

PN-AAW-595

IAN: 48825

9310262

REPORT on NUTRITION:
Scientific, Technical and Planning Support
Africa Nutrition Planning
Sudan & Madagascar, No. 931-0262

Marilyn Bennett, R.N., M.P.H.
Under U.S.A.I.D. FDC-0262-I-01-3097-00
June 1983

TABLE OF CONTENTS

I. Consultation Report on Sudan	
A. Executive Summary	1
B. Background to Consulting Trip	2
C. Summary of Sudanese Problems	3
D. Summary of Findings	5
1. Organization of Health Services and Education of Health Personnel	5
a. Ministry of Health	5
b. Khartoum Provincial Health System	7
c. Review Medically-oriented Training Programs	7
d. MCH Activities in Khartoum	10
1) Clinics in Khartoum	10
2) On-site Visits	12
3) Problems	14
4) In-patient MCH Facilities	15
5) MCH Pilot Project	16
6) Family Planning Activities	17
e. Recommendations of Activities for Technical Advisors to MCH/Nutrition Project	19
1) Phase 1	19
2) Phase 2	26
3) Phase 3	29
4) Phase 4	31
2. Summary Planning Activities - Sudan	33
II. Consultation Report on Madagascar	35
A. Executive Summary	35

B.	Background to Trip	37
C.	Brief Description Madagascar	38
D.	Summary of Findings	39
	1. Organizational Outline of the Ministry of Health	39
	2. Negotiations	41
	3. Para-medical Education	41
	4. MCH Care and Problems	42
	5. On-site Visits	50
	a. Nutrition Research Laboratory	50
	b. Antananarivo MCH Center	50
	c. Pediatric Hospital	52
	d. Laniera Child Care Center	53
	e. Seventh-day Adventist Facilities	54
	f. Lutheran Primary Health Care Center Office	57
E.	Recommendations of Activities for Technical Advisors to MCH/Nutrition Project	59
	1. Phase 1	59
	2. Phase 2	64
	3. Phase 3	66
	4. Phase 4	68
F.	Summary Planning Activities - Madagascar	70
III.	List of Persons Contacted	73
IV.	Bibliography of References Read & Referred to	77
V.	Appendices	
	A. Appendix A: List Suggested References for Resource Library at Project Headquarters	80

B.	Appendix B: Suggested Curriculum Content for Training Sessions/Seminars Sudan	83
C.	Appendix C: Suggested Curriculum Content for Training Sessions/ Seminars Madagascar	105
D.	Appendix D: List of Suggested Subjects for Production of Mass Media Materials	121
E.	Appendix E: SAWS Proposal for Sudan	
F.	Appendix F: SAWS Proposal for Madagascar	

/

REPORT OF CONSULTATION VISIT TO SUDAN AND MADAGASCAR

by Marilyn Bennett

I. Sudan Report

A. Executive Summary

The purpose of this consulting trip was to assist in the preparation of a proposal for a Title II PL 480 Food for Peace (FFP) feeding program from the Government of the United States to the Government of Sudan (GOS), and to make recommendations for the implementation of this project to technical advisors assigned. This program would replace the feeding program carried out by Catholic Relief Services (CRS), which ended in June, 1982. Seventh-day Adventist World Service (SAWS) was the Private Voluntary Organization (PVO) approached to re-open this FFP program in Sudan by USAID in Khartoum first.

Following negotiations with the GOS, it was decided to distribute in MCH centers two kg. red lentils, two kg. non-fat dry milk, and one liter of oil per month to the following beneficiaries:

Pregnant women

Lactating mothers (for 18 months)

All infants between six months and twenty-four months of age

Children between twenty-four and sixty months of age
diagnosed as having second or third degree malnutrition

Recipient contributions will not be taken until further negotiations are completed.

If the proposal is accepted, SAWS will do the following with the aid of an outreach grant:

- 1) Obtain the food from the U.S. government
- 2) Transport the food from U.S.A. to Port Sudan
- 3) Transport the food from Port Sudan to Khartoum
- 4) Store the food as necessary in Port Sudan and Khartoum

- 5) Distribute the food to the MOH MCH clinics
- 6) Provide technical assistance in the following:
 - a) Nutrition Education
 - b) Oral Rehydration
 - c) Growth Monitoring
 - d) Other areas that may be agreed upon mutually
- 7) Train staff, to be designated by the Ministry, in PL 480 policies and requirements related to food distribution.

(The complete proposal is found in Appendix E.)

B. Background to the Consulting Trip

For several years Catholic Relief Service (CRS) had been operating a feeding program to MCH clinics using PL480 Title II commodities in various parts of the Democratic Republic of Sudan including the Khartoum area. In 1982 CRS and the Government of Sudan came to an impasse which necessitated the withdrawal of CRS from Sudan, and hence the demise of the PL 480 Title II program. The problems which CRS traversed include such items as the high cost of operating given the problem of diminishing availability of fuel and transportation and storage costs leading to logistical breakdown; disagreements with the government over payment for inland transportation; and arguments over the handling and charging of contributions received by recipients at the MCH centers. CRS expected these funds to be used to defray inland transportation costs, but the government wished to control the money. Food piled up in Port Sudan because the government did not assist in moving the food from the port inland. When CRS left, the government distributed the remaining food. Since then USAID had been concerned over continuing the Title II food program and invited the Seventh-day Adventist World Service (SAWS) to consider restoring this program.

Due to logistical problems involved in inland transport in Sudan, USAID has agreed to restart the PL 480 Title II program in only the Khartoum area for now. USAID priorities for Sudan are Kardofan, Dafur, Khartoum, and the southern areas. It has been agreed to start small with 50,000 recipients the first year. This program will grow in recipients and expand to these other areas of USAID preference in time. The admonition is to start small. An outreach grant from AID is being negotiated to cover transportation and storage costs for the PL 480 Title II commodities and education and administrative costs.

USAID is expecting a developmental program with the PL 480 Title II commodities. This calls for the development of a Nutrition Maternal Child Health/Nutrition education component. The Ministry of Health has agreed to receive technical assistance in developing this program. Two consultants were appointed by USAID for this purpose of making recommendations for Maternal Child Health (MCH) and nutrition planning. This consultancy report deals with the MCH planning primarily, however the two aspects of MCH and nutrition are inter-related. SAWS will appoint an MCH/Nutrition Advisor in the future. This report could hopefully be of value to that individual.

C. Brief Summary of Sudanese Problems with Emphasis on Khartoum Area

The Democratic Republic of the Sudan is Africa's largest country in terms of land mass. But it is one of the poorest nations viable with multitudes of economic, logistical, science and health problems. One hundred fifty-five different tribes inhabit the borders of Sudan and seven nations touch boundaries with this country. Due to starvation and war in some of the neighboring countries,

thousands of refugees have poured into the Sudan, aggravating the existing problems.

A brief report of economic facts and social data follow:

Population	20,000
Per Capita GNP	\$380
Rate of Inflation (1970-80)	15.8%
Life Expectancy (1968)	
male	44.9 years
female	47.3 years
Adult Literacy Rate	
Total	26%
female (1961)	3%
male (1961)	23%
Population Growth Rate	2.8%
Population in Urban Areas	20%
Live Births per 1,000 (1970)	45
Population in Age Groups (1981)	
a) 0 - 14 years	44.2%
b) 15 - 64 years	53%
c) 65 +	2.8%
Infant Deaths in First Year of Life/1,000 Live Births (1982)	131
People per Physician (1977)	8,643
Major Causes of Disease (1978)	Malaria, Enteric Diseases, Dysentery
Total School Enrollment as % of Population in Age Groups	
Primary (1979)	Total 51%
male	60%
female	43%

Secondary (1979)	Total 16%
male	20%
female	11%
Post Secondary (1978)	Total 1.7%
male	2.5%
female	0.8%

(from Background Notes: Sudan; United States Department of State, April 1982).

Khartoum, the capital city, is growing rapidly; part of the growth is due to the influx of refugees, and part is the migration of Sudanese to the city in search of work, services and hence a better life. However, jobs are not particularly plentiful. A common day laborer receives 35 Sudanese pounds per month (\$18). Food is expensive. For example, to adequately bottle feed an infant costs up to 80 pounds per month (\$40). Other problems include prostitution; low status of women and children is resulting in poor health service to this population group; loss of the extended family; exposure to bad urban habits such as decrease in breast-feeding, smoking, working mothers with poor childcare facilities; overcrowding, and poor sanitation to mention only a few. There are large unincorporated areas around Khartoum with no services of any kind such as water, electricity, or transportation, much less even the most basic medical care. Water is carried into these areas on donkey-drawn carts and sold by private entrepreneurs.

In summary, what else can one say except, "Khartoum has problems"?

D. Summary of Findings

1. Organization of Health Services and Education of Health Personnel in Sudan

a. Ministry of Health

In order to provide a basic framework of reference for this project, a brief review of the organization structure of the Ministry of Health is listed here:

Minister of Health
Undersecretary

Ten departments with Director Generals for each
Department:

- 1) International Health
- 2) Rural Health and Primary Health Care Centers
- 3) Planning
- 4) Health Statistics
- 5) Training (all medically oriented training except medicine; ex: nursing, medical assistants, midwives)
- 6) Preventative Medicine
 - a) epidemiology
 - b) extended immunization program
 - c) nutrition
- 7) Curative Services

Khartoum Hospital, Omdurman Maternity Hospital,
other hospitals
- 8) Central Medicine Stores
- 9) Laboratories and Research
- 10) Occupational Health

The main contacts during this visit were with the Director for International Health, Dr. Zuhir Ali Nur, (the third in command of MOH hierarchy), and the Nutrition division of the Preventative Medicine department. This is the unit that will provide the "home base" for this MCH/Nutrition project. Dr. Kamal Ahmel Mohamed is the director of this unit with Mrs. Alowia being Deputy Director.

b. Khartoum Provincial Health System

In that the first emphasis of this program will be in the Khartoum area, an extra explanation should be added. At this time health services involving Khartoum are handled under the Curative Services Department. However, Khartoum health services will be changed to a provincial system in the near future, according to Dr. Mary Ann Micka of USAID/Khartoum.

