IEC, ORT and DMD, and BEF;
- the Moyen-Chari training team and the NTT is continuing training without outside technical assistance; and
- 200 health and social workers have received in-service training.

d. Information, Education and Communication (IEC)

The Project will improve the MOPH's capability to design, produce and distribute accurate and culturally relevant SMI/BEF information to well-identified audiences, using appropriate channels of communication to increase the demand for services.

The SMI/BEF unit within the MOPH will need assistance to carry out the IEC activities necessary for the successful implementation of the SMI/BEF national program. The Direction de la Formation Professionnelle et de L'Education pour la Santé (DFPES), the MOPH's training and health education directorate, does not have the resources to provide this support nor the means to hire additional IEC staff. The MOPH does however have IEC antennae in all its directorates. The CCSP will encourage pooling these IEC personnel, which can be achieved without any reorganization; it simply involves making people available for Project interventions on an ad hoc basis.

First, the CCSP will promote and formalize a working relationship among the different ministries and organizations involved in IEC work through the establishment of a national interministerial IEC committee which is a subcommittee of the National SMI/BEF Commission to oversee the design and implementation of IEC strategies. Secondly, the CCSP will supply basic equipment and materials that the MOPH must have in order to carry out IEC health activities. Thirdly, the CCSP will train suitable candidates from the MOPH and related ministries in management and implementation at regional workshops conducted by institutions such as the Centre for African Family Studies. Fourthly, the CCSP will develop the MOPH's knowledge and

understanding of target audiences in the designated préfectures through applied ethnographic research, Knowledge/Attitudes/Practices (KAP) studies and focus group discussions.

Expected IEC achievements at the national level are the following:

- development of an IEC program to support SMI/BEF;
- development of an IEC pre-service curriculum for ENSPSS;
- constitution of an interministerial IEC subcommittee for health that is holding regular meetings; and
- production of materials, such as videoclips on sexual responsibility, posters, leaflets, outdoor clinic signs, banners for the awareness campaign and a national logo.

2. Service Delivery

No program is a success until translated into actual services delivered to the people who need them most. The CCSP will, therefore, assist the GOC in implementing an effective service-delivery program for maternal and child health and family well-being services first in the Moyen- Chari and then in Salamat Préfectures. The delivery of the three targeted interventions in the field will provide feedback to the national SMI/BEF Unit concerning possible pitfalls or inconsistencies in the design of the national SMI/BEF program. In an iterative fashion, the SMI/BEF Unit will draw on this experience to continually modify and perfect the national program. The result will be a realistic and field-tested program for SMI/BEF service delivery for the entire country.

The Project will provide the long-term technical assistance of a Préfecture MCH Coordinator to be the counterpart of the Chadian SMI/BEF Chief(s) in the Moyen-Chari. The Préfecture MCH Coordinator will work with the Chadian SMI/BEF Coordinators to oversee the establishment of management and support systems to coordinate SMI/BEF activities of the MOPH and the MSAWW in the field.

The Project's strategy in targeting three specific health interventions is described below.

a. Oral Rehydration Therapy

ORT is an effective tool to prevent and treat the dehydration that complicates diarrheal disease. Increased attention to dietary management of disease (DMD), an integral component of ORT, is needed to minimize the weight loss that often results from diarrhea. The Project will provide short-term TA to assist in the implementation of the ORT/DMD program, to train personnel, and to establish ORT centers and corners in health facilities in the Project area. The MOPH will benefit from lessons learned in the

initial implementation of the ORT program in the target préfectures, before expanding nationwide.

While ORT is a treatment for diarrheal disease and can prevent deaths due to dehydration, other interventions are needed to address the causes of diarrheal disease and reduce related morbidity. ORT and DMD will be the first steps in what will become a comprehensive diarrheal disease control program that will include related interventions, such as expanded nutrition counselling, promotion of breastfeeding, as well as education about sanitation, personal and food hygiene and safe water. Given the existing infrastructure and available resources, it is not possible to launch such an ambitious package of interventions initially.

Expected achievements pertaining to ORT in the project area include the following:

- 75 percent of diarrheal cases presented to health facilities will receive effective diarrhea case management;
- 268,500 children with diarrhea correctly treated with ORT at the health facility and at home;
- 90 percent of project-trained health and social workers will be able to explain effective diarrhea case management correctly;
- 60 percent of mothers and other child caretakers will be able list the components of effective case management of diarrhea and explain how to practice ORT; and
- Of mothers who report children under 5 as having diarrhea during the previous two weeks, 20 percent will have used ORT.

b. Family Well-Being

b.1 Prenatal Care

While primary health facilities in the Project areas already offer prenatal care services, service delivery is inconsistent and the quality of services is unsatisfactory. As a result, health providers are unable to identify and properly care for high risk pregnancies. Service quality and consistency must be upgraded before prenatal care services can be effective. In this respect, the CCSP will emphasize early identification and care of high risk pregnancies, identification of women inadequately protected against tetanus and the benefits of attended births and child spacing in promoting maternal health.

In addition, prenatal care is one of the most important avenues for reaching women of child bearing age with messages about family health and well-being. By heightening the visibility and increasing the availability of prenatal care services, the CCSP will promote awareness and use of available SMI/BEF services,

including ORT and child spacing.

Expected achievements in prenatal care in the project area are the following:

- 60 percent of pregnant women register for prenatal care (up from current level of 47 percent);
- 30 percent of facilities are correctly assessing pregnant women for risk factors and are making the appropriate referrals for those at high risk; and
- Overall utilization of health facilities by pregnant women increases by 10 percent.

b.2 Child Spacing

The CCSP will continue to support and monitor the service delivery activities that have already begun in a number of health facilities in N'Djamena. Promotional programs that target men will also be developed.

In the target préfectures, the Project will introduce family well-being activities as a part of integrated SMI/BEF service delivery. This delivery strategy will at first be targeted to urban dwellers and will then provide outreach to rural areas. Since family well-being is a new and sensitive health intervention, the Project will proceed carefully and conduct operations research to determine the most effective and culturally relevant information and service delivery approaches.

Expected achievements in child spacing in the project area are the following:

- The contraceptive prevalence rate increases from less than 1 to 3 percent;
- 5 health and social centers in the Moyen-Chari and 8 health and 7 social centers in N'Djamena are offering child spacing services and information;
- 40 percent of women and 25 percent of men can name at least two modern contraceptive methods;
- 30 percent of women can correctly explain use of at least one contraceptive method; and
- 60 percent of women and 40 percent of men can name at least three advantages of child spacing.

c. Support Structure

The CCSP will strengthen infrastructure and management support services for service delivery at the Préfecture level. The Project will:

- upgrade, rehabilitate and equip selected health facilities,
- provide in-service training to existing personnel,

- develop IEC activities,
- develop supervisory systems and
- promote cost recovery at the local level.

c.1 Upgrading and Rehabilitating Facilities

The dilapidated state of many of the country's health facilities seriously constrains effective health services delivery in Chad. Lack of basic equipment and supplies in most facilities is hindering personnel from accomplishing even basic tasks. If the Project is to meet its service delivery objectives, facilities in the target area must be structurally sound, have an adequate supply of basic equipment and have access to a regular supply of essential drugs and contraceptive products.

The Project will rehabilitate and equip a SMI/BEF demonstration center and a training center in Sarh, the capital of the Moyen-Chari Préfecture, as well as a SMI/BEF Demonstration Center in Koumra, the seat of the Koumra Sous-Préfecture. The possibility of developing a satellite training center in Koumra will be explored during Project implementation. The CCSP will also rehabilitate and equip one SMI/BEF demonstration center in the Salamat Préfecture. In addition, an IEC education area will be refurbished and equipped for the two social centers in Sarh and Koumra in the Moyen-Chari.

The Project will upgrade approximately 15 to 20 dispensaries or social centers and provide essential equipment and supplies for approximately 30 MOPH and MSAWW facilities in the target area.

Out of the total of 72 health facilities in the Moyen-Chari 30 are in the public sector. The private centers run by various religious orders are in adequate condition. The Project will rehabilitate the public sector units that, according to a recent BSPE survey, need repair and are participating in the Project interventions.

c.2 In-service Training

Effective service delivery is not possible without trained personnel. In the Moyen-Chari Préfecture, close to 50 percent of health personnel have less than two years of technical training and will require intensive in-service training in order to acquire the necessary skills and knowledge to use new equipment and deliver the targeted health interventions.

Drawing on the resources of the Moyen-Chari Training Team, the Project will train approximately 200 health and social service personnel during the life of Project. (Non-qualified health personnel [Table VII.A.3] and social workers in the Moyen-Chari total approximately 250; thus 200 is a conservative estimate which could be exceeded if all workers in the Moyen-Chari and some in

the Salamat are trained.) Two to three persons from the target area's 30 peripheral participating health facilities, two SMI/BEF Demonstration Centers and two social centers in the Moyen-Chari and one SMI/BEF Demonstration Center in the Salamat will be trained. A phased approach will be used to introduce technical skills in ORT, prenatal care, child spacing, as well as techniques for effective communication with clients. As a follow-up to initial in-service training, refresher training will also be provided on a regular basis, especially through supervisory visits.

Expected training achievements in the target area are the following:

- Approximately 200 health and social workers will have received in-service and refresher training in SMI/BEF and
- At least 60 percent of participants will receive a mark of 60 percent or better.

c.3 IEC Activities

IEC activities will include a field campaign in the Project's designated areas. The visual aids, support materials, publicity and training will be designed to increase demand for SMI/BEF services. As a result of Project interventions, midwives, nurses, social workers and their collaborators from the mass media will work together to provide clients more accurate, convincing and entertaining information on family health issues. Radio programming will reinforce the interpersonal communications activities of field workers. As part of the training, health units and even individual field workers will be encouraged to design their own IEC plans.

Based on the experience gained during the first phase of field implementation, the Project will explore the possibility of systematic community outreach campaigns as a future direction for IEC activities.

Expected IEC achievements in the project area are the following:

- 60 percent of health facilities are using some form of SMI/BEF teaching aid;
- 90 percent of mothers will have heard about ORT, prenatal care and child spacing through project-sponsored IEC activities;
- 75 percent of mothers will have received an ORT reminder leaflet;
- 50 percent of mothers will have participated in face-to-face ORT, prenatal care and child spacing education;
- SMI/BEF leaflets and posters will be available at 80 percent of the health and social service facilities; and
- The Sahr radio station will be broadcasting at least two features per week on aspects of SMI/BEF;

c.4 Supervision

The Project will establish a regular supervisory system to reinforce the link between the Préfecture offices and activities in the field. Two supervisors will be trained to conduct supervisory visits and to evaluate health worker performance. This will provide an opportunity to field-test the supervision protocols developed during the TOT. The Project will provide two vehicles and two motorcycles and adequate fuel allowance to support these activities in the Moyen-Chari. Possible collaboration with the United States Peace Corps to provide counterparts for the SMI/BEF field supervisors will be investigated as a way of further reinforcing supervisory skills and procedures.

Expected achievements in supervision include the following:

- Préfecture SMI/BEF office will be conducting at least two monitoring visits per year to all health facilities; and
- Visits will demonstrate that 60 percent of trained personnel are delivering SMI/BEF services correctly and providing accurate information to clients.

c.5 Cost Recovery

The project will provide short-term TA to promote sustainable health delivery systems at the national and préfecture levels. At the national level, the CCSP will assist the Cost-Recovery Commission, which was established in early 1989, to formulate plans for cost-recovery programs. In addition, the Project will host a national seminar for Chadian health professionals and the donor community to demonstrate how pricing models can assist in making pricing policy decisions at the local level.

At the Préfecture level, the Project will study the cost recovery system of the village pharmacies developed by the Catholic Mission in Moyen-Chari. Then the CCSP will develop and will implement a pilot cost-recovery program based on the sale of essential drugs in five health units. Operations research activities will develop procedures to establish and monitor prices (including an appropriate price for contraceptives which are currently given free of charge in N'Djamena clinics) and procedures for fee collection and financial control. The Project will hire a local financial specialist to oversee cost recovery activities and assure that the pilot centers have start-up essential drug kits and contraceptives and an adequate system to collect fees, to control funds and materials, and to reorder drugs and contraceptives.

The expected achievement in cost recovery is that five health facilities in the Moyen-Chari will have cost recovery systems

that, under local management, are recovering at least the full cost of drugs and medical supplies.

In the midterm evaluation, the possibility of placing a long-term health financing technical advisor in Chad for Phase II will be assessed. A technical advisor could provide strategic guidance to the GOC in considering how to move beyond user fee systems to adopting other health financing strategies such as risk-sharing arrangements, privatization, and improved resource allocation and cost containment in the hospital sector.

III.D. Project Beneficiaries

Several groups will benefit from the CCSP.

The first group consists of MOPH staff who are assigned to work in the SMI/BEP national unit and at the préfecture level. This includes the national SMI/BEP Unit Head, three central level program officers for planning and field monitoring, two préfecture level coordinators for service delivery and training, two SMI/BEP field trainer/supervisors at the préfecture level, and two support staff responsible for administration and logistics, one at the central and one at the préfecture level. These Chadian civil servants will receive on-the-job training in management functions (planning, supervision, monitoring and evaluation, financial management) and technical skills (ORT, prenatal care and child spacing interventions).

Secondly, approximately 200 health and social workers and trainers will benefit from in-service training in delivery of target interventions and IEC strategies. These workers will also receive IEC materials and other essential equipment and supplies to help them perform their duties. Approximately 18 trainers will be trained.

Thirdly, all future students attending the ENSPSS (approximately 150 graduates per year) will benefit from the improved course in the management and delivery of integrated SMI/BEP services. Upon graduation these health professionals will be posted throughout the country, in both rural and urban areas.

Women of child-bearing age and children under five, the prime target populations, will benefit from decreases in mortality and morbidity resulting from increased understanding and use of the target interventions, such as ORT and dietary management of disease, prenatal and child spacing services.

Adult males and females not of child-bearing age will indirectly benefit by the improved quality of services provided in the target Préfectures (and eventually throughout the country) made possible by rehabilitating and upgrading facilities and made sustainable by community participation in financing a regular supply of essential

drugs and other supplies needed to operate full-service primary health centers.

III.E. Summaries of Analyses

1. Technical Analysis

The Technical Analysis discusses the most important constraints to improving child and maternal health in Chad. The health situation of the Moyen-Chari préfecture, where service delivery interventions will initially take place, is analyzed in depth. Key constraints include: limited technical capability of the health workforce; inadequate management, supervision and policy making; lack of equipment and supplies; gaps in the existing training curriculum, and dilapidated health facilities.

Recommendations are then made to resolve the identified constraints. In particular, the details of an in-service training program are worked out for national and Moyen-Chari levels of MOPH employees. The state of health facilities in the project area justifies an investment in their equipping and upgrading. The addition of SMI/BEF indicators to the health information system at the BSPE will facilitate monitoring, evaluation, and effective management.

Next, the reason for selecting the targeted interventions is analyzed. Maternal mortality rates are extremely high. At the Maternity Hospital in N'Djamena, maternal mortality was found to be 833 per 100,000 live births, and it was over 1,000 per 100,000 in two areas distant from a maternity center. By comparison, the rate in neighboring Cameroon is only 141 per 100,000. Surveys have indicated that women with risk factors, such as severe jaundice, grand multiparity, very high blood pressure, maternal tetanus, severe anemia, and young age, have a greater chance of dying during pregnancy or delivery or of delivering still-born children or having a neonatal death. Many of these deaths are preventable at low cost through prenatal care and monitored delivery. Thus, the Project will include prenatal monitoring and referral for women found to be at risk.

Chad has one of the highest infant mortality rates in the world, and illness associated with dehydration from diarrhea is one of the major contributors to this high rate. Prompt and effective case management of diarrhea can prevent dehydration and reduce the nutritional impact associated with an episode of diarrhea. ORT and dietary management of disease are cost-effective interventions that can have a very positive effect on diarrheal-related mortality and morbidity and for this reason will be included as project interventions.

Child spacing is the other primary intervention that the CCSP will support. Research in other countries has shown that death of

infants and mothers could be reduced by an estimated 25 percent by avoiding births that are "too many or too close" to mothers who are "too young or too old." Information on the Moyen-Chari Préfecture show that many women are becoming pregnant before the age of 18 or after the age of 35.

2. Administrative Analysis

The administrative analysis concludes that the present organizational structure of the MOFH whereby the responsibility for the development of the national SMI/BEF program rests with the head of the Assiam Vamtou Clinic is untenable because responsibilities are too broad. Thus, this section recommends that the responsibility for the development of the national program be separated from the Assiam Vamtou clinic. Once separated, this SMI/BEF unit should develop its own mission statement so that employees of this unit and the MOPH have a clear sense of the responsibilities. To enhance coordination and the efficient use of scarce human and material resources, it is then recommended that this unit be staffed along functional lines. In order to build consensus and promote cooperation with other parts of the MOPH, other ministries and donors, a steering committee should be established to guide the activities of this unit. The MSAWW should be represented on this committee.

The CCSP is addressing these concerns with conditions precedent and project inputs. Talks with the MOPH indicate its willingness to undertake these organizational changes.

The existing organizational structure at the préfecture level is judged to be adequate for project implementation.

3. Economic Analysis

The economic analysis examines the costs and benefits of the Project to determine if the project is a worthwhile investment for the Chadian people. First, the analysis quantifies both process outcomes and projected decreases in mortality to be achieved through the Project. As a result of the Project, 9,000 more women will receive prenatal care, over 4,000 additional couples will practice child spacing (resulting in 6,525 couple years of protection), and close to 270,000 more cases of diarrheal disease will be properly treated with ORT. Trends toward decreasing infant mortality rates should be visible by the end of the project, although maternal mortality rates may not yet be measurably affected.

All three Project interventions--ORT, child spacing and prenatal care--address major morbidity and mortality problems which have been documented in Chad. ORT and child spacing are interventions proven to be effective in other countries. While few studies examine the effectiveness of prenatal care alone,

maternal mortality is extremely high in Chad (833/1,000), and these services will help with the proper detection and referral of pregnant women at high risk.

The direct costs of the interventions are low. While cost-effectiveness was not analyzed directly, studies in other countries indicate that the cost per death averted is in the area of \$200 to \$400 for ORT and the cost per birth averted is \$71 to \$450 for child spacing programs. Cost-effectiveness of the Project's interventions will depend on the effectiveness of promotional materials. A key concern will be not to become dependent on expensive communications campaigns that are not sustainable in the long run. The cost-effectiveness of child spacing services will depend on assumptions about the existing latent demand for these services and about the appropriateness of the Project's facility-based service delivery strategy.

The Project's design is a least-cost strategy. Some examples of how low cost alternatives were chosen in design include the training of Chadian trainers in-country to promote sustainable training programs, rehabilitation of existing structures instead of new construction, and considerable emphasis on cost recovery, both through policy dialogue at the national level and through operations research in the field.

4. Financial and Cost Recovery Analysis

The recurrent cost analysis revealed that operating costs entailed by the Project will increase MOPH operating costs by about \$116,000 (36.4 million CFA per year). This represents about 2.2 percent of the 1989 total recurrent budget for the MOPH. When viewed in relation to the non-personnel portion of the MOPH recurrent budget, however, Project-engendered costs are close to 11 percent of the 1989 operating budget.

Although the recurrent costs of the Project are low in absolute terms, the Project will still significantly increase the recurrent cost burden of the MOPH. This is because the budget of the MOPH is extremely small due to the serious setbacks suffered by the Chadian economy during the war and in recent years due to droughts and falling world prices for export crops.

Experience of other countries and historical evidence in Chad show that with improved economic conditions, the GOC will probably allocate an increasing portion of the total government recurrent budget to the health sector, which will ease the recurrent cost problem. Recognizing that the full benefits of the Project will not be achieved in the first five years, the design calls for a 10-year program of assistance. A long-term solution to the recurrent cost problem will also have to be sought, and the Project should not be expected to be sustainable at the end of the first phase.

The Project will address the issue of recurrent costs by promoting cost recovery. Chad already has some experience with cost recovery, both through the public health sector and donor-supported experiments. The Project will help to increase community financing by promoting policy dialogue at the national level and by testing fee collection systems, pricing policies, and other aspects of cost recovery implementation in the field.

5. Social Soundness Analysis

The social soundness analysis looks at the sociopolitical background of Chad and notes that its poverty and political instability have hampered development. This has led to an underdeveloped health sector and high rates of infant and maternal mortality. With donor support, the GOC is rehabilitating its health system. The FAC, the EDF, UNICEF, WHO, and UNFPA together with USAID are the major donors. This section concludes by saying that this is an opportune time for a child survival project that is designed to improve delivery systems and planning and management.

This section notes that the success of the project depends to a considerable degree on the cooperation and support of a few influential and critically placed officials in the MOPH and related ministries. Therefore the technical assistance team and USAID should assure that good relations are maintained throughout the project.

Given the limited resources of the MOPH, active participation of the MSAWW is viewed as critical. This is especially true since social centers currently provide prenatal and nutritional guidance and also since the MSAWW has an outreach program. The MSAWW is included in the project as recommended.

The success of a project that emphasizes preventive health care will depend on its ability to motivate and mobilize the target population. For this reason, strong educational and promotional efforts are recommended, and the project's IEC element represents an attempt to address this concern. The social analysis also recommends that audience research be carried out to help identify culturally appropriate and effective interventions.

This section ends by looking at women in development concerns. It is clear that the project will benefit women, as high maternal and morbidity and mortality are addressed by the project. While women and children are the beneficiaries of the project as clients, the staff of the MOPH is predominantly male. For this reason, it is recommended that a female head the demonstration center in the Moyen-Chari.

IV. IMPLEMENTATION PLAN

The first major task of the long-term TA team in country will be to finalize the analysis of the baseline survey and to complete task analyses of the actual activities of the health workers in the various facilities in the Moyen-Charri. From these analyses, job descriptions can be written for actual health worker performance at the beginning of the project. This will then form the basis for writing the job descriptions for the future role of the respective health workers in the SMI/BEF interventions as the national plan begins to take shape and as the in-service curricula are developed.

IV.A. Institution Building

Institution building is a major component of the CCSP comprising approximately 46 percent of the budget. In establishing a national SMI/BEF Unit the Project plans to assist the GOC to develop Chad's first national plan for an integrated maternal and child health/family well-being program. The Project will strengthen program support elements at the national level that are critical to the success of the SMI/BEF Program. These include:

- health information systems;
- population and family well-being policy and strategies;
- curriculum development and training of trainers (TOT); and
- IEC strategies and materials.

1. Proposed Organization of the SMI/BEF Unit

The first task of the National SMI/BEF Unit will be to formulate its own mission statement and physically set up offices. The mission of the SMI/BEF Unit will be to coordinate and provide strategic direction for all activities aimed at assuring the health of women of child-bearing age and children and to assure that national health policy regarding women and children is carried out in all health facilities throughout Chad.

The SMI/BEF Unit will accomplish its mission through an organizational structure placed under the MOPH Director General. The position of the unit within the MOPH's organizational chart is yet to be defined. A decision regarding the placement of the unit will need to be taken soon. The Administrative Analysis (VII. C.) provides a detailed discussion of some of the benefits and drawbacks that must be weighed in making this key decision. USAID will work with the GOC to assure the issue is addressed in a timely manner.

While the position of the Unit within the MOPH will require further discussion and negotiation, the organization of the unit itself is less problematic. The following discussion proposes a

functional division of responsibilities within the unit and presents a recommended staffing pattern.

a. Functional Organization

A clear distinction must be made between functional organization and staffing. While the proposed functional organizational chart for the SMI/BEF Unit has many boxes (Figure IV.A.1.1.), the Unit will require only seven full-time staff (Figure IV.A.1.2.) to perform the different functions and tasks required. The functional structure provides room for organizational growth and thus avoids the need for reorganization to accommodate future expansion.

In addition to the two operational components of the SMI/BEF Unit, a Steering Committee will be created to provide a mechanism for coordinating SMI/BEF activities inside and outside the MOPH. Both the operational components and the steering committee are described in further detail below.

b. Program Section

The first organizational component of the Unit is the Program Section. This component is responsible for coordinating and supervising all SMI/BEF programmatic activities, policies and directives. The Program Section will collect information on donor assistance proposals and ongoing projects and will analyze all proposed assistance programs to assure conformity with MOPH policies and established priorities. The Unit will make recommendations to the Director General concerning allocation of investments in the area of maternal and child health and family well-being.

Another responsibility of the Program Section will be to promulgate SMI/BEF service delivery guidelines, including determining types of services to be provided at the different levels of the health care system, lists of standard equipment for facilities, required qualifications and training of staff and staffing patterns, measures for quality and efficiency of care, health status indicators, performance evaluation criteria, etc. The program unit will continually revise and update these guidelines and assure their availability to both public and private health providers and organizations.

Within the Program Unit, there will be three subsections: maternal and child health, training and IEC. Each subsection will be responsible for developing guidelines and coordinating allocation of resources for activities specifically related to its functional area.

The work of these three subsections will require coordination with other divisions within the MOPH as well as with other Ministries. For example, the Training and IEC subsections will need to collaborate closely with the MOPH Directorate for Professional

Training and Health Education (DFPES). The principal collaborator outside the MOPH will be the Ministry of Social Affairs and Women's Welfare.

c. Administrative Section

The Administrative Section will handle all of the functions of administration, general office management, correspondence, accounting and record keeping.

There will be three subsections within the Administrative Section: Logistics, Administration and Accounting. The Logistics subsection will monitor the materials, supplies and commodity needs of health facilities in the areas of SMI/BEF and will help assure that needs are met. The administrative subsection will handle general administration and secretarial services. Finally, the accounting subsection will be responsible for maintaining financial records, preparing budgets and financial analyses and assuring financial control.

d. Steering Committee

A Steering Committee will be created as a subset of the SMI/BEF Commission to provide a mechanism by which the SMI/BEF Unit can begin to create "horizontal relations" to promote better integration of activities. Committee members should represent the EPI, the Nutrition Center (CNNTA) and the AIDS Control Program. Also included should be a representative of the DFPES, the ENSPSS and the BSPE. A representative of MSAWW should also be a member.

Along with the head of the SMI/BEF Unit, the above members would constitute a core group that would meet monthly to coordinate activities. The SMI/BEF Commission would also include USAID, UNICEF, UNFPA, WHO, and other active donors. This group would meet less frequently (e.g. semiannually) to review and to approve annual and long-range plans and to discuss programmatic needs and resource allocation.

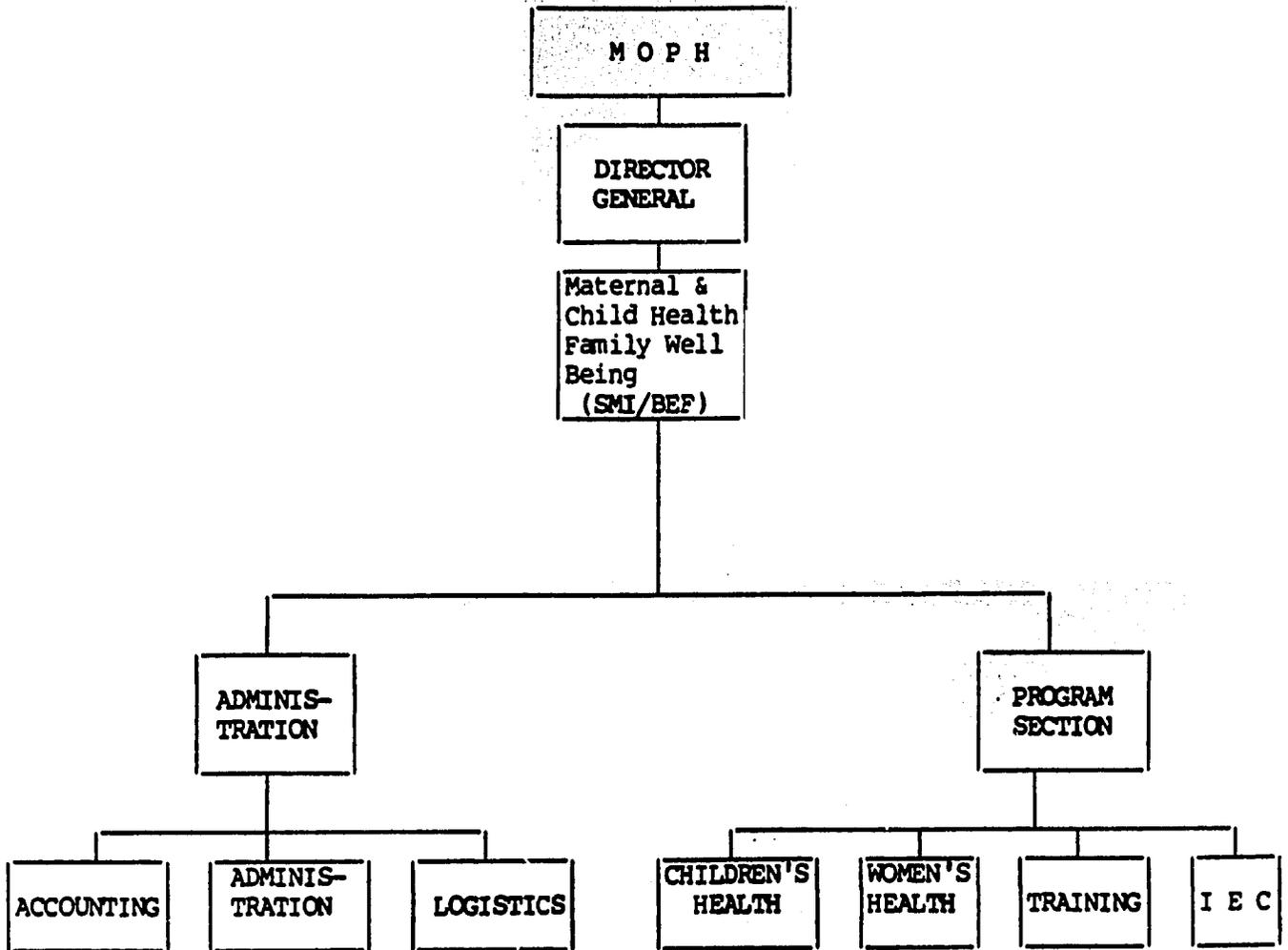
2. Staffing Pattern

a. Central Level Organization and Staffing

To give life to the organization described above, the MOPH must provide office space and staffing. Figure IV.A.1.2. shows positions for seven staff members: unit head, three program officers, one administrator, one accountant and one secretary. The positions are described briefly below. More complete job descriptions need to be developed in accord with civil service classifications of the GOC.

The GOC will need to rearrange current staffing to accommodate the needs of the new SMI/BEF Unit. For example, only the ORT program officer position currently exists. The CCSP will not

FIGURE IV.A.1.1.: FUNCTIONS OF THE SMI/BEF UNIT, MINISTRY OF PUBLIC HEALTH, CHAD



finance the salaries of personnel to staff the SMI/BEF Unit, with the exception of the Project accountant, because of the recurrent cost implications. The GOC must agree to fill the required positions before the Project can become operational.

The Unit Chief will direct and supervise all activities of the SMI/BEF Unit and approve all guidelines and standards that are developed. The Unit Head will also have primary responsibility for coordination with the SMI/BEF steering committee and for strategic planning. The appropriate candidate for this position will be a public health physician with a background in delivery of preventive care services.

The Program Officers will be responsible for drafting, updating and revising service delivery guidelines and standards for each intervention. They will analyze and interpret data on SMI/BEF indicators produced through the health information system, and make recommendations to the Unit Head regarding the implications of these analyses. They will also coordinate training and IEC plans and activities.

Office support will be provided by the Administrator, Accountant and Secretary. The Accountant will be financed by the Project to fulfill the requirements of the U.S. Government regarding proper financial control of Project funds. (S)He will also assist in coordination of cost recovery activities.

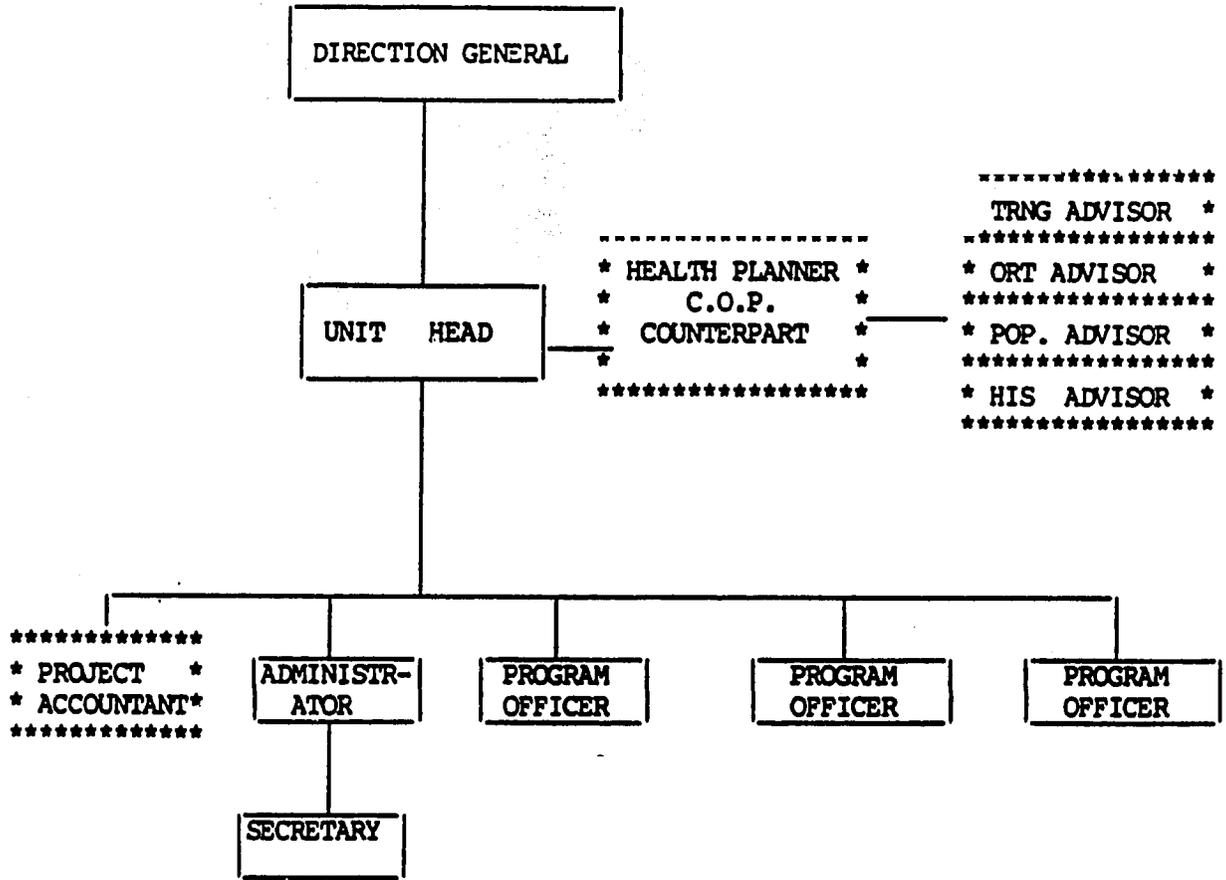
b. Préfecture Level Organization and Staffing

The SMI/BEF Unit will have two components: the SMI/BEF Center and the Training Center, as illustrated in Figure IV.A.1.3.1. The SMI/BEF Center is responsible for providing curative and preventive health care, health education and training to women and children in the préfecture. The Center will: a) deliver clinical services and information (child spacing, ORT, vaccinations, prenatal care); b) serve as a demonstration center for the préfecture's health personnel; and c) supervise the operation of Koumra SMI/BEF demonstration center and the delivery of SMI/BEF services in all préfecture health facilities.