The Khartoum area has the following medical facilities:

- 1) Three major hospitals
- 2) Forty-eight health centers with MCH facilities
- 3) Many private clinics (conflicting reports received regarding numbers)
- 4) One obstetrical hospital
- 5) One pediatric emergency hospital

c. Brief review of medically-oriented training programs of Sudanese health system

Although this MCH/Nutrition project will be responsible to the nutrition unit, persons working on this project will be having contact with various cadres of medical workers either who work in MCH clinics or have involvement in the medical care of mothers and children in some way. Therefore, this following short description of medical workers and educational programs in Sudan may be helpful to those working on the training component of this project.

The following brief review of medically-oriented health workers and their training programs in Sudan may not be complete or entirely accurate in that the consultant received conflicting reports, but it does represent a semblance of a picture:

- 1) Village midwives (traditional midwives)
 - a) illiterate, but attend majority of births in Sudan
 - b) learn through rote memorization; work in rural and urban areas
 - c) 18 schools throughout Sudan
 - d) duration of course--one year (?)
- *2) Nurse midwives
 - a) 8-9th grade education
 - b) three years of nursing
 - c) one year midwifery training
 - d) work in hospitals and health centers
- *3) Health visitors
 - a) 8-9th grade education
 - b) three years of nursing
 - c) one year midwifery training
 - d) one year health visitor training
 - d) work in health centers; have some preparation in community work and supervision
 - f) two schools for training
- 4) Assistant health visitors
 - a) may be illiterate; may have few years education
 - b) have training in community work
 - c) assist health visitors in rural areas; but actual role/work is not clear
 - d) one training school in Sudan

- *5) General nurses (practical)
 - a) 8-9th grade education
 - b) three year course of training
 - c) work in hospitals/health centers
 - d) three schools in Sudan
- 6) Nursing sisters
 - a) high school graduates
 - b) three year course
 - c) are supervisors, matrons, teachers, leaders in nursing
 - d) nursing teachers are trained abroad or take education programs at University of Khartoum
 - e) one college of nursing
- 7) Medical assistants
 - a) information on entry level not obtained
 - b) three years of training
 - c) work in health centers
 - d) six schools in Sudan
- *8) Vaccinators
 - a) information on training not complete; perhaps four months
 - b) give vaccines in health centers
- *9) Nutrition officers
 - a) high school graduates
 - b) college degree in Home Economics/Nutrition
 - c) work in health centers, supervising and educating
- *10) Nutrition educators
 - a) primary school education
 - b) four months training course

- c) course is offered two times a year
- d) 75% trained in Sudan
- e) give health education to mothers at centers
- 11) Health educators
 - a) no specific information obtained
- 12) Rural Community Health Workers
 - a) educational entry level (?)
 - b) work in rural health centers and communities
 - c) three to four month curriculum of: diarrheal diseases and oral rehydration therapy, nutrition, family planning, and immunization

* Work in MCH Clinics in Khartoum

d. MCH Activities in Khartoum

The following paragraphs describe to a limited extent the MCH activities in the Khartoum area. This includes a brief description of outpatient facilities and their workers, inpatient facilities, an MCH Pilot Project, and family planning activities.

1) Clinics in the Khartoum area and types of personnel

Theoretically, MCH services are being offered at the 48 health centers as part of the comprehensive primary health care program. The services given are the following:

- weighing
- nutrition/health education
- screening for ill children
- immunizations
- antenatal care
- malarial prophylaxis
- family planning activities (not at all clinics)
- medical care or referral

The following types of personnel are utilized by the clinics:

- a) clerks
 - register mothers and children
 - weigh and record weights
 - are given on-the-job training
- b) nutrition educators
 - weigh
 - give nutrition advice
 - give food demonstrations
 - are given four-month training program
- c) vaccinators
 - give vaccinations
 - responsible for proper storage of vaccines
 - receive short training course; are not professionally prepared
- d) nutrition officers
 - screen mothers and children
 - weigh
 - give nutritional and child care advice
 - health education in large groups, small groups and one-to-one
 - supervise nutrition educators
 - follow malnourished cases through home visiting
 - receive four-year college education in home economics
- e) nurses and nurse midwives
 - screen mothers and children
 - vaccinate
 - family planning
 - weigh children
 - give medications
 - refer to doctor
 - oversee clinic supplies
 - manage clinic
- f) health visitors
 - oversee the clinics, have managerial responsibilities
 - are midwives, therefore examine mothers and

children

- not directly involved with health education

g) physicians (not at all clinics)

- assess patients and give medical care

- refer to hospital for further care

2) On-site visits to MCH Clinics

a) Omdurman Comprehensive Health Center

Visit One:

This is the model MCH outpatient facility for the city. It had a physician, laboratory, pharmacy as well as the regular cadre of health workers. This clinic had certain days scheduled for under 5's and certain days for antenatal care. This first visit was on an antenatal day. The physician stated this was a new program here, so only about 14 women had attended by mid-morning.

First, nutrition education is conducted, then the routine examinations are given. Tables were set up with a food demonstration ready. The clients sit at small tables with six to a table during the teaching session and watch the demonstration from the head table. Afterwards, nutrition educators and officers sit with the clients doing one-to-one and small group teaching. There were a few posters around with the following captions:

"This child is well-fed because he eats these foods"

"Start feeding your child at four months"

"Best food for your child is mother's milk because it gives protection for six months"

For this group of 14 mothers, there were five nutrition educators and three officers, so there was potential for excellent teaching! But most of the workers were sitting around. This clinic also periodically operated a four-month training session

for mothers in nutrition, cleanliness, environmental health and related matters. These mothers became volunteers at the center and in the community.

Visit Two:

The second visit took place on a day for under 5's clinic. By mid-morning 150 children had attended; three new cases of malnutrition had been detected (but this was not the day for malnutrition follow-up); four cases of diarrhea had been referred to a physician. Supposedly 30% of all new children attending this clinic have greater than first-degree malnutrition. There was a social worker at the clinic who supposedly does follow-up work on all malnourished cases. She does home visits and tries to get money for families when possible. Cards were kept at the clinic, but mothers were given a small "home card" with clinic number, name of child, and date of last visit.

Health education consisted of small group teaching while food was served at small tables in the lecture hall. One-to-one teaching was implemented for individual cases. Cards were kept by the clinic and were the "Road to Health" cards. Each mother had a smaller card which she kept with clinic number, weight, diet, date to return and special instructions. Another record book kept this information: name, address, age, % malnutrition, and whether the client attended regularly.

b) Khatemah Clinic

The day our team visited, 14 mothers and children had attended by mid-morning. The workers were sitting around waiting for lunch hour to arrive. There were a few posters on the walls. This clinic had a physician for referrals. Health education was conducted in a large group in the courtyard prior to the weighing/

examination and individual teaching was done as the need arose. No activities were observed directly because the clients had left already.

c) Omdurman Obstetrical Hospital Clinic

This clinic had a section for paying clients and was connected to the Obstetrical Hospital. However, once again, little activity was noted. The workers were all sitting around chatting. But here family planning was being stressed and the writer observed one-to-one teaching regarding the pill. More posters were on the walls than in other clinics. The clinic records were kept by graph. Here the staff was experimenting with "home-based cards"; the child's cards were sent home with the mother in a plastic bag. The workers reported good success with this. No health education activities were observed.

3) Problems

a) No central Maternal Child Health Department in Ministry of Health

If one refers back to the organizational structure of the Sudanese Ministry of Health, one can see that there is no department pertaining to MCH. One health professional states that the dearth of MCH activities is due to the low status of women in Sudan. Yet another health professional commented that there were 50 OB-GYN specialists in Sudan which is the largest number of medical specialists for any field of practice in the Sudan. But many of these practitioners offer their services only to paying clients in private clinics.

b) Varied workers in clinics with no administration back-up

With this above-mentioned varied group of

workers in the clinics, communication problems often arise because the various categories of workers are responsible to three different departments in the MOH; role identities are not specific, and no one is really in charge of the total clinic operation since there is no MCH division at this time. As it is now, the nutrition unit, the extended immunization program and curative services departments within the MOH all vie for authority in operating the clinics in that personnel under their jurisdiction are involved and all work together side by side. Various other problems exist, but will not be covered here.

4) In-patient MCH facilities in Khartoum

a) Maternity hospitals: 90% of all births are in the home. There is one maternity hospital, which has three levels of care:

- 1) referred high risk cases for non-paying clients
- 2) referred high risk cases for clients who can pay part
- 3) normal and high risk cases for clients who can pay the complete bill

There are between 500 and 700 deliveries monthly.

Dr. El Harith Mahal Ali, Director of the Omdurman Maternity Hospital, lists the following as the major maternal problems in Khartoum: diabetes, anemia, malaria, malnutrition and toxemia.

b) Pediatric in-patient facilities: In Khartoum there are a total of 360 pediatric beds divided between two hospitals. The writer only visited one facility, Khartoum Pediatric Emergency Hospital. This 160-bed facility services 3,000 in-patients per month and 15,000 out-patients. According to Dr. Galbfer Ignoaf Suliman, director and founder of Khartoum Pediatric Emergency Hospital, the major casues of child morbidity and mortality are malnutrition, respiratory infections, diarrhea and measles.

In the opinion of this writer, Dr. Suleiman is perhaps the greatest champion of Maternal Child Health in Khartoum. He is greatly concerned over fragmentation of services and along with Dr. Baldo is waging a battle within the Ministry of Health for the formation of an MCH division. His two "pet" interests are oral rehydration therapy and malnutrition. He built a 40-bed oral rehydration unit in connection with the Pediatric Hospital as well as a malnutrition center. Both these units stress parent education and are equipped with health education aids. The Children's Emergency Hospital is perhaps one of the cleanest and most well-organized hospitals the writer has seen in a developing country.

Dr. Suleiman has been involved in research and some of his work would be good baseline studies in malnutrition for the MCH/Nutrition project. Dr. Suleiman is also in charge of a program funded by WHO for the control of diarrheal diseases in the Sudan. This project will include awareness-development of Oral Rehydration Therapy through seminars to senior regional and provincial health administrators, pediatricians and senior tutors, medical officers and trainers of medical assistants, health visitors, midwives and primary health care workers.

5) MCH Pilot Project

However, steps are being taken to create an MCH division within the MOH administrative structure. In October, 1979, the first workshop was held for long-range MCH planning. The United Nations Fund for Population Activities has started a pilot project entitled "Project for Improvement of MCH and Family Planning". This will become the basis of the MCH division which will materialize in six months according to Dr. Baldo, Director for the project.