The Training Center will assure that SMI/BEF knowledge, technical and supervisory skills of health and social workers are developed at levels that result in satisfactory job performance. The Training Center will a) assess training needs; b) schedule training sessions; c) support and conduct in-service and refresher training; and d) assure supervision of trained personnel.

The Préfecture SMI/BEF Unit will have two part-time co-directors, Figure IV.A.1.3.2. The Médecin-Chef of the Moyen-Char: Préfecture has delegated supervision of SMI/BEF services to two physicians from the hospital, the pediatrician and the ob/gyn specialist. Both doctors share a sense of mission about SMI/BEF and

FIGURE IV A.1.2.: STAFFING MODEL FOR SMI/BEF UNIT
MINISTRY OF PUBLIC HEALTH



NOTE: *****
* * Asterixed Boxes will end with Project completion.

already collaborate closely. They will be responsible for overall management of Unit activities.

For day-to-day operations, the SMI/BEF Unit will require two full-time program officers: one to manage the SMI/BEF demonstration centers and the other to manage the training program and facility. Both will be responsible for planning and implementing the SMI/BEF program in the Préfecture. These officers will preferably be a registered nurse for the training program and a nurse midwife to be the SMI/BEF coordinator for the demonstration centers.

In addition to the training program officer, two trainer-supervisors will be responsible for training health workers and for supervising SMI/BEF activities in health centers. Field supervision is a key element to successful program implementation. United States Peace Corps volunteers may be assigned to work as counterparts to the Chadian SMI/BEF Trainer/Supervisors. Because it is important for these trainer/supervisors to maintain their service delivery skills, they will occasionally need to work in the demonstration center.

A cost-recovery coordinator is required to supervise and control revenue generation activities in the Préfecture. Trained as an accountant, the cost-recovery coordinator will also provide general logistic support to the unit.

The SMI/BEF Unit co-directors are already employed at the Préfecture level. However, the GOC must formally authorize them to work with the unit. This is included as a condition precedent. The GOC will nominate two candidates for the program officer positions from among the existing staff. The Project will review these candidates to assure that they have the necessary skills and qualifications for these challenging positions. If acceptable candidates cannot be found from among existing staff, the Project will recruit candidates from other sources.

It is assumed that the GOC will staff the program officer positions from the beginning by reassigning existing staff. This will not require the GOC to assume an additional burden for paying salaries. Similar procedures will be followed for the recruitment of trainer-supervisors.

The cost-recovery coordinator position will be funded initially through the Project, since this person will also work as a project accountant to assure that U.S. Government funds are managed according to accepted accounting practices. At the end of the Project, however, this position must be transferred to the GOC civil service, and the GOC must then pay this salary. Experience in other countries has shown that cost recovery cannot succeed unless a trained technical advisor assumes full-time responsibility for systems management.

FIGURE IV.A.1.3.: STRUCTURE OF SMI/BEF IN PREFECTURE OF MOYEN-CHARI

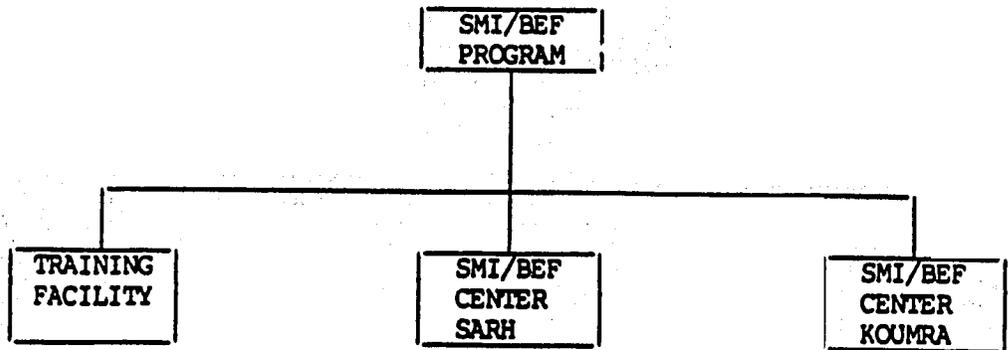
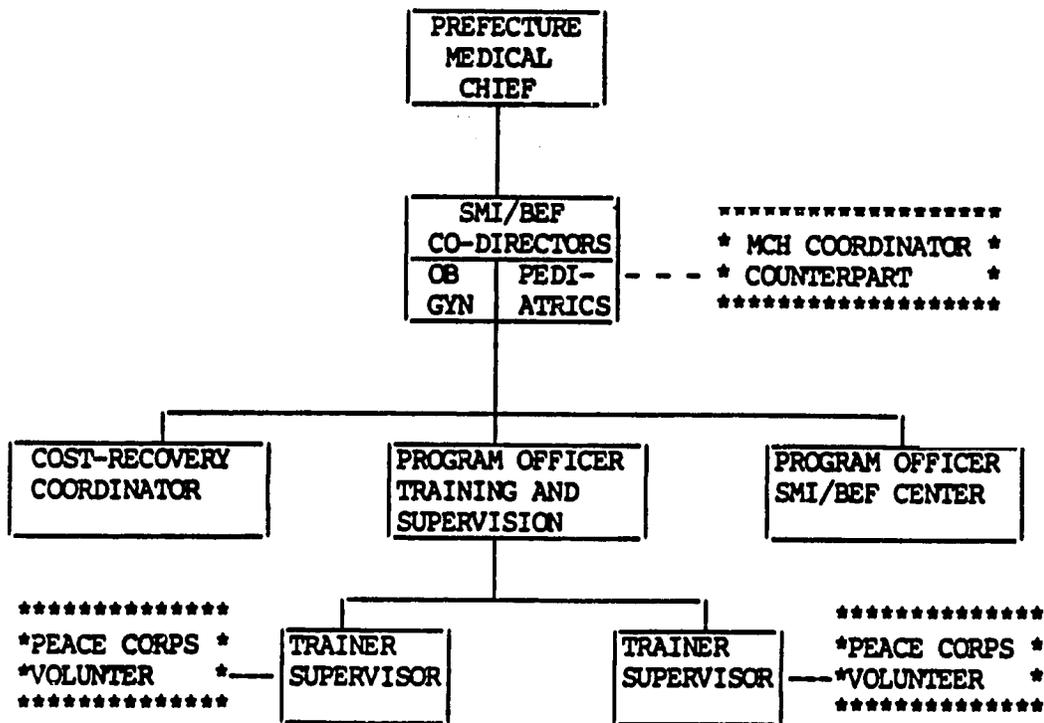


FIGURE IV.A.1.4.: STAFFING MODEL AT PREFECTURE LEVEL SARH, PREFECTURE OF MOYEN-CHARI



NOTE: *****
 * * Shows positions which will end with Project completi....

3. Health Information System (HIS)

The CCSP will assist the BSPE to carry out its mandate of collecting and analyzing health data by continuing LTTA to the unit. A locally-hired specialist will join the CCSP staff in October 1989 to overlap with the HIID team during the last month of the Health Planning and Restoration Project. The CCSP will also fund 100 percent of the BSPE's recurrent costs for three years. The GOC or other donors will pay 10 and 25 percent of these costs, respectively, in project years four and five.

The CCSP will continue to support motivational activities, such as the annual pre-service course on the HIS for the ENSPSS, annual training courses for health workers and routine supervisory visits.

A major activity of the BSPE will be the CCSP baseline survey, which will include a more complete inventory of the state of health facilities in the Moyen-Chari and a KAP of health workers and the mothers who seek SMI/BEF services. In addition, a population-based survey will be executed to collect data on trends in the IMR in the Project area during the life of the project. The BSPE together with the TA team will develop the questionnaire and the sampling frame for the survey. It will recruit, train and supervise the enumerators. The BSPE will enter, clean and process the data. The long-term HIS advisor will work with the BSPE in the final analysis of the survey. After the baseline survey, the BSPE will put in place a system to collect and analyze routine service statistics from all prenatal and maternity services using the "Preceding Birth Technique" to monitor the trends in IMR.

Another major task of the HIS advisor will be to assist BSPE in developing SMI/BEF indicators. Studies will be required to fine tune the list of indicators included in the later section on evaluation and to determine valid indicators for measuring quality of care and level of service delivery. For example, VAT coverage (tetanus toxoid vaccine for women) could be a measure of the effectiveness of prenatal risk assessment and outreach activities. One of the critical tasks of the CCSP will be to improve the SMI/BEF data collection procedures within the BSPE. This will be a principal on-the-job training task of the long-term HIS advisor.

The Project will provide training support for in-service workshops, seminars and on-site visits required to train MOPH staff in how to collect and use this new data set for planning for SMI/BEF services.

A second area where new information will be required is cost recovery. The Project will assist the BSPE to collect and analyze descriptive information about cost recovery systems, pricing policies, etc. used in different préfectures. The BSPE will also need to incorporate indicators for evaluating cost recovery

performance.

4. Population Policy and BEF Strategies

A Population Advisor (PA) will be hired for one year with funding through the FHI II project. The CCSP will fund the PA for the second year.

One of task of the PA will be to assure that the proposed changes to the law that prohibits importation, sale and advertising of contraceptives (Law No. 28) are enacted. The proposed changes were approved by the Department of Justice and are pending final approval by the MOPH.

Another activity will be to continue promotion of child spacing among traditional and political leaders. Informational campaigns need to be targeted for this audience and for men. In addition, one or more study tours will be planned to other African countries, such as Burkina Faso, Morocco or Senegal.

The PA will assist the chief of party to elaborate the BEF portion of the national SMI/BEF plan. An issue that will be addressed is the place of voluntary surgical contraception with the child spacing services in N'Djamena and the appropriateness for Chad of laparoscopy versus Minilap.

5. Training Plan

The largest single component of institution building is training, which accounts for two-fifths of the institution building budget or 17 percent of the overall budget. The training component includes pre-service curriculum development, training of trainers, in-service training* and on-the-job training. The Project has thus reflected the PID Approval Guidance to strengthen the training component.

The long-term training/curriculum development advisor will be responsible for overseeing the Project's training activities. This person is not scheduled to arrive in-country until six months after the arrival of the COP and the Moyen-Chari Coordinator. However, the analysis of the baseline data and the writing of the health workers' task analyses and job descriptions are so crucial that this individual should join the TA team on a short-term basis for this activity.

a. Curriculum Development

* In-service training could also be classified as part of service delivery. However, since the project is improving the GOC's ability to provide in-service training on a regular basis, it is included in this section.

Although the training advisor is responsible for the development of a pre-service SMI/BEF curricula for ENSPSS, much of this work will have to be completed by short-term TA while the training advisor is implementing the extensive TOT and in-service training activities. The scheduling of this specialized STTA will depend on the results of the UNFPA/WHO evaluation of assistance to the

b. Training of Trainers (TOT)

As part of the institution building activities, the Project will train trainers for SMI/BEF. The training advisor will assist the SMI/BEF staff, perhaps with the involvement of the curriculum committee, to select approximately 18 candidates to be trained as trainers. There will be two groups composed of the following:

- individuals resident in the Moyen-Chari who will bear primary responsibility for in-service training and the subsequent supervision of health and social workers for SMI/BEF activities in that préfecture and
- individuals resident in N'Djamena who will form a core national training team;

Both groups will follow Training-of-Trainers (TOT) courses financed by the Project, and will gain practical training experience by participating as co-trainers in SMI/BEF training activities. It is expected that two years of participation in periodic project-sponsored TOT workshops and practicums will be required to enable these groups of trainers to carry out fully independent design, implementation and follow-up of health-related training activities. The TOT will begin in the Moyen-Chari, where the training modules and methodologies will be first tested and perfected. The training of the national level Training Team will begin after the Moyen-Chari Training Team is well established, which is expected to be after Year 2.

Careful selection of the TOT candidates will be critical to the success of this project component. Selection criteria to be established should include the following:

- demonstrated interest in child survival/public health activities and in training;
- length of expected residence in either N'Djamena or the Moyen-Chari;
- acceptable level of education and experience; and
- availability and willingness to participate fully in all planned TOT activities.

Both women and men should be recruited as trainer candidates. Although final selection must be made by the selection committee at the start of the project, the types of prospective candidates are suggested in Table IV.A.4.2. to clarify the intent of the design

team.

TABLE IV.A.4.2 Suggested Candidates for SMI/BEF Trainers

National Trainers

3 MOPH staff (including
CDD, BEF and SMI train-
ing coordinators)
2 MSAWW staff
2 ENSPSS faculty

Moyen- Chari Trainers

2 SMI/BEF supervisor/trainers
1 Assainissement (Sanitation)
Agent
1 MOPH staff
2 MSAWW personnel
3 Confessional (church
affiliated) health staff
(Catholic, Baptist, Bahai)
2 Private (SONASUT, STT or
COTONTCHAD

A process should be established for final accreditation or designation of fully trained trainers at the end of the apprenticeship. The fully trained national trainers would then be expected to form a team capable of training trainers or health workers for other MOPH or MSAWW programs or other donors' projects as necessary. The Moyen-Chari trainers would continue to train and supervise SMI/BEF workers in that préfecture and possibly begin training activities in Salamat Préfecture during Project Year 5.

c. In-service Training

The exact in-service training plan will be developed by the training advisor and his or her Chadian colleagues based on a thorough needs assessment, KAP study and analysis of local conditions and constraints. Much of the data will be collected during the baseline survey.

This in-service training will include both technical training in SMI/BEF activities (prenatal risk assessment, ORT, child spacing) and training in process or organizational skills including health education/communication and community outreach/mobilization; SMI/BEF service organization; stock management for essential drugs and equipment; record keeping; supervisory skills; problem-solving and reporting. It is recommended, however, that a phased in-service training approach be used, that is a series of short (1 week) training activities, each focussing on one SMI/BEF skill cluster, separated by periods of practical work at the trainees' regular work sites. It is further recommended that the TOT workshops follow a similar pattern and include a practicum that, in fact, becomes the initial SMI/BEF in-service training activities in the Moyen-Chari.

One advantage this approach provides is the opportunity for regular exchange of experiences and information based on a practical application of what has been learned in the classroom. Supervisory visits and periodic (yearly) meetings of the trainers and the trained health personnel to share experiences and find solutions to common problems should be part of an annual training plan.

Training content will be adapted for several levels of health workers to reflect different levels of responsibility, knowledge and skills. The preparatory work for such an adaptation will be the task analyses and job description Activity conducted when the TA team first arrives (see IV.J. Implementation Schedule). Additional details on training content and on the scheduling of activities is found in Annex VII.B.3.2.

6. IEC Plan

The project will develop an IEC plan and program to increase the demand for SMI/BEP interventions as part of the national SMI/BEP plan. Much of this work will be done with STTA, initially funded through bridge funding of the A.I.D. centrally-funded JHU/PCS project until the long-term contractor is selected.

An interministerial IEC committee will be formed as a subcommittee of the national SMI/BEP commission. Membership of this subcommittee is suggested in Annex VII.G. IEC Plan. The IEC STTA will provide technical input to this subcommittee, but routine supervision of specific IEC activities will fall to the ORT resident advisor and to the PA.

STTA during the design of the baseline questionnaire will assure that appropriate baseline data is collected, such as an inventory of existing MOPH and MSAWW IEC resources in the Moyen-Chari. Another consultancy may be needed during the final analysis of the baseline survey data and the writing of the first six month work plan. At this time the list of appropriate IEC equipment and supplies must be finalized and the specifications developed. A preliminary list of equipment is included on pages G12-13. The initial candidates for short-term IEC training should also be also selected early.

The first module developed for the TOT and for in-service training will be on health education and IEC techniques. Close coordination between the long-term training advisor and the STTA for IEC is needed to complete this task in coordination with Chadian counterparts in an efficient manner.

The project provides for nine person months of STTA in IEC. The details of the specialized subject areas are listed on page G13. A general timeframe for IEC activities is listed on pages G11-12.

IEC activities will be carried out in the field in the project's

designated areas. The visual aids, the support materials, the publicity and the training will be designed to increase demand for SMI/BEF services. Radio programming, both at the national and regional level, will reinforce the interpersonal communication activities of field workers. As part of the training, health units and even individual field workers will be encouraged to design their own IEC plans.

Sensitization on ORT, prenatal care and child spacing will be a continuous process, highlighted twice during the project with short (7-10 days) but intensive family well-being campaigns -- especially in the larger population centers of the Moyen-Chari. These promotion efforts will feature mass rallies, film presentations, large banners, contests and a heavier than usual use of the media.

IV.B. Service Delivery

Simultaneous with the development of a national SMI/BEF plan, the Moyen-Chari préfecture will develop and test a service delivery component. The médecin-chef of the préfecture has asked for a certified nurse midwife as the long-term SMI/BEF coordinator (program officer) in the Moyen-Chari. The coordinator's overall responsibility will be to assist the préfecture to implement SMI/BEF interventions. A major responsibility will be to assure that the SMI/BEF demonstration centers are established and equipped, that the staff are trained and that the centers become model service delivery facilities delivering complete prenatal, child spacing and ORT/DMD services by the end of the project.

1. ORT and Dietary Management of Diarrhea (DMD)

USAID is providing bridge funding to PRITECH through an FY 1988 buy-in. Plans are to hire an ORT resident advisor locally through this mechanism (for 12 months) to assist in planning for the ORT/DMD component of the national SMI/BEF plan. This advisor and the Chadian ORT program officer will work closely with the training advisor, the Moyen-Chari MCH coordinator and the Chadian SMI/BEF coordinators to design and implement the TOT and in-service training for this intervention.

The ORT advisor will participate in the development of the baseline survey questionnaire and in supervising the field work for the survey in the Moyen-Chari. This person will also assist in conducting a KAP survey of health workers in the N'Djamena area. The findings of these two surveys will form the basis for developing the TOT and in-service training curricula. Under the bridge funding, ORT demonstration centers will be set up to function as training sites for the TOT and in-service training.

To implement the ORT component fully, approximately 9 person months of STTA are envisioned. Two person months will be requested

from PRITECH central funding because neither the bridge funding buy-in nor the project's funding will be in place for the first activities needed, i.e., revising technical forms, establishing two ORT units in N'Djamena and planning and executing a health and social worker KAP/needs assessment in N'Djamena. One person month will be provided under the bridge funding and six person months of STTA for training and specialized ORT skills will be funded under the project. In addition, a second 12 months of the ORT resident advisor will be funded under the project.

2. Family Well-Being

As stated previously, the concept of family well-being (BEF) in this paper includes prenatal high risk assessment and referral as well as child spacing. The PA will assist in the planning and implementation of this program in the project areas.

a. Prenatal Care

While working on the BEF strategy with the SMI/BEF unit, the PA must also begin working with the MOPH and the FAC technical assistance to define the criteria for "high risk." Guidelines will be needed to define the appropriate treatment protocols and the referral patterns for treatment and for child spacing services. Based on these guidelines the commodity list for prenatal care will be defined in more detail.

These guidelines must be completed by the second half of project year 2 to facilitate the development of the TOT course on prenatal high risk assessment and child spacing. A first step in this process would be to review similar guidelines that have been developed in other countries in the region.

b. Child Spacing

One of the first tasks will be to monitor the child spacing serviced delivery activities of the INTRAH-trained nurses in N'Djamena and coordinate with the UNFPA-funded, WHO-implemented activity at Assiam Vamtou which is being developed at the same time as the CCSP.

Another task will be to conduct an inventory of child spacing services and commodities in the Moyen-Chari. As a result of this inventory, the PA will develop a detailed list of the BEF equipment needed for the delivery of prenatal risk assessment and child spacing services.

With the STTA of a contraceptive logistic management specialist through the Contraceptive Logistic Management Project, the PA will establish a monitoring and supply system for contraceptives for N'Djamena and Sarh. In addition, the A.I.D. contraceptive procurement tables will need to be completed for USAID's annual

budget submission for 1992. This consultancy should be timed to coincide with the baseline survey.

IV.C. Supporting Service Delivery

The project must strengthen infrastructure and management support services if the delivery of SMI/BEF interventions is to succeed. IEC activities and in-service training will support service delivery as key elements in the project strategy and have been discussed above. Other support services will include developing supervisory systems, rehabilitation of facilities, logistical support and cost recovery. The latter are discussed in more detail below.

1. Supervision

The Project will establish, in collaboration with national and préfecture-level SMI/BEF commissions, a system of supervision to reinforce the skills learned in training and to provide on-the-job refresher training for health workers and to ensure that a supply system is working. The supervisory system must take into account local resources and constraints. It should be designed to be sustainable after project completion and to provide feedback to the in-service training process established by the Project. Thus, the trainers are proposed as the supervisors. As such, they will be trained for these duties during the workshops and will conduct their first supervisory visits to practice their new skills during the weeks following the practicum. They will conduct periodic visits to trainees, most intensively for a year after refresher training and less frequently thereafter. Other inputs to the supervisory system may include community participation in supervision/feedback to health workers, yearly group review meetings or other mechanisms using local human resources.

Supervisory visits should serve as opportunities for problem solving and further training. To this end the project will work with counterparts to develop supervisory protocols and checklists as well as training "mini-modules" that supervisors can use during visits, as appropriate to the skill level, to the supervisee. Supervisory visits should be complemented by both written and oral reporting. Written and oral feedback by supervisors should be available on occasions other than supervisory visits.

Supervisors will not be employed by the project, but the cost of travel for supervisory visits will be funded by the project during the life of project. Two vehicles and two motorcycles will be provided in the Moyen-Chari to assist with this activity. During the second phase of this ten year program supervisors may receive training in vehicle maintenance to assure adequate functioning of transportation resources.

2. Rehabilitation of Facilities

The CCSP will rehabilitate buildings and equip selected health facilities initially in the Moyen-Chari Préfecture and later in the Salamat Préfecture, to improve the quality of and the access to health service delivery.

The BSPE estimates that approximately 17 percent of health facilities nationwide are in bad condition. This figure may be closer to 25 percent due to underreporting. Out of the total of 60 primary health care facilities in the Moyen-Chari (46 dispensaries and 14 health posts), A.I.D. estimates that 19 facilities are in poor condition and require rehabilitation.

Before starting to rehabilitate and upgrade these facilities, the CCSP will inventory the state of these structures to verify and supplement the BSPE's data. The 22 GOC-managed dispensaries and one GOC-managed health post will need more assistance than facilities managed by confessional groups, NGOs, private or parastatals companies.

Facilities targeted for rehabilitation in the Moyen-Chari are described below:

a. The PMI clinic in the Sarh Hospital complex will be rehabilitated as a training center.

b. The building adjacent to the PMI clinic which is presently occupied by nurses and their families will be rehabilitated as the SMI/BEF demonstration center. This structure is more spacious than the PMI clinic and can house all the SMI/BEF services as described in the technical analysis. These include:

- a covered waiting area;
- a registration area;
- two private counselling areas;
- a SMI/BEF education area;
- a vaccination and treatment room (for minor injuries, etc);
- a prenatal clinic area;
- a pharmacy;
- a laboratory; and
- a utilities and storage area.

c. The maternity building in Koumra will be rehabilitated as an SMI/BEF demonstration center.

d. 19 Dispensaries - The standard three-room structure will be rehabilitated. The Project will initially rehabilitate dispensaries in the Sarh and Koumra Sous-Préfectures. The selection of centers in other préfectures in the rest of the Moyen-Chari will be decided at the time of the midterm evaluation.

e. The project will rehabilitate IEC areas in the two social centers of Sarh and Koumra (a total of four rooms), construct a covered area for consultations and storage space for equipment.

3. Logistics

The project will be responsible for managing all logistical support functions necessary to meet the project objectives as expressed in the annual project work plans and budgets. It will not, however, design a logistics system for MOPH, an aspect which will be considered for the follow-on project.

At the same time or soon after the completion of the six month work plan, a logistics specialist will assess project requirements for commodities and inventory control at the préfecture and central levels. This will include plans, specifications and scheduling for procurement, storage, inventory control and distribution. MOPH storage facilities and distribution procedures will be assessed. Where feasible, the project will use MOPH facilities and procedures, although the project managers at the central and préfecture levels will be responsible for administrative control over the system that is established.

Equipment lists must be completely finalized to equip two SMI/BEF demonstration centers in the Moyen-Chari and one in Salamat for ORT/DMD, prenatal high risk assessment and child spacing services. The two social centers in the Moyen-Chari will be equipped with appropriate IEC equipment and supplies. The appropriate type of equipment must be selected for the specific interventions to be provided at the various levels of health facilities, e.g. laboratories will be equipped only in the SMI/BEF demonstration centers and possibly in the test sites for cost recovery.

A complete assessment of modes of transport and vehicular requirements, including mopeds and bicycles, will be made as part of the SOW of the logistics consultant. This will include the modes of transportation and communication needed for the training and supervision of health personnel, the supply and resupply of commodities, fuel, spare parts and for general administration. A training module could then be developed on project transport and commodity management by the Sahel Regional Financial Management Project (SRFMP) if appropriate. The project managers will be responsible for identifying candidates to be trained in this course from both the project and MOPH.

To have transport available during the preparation and planning period, USAID or the contractor support mechanism shall order one 9-passenger sedan with four-wheel drive and two four-wheel drive pick-up trucks. In addition, the contractor support mechanism employed for other projects will be used to procure and ready houses

for the long-term TA team as shown in Section IV. J. implementation schedule.

4. Cost Recovery

At the national level, the project will host a seminar on pricing models, the COP will participate in the meetings of the cost recovery commission, and two person months of STTA are planned to assist in the initial policy development.

At the prefectural level, the CCSP will develop and will implement a pilot cost recovery in five health units. In addition to the long-term local hire, five months of STTA are scheduled to assist with the development of the pilot activity in the Moyen-Chari.

IV.D. Donor Coordination

As indicated in Section II.-- Background -- a number of donors are involved in the health sector in Chad. USAID/Chad has had the unique experience of close coordination with the other major donors, namely UNDP, UNFPA, UNICEF and WHO. The USAID program has already executed several successful joint activities with these organizations.

The only instance of less than excellent coordination was in the design of the UNFPA follow-on activity which took place at the same time as the CCSP design. Despite attempts at coordination, the draft UNFPA project has areas of conflict with the design of the CCSP relative to the function of the Assiam Vamtou clinic, the national SMI/BEF unit and its planning function. UNDP, UNFPA and WHO, the implementing agency, are working with USAID to resolve these conflicts in the spirit of coordination rather than competition.

Under the CCSP, donor coordination will continue, especially with UNICEF and WHO, in the areas of TOT for the national training team, support for the ENSPSS, the national diarrheal disease control program and the development of IEC materials. It will be crucial to develop close coordination with the FAC technical assistance team providing curative services in the Sahr hospital. This team should assist Chadian clinicians and the CCSP to formulate clinical guidelines and treatment protocols for prenatal high-risk assessment and referral.

The cost recovery activity will build on the experiences of the PVOs and the Catholic village pharmacies. Through TOT activities there will be opportunity for close collaboration with the PVOs and the NGOs represented in the Moyen-Chari.

IV.E. Evaluation Plan

A key component of the CCSP, in support of the project purpose,

is building a planning and HIS capability. Thus, use of data for management decisions and monitoring performance is an integral part of the project.

The Project has a set of quantifiable (mostly behavioral) indicators which can be measured to monitor and evaluate the success of the Project in achieving its Purpose. These verifiable indicators are noted in the logical framework and are listed below in more detail. Progress will be monitored and evaluated in three ways:

- through routine reporting systems;
- through survey research; and
- through evaluations.

1. Routine Reporting

The BSPE has implemented a routine reporting system for the MOPH through the HIS developed under the USAID- and UNDP-funded Health Restoration and Planning Project. The BSPE tabulates this information and presents it in a form that is useful to MOPH decision makers at the central and intermediate levels. The Director General and the "médecin chefs de préfecture" use this information to evaluate health activities. Similarly, SMI/BEF information gathered by the BSPE will be passed to the SMI/BEF Unit Chief and others to be used in planning and evaluating this project.

The TA contractor will also develop a routine reporting system. USAID's routine reporting system is the Project Implementation Report (PIR). USAID's reporting system will utilize information from the MOPH and the contractor's systems. Besides fulfilling reporting requirements, USAID will use this information to make management decisions. Each of these systems is described below.

a. HIS

The BSPE collects the following data:

- reported incidence of illness for 22 health problems, by age group, including fever, neonatal tetanus, diarrheal diseases and dysentery, respiratory infection, malnutrition (kwashiorkor), post-partum complications, and other problems;
- geographic variances in incidence of illness;
- utilization of curative care by month, including assisted deliveries and hospitalization data (occupation rates, average length of stay, diagnosis and cause of death);
- utilization of preventive care, including pregnant women registered for prenatal care, number of prenatal visits per registered woman, children under 5 registered for well-baby

care and number of visits, vaccination doses and coverage; and

- health resources, including location and training of health personnel, location and condition of buildings and equipment, including hospital beds and vehicles, and descriptive information about pharmaceutical supply.

The Project will use the existing system to evaluate success in meeting some objectives. For example, registration for prenatal care visits can easily be judged through the existing system. The equipping and upgrading of facilities and the training of personnel will also be recorded through the HIS.

One of the objectives of the Project is to improve the HIS by expanding the health information system to add new and measurable SMI/BEF health indicators, including data which will permit the calculation of tetanus toxoid vaccination coverage (VAT) and will provide information on child spacing (number of acceptors, couple years of protection), women referred because of high-risk pregnancies, history of women's gravity and parity, etc. The HIS will also have new indicators about cost recovery, including the number of facilities practicing cost recovery, type of system used and revenue generated.

Consistent with A.I.D.'s policy of showing project impacts by gender, the HIS will include gender-specific data where it is considered practicable.

b. USAID's Project Implementation Reports (PIR)

The PIR is the Africa Bureau's management information tool by which projects are monitored on a semiannual basis. The PIR covers the first two and the last two quarters of the A.I.D. fiscal year. USAID/Chad has used the software package TIMELINE in the past for this purpose. Because of the large number of quantifiable indicators developed for this Project, the Mission is proposing to use TIMELINE as a means for routine monitoring of the CCSP. Another possibility would be to use the PIR Lotus program developed by AFR/TR/PRO to track indicators of project progress based on the project's logical framework.

It is recommended that the contractor's system correspond directly with USAID's to avoid the reporting problem created by multiple different formats. The indicators should be translated into French and used to develop the Project's reporting forms for the PIR. A comprehensive list of Project Indicators follows.

2. LIST OF CCSP INDICATORS OF PROGRESS

IV.E.1.2.1 Institutional capability of SMI/BEF Unit

- a. A Unit with a staff of six will be in place within the MOPH in

N'Djamena to plan and coordinate nationwide integrated SMI/BEF activities and programs.

- b. The MOPH will have adopted a national SMI/BEF plan.
- c. The MOPH will be using the plan to implement a national SMI/BEF program.
- d. Two Project-designed sets of SMI/BEF curricula--basic and advanced--will be in use at the ENSPSS.
- e. A competent training team of 18 trainers will be delivering SMI/BEF training to health and social work personnel on a continuing basis without outside technical assistance.

IV.E.1.2.2 Health Information System

- a. The BSPE's management, planning and technical capabilities will be upgraded to the point where long-term technical assistance can be phased out.
- b. The percentage of health facilities nationwide sending in a regular (10 of 12) timely (within 30-60 days) monthly reports will have increased from 85 to 90 percent.
- c. The BSPE will have expanded the health information system base to add new and measurable SMI/BEF health indicators, including data on child-spacing service delivery.
- d. The BSPE will have expanded the health information system base to add new and measurable cost recovery indicators, including descriptive and financial information.
- e. The BSPE will have produced three Statistical Yearbooks which present and analyze data collected using the new SMI/BEF and cost recovery performance indicators.
- f. 70 percent of Project-trained health personnel will be able to demonstrate an ability to correctly report health information.
- g. 30 percent of Project-trained health personnel will be able to demonstrate an ability to interpret data generated from the Health Information System.
- h. 80 percent of professional staff of the central and préfecture level SMI/BEF Units will be able to correctly interpret data from the HIS and describe at least one way in which actual data can be used to improve health service management and delivery.