However, other informal sources believe this is a long way off. At present this project is basically providing in-service education to village midwives, community health workers, nutrition officers, vaccinators, nutrition educators, and nurses on the following subjects:

breast feeding

ORT

basic maternal health concepts

high risk pregnancy

family planning (f/p)

integration f/p with use of road to health cards

This project also provides road to health cards, scales, refrigerators and other equipment to clinics. Dr. Suleiman, Director of Khartoum Children's Emergency Hospital states this project puts emphasis on maternal health and very little is done in child health.

On the national level, MCH activities are very fragmented. Much work needs to be done in integrating all aspects of MCH to provide a unified cohesive work force to tackle these problems.

6) Family Planning Activities

Family planning is a newcomer to Sudan. However, several international associations are already at work. In 1982, the International Fertility Research Program of Chapel Hill, North Carolina funded a KAP study among males in Khartoum. The following presents brief highlights of the findings:

250 males interviewed in mosques, market places
and factories:

- this population was aware of need for family planning
- was aware of overpopulation in Khartoum with resulting problems

- all men wanted large families, but realized they could not afford these
- 50% wished to use f/p services
- 20% were currently using
- 80% wanted more information about f/p
- 60% were interested in learning about female sterilization
- 50% wanted to know more about male sterilization
- religious men wanted to limit their family size more than non-religious groups
- was relationship between smaller families and increased education
- factory workers were most interested in learning about both female and male sterilization
- 12% would consider having male sterilization
- 33% knew where to get sterilization but suggested procedure acceptable to others, not themselves
- only 2.8% had obtained services from f/p clinics

The international Program Association on Voluntary Sterilization is training several Sudanese physicians at Johns Hopkins in laparoscopy. The United Nations Fund for Population Activities has financed the project described previously. Twenty-five nurse-midwives are presently trained in family planning activities working in clinics; seven of these received training in the United States. These family planning trained nurses rotate to various clinics so that many clinics can offer this service one day a week. These nurses are keeping good records and making graphs of their progress. For example, during the month of April, 67 women were given family planning services at one large clinic in Omdurman.

E. Recommendations of Activities for Technical Advisors to
MCH/Nutrition Project/Sudan

1. Introduction:

This project has chosen to address oral rehydration, growth monitoring, and nutrition-related behavior change, primarily. (See Appendix E for proposal draft.) However, if other aspects of the clinic and total MCH program are not functioning well, these three areas will of course be affected. Therefore, these recommendations address other issues involving MCH clinic operation effectiveness and cognitive content. These are only suggestions and may be discounted according to the discretion of those actually implementing the program. The recommendations have been written according to phases in order to prioritize.

2. Recommendations:

a. Phase I

- (1) Obtain consultation services for development of job descriptions for SAWS.

Team members: (a) Director
(b) Logistic person
(c) MCH/Nutrition technical
advisors

- (2) Spend time getting acquainted with Sudanese counterparts.

- (3) Spend time in making acquaintances with MOH

personnel; invite to dinner, spend time on one-to-one interactions.

ex. Dr. Nur, Mrs. Alowia, Director of preventive services, Dr. Kamal, Dr. Baldo, Dr. Suleiman, Director Children's Emergency Hospital; Health Officer USAID; WHO/UNICEF officials.

- (4) Set up Advisory Committee with representatives from all divisions (directorates) of MOH who provide services to MCH clinics: ex.

representatives from

- (a) Preventative Medicine division from Department
 - i. of EIP (Extended Immunization Program)
 - ii. Nutrition
- (b) Division of Curative Services
- (c) Division of Training
- (d) Other appropriate persons

This committee would provide a "clearing house" and communication means for the personnel involved in MCH activities in Khartoum

- (5) Visit Clinics

- (a) Assess equipment needed; make list and order scales, refrigerators, road to health cards (Suggest use road to health card being used in Dr. Baldo's project, because this will

be used in all ministry health facilities in time.)

- (b) Observe health education being done and get ideas for upgrading.
- (c) Assess storage facilities for commodities at each clinic site; develop plan for improvement of these.
- (d) Choose fifteen initial clinics in which program will be started.
- (e) Do baseline survey in clinics
 - regarding anthropometric indices
 - prevalence of clinical signs of malnutrition
 - give pre-test to mothers to determine
 - i. recognition of malnutrition; knowledge about malnutrition
 - ii. treatment of diarrhea; causes of diarrhea
 - iii. nutrition beliefs and practices including breast feeding and weaning
 - iv. attitudes toward staff and clinic

(Suggest contact teachers in University for use of students in Sociology/Psychology in giving of pre-tests; perhaps could be field experience for them; use food incentives for mothers to participate in baseline studies.)

- (6) Procure equipment and supplies for education program.
- (a) Appropriate resource library containing books and periodicals on Maternal Child Health and Nutrition (See Appendix A for suggestions)
 - (b) Procure shelves for this material.
 - (c) Procure the following equipment for use with the training programs.
 - i. 16mm film projector
 - ii. Overhead transparency projector with transparencies.
 - iii. Slide projector
 - iv. Screen
 - v. Generator for undependable electricity supply.
 - vi. Other materials as needed.
 - (d) Procure health education aids for Health visitors and Nutrition officers.
 - ex.
 - Baby gourds for teaching ORT.
 - Cups, spoons, utensils for teaching ORT to mothers and groups.
 - Flannelgraph.
 - Flip charts.

- (e) Secure training facility near an operating MCH facility to provide opportunity for clinical observation and participation; facility should have seats which can easily be moved around to accommodate various educational modalities.
- (7) Set up committee to work on MCH Clinic manual and policies regarding growth surveillance, screening, health teaching, ORT, and other concerns.
 - (a) Growth surveillance
 - procedures for monitoring growth
 - procedures for screening
 - when to refer children/mothers
 - how to fill out road to health cards
 - (b) Ideas for Health Education
 - (c) Vaccinations
 - vaccination schedule for a normal child
 - vaccination schedule for malnourished child
 - (d) Job descriptions for various levels of workers in clinics
 - (e) List main diseases or problems with signs and symptoms and basic treatment; when to refer
 - (f) Formulate policies for ORT
 - whether to only use prepared packets in education of mothers
 - whether to use preparation of home solutions in education of mothers

- which measuring devices to use, household or provide each mother with equipment
- when to start rehydration (first day of stools; number of stools)

(g) Other

(8) Initiate developmental component by -

- (a) Developing curricula for training sessions for workers participating in MCH clinics; obtain services of a consultant for assistance in curriculum development.
- (b) Making preparation for training session by -
 - i. developing specific objectives for each training session with evaluation criteria
 - ii. preparing for written evaluations from participants both daily and final
 - iii. preparing certificates to give participants upon completion
 - iv. finding appropriate location near a clinic for easy access to field observations and participation
 - v. choosing consultants/other knowledgeable persons to assist with teaching in-training seminars
 - vi. finding appropriate visual aids for use with various training sessions (ex. excellent baby model demonstrating clinical features dehydration marketed by makers of "Recussi'Ann")
- (c) Holding training sessions for following groups:
 - i. Physicians and Medical Assistants working in MCH facilities (See Appendix B for skeleton

- curriculum)
 - ii. All non-physician workers in MCH clinic and those associated with PL480 program (See appendix B for suggested curriculum)
 - iii. Health visitors (See Appendix B for suggested curriculum content)
 - iv. Nutrition Officers (See Appendix B for suggested curriculum content)
 - v. Suggest use of consultant for these first training sessions; especially sessions for leaders in MCH activities.
- (9) Initiate "Training of Trainers" program.
- (a) Suggest choose 10 nutrition officers and 10 Health visitors for "Training of Trainers" program; these individuals should have leadership and teaching ability and desire; may include Medical Assistants or other cadre of medical workers desiring this training (See appendix B for suggested curriculum content)
 - (b) Suggest consultant for assistance with this training session.
- (10) Plan for evaluation of project; suggest obtain services of consultant.
- (11) Other

b. Phase II

- (1) Continue on-site clinic visits to evaluate progress and identify problem areas.
- (2) Continue to develop relationships with appropriate individuals as in Phase I.
- (3) Initiate plans for development of mass-media program; secure assistance (See Appendix B for possible subjects and modalities.)
- (4) Continue to give appropriate support to advisory groups in policy formation and revision as in Phase I.
- (5) Select several potential candidates for upgrading in Public Health/MCH Nutrition/Leadership in U.S. or other countries.

Examples:

- (a) University of California Santa Cruz offers 1-2 month training program on "Training of Trainers" funded by USAID.
- (b) Downstate University New York offers 6-week training program in MCH and related activities for midwives funded by USAID.
- (c) Meharry University, Tennessee.
- (d) University of Indiana at Marion offers Master's in Community Health Nursing with emphasis on International health.

- (e) Locate other possibilities by reading journals, etc.
- (6) Evaluate first phase.
- (7) Select new group of clinics to participate in PL480 Title II feeding program.
- (8) Continue "Training of Trainers" session (See Appendix C for suggested curriculum content.)
- (9) Continue developmental component by holding training sessions for workers in MCH facilities.
 - (a) Preparation for training sessions-
 - i. Develop evaluation criteria for each training session; pre-test - post-test.
 - ii. Prepare for written evaluations from participants, daily and final
 - iii. Develop objectives for each seminar which can be evaluated.
 - iv. Prepare certificates to give participants upon completion.
 - v. Choose consultants to assist with seminars.
 - vi. Find appropriate visual aids for use with various training sessions. Obtain gourd baby and other demonstration utensils for each midwife and health educator attending session.
 - (b) Training session for Physicians and Medical Assistants working in MCH facilities (See Appendix B for suggested curriculum content)

- (c) Training session for Health visitors (See Appendix B for suggested curriculum content)
 - (d) Training session for Nutrition officers (See Appendix B for suggested curriculum content)
 - (e) Training session for "Training of Trainers" (See Appendix B for suggested curriculum content)
 - (f) Training session for Nutrition educators ... (participants in "Training of Trainers" session should lead out/assist in this. (See Appendix B for suggested curriculum content)
 - (g) Training session for nurse midwives (Suggest have participants of "Training of Trainers" session lead out/assist.
 - (h) Training session for traditional midwives (See appendix B) Participants in "Training of Trainers" should lead out/assist.
 - (i) Training session for vaccinators. (Participants in "Training of Trainers" should assist in this, see Appendix B for content suggestions.)
- (10) Broaden developmental component to include other professionals involved with children and parents such as: elementary school teachers, workers in child care centers, social workers, and those in training for these programs. (See Appendix B for possible curriculum content; involve "Training of

Trainers" participants.)