IV.E.1.2.3 Oral Rehydration Therapy

- a. 75 percent of cases of diarrhea that come to health facilities with trained personnel will receive effective diarrhea case management in the Project area.
- b. 90 percent of Project-trained health and social service workers will be able to explain components of effective diarrhea case management correctly.
- c. 50 percent of Project-trained health and social services workers will practice effective diarrhea case management 75 percent of the time.
- d. 90 percent of health facilities with Project-trained personnel will be constantly supplied with oral rehydration salts and other ORT-related equipment and supplies.
- e. 60 percent of mothers and other child caretakers in the Project area will be able to list the components of effective case management of diarrhea and to explain how to practice effective ORT.
- f. 30 percent of mothers and other child caretakers in the Project area will be able to demonstrate correct preparation and use of an effective rehydration solution for diarrhea.
- g. Of mothers in the Project area who report children under 5 having a case of diarrhea during the last two weeks, 20 percent will have used ORT.

IV.E.1.2.4. Population Policy and Family Well-Being

- a. The GOC will have promulgated and adopted (or be on the verge of adopting) a national population policy.
- b. A strategy statement and workplan for national family well-being activities will be in place.
- c. The objectives and activities of the national family well-being plan will be integrated into the overall SMI/BEF program.
- d. The contraceptive prevalence rate in the Project area will increase from less than 1 to 3 percent.
- e. Of 10 facilities (hospitals, medical and social centers) in Moyen-Chari, half will be offering child spacing services and information; in N'Djamena, 8 health and 7 social centers will offer child spacing services and information.
- f. 40 percent of women and 25 percent of men in the Project area will be able to name at least two modern child spacing

methods.

- g. 30 percent of women in the Project area will be capable of explaining the correct use of at least one modern method of contraception.
- y. 60 percent of women and 40 percent of men in the Project area will be capable of naming at least three advantages of child spacing.
- h. 30 percent of women who are registered for prenatal care will be able to identify three modes of AIDS transmission, three groups at high risk of AIDS infection, and one method of preventing AIDS infection.
- i. The 1965 law that prohibits importation, sale and advertising of contraceptives will be abrogated.

IV.E.1.2.5. Prenatal Care

- a. The overall utilization of health facilities in the Project area will increase by 10 percent.
- b. The number of pregnant women registered for prenatal care will increase from 47 percent to 60 percent in the Project area.
- c. 30 percent of facilities will be correctly assessing pregnant women for risk factors.
- d. 5 percent of pregnant women will be referred to a higher level of care because of high-risk factors.

IV.E.1.2.6. Training and Supervision

- a. About 200 health and social affairs workers will have received in-service and refresher training in SMI/BEP.
- b. At least 50 percent of participants who attend training will receive a mark of 50 percent or above on a 100-point post-test.
- c. The Préfecture level SMI/BEP offices will be conducting at least two monitoring visits per year to all health facilities in the Project area.
- d. Supervisory visits will demonstrate that 60 percent of trained personnel are delivering SMI/BEP services correctly and providing accurate information on SMI/BEP to clients.
- e. Curricula teaching all health workers and social workers how to promote SMI/BEP will be in use.

IV.E.1.2.7. Information, Education and Communication (IEC)

- a. The MOPH will have a fully developed IEC program and will develop an annual work plan and budget for its activities.
- b. An interministerial subcommittee on IEC for Health will be in place and will have held at least 24 meetings.
- c. 60 percent of health facilities with Project-trained personnel will be using some form of teaching aide for prenatal care, ORT and family well-being.
- d. 90 percent of mothers and other child caretakers in the Project area will have heard about ORT, prenatal care and child spacing through project sponsored IEC activities.
- f. 75 percent of mothers in the Project area will have received an ORT reminder leaflet.
- g. 50 percent of mothers in the Project area will have participated in face-to-face education re ORT, prenatal care and child spacing at either a health facility or in the community.
- h. SMI/BEP leaflets and posters will be available at 80 percent of the health facilities in the Project area.
- i. The radio station in the Moyen-Chari Préfecture will be broadcasting at least two significant features per week on aspects of SMI/BEP.

IV.E.1.2.8. Cost Recovery

- a. The Cost Recovery Commission will have adopted national policy guidelines regarding cost recovery for health services and commodities.
- b. Five health facilities in the Moyen-Chari Préfecture will have cost recovery systems that, under local management, are recovering at least the full cost of drugs and medical supplies.
- c. Representatives of 80 percent of préfectures and organizations managing health service delivery systems in Chad will have attended a national Project-sponsored seminar on pricing policies and cost recovery.

2. Baseline Survey

People attending health facilities represent only a fraction

of the total population. Therefore health-facility based data cannot be used to make generalizations about the entire population of the target area. Since the Project's direct beneficiaries are all women of child-bearing age or children under 5 in the two préfectures, population-based data must be collected both at the beginning and at the end of the Project to detect changes in knowledge, attitudes and practices that occur as a result of the Project. The two studies can also detect changes in mortality and morbidity rates, if properly designed. Thus, the baseline survey will include health facility-based data on the KAP of health workers and mothers attending the facilities as well as population-based data that are essential for ultimately determining the impact the project on infant mortality in the Moyen-Chari.

The survey of the Moyen-Chari will be conducted in Project Month 4 prior to the arrival of the TA Team in Project Month 6. It will collect baseline data for the indicators listed above. Data will also be collected to facilitate developing an IEC strategy for the SMI/BEF interventions. Additional research questions are suggested in Section VII.I. This annex discusses sample size and study design and provides an example of a study design from Nigeria.

A repeat of the baseline survey is planned for the end of Project year 4 so the final evaluation team will have data with which to work so that trends in morbidity and mortality and in knowledge and use of the targeted interventions can be seen.

The short-term specialist in surveys, together with the HIS specialist, the PA and the ORT advisor, will lead the survey effort.

It is expected that BSPE will complete at least the preliminary analysis by Project month 7 so that the entire TA team may participate in the final analysis of the data from the baseline survey. The data collected will also facilitate the development of an IEC strategy for the SMI/BEF interventions. The survey will use the Preceding Birth Technique, a method to follow trends in the IMR.

The Project budget includes \$100,000 for the baseline survey. A lesser amount is planned for the repeat survey because the previously developed sampling framework and questionnaire can be used and will only require minor adjustments to correct for problems.

3. Midterm and Final Evaluations

A midterm evaluation is scheduled for early in Project year three to allow corrections to be made to the design. This evaluation will determine if progress in the Moyen-Chari warrants initiation of project activities in the Salamat Préfecture.

A final evaluation is scheduled for the beginning of Project Year 5 to enable USAID to design the second phase of this program early enough to prevent a lapse in assistance.

\$75,000 is budgeted for each evaluation; thus the total for evaluations is \$150,000.

IV.F. Financial and Audit Requirements

A budget of \$100,000 is included for two audits of the Project, one will be scheduled at midterm and the other at the end of the Project to coincide with the project evaluations.

The Project will hire the services of two accountants: a chief accountant to be posted in N'Djamena and an accountant in Sarh. The accountants' duties will include other administrative tasks as well, e.g., supplies management, travel arrangements, etc., to help defray the expense of creating these positions. In addition, the accountants will help to set up the cost-recovery system and monitor cost recovery activities in the field.

The Sahel Regional Financial Management Project (SRFMP) will help set up the CCSP accounting system at the central and préfecture levels. The SRFMP will identify four candidates for the two positions. These candidates will then attend a workshop to acquire skills in financial management of USAID Projects. At the end of this training, the SRFMP will assist the CCSP to select the two best candidates, who will be offered positions as CCSP accountants. The cost of this recruitment, training and selection process is estimated at \$320 per candidate, or approximately \$1,280.

The cost of the accountants is estimated to be 150,000 CFA per person per month, or \$5000 per person per year, plus allowances.

Following the selection of the accountants, local SRFMP trained consultants will supervise the design and initial implementation of the accounting systems. The SRFMP will identify an experienced, senior level Chadian accounting consultant to provide these services.

The budget for this consulting activity is presented below.

<u>Item</u>	<u>Amt.</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Consultant (80 hrs. x 2 systems)	160	6,000 CFA	960,000 CFA
Round-trip airfare to Sarh	2	65,000 CFA	130,000 CFA
Perdiem in Sarh	14	20,000 CFA	280,000 CFA
Office supplies, Ledgers, books			160,000 CFA

			1,530,000 CFA
Converted to USD @ \$1 = 314 CFA			4,873 US\$

To build local capacity, the Project has decided to use local Chadian financial consultants, rather than hiring an international accounting firm to design the Project accounting system. As a result, however, the TA contractor will need to assume a greater role in supervising the accounting system development and monitoring use of funds. This supervisory role should be included in the implementation plan and assigned to the Chief of Party.

IV.G. Detailed Implementation Schedule for Year One

The anticipated schedule for project year one is presented below.

DATE PARTY	ACTIVITY 1989	RESPONSIBLE
August	Execute project agreement	AID/GOC
August-September	Prepare scopes of work for baseline survey and long-term technical assistance	USAID
August-September	Prepare final plans for health clinic rehabilitation in initial towns	USAID
September	Conditions precedent to first disbursement fulfilled	GOC
September	Commence procurement process for baseline survey, long-term TA, commodities	USAID
September	Begin formulation of SMI/BEF Unit's Mission statement, creating steering committee and staffing of SMI/BEF Unit	MOPH-SMI/BEF (with USAID and other donors)
September	Begin process of selecting ORT Advisor, Chief of Party, Rehabilitation Contractor, Population Advisor, Training Advisor, HIS Advisor	USAID
October	Finalize equipment lists for initial clinics and begin procurement process	MOPH and USAID

<u>DATE</u>	<u>ACTIVITY 1990</u>	<u>RESPONSIBLE PARTY</u>
October-November	Select contractor(s) for clinic rehabilitation, baseline survey, population advisor	USAID
October-November	Nomination of Moyen-Chari training and program personnel and cost-recovery coordinator	MOPH
November	HIS Advisor hired HIS data entry begins	USAID, BSPE and contracto
December-January	Select training advisor	USAID
December-January	Select Regional MCH Coordinator and Chief of Party	SMI/BEF and USAID
January	Regional MCH Coordinator and Chief of Party begin work	contractors
January	Baseline survey begin	contractor
January	Process of abrogating anti-contraception law underway	GOC
February	Task analysis and job descriptions for health workers prepared	contractors
March	HIS data analysis	BSPE/contract
March	Training of trainers candidates selection and 6 month workplan preparation begin	contractor
April	Health workers task analyses and job descriptions finished	contractors
April	Baseline survey and analysis completed	contractors
May	Complete selection of TOT candidates and workplan	contractors
May-June	Prepare IEC and ORT materials for first TOT	short-term contractors

<u>DATE</u>	<u>ACTIVITY 1990</u>	<u>RESPONSIBLE PART</u>
May-June	Complete work plans for Chief of Party and MCH Coordinator	contractors
July	Training advisor arrives	contractor
August	Health education phase I TOT begins	contractors/ participants
August	Conditions precedent to second increment fulfilled: SMI/BEP Unit staffed; national SMI/BEP commission and steering committee in place; SMI/BEP Directors for Moyen-Chari appointed and authorized	GOC
August	Second increment amendment signed	GOC/AID

V. FINANCIAL PLAN AND DETAILED BUDGET

The detailed budget for the Child Survival Project is presented on the following pages.

The detailed budget is presented in four tables:

- Table V.A.1: Unit Cost Assumptions
- Table V.A.2: Units Used for Costing
- Table V.A.3: Total Project Costs
- Table V.A.4: Chad Child Survival Project Budget Summary.

Unit costs were determined by experience of the USAID mission in Chad, estimates by PP team members, the most recent edition of UNICEF's procurement book, and by referring to operating costs calculated for the MOPH's Bureau of Statistics, Planning and Studies (Etude des couts de fonctionnement du systeme d'information sanitaire du Ministere de la Sante Publique, Universite du Tchad, 30 Septembre 1987).

The methods of implementation and financing are presented in Table V.B.

V.A. Project Inputs

The life of project funding will be \$8,643,450 of which \$8,500,000 will be provided by USAID. The Government of Chad will contribute 43,035,000 CFA francs (\$143,450) and in-kind services.

1. USAID Inputs:

The USAID inputs will assist the Government of Chad to plan, manage and strengthen delivery of SMI/BEP services at the central and préfecture levels. The CCSP will provide long and short-term

technical assistance to assist the GOC in policy development; program planning, design and implementation; training and curriculum development; development of a health information system and a cost-recovery system. The long-term TA will include the following:

One senior health planner	54 months
One Préfecture MCH Coordinator	54 months
One Population Advisor	24 months
One Training Specialist	24 months
One ORT Advisor (local hire)	12 months
One HIS Specialist (local hire)	30 months
Two Accountants (local hire)	108 months

The budget components include the following:

a. Technical Assistance	4,275,000
Long-term (306 person months)	2,700,000
Short-term (63 person months)	1,575,000
b. Commodities	774,000
b. Training	883,000
Short-term, U.S. & third country (29 person months)	232,000
Study tours, Africa	75,000
In-country training	576,000
c. Other Direct Costs (including Operating Expenses):	1,188,000
d. Construction	680,000
e. Research & Studies	450,000
f. Evaluations & Audits	250,000
g. GRAND TOTAL	<u>\$8,500,000</u>

2. Chadian Inputs:

The Chadian Government plans to contribute staff, buildings (rent) and some operating costs of the total cost of Project. The total value of the Chadian contribution is 43,035,000 CFA francs (FCFA) which includes the following in-kind services:

TABLE V.A.1: UNIT COST ASSUMPTIONS

7/18/89

UNIT COSTS

I. TECHNICAL ASSISTANCE

RATES:

Annual Salary Increase:	5.0%
Fringe Benefits:	20.0%
Post Differential:	25.0%
Children per TA:	1.5
Spouse per TA:	0.5
COLA:	18.0%
DBA Insurance:	2.25%
Education Cost/Child:	\$15,000
ORT Specialist Overhd:	80.0%

ALLOWANCES:

Shipping/furn	\$50,000
Housing:	\$14,400
Utilities:	\$15,330
Storage:	\$900
Security:	\$3,000
Travel RT:	\$3,000
R&R Cost:	\$3,000
R&R trips/yr:	1
Home Lv (unk)	\$11,250
Home Lv (sin)	\$5,000
Home Trps/yr:	1
Education:	\$22,500
Hlth/SO: Ins:	\$1,296

A. Long Term	Total	Base Sal	Fringe	Post Diff.	COLA	DBA Insur.	Ship/Trav	Allow
1. Chief of Party	\$218,964	\$65,000	\$13,000	\$16,250	\$11,700	\$1,463	\$56,750	\$54,800
2. Prefectural MCH Coord.	\$194,176	\$50,000	\$10,000	\$12,500	\$9,000	\$1,125	\$56,750	\$54,800
3. HIS Advisor	\$55,296	\$45,000	\$9,000	\$0	\$0	\$0	\$0	\$1,296
4. Population Advisor	\$185,914	\$45,000	\$9,000	\$11,250	\$8,100	\$1,013	\$56,750	\$54,801
5. Training Advisor	\$189,219	\$47,000	\$9,400	\$11,750	\$8,460	\$1,058	\$56,750	\$54,801
6. ORT Advisor	\$49,200	\$36,000	\$7,200	\$0	\$0	\$0	\$0	\$6,000
7. Profess.local hire/cons	\$5,000	\$5,000						
8. PSC Project Coordinator	\$194,176	\$50,000	\$10,000	\$12,500	\$9,000	\$1,125	\$56,750	\$54,801
B. Short Term	\$25,000							

II. COMMODITY SUPPORT

A. 4-wheel dr. vehicle & pts	\$28,000
B. 2-wheel dr. vehicle & pts	\$18,000
C. Motorcycles and spare parts	\$4,500
D. Bicycles and spare parts	\$150
E. Computers	
1. Desk-top	\$10,000
2. Lap-top	\$8,000
3. Software	\$3,000
F. IEC Communications Equip.	
1. A/V Equipment	\$50,000
2. Printing/supplies	\$30,000
3. Stencil machine	\$5,000
4. Contracept. soap. kits	\$40
5. Lockers and shelving	\$5,000
G. Prefecture MCH Center & Offices	
1. ORT Demonst. equip	\$1,000
2. MCH center equipment	\$2,000
3. Photocopy machine	\$5,000
4. Mimeograph Machine	\$2,000
5. Air Conditioners	\$1,500
6. Office Furniture	\$4,000
7. Typewriter	\$1,500
8. Calculating machine	\$300
9. Electric Lamp	\$150

H. National SMI Offices	
1. Photocopy machine	\$5,000
2. Mimeograph machine	\$2,000
3. Air Conditioners	\$1,500
4. Office Furniture	\$4,000
5. Typewriter	\$1,500
6. Calculating machine	\$300
7. Electric Lamp	\$150
I. Health Center Upgrading	
1. SMI equip. kits	\$1,000
2. ORT Corners	\$500
3. Mt for ht wall chart	\$20
4. Microscope (40x-100x)	\$500
5. Reagents	\$20
6. Prenatal care kits	\$200
7. Health education books	\$20
8. Essential Drugs kits	\$3,500
9. ORS packets	\$0.06

III. TRAINING

A. In-country, TOT	\$100
B. In-country, IST	\$58
C. In-country, technical	\$58
D. In-country, Curric.Prod.	\$58
E. External, Study Tours	\$5,000
F. External courses(person no.	\$8,000

IV. OTHER DIRECT COSTS

A. Support local hire	\$3,000
B. Central office supplies	\$10,000
C. Prefectural office supplies	\$3,000
D. Vehicle operations	\$9,000
E. Motorcycle operations	\$1,000
F. Generator fuel	\$1,000
G. Supervision & travel	\$15,000
H. Radio production/air time	\$75,000
I. Set-up of Project accounts	\$7,500
J. Contractor support services	\$100,000
K. BSPE Recurrent Costs	\$100,000
L. Peace Corps	\$24,600

V. REHABILITATION (per room) \$10,000

VI. RESEARCH/STUDIES \$30,000

VII. EVALUATION/AUDIT

B. Evaluation	\$75,000
C. Audit	\$50,000

TABLE V.A.2: UNITS USED FOR COSTING

7/18/89

UNITS	Year:	1.00	2.00	3.00	4.00	5.00	TOTAL
I. TECHNICAL ASSISTANCE							
A. Long term (person yrs)							
1. Chief of Party		1.00	1.00	1.00	1.00	0.50	4.50
2. Prefectural MCH Coord.		1.00	1.00	1.00	1.00	0.50	4.50
3. BSPE Info Specialist		1.00	1.00	0.50	0.00	0.00	2.50
4. Population Advisor		1.00	1.00	0.00	0.00	0.00	2.00
5. Training Specialist		1.00	1.00	0.00	0.00	0.00	2.00
6. ORT Specialist		1.00	0.00	0.00	0.00	0.00	1.00
7. Professional local hires and cons		3.00	3.00	3.00	3.00	3.00	15.00
8. PSC Project Coordinator		1.00	0.00	0.00	0.00	0.00	1.00
B. Short term (person no.) contract		10.00	7.00	5.00	4.00	4.00	30.00
C. Short term (person no.) buy-ins		8.00	7.00	8.00	5.00	5.00	33.00
1. Cost Recovery		3.00	3.00	3.00	2.00	2.00	13.00
2. Training		4.00	3.00	3.00	2.00	2.00	14.00
3. ORT/PNC/BEF		4.00	3.00	2.00	2.00	2.00	13.00
4. IEC		3.00	3.00	3.00	1.00	1.00	11.00
5. Management		4.00	2.00	2.00	2.00	2.00	12.00
II. COMMODITY SUPPORT							
A. 4-wheel dr. vehicles and parts		3.00	0.00	0.00	3.00	0.00	6.00
B. 2-wheel dr. vehicles and parts		1.00	0.00	0.00	0.00	0.00	1.00
C. Motorcycles and spare parts		2.00	0.00	0.00	0.00	0.00	2.00
D. Bicycles and spare parts		65.00	0.00	0.00	30.00	0.00	95.00
E. Computers							
1. Desk-top		1.00	0.00	0.00	0.00	0.00	1.00
2. Lap-top		2.00	0.00	0.00	0.00	0.00	2.00
3. Software		1.00	0.00	0.00	0.00	0.00	1.00
F. IEC Equipment							
1. A/V Equipment		1.00	0.00	0.00	0.00	0.00	1.00
2. Printing/supplies		1.00	1.00	1.00	1.00	1.00	5.00
3. Stencil machine		1.00	0.00	0.00	0.00	0.00	1.00
4. Contracept. sample kits		0.00	250.00	0.00	0.00	0.00	250.00
5. Lockers and shelving		1.00	0.00	0.00	0.00	0.00	1.00
G. Prefecture MCH Center & Offices							
1. ORT Demont. equip		2.00	0.00	0.00	0.00	1.00	3.00
2. MCH center equipment		2.00	0.00	0.00	0.00	1.00	3.00
3. Photocopy machine		1.00	0.00	0.00	0.00	0.00	1.00
4. Mimeograph Machine		1.00	0.00	0.00	0.00	1.00	2.00
5. Air Conditioners		4.00	0.00	0.00	0.00	4.00	8.00
6. Office Furniture		4.00	0.00	0.00	0.00	4.00	8.00
7. Typewriter		1.00	0.00	0.00	0.00	1.00	2.00
8. Calculating machine		1.00	0.00	0.00	0.00	1.00	2.00
9. Electric Lamp		2.00	0.00	0.00	0.00	2.00	4.00

H. National SMI Offices

1. Photocopy machine	1.00	0.00	0.00	0.00	0.00	1.00
2. Mimeograph machine	1.00	0.00	0.00	0.00	0.00	1.00
3. Air Conditioners	4.00	0.00	0.00	0.00	0.00	4.00
4. Office Furniture	4.00	0.00	0.00	0.00	0.00	4.00
5. Typewriter	1.00	0.00	0.00	0.00	0.00	1.00
6. Calculating machine	1.00	0.00	0.00	0.00	0.00	1.00
7. Electric Lamp	2.00	0.00	0.00	0.00	0.00	2.00
I. Health Center Upgrading						
1. SMI equipment kits	50.00	0.00	0.00	20.00	0.00	70.00
2. ORT Corners	60.00	0.00	0.00	0.00	0.00	60.00
3. Mt for ht wall chart	50.00	0.00	0.00	0.00	0.00	50.00
4. Microscope (40x-100x)	10.00	0.00	0.00	0.00	0.00	10.00
5. Reagents	10.00	10.00	10.00	10.00	10.00	50.00
6. Prenatal care kits	50.00	0.00	0.00	20.00	0.00	70.00
7. Health education books	60.00	0.00	0.00	0.00	0.00	60.00
8. Essential Drugs kits	4.00	10.00	0.00	0.00	2.00	16.00
9. ORS packets	0.00	100000.00	150000.00	200000.00	200000.00	650000.00

III. TRAINING

A. In-country, TOT	0.00	900.00	900.00	300.00	0.00	2100.00
B. In-country, IST	0.00	1000.00	1400.00	1000.00	1000.00	4400.00
C. In-country, Technical	0.00	0.00	0.00	900.00	900.00	1800.00
D. In-country, Curriculum Production	0.00	50.00	50.00	0.00	0.00	100.00
E. External, Study Tours	5.00	5.00	5.00	0.00	0.00	15.00
F. External courses	7.00	7.00	5.00	5.00	5.00	29.00

IV. OTHER DIRECT COSTS

A. Support local hire	8.00	8.00	8.00	8.00	8.00	40.00
B. Central office supplies	1.00	1.00	1.00	1.00	1.00	5.00
C. Prefectural office supplies	1.00	1.00	1.00	1.00	1.00	5.00
D. Vehicle operations	4.00	4.00	4.00	4.00	4.00	20.00
E. Motorcycle operations	2.00	2.00	2.00	2.00	2.00	10.00
F. Generator fuel	1.00	1.00	1.00	1.00	1.00	5.00
G. Supervision & travel	1.00	1.00	1.00	1.00	1.00	5.00
H. Radio production/air time	0.00	0.25	0.25	0.25	0.25	1.00
I. Set-up of Project accounts	1.00	0.00	0.00	0.00	0.00	1.00
J. Contractor support services	1.00	0.00	0.00	0.00	0.00	1.00
K. BSPE Operating Costs	1.00	1.00	1.00	0.75	0.55	4.30
L. Peace Corps	1.00	1.00	1.00	1.00	1.00	5.00

V. REHABILITATION (per room)	17.00	15.00	15.00	15.00	6.00	68.00
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VI. RESEARCH/STUDIES	5.00	2.00	2.00	1.00	5.00	15.00
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VII. EVALUATION/AUDIT

B. Evaluation	0.00	0.00	1.00	0.00	1.00	2.00
C. Audit	0.00	0.00	1.00	0.00	1.00	2.00

TABLE V.A.3: TOTAL PROJECT COSTS

7/18/89

ITEM	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
I. TECHNICAL ASSISTANCE	\$1,551,944	\$1,012,396	\$700,834	\$586,870	\$422,107	\$4,274,151
A. Long term (person yrs)						
1. Chief of Party	\$218,964	\$170,324	\$178,840	\$187,782	\$98,586	\$854,496
2. Prefectural MCH Coord.	\$194,176	\$144,297	\$151,512	\$159,088	\$83,521	\$732,594
3. BSPE Info Specialist	\$55,296	\$58,061	\$30,482	\$0	\$0	\$143,839
4. Population Advisor	\$185,914	\$135,622	\$0	\$0	\$0	\$321,535
5. Training Specialist	\$189,219	\$139,092	\$0	\$0	\$0	\$328,310
6. ORT Specialist	\$49,200	\$0	\$0	\$0	\$0	\$49,200
7. Professional local hires/consults	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000
8. PSC Project Coordinator	\$194,176	\$0	\$0	\$0	\$0	\$194,176
B. Short term (person no.) contract	\$250,000	\$175,000	\$125,000	\$100,000	\$100,000	\$750,000
C. Short term (person no.) buy-ins	\$200,000	\$175,000	\$200,000	\$125,000	\$125,000	\$825,000
1. Cost Recovery	\$100,000	\$75,000	\$75,000	\$50,000	\$50,000	\$350,000
2. Training	\$100,000	\$75,000	\$75,000	\$50,000	\$50,000	\$350,000
3. ORT/PMC/FP	\$100,000	\$75,000	\$50,000	\$50,000	\$50,000	\$325,000
4. IEC	\$75,000	\$75,000	\$75,000	\$25,000	\$25,000	\$275,000
5. Management	\$100,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000
II. COMMODITY SUPPORT	\$419,350	\$81,200	\$39,200	\$154,700	\$78,300	\$772,750
A. 4-wheel drive vehicles w/parts	\$84,000	\$0	\$0	\$84,000	\$0	\$168,000
B. 2-wheel drive vehicles w/parts	\$18,000	\$0	\$0	\$0	\$0	\$18,000
C. Motorcycles and spare parts	\$9,000	\$0	\$0	\$0	\$0	\$9,000
D. Bicycles and spare parts	\$9,750	\$0	\$0	\$4,500	\$0	\$14,250
E. Computers						
1. Desk-top	\$10,000	\$0	\$0	\$0	\$0	\$10,000
2. Lap-top	\$16,000	\$0	\$0	\$0	\$0	\$16,000
3. Software	\$3,000	\$0	\$0	\$0	\$0	\$3,000
F. IEC Communications Equip.						
1. A/V Equipment	\$50,000	\$0	\$0	\$0	\$0	\$50,000
2. Art/production supplies	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$150,000
3. Stencil machine	\$5,000	\$0	\$0	\$0	\$0	\$5,000
4. Contracept. soap kits	\$0	\$10,000	\$0	\$0	\$0	\$10,000
5. Lockers and shelving	\$5,000	\$0	\$0	\$0	\$0	\$5,000
G. Prefecture MCH Center & Offices						
1. ORT Demonst. equip	\$2,000	\$0	\$0	\$0	\$1,000	\$3,000
2. MCH center equipment	\$4,000	\$0	\$0	\$0	\$2,000	\$6,000
3. Photocopy machine	\$5,000	\$0	\$0	\$0	\$0	\$5,000
4. Mimeograph Machine	\$2,000	\$0	\$0	\$0	\$2,000	\$4,000
5. Air Conditioners	\$6,000	\$0	\$0	\$0	\$6,000	\$12,000
6. Office Furniture	\$16,000	\$0	\$0	\$0	\$16,000	\$32,000
7. Typewriter	\$1,500	\$0	\$0	\$0	\$1,500	\$3,000
8. Calculating machine	\$300	\$0	\$0	\$0	\$300	\$600
9. Electric Lamp	\$300	\$0	\$0	\$0	\$300	\$600

H. National SMI Offices						
1. Photocopy machine	\$5,000	\$0	\$0	\$0	\$0	\$5,000
2. Mimeograph machine	\$2,000	\$0	\$0	\$0	\$0	\$2,000
3. Air Conditioners	\$6,000	\$0	\$0	\$0	\$0	\$6,000
4. Office Furniture	\$16,000	\$0	\$0	\$0	\$0	\$16,000
5. Typewriter	\$1,500	\$0	\$0	\$0	\$0	\$1,500
6. Calculating machine	\$300	\$0	\$0	\$0	\$0	\$300
7. Electric Lamp	\$300	\$0	\$0	\$0	\$0	\$300
I. Health Center Upgrading						
1. SMI equipment kits	\$50,000	\$0	\$0	\$20,000	\$0	\$70,000
2. ORT Corners	\$30,000	\$0	\$0	\$0	\$0	\$30,000
3. Mt for ht wall chart	\$1,000	\$0	\$0	\$0	\$0	\$1,000
4. Microscope (40x-100x)	\$5,000	\$0	\$0	\$0	\$0	\$5,000
5. Reagents	\$200	\$200	\$200	\$200	\$200	\$1,000
6. Prenatal care kits	\$10,000	\$0	\$0	\$4,000	\$0	\$14,000
7. Health education books	\$1,200	\$0	\$0	\$0	\$0	\$1,200
8. Essential Drugs kits	\$14,000	\$35,000	\$0	\$0	\$7,000	\$56,000
9. ORS packets	\$0	\$6,000	\$9,000	\$12,000	\$12,000	\$39,000
.....						
III. TRAINING	\$81,000	\$231,900	\$239,100	\$180,200	\$150,200	\$882,400

A. In-country, TOT	\$0	\$90,000	\$90,000	\$30,000	\$0	\$210,000
B. In-country, IST	\$0	\$58,000	\$81,200	\$58,000	\$58,000	\$255,200
C. In-country, technical	\$0	\$0	\$0	\$52,200	\$52,200	\$104,400
D. In-country, Curric. Production	\$0	\$2,900	\$2,100	\$0	\$0	\$5,800
E. External, Study Tours	\$25,000	\$25,000	\$25,000	\$0	\$0	\$75,000
F. External courses	\$56,000	\$56,000	\$40,000	\$40,000	\$40,000	\$232,000
.....						
IV. OTHER DIRECT COSTS	\$322,500	\$233,750	\$233,750	\$208,750	\$188,750	\$1,187,500

A. Support local hire	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$120,000
B. Central office supplies	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
C. Prefectural office supplies	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$15,000
D. Vehicle operations	\$36,000	\$36,000	\$36,000	\$36,000	\$36,000	\$180,000
E. Motorcycle operations	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$10,000
F. Generator fuel	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000
G. Supervision & travel	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000
H. Radio production/air time	\$0	\$18,750	\$18,750	\$18,750	\$18,750	\$75,000
I. Set-up of Project accounts	\$7,500	\$0	\$0	\$0	\$0	\$7,500
J. Contractor support services	\$100,000	\$0	\$0	\$0	\$0	\$100,000
K. BSPE Operating Costs	\$100,000	\$100,000	\$100,000	\$75,000	\$55,000	\$430,000
L. Peace Corps	\$24,000	\$24,000	\$24,000	\$24,000	\$24,000	\$120,000
.....						
V. BUILDING REHABILITATION	\$170,000	\$150,000	\$150,000	\$150,000	\$60,000	\$680,000

VI. RESEARCH/STUDIES	\$150,000	\$60,000	\$60,000	\$30,000	\$150,000	\$450,000

V. EVALUATION/AUDIT	\$0	\$0	\$125,000	\$0	\$125,000	\$250,000

A. Evaluation	\$0	\$0	\$75,000	\$0	\$75,000	\$150,000
B. Audit	\$0	\$0	\$50,000	\$0	\$50,000	\$100,000

TOTAL PROJECT COSTS	\$2,694,794	\$1,769,246	\$1,547,884	\$1,310,520	\$1,174,357	\$8,496,801

TABLE V.A.4: CHAD CHILD SURVIVAL PROJECT BUDGET SUMMARY

ITEM	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL	Percent
I. TECHNICAL ASSISTANCE	\$1,551,944	\$1,012,396	\$700,834	\$586,870	\$422,107	\$4,274,151	50.0
II. COMMODITY SUPPORT	\$419,350	\$81,200	\$39,200	\$154,700	\$78,300	\$772,750	9.0
III. TRAINING	\$81,000	\$231,900	\$239,100	\$180,200	\$150,200	\$882,400	10.3
IV. OTHER DIRECT COSTS	\$322,500	\$233,750	\$233,750	\$208,750	\$188,750	\$1,187,500	13.9
V. BUILDING REHABILITATION	\$170,000	\$150,000	\$150,000	\$150,000	\$60,000	\$680,000	8.0
VI. RESEARCH/STUDIES	\$150,000	\$60,000	\$60,000	\$30,000	\$150,000	\$450,000	5.3
VII. EVALUATION/AUDIT	\$0	\$0	\$125,000	\$0	\$125,000	\$250,000	2.9
TOTAL PROJECT COSTS	\$2,694,794	\$1,769,246	\$1,547,884	\$1,310,320	\$1,174,357	\$8,496,801	100.0

TABLE V.8 METHODS OF IMPLEMENTATION AND FINANCING

METHOD OF IMPLEMENTATION	METHOD OF FINANCING	APPROX. AMOUNT
TECHNICAL ASSISTANCE		
INSTITUTIONAL CONTRACT	AID DIRECT CONTRACT	\$2,700
PSCS AND BUY-ING		\$1,575
COMMODITIES AID PROC		
PSA	BANK & DIRECT L/COM	\$490
PURCHASE ORDERS	DIRECT PAY	\$97
FIO/C	DIRECT PAY	\$185
TRAINING AID PROC		
INSTITUTIONAL CONTRACT	AID DIRECT CONTRACT	\$570
FIO/P	AID/DIRECT	\$312
CONSTRUCTION	FIXED AMOUNT REIMBURSEMENT	\$680
RESEARCH & STUDIES	AID/DIRECT	\$450
EVALUATION	AID/DIRECT	\$250
OTHER DIRECT COSTS		
INSTITUTIONAL CONTRACT	AID DIRECT CONTRACT	\$1,068
FVO/PEACE CORPS	AID DIRECT	\$120
PROJECT TOTAL		\$8,497

a. Rental of building facilities	4,680,000 FCFA
b. Utilities	13,425,000 FCFA
c. Staff at national and préfecture SMI/BEF Units (total: 10)	9,180,000 FCFA
d. Operating costs of BSPE during years 4 and 5	15,750,000 FCFA
e. GRAND TOTAL	<u>43,035,000 FCFA</u>

V.B. Procurement Plan

Various modes of procurement will be utilized. The main technical assistance contract will be an A.I.D. direct contract. The Mission is currently considering use of an 8A firm. If full and open competition is used, Gray Amendment firms will be encouraged to participate, and subcontracting with such firms will be an evaluation criteria. Representatives from the MOPH will participate in the selection of a contractor. There will be some resident hires as well as expatriates. In addition to the main contract, there may be some buy-ins for specialty TA. Commodities will be procured both locally off the shelf and overseas from Code 000, 941 and 935 countries. A waiver to purchase goods in Code 935 is not necessary except for pharmaceuticals since this project is financed under the DFA. The contracting mode to be used for building rehabilitation will be USAID Mission Direct Contract with local firms under the technical supervision of the USAID Engineer.