- (11) Work on program for clinic attendance incentive measures for mothers of children over 24-months; involve village leaders.
 - (a) Income generating activities
 - (b) Literacy programs
 - (c) Films and classes on child development
- (12) Encourage development of demonstration gardens at each clinic.
- (13) Start newsletter to be sent to workers at MCH clinics on nutrition update, nutrition education ideas, behavior change modalities; success stories from experiences; seek contributions from readers and offer prizes; possibly publish bi-monthly.
- (14) Other

c. Phase III

- (1) Continue to develop relationships with appropriate individuals in MOH, USAID, WHO and other individuals.
- (2) Continue to visit clinics and appraise health education, clinic management, use of Title II commodities in order to assist with appropriate evaluation procedures for USAID and GOS.
- (3) Continue with assistance to production of mass media materials.
- (4) Continue to give appropriate support to advisory group in policy formation and revision.

- (5) Continue to find appropriate resource materials for library at project headquarters.
- (6) Continue to find good candidates for leadership upgrading programs in U.S/other countries.
- (7) Participate in the on-going process of evaluation.
- (8) Assist with program expansion to all areas of Khartoum and implementation of program to North Kordofan.
- (9) Continue "Training of Trainers" session (See Appendix B for suggested curriculum content)
- (10) Continue developmental component by holding training sessions for workers in MCH clinics.
 - (a) Preparation for training sessions.
 - (b) Training session for Physicians and Medical Assistants.
 - (c) Training session for Health Visitors.
 - (d) Training session for Nutrition Officers.
 - (e) Training session for "Training of Trainers."
 - (f) Training session for nurse midwives.
 - (g) Training session for Nutrition educators (participants in "Training of Trainers" should assist.)
 - (h) Training session for traditional nurse midwives. (Participants in "Training of Trainers" should assist.)
 - (i) Session for vaccinators (Participants in "Train-

ing of Trainers" program should assist)

- (11) Broaden developmental component to include other professionals involved with children and parents such as: elementary school teachers, workers in child care centers, social workers, and those in training for these programs (See Appendix B for possible curriculum content; involve "Training of Trainers" participants with this)
- (12) Assist in investigation of local production of ORS
- (13) Continue newsletter to clinic workers
- (14) Other

d. Phase IV

- (1) Continue same activities as Phase III.
- (2) Initiate developmental component in relationship of family planning to malnutrition prevention while reviewing concepts of growth monitoring, behavioral change, oral rehydration therapy, and other subjects in training sessions to same groups as Phases I, II and III and adding other subjects as necessary.
- (3) Prepare for evaluation of project.
 - (a) Improvement in anthropometric indexes.
 - (b) Reduction in gross quantity of clinical signs of malnutrition.
 - (c) Improvement in educational scores of mothers on pre-test involving recognition of malnutrition,

treatment of diarrhea and nutritious diet.

(d) Assessment of increase in use of clinic services.

(e) Changes in attitudes of staff and recipients as demonstrated by questionnaire at beginning and end of a 2-year period during which a mother brings her child to the clinic.

(f) Other areas of evaluation.

(4) Other.

SUMMARY PLANNING ACTIVITIES - SUDAN

<u>CATEGORIES OF ACTIVITIES</u>	<u>Phase 1</u>	<u>2</u>	<u>3</u>	<u>4</u>
A. <u>Training and Upgrading</u>				
1. Preparation Curriculum for following sessions.				
a. Physicians and M.A's working in MCH facilities	X			
b. Health Visitors	X			
c. Nutrition Officers	X			
d. Training of Trainers	X			
e. Nutrition educators		X		
f. Nurse midwives		X		
g. Traditional midwives		X		
h. Non-medical Professionals working with parents and children		X		
i. Vaccinators			X	
2. Implementing Training Session.				
a. Physicians and M.A's working in MCH facilities	X	X	X	X
b. Health Visitors	X	X	X	X
c. Nutrition Officers	X	X	X	X
d. Training of Trainers	X	X	X	X
e. Nutrition educators		X	X	X
f. Nurse midwives		X	X	X
g. Traditional midwives				
h. Non-medical professionals working with parents and children		X	X	X
i. Vaccinators			X	X
B. <u>Administration and Supervision</u>				
1. Development of job descriptions SAWS Project team members	X			
2. Developing working relationships with counterparts and other individuals	X			

	<u>Phase 1</u>	<u>2</u>	<u>3</u>	<u>4</u>
B. <u>Administration and Supervision Cont'd</u>				
3. Choose participating clinics and assess.	X	X	X	
4. Select candidates for out-of-country upgrading in leadership.		X	X	X
C. <u>Logistics and Co-ordination</u>				
1. Set up MCH advisory committee and work with it.	X	X	X	X
2. Procure equipment for clinics and education program.	X	X	X	X
3. Set up MCH Clinic Policy Committee and work with it.	X	X	X	X
4. Develop Procedure Policy Manual for clinics	X	X	X	X
5. Assist in mass media materials preparation		X	X	X
6. Start Newsletter and distribute		X	X	X
D. <u>Evaluation</u>				
1. Training and upgrading programs	X	X	X	X
2. MCH Clinic effectiveness:	X	X	X	X
a. Baseline survey	X			
b. Criteria selection for evaluation	X			
c. Data collection		X	X	X

II MADAGASCAR REPORT

A. Executive Summary

The purpose of this consulting trip was to assist in the preparation of a proposal for a Title II PL480 Food for Peace feeding program from the Government of the United States to the Government of the Democratic Republic of Madagascar and to make recommendations for the implementation of the developmental component of this project.

During the past 10 years, relations between Madagascar and the United States have been strained. But recently that situation has been changing. For this reason, the United States requested that SAWS explore the possibility of a Title II PL480 FFP program in Madagascar. Catholic Relief Service has been operating such a 65,000 recipient program for years, but there is plenty of room in poverty-riddled Madagascar for more feeding programs in that Catholic Relief Service is helping only 2% of children under five. Hence SAWS was asked as another PVO to work in Madagascar.

Pending completed negotiations with the Government of Madagascar, the following commodities will be distributed in MCH centers, clinics, or dispensaries:

2 Kg rice
2 Kg non-fat dry milk
1 liter oil per month to the following
beneficiaries:

(Continued on next page)

Pregnant women
Lactating mothers (for 18 months)
All infants between six months and
twenty-four months of age
Children between twenty-four and
sixty months of age diagnosed
as having second or third degree
malnutrition.

This would be a 5 year program that would eventually reach 60,000 beneficiaries. Ten thousand beneficiaries would be targeted for the first year, starting in Antananarivo, extending to other provinces later.

If the proposal is accepted, SAWS will do the following with the aid of an outreach grant:

- 1) Obtain the food from the United States Government
- 2) Transport the food from Tamatave to Antananarivo.
- 3) Store the food as necessary in Tamatave and Antananarivo
- 4) Distribute the food to the clinics involved
- 5) Provide technical assistance in the following:
 - a) nutrition education and behavior change
 - b) oral rehydration therapy
 - c) growth monitoring
 - d) other areas that may be agreed upon mutually
- 6) Train staff, to be designated by the ministry in PL 480 policies and requirements related to food distribution.

(The complete proposal is found in the index)

B. Background to trip:

In 1960 Madagascar received full independence from France. Relations with the Western nations were good until the mid-70's. But in 1975, a popular referendum elected a new president, endorsing a strong socialist political program. At this time Madagascar endeavored to cut as many ties with the West as possible, which included deteriorating relationships with the United States. At one point diplomatic relations between the two countries was nearly severed. However, the United States has been able to maintain some diplomatic representation continuously, though not always an Embassy. Just recently the relations between Madagascar and the United States have strengthened. For this reason, the United States has asked the Seventh-day Adventist Welfare Service (SAWS) to explore the possibility of starting a project. There is little United States foreign aid being given to Madagascar, USAID has no real presence other than the distribution of Food for Peace commodities through Catholic Relief Services.

During the period of Western disenchantment, Madagascar refused nearly all foreign aid from all sources. Since the country was unable to support itself, great economic deterioration has occurred. Poverty, and therefore malnutrition is rampant, though there are no recent statistics on this because no research has been done on nutritional status for 20 years. A nutritional survey will

be done as part of this project. However, Madagascar is now willing and eager to receive foreign aid.

SAWS is the relief and development arm of the Seventh-day Adventist Church. SAWS relief work in Madagascar is done through 220 Community Welfare Centers connected with Seventh-day Adventist Churches on the island. Recently US \$30,000 was given in the form of clothing and medical supplies during a recent disaster in Madagascar.

Seventh-day Adventists began working in Madagascar in 1917. Today there are several primary schools and one training school located in Antananarivo. Seventh-day Adventist medical work consists of 2 dispensaries, one of which operates a ten-bed maternity ward and ten medical beds, and a 55-bed hospital and dental clinic.

C. Brief Description of Madagascar; its People and Problems:

Madagascar is a large island off the Eastern coast of Africa, composing 228,000 sq. miles. The population is composed of 18 ethnic groups and various religions such as Christians, Muslims and indigenous beliefs (of Malayan and Polynesian origin). French and Malagasy are the official languages spoken. The population was 8,450,000 in 1982. Madagascar has made strides in its educational system so that the literacy rate is 53% and school attendance is 83%. (Background Notes, Madagascar, U.S. Dept. of State, 1982)

The following figures give a synopsis of the health situation:

infant mortality rate	177/1,000
maternal mortality rate	130/1,000
diarrhea death rate	179/1,000
life expectancy	46 years
population growth rate	2.8 %
% families without latrines in rural areas	86%
% families without safe water in rural areas	84%

(from GOM Bureau of Health Statistics, 1982)

These statistics show a small picture of the economic situation:

per capita income	\$350 (1980)
average inflation rate	15-25% (1980-81)
work force consists of	
a) agriculture	88%
b) industry and commerce	1.5%
c) services	less than 1%
d) government	1%

D. Summary of Findings

1. Brief organizational outline of the Ministry of Health

In that this project will be under the auspices of the Ministry of Health, a brief outline of administrative structure is given here:

Minister of Health
|
Secretary General

3 Main Divisions

1. Division Pharmacy and Laboratories

Pharmacy

Laboratories

Acquisition of medicines

2. Division Medical Services

Hospitals

Statistics

Training

Immigration

Preventive health

3. Division Public and Social Hygiene

Environmental Sanitation

Immunization & Communicable Disease

SESMS (Services del' Education Sanitaire et de la Medecine Sociales)

MCH

Nutrition

Health Education

School Health

Research and Studies

6 other branches loosely attached administratively to Secretary General's office but separate from previous 3 main divisions:

1. Health legislation

2. International organizations

FAO
WHO

UNICEF
UNFPA

6 Other branches - Continued

3. Financial Service
4. Administration
5. Health Planning
6. 6 Provincial Directorates under which are 35 medical circumscriptions(counties) responsible for medical work in each circumsription

2. Negotiations

Negotiations in the Ministry of Health during this visit were conducted with the Directors of the Pharmacy and Laboratories Division and Public and Social Hygiene Divisions; Director of SESMS (subdivision of Public and Social Hygiene Division) and his director for nutrition.

When the project becomes viable it will be in the Division of Public and Social Hygiene, under the department of SESMS.

3. Para-medical Personnel and their education in Madagascar

This MCH/Nutrition project, includes a developmental component of giving training sessions to medical workers in MCH facilities. In order to have a background of the type of personnel involved in health care in Madagascar, the following list is given:

- * Physicians
- * Nurses
- * Midwives

(Continued on next page)

Para-medical Personnel - Continued

Physician's assistants
Dentists
Pharmacists
Environmental Health technicians
Social workers
Sanitary engineers
Laboratory technicians
Administrative personnel
X-ray technicians
Physiotherapists

The consultant was not able to receive much information regarding the training of the various cadre of workers. There seems to be a basic one year training period for all medical personnel followed by a one-to-two year specialization for X-ray technicians, physiotherapists, general nurses and midwives. There are six nursing schools throughout the country. All professional upgrading is done in France except for occasional seminars.

* Workers in MCH Facilities

4. Maternal Child Health Care & Problems in Madagascar

a) MCH - A Priority

Maternal Child Health is a priority in the Ministry of Health for Madagascar. There is an administrative line of command in the hierarchy and attention is being given to MCH, as was shown in the previous description of the structure of the MCH.

b) Statistics regarding MCH

To show some of the activities, the following figures are given:

Fifty-two % of all births are in health facilities. Forty-eight percent of all children are immunized for DPT; seventy-four percent over one year were immunized with BCG; Chloroquine coverage was 40% for school children and thirty percent for under fives. (MOH Dept. of Statistics, 1982) These statistics indicate that attempts are being made to provide for the health of mothers and children.

Conflicting reports were received regarding the number of MCH facilities in Antananarivo, so the following information may not be accurate.

There are 2 general hospitals, one 90-bed pediatric hospital mainly for cases of malnutrition (but 200 total pediatric beds in Tauninarivo), 1 maternity hospital which delivers 15,000 babies per year and 23 medical centers (primary health care facilities) which, theoretically give MCH care. There also are 10 other centers only for MCH care scattered throughout the city. Malnutrition is worse in the urban areas. Mothers have difficulty attending the clinics regularly due to transportation problems and its costs.

1982 Population Statistics for under 5's for the Province of Antananarivo are as follows:

0 - 11 months	98,000
1 - 2 years old	87,000
2 - 3 years old	73,000
3 - 4 years old	<u>67,000</u>
	325,000

No statistics were available for 5 year olds

1980 rough data collected from health centers by the nutrition department indicate the following trends in malnutrition.

0 - 12 months	20% malnutrition
1 - 24 "	25%
2 - 5 years	5%

But when talking with those health workers directly involved with monitoring of children, it seems the incidence is higher. However, no studies have been done lately to document this, as stated previously.

c) Major causes of morbidity and mortality

According to the medical director of the chief MCH clinic, the largest causes of maternal morbidity are malnutrition, anemia, VD, trichomonas, and hypertension with toxemia. Malnutrition (with greater incidence of marasmus than Kwashiorkor) is the biggest problem for children followed by respiratory problems, malaria and

diarrheal diseases.

d) Activities of Nutrition department of SESMS

The nutrition department of SESMS is also engaged in MCH activities. A nutrition rehabilitation center is operated in the SESMS building. Malnourished children are referred here following release from the hospital. Children come with their mothers for nutrition education and a balanced diet. Following rehabilitation at this center, children are taken back to the MCH center for growth monitoring.

This department has a committee that works with the health education department for planning Mass Media programs. Conferences are held with various educators from various organizations to emphasize nutrition. There is also a National Committee Against Hunger and Women's Nutrition Education Team which offers help to organizations on training in nutrition and related subjects. This is a 10-day training program covering the following points: sanitation, basic nutrition, food production, family gardens and animal projects, balancing a diet using local foods, family education, child care, handicrafts and human relations. The director admitted that little had been done due to lack of funding. Emphasis is trying

to be put on the village level through training teams. This department hopes to hold workshops in the future for MCH workers and all paramedical workers on nutrition using local products. So the goals of this department are compatible with some of the goals for the proposed MCH/Nutrition Project.

e) Ministry of Population Activities - MCH

The Ministry of Population has also been working on projects that are related to Maternal Child Health.

i) Child Care Centers:

This is a pilot project in which 18 day care centers will be opened by 1985. There are 30 children in each center aged 2-6 years.

UNICEP supplies some toys and Save-the-Children Foundation donates milk. Parents contribute 20 francs (5¢) per child per day and also contribute food, work in the Center's garden or help with the upkeep of the Center in exchange for their child's attending. In addition, participating parents must attend parent education classes every other week on child development, family education, and home economics nutrition or budgeting. A physician plans the menu for the center. Three adults work at the center, making a ratio of one adult per ten

children. The training course consists of a 6 month session for candidates with a 9th grade education. The curriculum consists of child psychology and development, nutrition, pre-school education techniques, and first aid. The buildings are furnished by the community.

ii) Women's Co-operatives

Women get together to work on crafts for marketing. Reports are being sent to the Ministry of population. Training in supervision is being given.

iii) Project for street children

This is being funded by Save the Children Foundation. This is a center where street children are taught literacy, crafts for income, music and sports.

f) Family Planning Activities

Family planning activities are being carried out in Madagascar by two associations thus far. International Planned Parenthood Foundation (IPPF) and United Nations Fund for Population Activities (UNFPA).

International Planned Parenthood Foundation has been working in Madagascar since 1967. So far the organization has opened 15 clinics throughout the country. At first, the government was not very

supportive, but lately there has been a change of attitude. Last year there were seminars with the parliament which opened up co-operation with the Ministry of Education, the Ministry of Population and Ministry of Finance. This organization is assisting the Ministry of Education in the development of curriculum materials for primary and secondary schools in family life subjects. The Ministry of Population is working with IPPF in developing a curriculum for parent education, and the Ministry of Finance has given duty-free status to educational materials and contraceptives entering Madagascar.

A KAP survey has not been done yet, approval from the government is still pending. The clinics distribute pills, injections, diaphragms, IUD's, condoms and cervical cremes. Two thousand clients attend the clinics per month and there are twenty-four thousand members of this organization, IPPF, in Madagascar. Both radio and TV have been covering IPPF activities. The organization has asked for their own programs, but this request has been denied thus far.

The clinic staff consists of a part-time physician, nurses, midwives, a social worker and field workers as well as administrative personnel. The field workers do home visits and hold motiva-

tional sessions in youth clubs, armed forces and church clubs.

A branch of this organization is Planned Parenthood Women's Development. This organization operates Family Guidance Centers where women are taught nutrition, care of the sick, health education, cooking and handicrafts. It is possible that the proposed MCH/Nutrition project may collaborate with this organization for training in oral rehydration, nutrition, and general Maternal Child Health at IPPF facilities.

The United Nations Fund for Population Activities has only recently started working in Madagascar. The director stated that just within the last three months they had been approached by the MOH to start making plans to incorporate contraceptive availability at Maternal Child Health clinics. However, some in the MCH knew nothing of it, therefore conflicting reports were received. UNFPA will take responsibility for training midwives in the use of contraceptives. This training will be given either on Mauritius Island or at Downstate University in New York City. When the program becomes viable, it should be possible for the MCH/Nutrition project to work with UNFPA in providing incentives for clinic attendance and in training seminars.

5. On-site visits

a) Nutrition Research Laboratory

Dr. Roger Andrianasolo, Ph.D. from Cornell University, New York, is the chief of the Nutrition Research Laboratory. This is a small laboratory where mostly chemical assay of foods is being done. During the time of our visit he was looking at the diets being given to malnourished children in the nutrition rehabilitation center. He found the protein calorie count to be within normal limits, but the calorie content was low.

Other research for which he had just received funding was entitled "Infant growth during the first 6 months of life in relation to the nutrition of the lactating mother and to the breast milk output," and "Breast feeding patterns in Madagascar."

Dr. Andrianasolo will be funded for the base line study on indices of malnutrition in Madagascar in connection with this project.

b) Visit to Antananarivo MCH Center

This Maternal Child Health Center was located beside the pediatric hospital, and was the largest MCH Center in Madagascar. Dr. Ravelonansy, the pediatrician in charge of the center, said that they served 3,500 children per week, and that only 500 of these

were over 2 years of age. The staff consisted of 15 midwives, 1 social worker and 2 physicians. Here pregnant mothers receive care, children are weighed, immunizations are given, and health education is conducted daily. Children needing medical care are taken across the street to the dispensary for outpatient care, or to the Pediatric hospital next door.

The clinic was well attended. About 200 mothers and babies were gathered into one large waiting room listening to a health lecture. The speaker used a microphone and passed microphones around the audience for participation. The conversation, in French, was not translated for me, but the participants were using the microphones for the discussion of some subject. There were posters on the walls. A flannel graph was there with pictures of foods. Simultaneously, midwives were weighing babies. So far that morning of the 62 babies weighed, 13 had been referred to the pediatric hospital with second degree malnutrition. Scales used were models.

There was also a kitchen off the waiting room where food was being prepared for a demonstration to mothers of malnourished children. The consultant did not see the demonstration. The facility was clean and in good repair.

c) Visit to Antananarivo Pediatric Hospital

This is a 90-bed facility adjacent to the large Maternal Child Health Center. It is a general pediatric hospital, but 80% of the patients are admitted with second and third degree malnutrition. Diarrhea and respiratory conditions were main causes of hospitalization for the remaining patients.

At the time of this visit, there was not enough milk for the children. Neither were there medications. The government operated medical facilities have almost no medications available. Patients were given prescriptions and told to find medications at private pharmacies. But often those pharmacies don't have medications because there is no foreign exchange or hard currency with which to import medicines.