See Annex J for details concerning the procurement plan and Annex P for details concerning the Gray Amendment.

VI. CONDITIONS AND COVENANTS

VI.A Conditions Precedent to Initial Disbursement of Funds

Prior to the first disbursement of funds under the Grant, or to the issuance by A.I.D. of documentation pursuant to which disbursement may take place, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to A.I.D. the following, in form and substance satisfactory to A.I.D.:

(1) The name of the person having authority to represent the Grantee and of any additional representatives, together with a specimen signature of each such representative;

(2) A statement that the Maternal Child Health/Child Spacing (SMI/BEF) Unit has been duly reconstituted, is separate from the Assiam Vamtou Clinic, is responsible for developing the national SMI/BEF program, is part of the regular MOPH organization, and is located on the central MOPH premises;

(3) A statement that a Unit Chief of the SMI/BEF Unit has been duly appointed whose sole responsibilities are managing said Unit and establishing the national SMI/BEF program; and

(4) A formal letter decree exempting A.I.D., its employees and Chadian and third country project participants from the provisions of Chad's 1965 law prohibiting importation, sale and advertising of contraceptives.

VI.B Condition Precedent to Disbursement for Clinic Rehabilitation

Prior to disbursement of funds, or the issuance by A.I.D. of documentation pursuant to which funds will be disbursed, for rehabilitation of any individual health clinic, satisfactory plans for proposed alterations to the clinics shall be approved by A.I.D.

VI.C Condition Precedent to Cost-Recovery Activities

Prior to the disbursement of funds, or to the issuance by A.I.D. of documentation pursuant to which funds will be disbursed, for cost-recovery activities under the Project, the Grantee shall provide A.I.D. a legally enforceable statement of its agreement to allow any funds collected through the cost-recovery activities to remain at the préfecture or sous-préfecture level to be used for replenishing the local drug supply or purchasing other essential expendable supplies.

VI.D Conditions Precedent to Obligation of Any Subsequent Increment.

Prior to the obligation by A.I.D. of any subsequent increment of funds that may be available for the purpose, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(1) Evidence that the SMI/BEF Unit has been fully staffed which, in addition to the Unit Chief, shall include three program officers, an administrator, and a secretary;

(2) Evidence that the national SMI/BEF Commission has been revived, that a steering committee has been set up (as a subcommittee of the national SMI/BEF Commission) to guide the activities of the SMI/BEF Unit and that such subcommittee shall contain, in addition to representation from the SMI/BEF Unit, representation from the Ministry of Social Affairs and Women's Welfare, the Center for Nutrition and Food Technology, the Expanded Program of Immunization, and the National Health and Social Service School; and

(3) Evidence that a SMI/BEF director (or co-directors) for the Moyen-Chari has been appointed and will be responsible for developing the SMI/BEF program in the Moyen-Chari.

VI.E Covenants

Project Evaluation. The Parties agree to establish a monitoring and evaluation program as part of the Project. Except as the Parties otherwise agree in writing, there will be a midterm and a final evaluation. The midterm evaluation will: assess progress toward planned objectives, identify problems, and recommend modifications to the project design, if necessary, to resolve any problems. The final evaluation will assess progress toward planned objectives and determine the desirability for follow-on efforts. The Grantee agrees that it will provide at least two MOPH staff members associated with the Project to participate in these evaluations.

Abortion Prohibition. None of the funds made available under this Grant may be used to finance any costs relating to (a) performance of abortion as a method of Family Planning, (b) motivation or coercion of any person to undergo abortion, (c) biomedical research which relates, in whole or in part, to methods of, or the performance of, abortion as a method of Family Planning, or (d) active promotion of abortion as a method of Family Planning.

The Grantee agrees that it will:

(1) Take all necessary actions to issue a decree to abrogate Chad's 1965 law, which makes the sale, distribution, and advertisement of contraceptives illegal;

(2) Create an interministerial Information, Education, and Communication organizational entity, which is a subcommittee of the National SMI/BEF Commission;

(3) Provide sufficient numbers of qualified personnel to assure successful implementation of the Project. This includes, but is not limited to: complete staffing of the BSPE, appointment of two trainer/supervisors for the SMI/BEF program in the Moyen-Chari, and full staffing for all SMI/BEF centers in the Project area;

(4) Assure that women participate in all training programs and have opportunities for professional advancement;

(5) Assure that the Oral Rehydration Therapy program is organizationally under the SMI/BEF Unit;

(6) Take actions so that the operating costs of the BSPE are borne by the Grantee or by other donors according to the following schedule: 10 percent in Project year 4 and 25 percent in Project year 5; and

(7) Keep open all public and private channels for the distribution and sale of drugs.

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT

REGIONAL ECONOMIC DEVELOPMENT SERVICES OFFICE
FOR EAST AND SOUTHERN AFRICA (REDSO/ESA)

United States Postal Address

470 NEW YORK AVENUE

International Postal Address

POST OFFICE BOX 3008
NAIROBI KENYA

August 28, 1989

Professor Thomas Odhiambo
Director
International Center of Insect
Physiology and Ecology
P.O. Box 30772
Nairobi, Kenya

Subject: Grant No. 623-0435-G-00-9036-00

Dear Dr. Odhiambo:

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, and the Federal Grant and Cooperative Agreement Act of 1977, the United States Government, represented by the Agency for International Development (hereinafter referred to as "AID" or "Grantor") hereby grants to The International Center of Insect Physiology and Ecology (ICIPE) (hereinafter referred to as "Grantee") the sum of Two million three hundred thousand dollars (\$2,300,000) pursuant to the terms specified in ATTACHMENT 1, the SCHEDULE, ARTICLE C, ENTITLED "Amount of Grant" to provide support for a regional program in East Africa as described in Attachment 2 of this Grant entitled "Program Description".

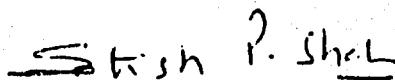
This Grant represents the second phase under the Bases of Plant Resistance to Insect Attack (BPRIA) Project and provides for a continuation of activities which were initiated under previous REDSO/ESA Grant No. 623-0435-G-00-4045-00.

This Grant is effective and obligation, pursuant to ATTACHMENT 1, the SCHEDULE, ARTICLE C, entitled "Amount of Grant", is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives from the period August 28, 1989 and ending on the estimated completion date of August 27, 1992.

This Grant is made to the Grantee on condition that the funds will be administered in accordance with the terms and conditions as set forth in this Cover Letter, Attachment 1 entitled "Schedule", Attachment 2 entitled "Program Description", and Attachment 3 entitled "Standard Provisions", which together constitute the complete Grant document and have been agreed to by your organization.

Please sign the original and five (5) copies of this letter to acknowledge your acceptance of this Grant, and return the original and four (4) copies to the undersigned. Please ensure that any/all copies stamped "Funds Available" are returned.

Sincerely yours,



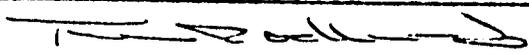
Satish P. Shah
Director
REDSO/ESA

Attachments:

1. Schedule
2. Program Description
3. Standard Provisions

ACKNOWLEDGED:

THE INTERNATIONAL CENTER OF INSECT PHYSIOLOGY AND ECOLOGY

BY: 

TYPED NAME: Prof Thomas Odhams

TITLE: DIRECTOR ICIPE

DATE: 08/14/89

FISCAL DATA

Total Estimated Amount: \$2,300,000
Previous Obligation: -0-
This Obligation: \$1,000,000
Total Obligated: \$1,000,000
Amount Pending: \$1,300,000

Project No.: 698-0435.02A
AID Project Office: REDSO/ESA/AGR
Payment Office: Regional Financial Management C.
(RFMC), Nairobi

PIO/T No.: 698-435.02-3-90001
Appropriation Symbol: 72-1191014
Budget Plan Code: GSSA-89-21623-KG12

9290033

FUNDS AVAILABLE

RFMC US. IN KENYA

DATE 08/11/89

SCHEDULE

A. PURPOSE OF GRANT

1. The purpose of this Grant is to provide support to the International Center for Insect Physiology and Ecology (ICIPE) for the continuation of the Bases of Plant Resistance to Insects Attack (BPRIA) Project, Phase I, as more fully described in Attachment 2 of this Grant entitled "Program Description".

B. PERIOD OF GRANT

1. The effective date of this Grant is August 28, 1989. The estimated completion date is August 27, 1992.

2. Funds obligated hereunder are available for program expenditures for the estimated period from August 28, 1989 to August 27, 1990 as shown in the Grant Budget below.

C. AMOUNT OF GRANT

1. The total estimated amount of this Grant for the period shown in B.1 above is \$2,300,000.

2. AID hereby obligates the amount of \$1,000,000 for the purposes of this Grant.

3. Payment shall be made to the Grantee in accordance with procedures set forth in the (Optional) Standard Provision No. 2 of this Grant entitled "Payment - Periodic Advance", as shown in Attachment 3.

4. Additional funds up to the total amount of the grant shown in C.1. above may be obligated by A.I.D. subject to the availability of funds, the mutual agreement of the parties to proceed, and the requirements of the Standard Provision of the Grant entitled "Revision of Grant Budget."

D. GRANT BUDGET

1. The following is the Budget for this Grant. The Grantee may not exceed the grand total or the total estimated amount (see below) or the obligated amount (see Part C above), whichever is less. Except as specified in the Standard Provision of this Grant entitled "Revision of Grant Budget", as

shown in Attachment 3, the Grantee may, with prior written approval of the REDSO/ESA Project Officer, adjust line item amounts within the grand total as may be reasonably necessary for the attainment of program objectives.

2. Notwithstanding the effective date of this Grant, and subject to the Standard Provision entitled "Allowable Costs", costs incurred on or after August 28, 1989 shall be eligible for reimbursement hereunder. Such costs are included in the Grant Budget shown below.

3. Budget

Cost Element

<u>USAID</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>TOTAL</u>
Professional staff (4)	118	125	132	375
Technical support staff (13)	95	100	106	301
Gratuity/PF (16%)	34	36	38	108
Training	59	80	81	220
Cooperative activities with NARS and IARCs	50	85	50	185
Travel	75	75	115	265
Support costs (supplies and maintenance)	115	127	139	381
Equipment	30	-	-	30
Development costs	25	-	-	29
Communications	29	32	35	96
Other costs (field station operations and miscellaneous)	<u>95</u>	<u>103</u>	<u>112</u>	<u>310</u>
TOTAL	725	763	808	2,300

E. OTHER PROJECT CONTRIBUTIONS

1. Grantee Contributions

The Grantee will provide resources in support of the Program Description in the amount of \$426,800 as shown below:

ICIPE

Professional staff	15.00	15.0	15.0	45.0
Technical staff	12.0	12.0	12.0	36.0
Gratuity/PF (15%)	-	-	-	-
Training	55.0	57.7	60.3	173.0
Travel	-	-	-	-
Expendable supplies	28.8	31.8	34.8	95.4
Equipment	-	-	-	-
Other Field Stations	<u>23.6</u>	<u>25.8</u>	<u>28.0</u>	<u>77.4</u>
TOTAL	134.4	142.3	150.1	426.8

2. Other Donor Contributions

The Grantee anticipates receipt of contributions from other donors (IFAD, ODA, ECA, ADB, Rockefeller Foundation, SAREC, COTU) to carry out research activities within the Bases of Plant Resistance to Insect Attack. The contributions from these donors over the next three year period are estimated at \$2.5 million.

F. REPORTING

1. Financial Reporting

(a) Financial reporting requirements shall be in accordance with the Standard Provision of this Grant entitled "Payment - Periodic Advance", as shown in Attachment 3.

(b) All financial reports shall be submitted to the Regional Financial Management Center (RFMC), P.O. Box 30261, Nairobi, Kenya. In addition, one copy of all financial reports shall be submitted to the AID Project Office specified in the Cover Letter of this Grant.

2. Technical Reporting

(a) Program Performance Reports

In accordance with the Program Description set forth as Attachment 2 of this Grant, the Grantee shall prepare and submit quarterly program progress reports, and a final report which presents the following information.

(1) A description of actual accomplishments compared with the goals established for the period. If the output/achievements of the program can be readily quantified, such quantitative data should be related to cost data for computation and verification of unit costs:

- 1.1 Quantity of inputs purchased
- 1.2 Type of input
- 1.3 Comparison of actual costs and expenditure compared with budget for both the AID and the cooperating agency resources
- 1.4 Source and location of inputs
- 1.5 Distributions to date, by number and locations of beneficiaries to at least the Woreda level
- 1.6 An operational plan for the succeeding quarter.

(2) Reasons why established goals were not met.

(3) Other pertinent information including the status of finances and expenditures and, when appropriate, analysis and explanation of cost overruns or high unit costs.

(b) Between the required performance reporting dates, events may occur that have significant impact upon the program. In such instances, the Grantee shall inform AID as soon as the following types of conditions become known:

(1) Problems, delays, or adverse conditions that materially affect the ability to attain program objectives, prevent the meeting of time schedules and goals, or preclude the attainment of program objectives. This disclosure shall be accompanied by a statement of the action taken, or contemplated, and any AID assistance needed to resolve the situation.

(2) Favorable developments or events that enable program objectives to be met sooner than anticipated.

(c) If any performance review conducted by the Grantee discloses the need for change in the budget estimates in accordance with the criteria established in the Standard Provision of this Cooperative Agreement entitled "Revision of Grant Budget", the Recipient shall submit a request for budget revision.

(d) All technical reports shall be submitted within 30 days from the end of each quarter.

(e) Distribution

(1). One copy of each quarterly program performance report shall be submitted to the AID Project Office specified in the Cover Letter of this Grant.

(2). The final program report shall be submitted to the above addressees within 90 days from the Grant completion date.

G. TITLE TO PROPERTY

Title to property acquired hereunder shall be in accordance with Standard Provision No. 20 of this Grant entitled "Title to and Use of Property (Grantee Title)".

H. AUTHORIZED GEOGRAPHIC CODE

1. With respect to the Standard Provisions of this Grant entitled "Air Travel and Transportation", "Ocean Shipment of Goods", "Procurement of Goods and Services", and "AID Eligibility Rules for Goods and Services", the authorized geographic code for source and origin of goods and services, and for nationality of suppliers of goods and services, is as follows:

(a) Goods and services financed by AID under this Grant, except for drug products and ocean shipping, shall have their source and origin in countries included in AID Geographic Code 935, except as AID may otherwise agree in writing. Non-drug pharmaceutical products manufactured outside the United States and financed by AID hereunder shall not infringe on U.S. patent rights. Except for ocean shipping and drug products, the suppliers of goods or services financed by AID hereunder shall have the their place of nationality in countries included in AID Geographic Code 935, except as AID may otherwise agree in writing.

(b) Drug products financed by AID hereunder shall have their source and origin in the United States, except as AID may otherwise agree in writing. Suppliers of drug products financed by AID hereunder shall have the United States as their place of nationality, except as AID may otherwise agree in writing.