The diet consisted of milk, carrot soup, and potatoes that day.

The consultant examined the following cases waiting for admission to the hospital:

20 month child	8 Kgs.	17.6 lbs.
4 year old	9 Kgs.	19.8 lbs.(Kwashiorkor)
9 month old	4 Kgs.	8.8 lbs.(Marasmus)
17 month old	6 Kgs.	13.2 lbs.(Kwashiorkor)
3 year old	6 Kgs.	13.2 lbs.(Marasmus)
10 month old	7 Kgs.	15.4 lbs.
6 month old	3 Kgs.	6.6 lbs.(Marasmus)(this child had weighed 5 Kgs. at birth but mother could not breast feed)

Malnourished children are usually kept one week, then referred to a smaller nutritional rehabilitation center in the Ministry of Health building downtown for continued surveillance. The staff indicated there were many returns. It was stated that often parents had absolutely no money for food.

d) Visit to Laniera Child Care Center

This was one of the child care centers being operated by the Ministry of Population. This is one of the finest pre-school educational facilities this consultant has seen in a developing country. The facility was clean and everything well organized. Activities were planned out in advance and included some of the following every day:

drawing, sketching, painting
 puppets
 play store
 educational games for
 pre-math
 pre-reading
 pre-writing
 body expression and acting
 stories
 poetry
 singing
 class walks
 group games

The children are given a nutritious meal. The week's menu included a balanced diet of locally avail-

able foods. The directors stated that when this center first opened one year ago, eighty percent of the children were malnourished. It was not indicated what degree of malnutrition this was, but now there was none among this group of children at the time of the visit. There was a large vegetable garden which the children help water and care for. The parents are responsible for the total care of the garden and upkeep in the building. A schedule of duties is posted weekly for the parents. Blankets and grass mats were available for rest periods; these were made by the parents. The toys and visual aids for teaching activities were all hand made by the teachers or parents and were excellent. Having observed day care centers in the United States, this consultant believes this one compares very favorably.

e) Visit to Seventh-day Adventist Facilities

In that the Seventh-day Adventist World Service will be the PVO involved in the implementation of this Maternal Child Health/Nutrition project, it is reasonable to expect that some Seventh-day Adventist institutions be involved in the MCH program as well as the Government of Madagascar clinics. The following church facilities were visited as potential sites for distribution/health education centers.

i) Mandrason:

This is one of the larger churches in Tananarivo with 400 members. Fifty women are already involved with "Dorcas" work. (Assistance to needy families in the form of food and clothes) There also classes being conducted by the church women for young girls from the street in cooking, sewing, embroidering, knitting and first aid.

Unfortunately, there is not adequate storage space at this church for the commodities unless another room could be built. The area around the church is crowded with buildings, but the court yard surrounding the church could accommodate outdoor classes in good weather. The open veranda adjacent to the church could be another option for the feeding and health education program.

ii) Manjakaray:

This church already has a clinic attached to it, so it would be an ideal location from which to start a distribution/education program. The area surrounding the church is a typical well-populated suburb.

iii) Ambohijafy:

This facility has a small primary school attached to it. Storage space is available and

both a pastor and teacher live on the premises. The membership is about 200, so there will be volunteers from whom to choose.

iv) Avarateteze:

Like the previous facility, there is a school attached. Storage space is available. Both a pastor and teacher live near by. The surrounding area is quite economically depressed, so there should be plenty of potential participants who would welcome the food supplements.

v) Tsararay:

This church is located near the periphery of the city. Houses are not as close together, but again, the area is economically depressed. A school is attached; storage space is available and responsible persons live on the premises.

vi) Indian Ocean Training School:

This facility is located 6 km out of the city in the semi-rural area. Several expatriate families are located near the school as well as printing press and Union Mission headquarters of the Seventh-day Adventist Church for Madagascar and neighboring islands. Storage space is available. The clinic could be held in an empty classroom. A milk distribution program is already in progress

on a monthly basis, so food supplements, health education, and growth monitoring could be added.

f) Visit to Lutheran Primary Health Care Project Office

The Lutheran Church operates 5 medical facilities in Southern and Northern Madagascar plus 2 dispensaries in Antananarivo. Presently this organization is engaged in training primary health care workers to operate from villages where they administer vaccines, a growth surveillance by using road to health cards, distribute Chloroquine, and give appropriate health education. The primary health care worker also does home visiting in his village. The local village chooses the person they want trained for this responsibility and financially supports him/her. Once a month a medical assistant from the Medical Center visits each village, providing supervision to the village health worker and a system of referral for him. Patients requiring hospitalization are transferred to the Lutheran medical facility for treatment or continued care.

Training sessions for primary health care workers are given twice a year, the course lasts a month. Some of the subjects taught are the following:

Child care

Nutrition pertaining to mothers & children

(Continued on next page)

Subjects taught in training sessions - Continued

TB

Malaria

Fever

Worms

Puberty

Diarrhea

Skin diseases

Bilharzia

Tetanus

V.D.

Measles

Development stories and plays for teaching purposes and others

This organization is also involved in developing visual aids and translating appropriate materials.

Nutrition for Developing Countries by King is presently being translated into Malagash. Large black and white pictures depicting foods, balanced diets, child care and other appropriate subjects have been drawn and are transferred to cloth for use by the village health workers.

The Lutherans are quite willing to show the visual aids and other teaching materials they have produced. They also wish to participate in the training sessions developed for individuals working with the Maternal Child Health/Nutrition Project.

E. Recommendations of activities for Technical Advisors to MCH/Nutrition

1. Introduction

This project has chosen to address oral rehydration, growth monitoring, and nutrition-related behavior change primarily.

(See Appendix F for Proposal)

However, if other aspects of the clinic are not functioning well, these areas of primary concern to this project will be affected. Therefore, these suggestions address other issues involving effectiveness of MCH program operation, and cognitive contents.

These are only suggestions and may be discounted at the discretion of those implementing the program. The recommendations have been written according to phases in order to prioritize. This is a five-year project, so suggestions pertain to that time frame.

This is a new program to Madagascar. Food has never been given out at MOH Clinics. Furthermore, the Seventh-day Adventist Church and perhaps other agencies will be involved in food distribution. These workers need to be introduced to this program, and in many cases training must be given.

2. Recommendations

a. Phase 1

- (1) Obtain consultation services for development of job description for SAWS project team members.

- (a) Director
 - (b) Logistic person
 - (c) MCH/Nutrition technical advisors
- (2) Make acquaintance with leaders in MOH involved with MCH and set up advisory committee from representatives of MOH, CRS, SAWS and other organizations operating MCH facilities to provide "clearing house" and communication for MCH activities and prevent duplication of services in geographical areas if possible.
- (3) Procure equipment and supplies for educational program.
- (a) Appropriate resource library containing books and periodicals on Maternal Child Health and Nutrition
(See Appendix A for suggested list)
 - (b) Procure shelves for this material
 - (c) Procure the following equipment for use with the training programs:
 - (1) 16 mm film projector
 - (2) Overhead transparency projector with transparencies
 - (3) Slide projector
 - (4) Screen
 - (5) Generator for undependable electricity supply
 - (6) Other materials as needed
 - (d) Procure Health Education aids for Health visitors and Nutrition officers:
 - (1) Baby gourds for teaching ORT to mothers
 - (2) cups, spoons, utensils for teaching ORT to mothers and groups
 - (3) flannelgraphs
 - (4) flipcharts
 - (5) Other

- (e) Locate training facility near an operating MCH facility to provide the opportunity for clinical observation and participation; ^{if possible} facility should have seats which can easily be moved around to accommodate various educational methods.
- (4) Set up committee to work on MCH Clinic manual and policies regarding growth surveillance, screening, health teaching, ORT, and other concerns.
- (a) Growth surveillance
- procedures for monitoring growth
 - procedures for screening
 - when to refer children/mothers
 - how to fill out road to health cards
- (b) Ideas for Health education
- (c) Vaccination schedule for normal child
- vaccination schedule for malnourished child
- (d) Job description for various levels of workers in clinics.
- (e) List main diseases ~~or~~ problems with s/s and basic treatment; when to refer
- (f) Formulate policies for ORT
- whether to only use prepared packets in education
 - whether to use in education, preparation of home solutions
 - which measuring devices to use; household or provide each mother with equipment
 - when to start rehydration (first day of stools, number of stools)
- (g) Other

(5) Initiate developmental component by -

(a) Developing curricula for training sessions for workers participating in GOM or existing MCH programs; obtain services of consultant for this, particularly for training programs of leaders in MCH system; (See Appendix C for suggestions of possible content for curricula for various sessions.

(b) Make preparations for training sessions by -

- i. developing specific objectives for each training session with evaluation criteria
- ii. preparing for written evaluations from participants both daily and final
- iii. preparing certificate to give participants upon completion
- iv. finding appropriate location near a clinic for easy access to field observations and participations
- v. choosing consultants/other knowledgeable persons to assist with teaching in-training seminars
- vi. finding appropriate visual aids for use with various training sessions (ex. excellent baby model demonstrating clinical features dehydration marketed by makers of "Recussi'Ann
 - obtain "gourd babies" for participants
 - cups, spoons, utensils for demonstrating ORT to mothers
 - flannelgraph
 - flipcharts

(c) Hold training sessions for following groups -

- i. Physicians and Medical Assistants working in MCH facilities (See Appendix C skeleton curriculum)
- ii. All non-physician workers in MCH clinic and those associated with PL480 program (See Appendix C for suggested curriculum)
- iii. Nurse-midwives in leadership position in MCH facilities (See Appendix C for suggested curriculum)
- iv. Nurse-midwives and nurses working in MCH facilities not in leadership positions. (See Appendix C for suggested curriculum)

(6) Initiate "Training of Trainers" program.

- i. Suggest choose 20 nurse-midwives for "Training of Trainers" program; should have leadership and teaching ability and desire; may include Medical Assistants or other cadre of medical workers desiring this training (See Appendix for suggested curriculum content)
- ii. Suggest consultant services for assistance with this training session.

(7) Initiate 3-month training program for -

- i. Non-medically trained individuals wishing to work in new feeding programs operated by SDA churches or other PVO's desiring participation in this program.
- ii. Plan for some method of reimbursement for one person involved at each site; write into budget preparation, collect contributions, or have church or community support: other workers can be voluntary, but one should be salaried to ensure continuity (feeding programs will probably be only 1-2 times per week, so salary can be based on that level of participation)
- iii. Plan for some method of recognition for volunteers such as yearly banquet, certificate upon completion of a certain number of hours or other.

- (8) Plan for evaluation of Project; suggest obtain services of consultant for assistance with this
- (9) Other.

b. Phase II

- (1) Continue on-site clinic visits to evaluate progress and identify problem areas.
- (2) Continue to develop relationships with appropriate individuals as in phase I.
- (3) Initiate plans for development of mass-media program; secure assistance of consultant (See Appendix A for possible subjects and modalities.
- (4) Continue to give appropriate support to advisory group in policy formation and revision as in Phase I.
- (5) Select several potential candidates for upgrading in Public Health/MCH Nutrition/Leadership in U.S.A. or other countries.

Examples:

- (a) University of California Santa Cruz offers 1-2 month training program on "Training of Trainers" funded by USAID
- (b) Downstate University New York offers 6-week training program in MCH and related activities for midwives funded by USAID.
- (c) Meharry University, Tennessee
- (d) University of Indiana at Marion offers Master's

in Community Health Nursing with emphasis on International health.

- (e) Locate other possibilities by reading journals, etc.
- (6) Evaluate first phase
- (7) Select new group of clinics to participate in PL480 Title II feeding program
- (8) Continue " Training of Trainers" program (See Appendix C for suggested curriculum content)
- (9) Continue developmental component by holding training sessions for workers in MCH facilities.
 - (a) Preparation for training sessions -
 - i. Develop evaluation criteria for each training session; pre-test - post-test.
 - ii. Prepare for written evaluations from participants; daily and final
 - iii. Develop objectives for each seminar which can be evaluated.
 - iv. Prepare certificates to give participants upon completion.
 - v. Choose consultant to assist with seminar.
 - (b) Hold training sessions for: (Use participants in "Training of Trainers" Session for assistance in the following teaching programs)
 - i. Physicians and Medical Assistants working in MCH facilities (See Appendix C for suggested curriculum)
 - ii. Nurse-midwives in leadership positions in MCH facilities (See Appendix C)

- iii. Nurse-midwives and nurses not in leadership positions in MCH (See Appendix C)
 - iv. Workers in PVO distribution centers (See Appendix C for suggested curriculum)
- (10) Broaden developmental component to include other professionals involved with children and parents such as: elementary school teachers, workers in child care centers, social workers, and those in training for these programs. (See Appendix B for possible curriculum content; involve "Training of Trainer participants)
- (11) Work on program for clinic attendance incentive measures for mothers of ~~later~~ children over 24 months; involve village leaders.
- i. income generating activities
 - ii. literacy programs
 - iii. films and classes on child development
- (12) Encourage development of demonstration gardens at each clinic.
- (13) Start newsletter to be sent to workers at MCH clinic on nutrition update, nutrition education ideas, behavior change modalities, success stories from experiences, seek contributions from readers and offer prizes; possibly publish bi-monthly.

c. Phase III

- (1) Continue to develop relationship with appropriate individuals in MOH, USAID, WHO, and other individuals.

- (2) Continue to visit clinics and appraise health education, clinic management, use of Title II commodities in order to assist with appropriate evaluation procedures for USAID and GOM.
- (3) Continue with assistance to mass media materials production.
- (4) Continue to give appropriate support to advisory group in policy formation and revision.
- (5) Continue to find appropriate resource materials for library at project headquarters.
- (6) Continue to find good candidates for leadership upgrading programs in U.S./other countries.
- (7) Participate in the on-going process of evaluation.
- (8) Assist with program expansion to other provinces of Madagascar.
- (9) Continue "Training of Trainers" session. (See Appendix C for suggested curriculum)
- (10) Continue developmental component by holding training sessions for workers MCH clinics.
 - (a) Preparation for training sessions.
 - (b) Training session for Physicians and Medical Assistants.
 - (c) Session for individuals working in PVO distribution centers.
 - (d) Session for nurse-midwives in supervisory

positions at MCH facilities.

(e) Session for nurses and midwives working in MCH facilities not in supervisory positions.

- (11) Broaden developmental component to include seminars in ORT, recognition of children at risk for malnutrition, etc. ^{by} other professionals involved with children and parents such as: elementary school teachers, workers in child care centers, social workers, and those in training for these programs. (See Appendix C for possible curriculum content; involve "Training of Trainers" participants with this)
- (12) Assist in investigation of local production of ORS.
- (13) Continue newsletter to clinic workers.
- (14) Other.

d. Phase IV

- (1) Continue same activities as Phase III.
- (2) Initiate developmental component in relationship of family planning to malnutrition prevention while reviewing concepts of growth monitoring, behavioral change, oral rehydration therapy, and other subjects in training sessions to same groups as Phases I, II and III and adding other subjects as necessary.
- (3) Prepare for evaluation of project.

- (a) Improvement in anthropometric indexes.
- (b) Reduction in gross quantity of clinical signs of malnutrition.
- (c) Improvement in educational scores of mothers on pre-test involving recognition of malnutrition treatment of diarrhea and nutritious diet.
- (d) Assessment of increase in use of clinic services.
- (e) Changes in attitudes of staff and recipients as demonstrated by questionnaire at beginning and end of a 2-year period during which a mother brings her child to the clinic.
- (f) Other areas of evaluation.

SUMMARY PLANNING ACTIVITIESMADAGASCAR

	<u>Phase 1</u>	<u>2</u>	<u>3</u>	<u>4</u>
<u>Categories of Activities</u>				
A. <u>Training and Upgrading</u>				
1. Curriculum Preparation for following Training Sessions	X			
a. Physicians and M.A's working in MCH facilities		X		
b. Introductory session for all non-physician workers in MCH clinics and those associated with PL480 Title II program.			X	
c. Nurse-midwives in leadership positions in MCH facilities		X		
d. Nurse-midwives and nurses working in MCH facilities not in leadership positions.		X		
e. "Training of Trainers" session		X		
f. Training program for non-medically trained individuals working in PVO distribution centers.				X
g. Non-medical professionals working with parents and children.		X		
2. <u>Implementing Training Session</u>				
a. Physicians and Medical Assistants working in MCH facilities.	X	X	X	X
b. Nurse-midwives working in leadership positions in MCH centers	X	X	X	X

	<u>Phase 1</u>	<u>2</u>	<u>3</u>	<u>4</u>
2. <u>Implementing Training Session Cont'd</u>				
c. Nurse-midwives and nurses not in leadership positions in MCH facilities	X	X	X	X
d. "Training of Trainers" Session	X	X	X	X
e. Workers in PVO distribution centers	X	X	X	X
f. Non-medical professionals working with parents and children			X	X
B. <u>Administration and Supervision</u>				
1. Development of job description for SAWS Project team members.	X			
2. Developing relationships with counterparts and other individuals	X	X	X	X
3. Choose participating clinics and assess	X	X	X	
4. Select candidates for out-of-country upgrading in leadership.		X	X	X
C. <u>Logistics and Co-ordination</u>				
1. Set up MCH advisory committee and work with it.	X	X	X	X
2. Procure equipment for clinics and education program	X	X	X	X
3. Set up MCH Clinic Policy Committee and work with it.	X	X	X	X
4. Develop procedure/policy manual for clinics	X	X	X	X
5. Assist in preparation of materials for mass media	X	X	X	X

C. <u>Logistics and Co ordination Cont'd</u>	Phase	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
6. Start newsletter and distribute		X	X	X	X
D. <u>Evaluation.</u>					
1. Training and upgrading programs		X	X	X	X
a. Preparation of objectives		X	X	X	X
b. Evaluation of objectives		X	X	X	X
2. MCH Clinic effectiveness		X	X	X	X
a. Base line survey		X			
b. Criteria selection for evaluation		X			
c. Data collection			X	X	X

LIST OF PEOPLE CONTACTED

I. Prior to Departure from U.S.A.

A. Loma Linda University

1. Dr. William Dysinger, M.D., Professor in International Health, School of Health, Loma Linda University, Loma Linda, CA
2. Ms. Sherrie Jones, R.D., M.S., Department of Nutrition, School of Health, Loma Linda University, Loma Linda, CA
3. Ms. Helen Register, R.D., M.P.H., Department of Health Education, School of Health, Loma Linda University, Loma Linda, CA
4. Dr. Ruth White, Dr.P.H., Professor in International Health, Department of Health Education, School of Health, Loma Linda University, Loma Linda, CA

B. San Bernardino County, California

1. Ms. Esther Hernandez, Home economist, Expanded Food/Nutrition Program, San Bernardino County Health Department, San Bernardino, CA
2. Ms. Mary Marshall, M.S., Director, Expanded Food/Nutrition Program, San Bernardino County Health Department, San Bernardino, CA

C. USAID

1. Larry Abel, USAID Africa Bureau, Agriculture Division, USAID, Washington, DC
2. Ms. Maura Mack, Office of Nutrition, USAID, Washington, DC
3. Ms. Tina Sanguh, Nutrition Unit, USAID, Washington, DC

II. Democratic Republic of Sudan

A. Ministry of Health

1. Ms. Mona Adib Abdalla, Social Worker, Omdurman Comprehensive Child Center
2. Dr. El Harith Hamal Ali, M.D., Senior OB-GYN Consultant, Director of Omdurman Maternity Hospital
3. Mrs. Alowia, Deputy Director, Nutrition Office
4. Sr. Asma, Matron, Outpatient Clinic for Maternity Hospital, Omdurman
5. Dr. Mohamed Hasan Baldo, M.D., Director of Project for Improvement of MCH and Family Planning, Maternity Hospital, Omdurman
6. Ms. Suad Bedri, Nutrition Officer, Omdurman Comprehensive Child Center, Omdurman
7. Sr. Heidi Gassim, Sister-in-charge, Malnutrition Ward, Children's Emergency Hospital, Khartoum
8. Sr. Joyce Jacintha, Sister-in-charge, 2nd Class Post Partal Maternity Ward, Maternity Hospital, Omdurman (Carmelite Catholic Sister from India)
9. Dr. Kamal, M.D., Director, Nutrition Office, MOH GOS