(c) While it is not anticipated that AID will finance ocean shipping hereunder, any such ocean shipping financed by AID hereunder shall be financed only on flag vessels of the United States, except as AID may otherwise agree in writing.

2. Source. Source means the country from which a commodity is shipped to the Cooperating Country or the Cooperating Country itself if the commodity is located therein at the time of purchase. However, where a commodity is shipped from a free port or bonded warehouse in the form in which received therein, source means the country from which the commodity was shipped to the free port or bonded warehouse.

3. Origin. The origin of a commodity is the country or area in which a commodity is mined, grown, or produced. A commodity is produced when through manufacturing, processing, or substantial and major assembling of components, a commercially recognized new commodity results that is

substantially different in basic characteristics, or in purpose or utility, from its components.

4. Componentry. Components are the goods that go directly into the production of a produced commodity. AID componentry rules are as follows:

(a) If a commodity produced in a country or area included in the authorized geographic code set forth above contains no imported component, it is eligible for AID financing.

(b) Unless otherwise specified herein, components from the United States, the Cooperating Country, and any other countries included in AID Geographic Code 941 may always be utilized in unlimited amounts, regardless of the authorized geographic code set forth above.

(c) Any component from a country not included in AID Geographic Code 935 makes the commodity ineligible for AID financing hereunder.

5. Nationality of Supplier. Except as specified in the Standard Provisions of this Grant entitled "Air Travel and Transportation", "Ocean Shipment Of Goods", and "AID Eligibility Rules for Goods and Services", in order to be eligible for AID financing hereunder, the Grantee, and any other supplier of goods or services hereunder, must fit one of the following categories:

(a) A privately-owned commercial (i.e., for profit) corporation or partnership supplying services must be incorporated or legally organized under the laws of a country or area included in the authorized geographic code set forth above; must have its principal place of business in a country or area included in the authorized geographic code; and must meet the criteria set forth in subparagraph (1) or (2) below:

(1) The corporation or partnership is more than 50% beneficially owned by individuals who are citizens of a country or area included in the authorized geographic code. In the case of corporations, "more than 50% beneficially owned" means that more than 50% of each class of stock is owned by such individuals; in the case of partnerships, "more than 50% beneficially owned" means that more than 50% of each category of partnership interest (e.g., general, limited) is owned by

such individuals. With respect to stock or interest held by companies, funds, or institutions, the ultimate beneficial ownership of individuals is controlling; or

(2) The corporation or partnership:

(A) Has been incorporated or legally organized in the United States for more than 3 years prior to the issuance date of this solicitation; and

(B) Has performed within the United States similar administrative and technical, professional, or construction services under a contract or contracts for services, and derived revenue therefrom in each of the 3 years prior to the issuance date of this solicitation; and

(C) Employs United States citizens in more than half its permanent full-time positions in the United States; and

(D) Has the existing capability in the United States to perform the contract.

(b) A nonprofit organization (e.g., educational institutions, foundations, and associations) supplying services must meet all the criteria in subparagraphs (A), (B), and (C) below. NOTE: International Agricultural Research Centers and such other international research centers as may be, from time to time, formally listed as such by the Senior Assistant Administrator of the AID Bureau of Science and Technology (SAA/S&T), are considered to be of U.S. nationality.

(1) The nonprofit organization must be organized under the laws of a country or area included in the authorized geographic code; and

(2) The nonprofit organization must be controlled and managed by a governing body, a majority of whose members are citizens of countries or areas included in the authorized geographic code; and

(3) The nonprofit organization must have its principal facilities and offices in a country or area included in the authorized geographic code.

(c) An individual supplying services must be a citizen of a country or area included in the authorized geographic code; or, must be a non-U.S. citizen lawfully

admitted for permanent residence in the United States. The foregoing nationality provision for an individual supplying services does not apply to the employees of the Grantee or contractors and subcontractors, but all Grantee, contractor and subcontractor employees engaged in providing services under this Grant must be citizens of countries included in Geographic Code 935, or non-U.S. citizens lawfully admitted for permanent residence in the United States.

(d) A joint venture or unincorporated association supplying services must consist entirely of individuals, corporations, partnerships, or nonprofit organizations which are eligible under paragraphs (a), (b), or (c) above.

(e) A supplier of goods must meet any one of the criteria in subparagraphs (1), (1), (3), or (4) below.

(1) The supplier must be an individual who is a citizen or legal resident of a country or area included in the authorized geographic code; or

(2) The supplier must be a corporation or partnership organized under the laws of a country or area included in the authorized geographic code; or

(3) The supplier must be a controlled foreign corporation of which more than 50% of the total combined voting power of all classes of stock is owned by United States shareholders within the meaning of Section 957 et seq. of the Internal Revenue Code (26 USC 957); or

(4) The supplier must be a joint venture or unincorporated association consisting entirely of individuals, corporations, or partnerships which are eligible under any of the foregoing criteria.

(f) A Government Owned Organization, i.e. a firm operated as a commercial company or other organizations (including nonprofit organizations other than public educational institutions) which are wholly or partially owned by governments or agencies thereof, are not eligible for AID financing hereunder. The limitation herein applies to suppliers of services, but not to suppliers of commodities.

(g) A local supplier of construction services, when the Cooperating Country is an authorized source for services and the estimated cost of the construction services is \$5 million or less, a corporation or partnership which is determined by AID to be an integral part of the local economy is eligible (such AID determination is contingent on first ascertaining that no U.S. construction company with the required capability is currently operating in the Cooperating Country, or, if there is such a company, that it is not interested in bidding for the proposed construction contract). A corporation or partnership is an integral part of the local economy provided:

(1) It has done business in the Cooperating Country on a continuing basis for not less than three years prior to the issuance date for the solicitation (i.e., invitation for bids, request for proposals);

(2) It has a demonstrated capability to undertake the proposed activity;

(3) All, or substantially all, of its directors of local operations, senior staff, and operating personnel are resident in the Cooperating Country;

(4) Most of its operating equipment and physical plant are in the Cooperating Country.

(h) Notwithstanding the foregoing, an AID Geographic Code 941 supplier of construction or engineering services must be approved in advance by the AID Project Office.

6. Eligibility of Commodities Determined by Ineligibility of Carrier and Marine Insurance

(a) Commodities shipped by a transportation medium owned, operated, or under the control of any country not included in AID Geographic Code 935 are ineligible for AID financing hereunder, regardless of whether such transportation costs are financed hereunder.

(b) Commodities are ineligible for AID financing hereunder if shipped on a vessel which AID has designated as ineligible, regardless of whether such transportation costs are financed hereunder.

(c) With respect to paragraph (c) of the clause of the Standard Provision of this Grant entitled "AID Eligibility Rules for Goods and Services", if the Cooperating Country discriminates against any marine insurance company authorized to do business in any state of the United States, failure to insure all AID-financed commodities with U.S. insurance companies shall render the commodities ineligible for AID financing hereunder.

(d) Commodities are ineligible for AID financing hereunder if shipped under an ocean or air charter that has not received prior approval of AID/Washington, regardless of whether such transportation costs are financed hereunder.

7. AID Geographic Codes

AID Geographic Codes are defined in Appendix D of AID Handbook 18, w of supply.

I. SPECIAL PROVISIONS

1. For the purposes of this Grant, references herein to the cost principles of OMB Circular A-122 shall include the AID implementation of such cost principles, as set forth in subpart 731.7 of the AID Acquisition Regulations (48 CFR Chapter 7).

2. With reference to paragraph (a)(3)(iii) of the Standard Provision of this Grant entitled "Procurement of Goods and Services", the requirement to notify the AID Office of Small and Disadvantaged Business Utilization (OSDBU) at least 45 days prior to placing an order or contract in excess of \$25,000 is hereby waived, when time does not reasonably permit such prior notification. Prior notification continues to apply when time permits. This does not relieve the Grantee from prudent advance procurement planning, nor does it relieve the Grantee from the requirement of said Standard Provision to make positive efforts to utilize small business and minority-owned business sources of supply.

PROGRAM DESCRIPTION

1. SUMMARY

The proposed project will support the continuation of the Bases of Plant Resistance to Insects Attack (BPRIA) Project which is investigating means for reducing the problems associated with maize and sorghum stem borers and the sorghum shootfly. These pests cause major crop damage in Africa. The project will provide financing for technical research, a training program; and other project related expenses to the International Center for Insect Physiology and Ecology (ICIPE) which is implementing the BPRIA Phase I Project. This project will contribute to the research necessary for developing the strategies for environmentally safe, economically feasible, integrated pest management systems for subsistence farmers in the tropics. The BPRIA II Project is a subproject of the Support to African Agriculture Research and Faculties of Agriculture (SAARFA) Project.

2. PROJECT DESCRIPTION

2.1 PROJECT GOAL

The primary goal of the BPRIA II project is to develop strategies for utilizing plant resistance to insect pests as a component of farmers integrated pest management practices so as to reduce food losses and thereby, increase food production by resource poor small scale farmers in Africa. The following types of activities, all building upon the successful implementation of Phase I of this research program for which A.I.D. provided funding, will be undertaken: Research aimed at identifying and developing sorghum and maize varieties resistant to stem borers, training of scientific and technical personnel in plant resistance to insect pests and networking and cooperating with national and international agricultural institutions to facilitate sharing and dissemination of the technologies and information generated at ICIPE and collaborating institutions.

2.2 PROJECT OBJECTIVES:

The main objectives of the project are:

(a) To carry out research on aspects that would lead to development of food crop varieties combining pest resistance with other desirable characters for cultivation;

(b) To train scientists and technicians from developing countries in Africa for conducting research on plant resistance to insect pests and effective utilization of resistant varieties for protection from pests;

(c) To interact with national and international agricultural centers through networking, particularly with a view to exchange plant materials and information and raise the capability of national programs.

2.3 PROJECT ACTIVITIES:

The project will support activities in three general areas including basic research, training and networking. The target crops for project activities will be maize and sorghum which are both a staple food for millions of people in Africa. The insect pests under study are stem borers which are most important and cause 30-80% losses of the above crops in Africa and Asia.

(a) The ICIPE team of specialists will continue their basic research at ICIPE's Mbita Point field station. Additional research work will be done on farmers' fields in cooperating countries in Africa, particularly in Kenya. Most of the research work will be based on the information and experiences already acquired from the Phase I of the project. Other departments at the ICIPE will provide support to research activities of the project. General areas of research will include continued work on identification and evaluation of maize and sorghum cultivars for resistance to borers. Further research will also contribute to understanding the biochemical and biophysical factors that govern resistance or susceptibility of plants to insect attack. ICIPE will continue with research into the genetics of resistance so as to determine the most appropriate breeding strategies for improving or incorporating particular resistance traits. Support will be provided to continue with pilot trials on farmers fields for both maize and sorghum varieties that have been positively evaluated for borer resistance.

(b) Training:

The project will support ICIPE to continue providing training to scientists through the following training programs:

- Ph.D. and graduate research support in its related disciplines
- Post doctoral and research fellowship programs
- Joint research work with researchers within national programs
- Short term training for national programs

(c) Networking and Cooperation with NARS and IARCs:

The project will support ICIPE to strengthen collaboration and cooperation with national agriculture research programs of some countries including Kenya, Zambia, Mozambique, Sudan and Somalia. PESTNET will provide an additional forum for increased networking. It is expected more technical information available to ICIPE will be exchanged through the PESTNET network.

Collaboration with ICRISAT and CIMMYT will be further strengthened through germplasm exchange, evaluation as well as through breeding programs of both maize and sorghum. Useful scientific information will be exchanged between the centers so as to facilitate designs for breeding strategies for resistance against pests.

2.4 PROJECT OUTPUTS

By the TACD, it is expected that the following outputs will be achieved:

(1) ICIPE will refine and further develop their existing strategy for research on plant resistance which is usable and affordable by the national agriculture research systems in cooperating countries.

(2) ICIPE will conduct 24 comprehensive on station and on farm trials of 50 cultivars of sorghum and maize and identify resistant/tolerant cultivars and transfer this information to the NARS. The technologies recommended should be biologically, sound, economically feasible and socially acceptable to the farmers.

(3) ICIPE will elucidate the bio-physical, biochemical and genetic bases for other pests of maize and sorghum.

(4) ICIPE, IARC's and NARS will develop a formal, sustainable way to continue to share research results, crop improvement information trials on resistant cultivars.

(5) NARS scientists will be trained in plant resistance research and utilize these skills to enhance the capability of their respective NARS.

(6) Training materials and publications will be developed and disseminated to the NARS.

By the PACD, it is expected that the ICIPE will have accomplished most of the outputs identified and listed above.

2.5 PROJECT INPUTS

(1) The ICIPE will provide scientific and technical staffing, research facilities and service units for the project.

(2) A.I.D. will be a major donor to the project that will provide funds for salaries of 4 scientists and support staff. Provide funds for training activities to include 2 doctoral, one post doctoral and four research associates. More funds will support one regional workshop.

2.6 IMPLEMENTATION

a) General Responsibilities:

ICIPE: The project will be implemented by the ICIPE whose director will be responsible for all project activities. Established implementation procedures will be utilized in this phase of the project.

A.I.D.: The subproject will be managed by REDSO/ESA which will periodically report to AID/W on project implementation status. REDSO/ESA will also play a central role in the final evaluation of this project.

b) Implementation Schedule

ACTIVITIES	1990	1991	1992
1. Multiple-Borer Resistance Levels determination in sorghum and maize lines periodically acquired or developed and supplied by various international/national centres or other sources.			Duration
2. Multi-locational trials for performance of promising multi-borer resistant lines in different agro-ecological zones.			<u>Initiate</u>
Trials			
3. Identification of components of resistance to different borers in selected lines.			
4. Development of simple methods for rapid evaluation of borer resistance levels.			
4. Mechanisms of resistance:			
(a) Identification of plant characters determining resistance to oviposition, larval orientation and feeding behaviour of borers:			
(i) Role of visual and hygro-stimuli.			
(ii) Role of plant volatiles.			
(iii) Identification of volatiles			
(iv) Role of mechanical characters			
(v) Role of contact chemical stimulants			
(vi) Identification of contact chemostimulants			
(b) Identification of plant characters determining resistance through anti-biosis:			

1990 1991 1992

(i) Role of food utilization and nutrition

(ii) Role of metabolic or interference by plant chemicals.

6. Genetic basis of resistance:

(a) Elucidation of modes of inheritance of different resistance components and characters

(b) Elucidation of gene action in inheritance of resistance

(c) Germplasm enhancement development of composite populations for:

(i) Resistance to C. partellus

7. Networking and collaboration with national and international agricultural research centres on above mentioned project activities

8. Training scientific and technical personnel of various national institutions in the field of plant resistance to insect pests

9. Regional workshop or host plant resistance

10. Project evaluation

2.7 Evaluation and Audit/Plans

One project evaluation and one external audit are scheduled during the final year of the LOP.

REDSO/ESA will be represented on the evaluation. The evaluation will ascertain whether project outputs are being realized in a manner consistent with the project description, and whether the outputs contribute to the project goals. The evaluation will contribute to any future involvement of A.I.D. in future project activities.

ATTACHMENT 3

STANDARD PROVISIONS

The Standard Provisions set forth as Attachment 3 of this Grant consist of the following Mandatory and Optional Standard Provisions marked by an "X", which are incorporated as part of this Grant by reference with the same force and effect as if included in full text. Full text of the Mandatory and Optional Standard Provisions designated below may be obtained from the project office specified on the cover page.

1. MANDATORY STANDARD PROVISIONS FOR U.S.,
NONGOVERNMENTAL GRANTEES

- (X) 1. Allowable Costs (November 1985)
- (X) 2. Accounting, Audit, and Records (March 1987)
- (X) 3. Refunds (May 1986)
- (X) 4. Revision of Grant Budget (November 1985)
- (X) 5. Termination and Suspension (May 1986)
- (X) 6. Disputes (March 1987)
- (X) 7. Ineligible Countries (May 1986)
- (X) 8. Nondiscrimination (May 1986)
- (X) 9. U.S. Officials Not to Benefit (November 1985)
- (X) 10. Nonliability (November 1985)
- (X) 11. Amendment (November 1985)
- (X) 12. Notices (November 1985)

2. OPTIONAL STANDARD PROVISIONS FOR U.S., NONGOVERNMENTAL
GRANTEES

- () Payment - Letter of Credit (November 1985)
- (X) Payment - Periodic Advance (November 1985)
- () Payment - Cost Reimbursement (November 1985)
- (X) Air Travel and Transportation (November 1985)
- (X) Ocean Shipment of Goods (May 1986)
- (X) Procurement of Goods and Services (November 1985)
- (X) AID Eligibility Rules for Goods and Services (November 1985)
- (X) Subagreements (November 1985)
- () Local Cost Financing (May 1986)
- () Patent Rights (November 1985)
- () Publications (November 1985)
- () Negotiated Indirect Cost Rates - Predetermined (May 1986)
- (X) Negotiated Indirect Cost Rates - Provisional (May 1986)
- (X) Regulations Governing Employees (November 1985)
- () Participant Training (May 1986)
- () Voluntary Population Planning (August 1986)