10. Dr. Khalid, M.D., Deputy Director of Maternity Hospital, Specialist in OB-GYN
11. Sr. Magna Mary, Sister-in-charge, 1st class Post Partal Maternity Ward, Maternity Hospital, Omdurman (Carmelite Catholic Sister from India)
12. Dr. Zuhir Ali Nur, M.D., Director, International Health Division (Acting Minister of Health)
13. Dr. Amal Abubakar Osman, M.D., Assistant Director of Project for Improvement of MCH and Family Planning
14. Ms. Duvria Mohamed Osman, Nutrition Officer, Omdurman Comprehensive Child Center
15. Sr. Fatmah Saleh, Senior midwife and Family Planning Officer, Project for Improvement of MCH and Family Planning
16. Dr. Annah Salih, M.D., Pediatrician, Children's Emergency Hospital, Khartoum; Clinical Professor of Pediatrics, Khartoum University School of Medicine
17. Dr. Gaeffer Ibnoaf Suleiman, M.D., Medical Director, Pediatric Emergency Hospital, Khartoum
18. Ms. Patrice Wannas, Nutrition Officer, El Khatima Health Center, Khartoum North
19. Dr. Hulda Zahir, M.D., Medical Director, Omdurman Comprehensive Child Center

B. USAID

1. Mr. Peter Kraustover, Assistant Projects Officer, USAID/Sudan
2. Mr. Gary Leinen, Health Officer, USAID Mission to Sudan
3. Ms. Nancy Metcalf, Regional Food for Peace Officer, Nairobi Office
4. Dr. Mary Ann Micka, M.D., Health Officer, USAID/Sudan
5. Mr. Arthur Mudge, Director, USAID/Sudan

C. Seventh-day Adventist World Service (SAWS)

1. Dr. Jerry Whitehouse, Dr.H.S., Director, SAWS, Sudan and Director, Juba Adventist Clinic
2. Robert Blintzi

D. United Nations

1. Dr. Lamir Basta, M.D., Director, UNICEF
2. Mr. Tom McDermott, M.P.H., Deputy Director, UNICEF

e. University Khartoum

1. Ms. Susan Weslyn, Nutritionist, Faculty of Community Medicine, School of Medicine

III. Madagascar

A. Ministry of Health

1. Dr. Roger Andrianasolo, Ph.D., Chief Nutrition Laboratory, Faculty of Medicine, Antananarivo, Madagascar
2. Dr. Aimee Rabehaja, Director, Division Nutrition and Alimentation, SESMS
3. Dr. Rakotomanga, Director of Medicine and Public Health Training Division

4. Dr. Maurice Ramakavelo, Director, Health Statistics, Ministry of Health, Madagascar
5. Dr. Ramangalaby, Director OF SESMS
6. Dr. Aimee Randriambololona, M.D., Chief Pediatrician, Pediatric Hospital, Tananarivo, Madagascar
7. Dr. Ravelonanosy, Director PMI (MCH Clinic)
8. Dr. Edmund Ribaira, Director, Social and Public Hygiene

B. Ministry of Population

1. Miss Monique Andreas, Director, Maternal and Child Conditions
2. Ms. Lily Andriamahaly, Training Division, Maternal and Child Conditions
3. Ms. Liliane Rajonina, Training Division, Maternal and Child Conditions
4. Ms. Christine Ramananjahary, Director, Laniera Children's Center
5. Mr. Robinson, Advisor, Minister of Population; Director, Project for Handicapped Children

C. United Nations

1. Paul Franey, Administrator, World Food Program, WHO, Madagascar
2. Robert Kidd, USAID
3. Rosemary McCrary, Administrator of Programs, UNICEF, Madagascar
4. Mr. Claude Paulet, Administrator of United Nations Fund for Population Activities, Madagascar

D. Family Planning Association

1. Mr. Andriamasinoro, Information and Education Officer, IPPF, Antananarivo (Fianakaviana Sambatra)
2. Mrs. Ramandratoaso, Field Worker
3. Madame Rosette Ramatitera, President, IPPF Committee
4. Mrs. Rosoarivelo, Social Worker, FISA
5. Dr. Razanatovo, Treasurer

E. Seventh-day Adventist Church, Madagascar

1. Pastor Theophile Andriamifidy, Pastor
2. Pastor Augsburg, President, Indian Ocean Union Mission of SDA
3. Pastor Stenio Gundadoo, Acting SAWS Director, Indian Ocean Union Mission of SDA
4. Pastor Marndel, Departmental Secretary, Indian Ocean Union Mission of SDA
5. Pastor Adolphe Rakorouson, Pastor of Mandrosoa Church
6. Pastor Lebran Randriamapandry, Pastor, Averateteze Church
7. Pastor Jonah Randrianansolo, Secretary, Indian Ocean Union Mission of SDA
8. Pastor Remy Rasamoely, Pastor of Ambonijafy and Tsararay churches
9. Pastor Scholar, Legal Advisor, Indian Ocean Union Mission of SDA

F. Lutherans

1. Eva Falkenberg, Primary Health Development Programs, Malagasy Lutheran Church
2. Agnes Rosaminampianina, Sociologist, Malagasy Lutheran Church
3. Zo Rasamceley, Primary Health Development Program, Malagasy Lutheran Church
4. Dr. Quamback, Medical Director, Malagasy Lutheran Church, Atananarivo

G. Other

1. Miss Lisa Gaylord, Program Assistant, CRS
2. Robert Kidd, Regional Food for Peace Office, USAID, Nairobi
3. Mr. Tuttle, Economic Advisor, U.S. Embassy

BIBLIOGRAPHY OF MATERIALS READ AND REFERRED TO

Books:

- Anderson, Mary Ann and Tina Grewel, Editors. Nutrition Planning in the Developing World. Bogota, Colombia: Programas Editoriales, 1976.
- Brown, Judith, Ph.D., and Richard Brown, M.D. Finding the Causes of Child Malnutrition, Atlanta: Taskforce on World Hunger, 1979.
- Griffiths, Marcia. Growth Monitoring of Preschool Children: Practical Considerations for Primary Health Care Projects. Washington, DC: Office of Health, Agency for International Development, 1981.
- Jequier, Nicolas. Appropriate Technology: Problems and Promises Part One; The Major Policy Issues, Stanford, California: Appropriate Technology Project, Volunteers in Aisa, 1977.
- Latham, Michael. Human Nutrition in Tropical Africa. Rome's Food and Agriculture Organization of the United Nations, 1978.
- Macagba, Rufino. Health Care Guidelines for Use in Developing Countries. Monrovia, California: World Vision International, 1978.
- Morley, David. Paediatric Priorities in the Developing World. London: Butterworths, 1979.
- Scotney, Norman. Health Education. Nairobi: African Medical and Research Foundation, 1976.
- Shack, Kathryn. Teaching Nutrition in Developing Countries. Santa Barbara, California: The Meals for Millions Foundation, 1977.
- Vella, Jane. Visual Aids for Nonformal Education. Amherst, Massachusetts: University of Massachusetts, 1979.
- Werner, David and Bill Bower. Helping Health Workers Learn. Palo Alto, California: The Hesperian Foundation, 1983.
- . A Growth Chart for International Use in Maternal and Child Health Care. Guidelines for Primary Health Care Personnel. Geneva: World Health Organization, 1978.
- . Bridging the Gap: A Participatory Approach to Health and Nutrition Education. Westport, Connecticut: Boyd Printing Company, Inc., 1982.
- . Nutrition and Health Care for the Young Child.

Articles and Drafts:

- Brown, Judith, Ph.D. and Richard Brown, M.D. Tackling Child Malnutrition in the Community. Contact 69:1-15, August, 1982.
- Curlin, Peggy and Patricia Taylor. Progress Report: "A Management Module For Nutrition Training." Center for Development and Population Activities, February 1, 1983.
- Dr. Fougere, William, Gladys Dominique and Linda Gonzales. Report From Haiti on Mother Craft Centers for Working Conference on Nutrition Rehabilitation Centers, Bogota, Colombia.
- Glode, Gretchen; Allen, Lindsay; Berggren, Warren; Cash, Richard; Colgate, Susan; Field, John; Guggenheim, Hans; King, Kendall; Levins, Richard; Morgan, Robert; et. al. Questions and Answers About Weaning, Handout funded by AID, Office of Nutrition.
- Klein, Hanny. Crimes Against Thirty Million, New Statesman, 24th August, 1979.
- Leinen, Gary. Action Memorandum for the Acting Director, USAID/Sudan. Regarding CRS PL 480, Title II Evaluation, June 28, 1982.
- Lockwood, Richard. A Proposed Methodology for Testing Nutritional Surveillance in South Kordofan Province. Consultant Report for USAID, December, 1981.
- Lockwood, Richard. Notes on the Potential for a Weaning Foods Intervention in the Sudan. Consultant's Report, Home and Village Prepared Weaning Foods Project of the Harvard, Massachusetts Institute of Technology International Food and Nutrition Program. Boston, January, 1982.
- Mgaza, Glyvia. Traditional Weaning Practices in East Africa. Paper prepared for International Conference on Action Needed to Improve Maternal and Infant Nutrition in Developing Countries. Manila, Philippines, February, 1982.
- Moran, Bery Crites. Materiales Maria Maya. Community-based Materials Development. Mothers and Children: Bulletin on Infant Feeding and Maternal Nutrition. Vol. 2:2, pp. 1-3, Spring, 1982.
- Parker, Robert, M.D.; Reinhart, Ward; Piotrow, Phyllis, Ph.D.; and Louise Doucette. Oral Rehydration Therapy for Childhood Diarrhea. Population Reports: Issues in World Health. Series L, No. 2, November-December, 1980.
- Pierce, N.F., and W. Hirscham. Oral Fluid: A Simple Weapon Against Dehydration in Diarrhoea. WHO Chronicle 31:87-93, 1977.
- Restrepo, Sonia. A Multi-Media Strategy for a Breast-feeding Campaign in Colombia. Mothers and Children: Bulletin on Infant Feeding and Maternal Nutrition. (1)3:1-3, Summer, 1981.
- Shah, Kusum. Appropriate Technology in Primary Health Care for Better Midwifery Services. The Journal of Obstetrics and Gynecology of India (30)1:109-114, February, 1980.

- Shah, Kusum, M.D., Surveillance Card for Married Women for Better Obstetric Performance. Journal of Obstetrics and Gynecology of India.
- White, Ruth, Dr.P.H., Indicators for Special Child Care. Handout Community Health Class, Foreign Missions Institute, Loma Linda University, 1973.
- . Better Use of Refrigerators for Storing Vaccines. Draft for Appropriate Health Resources and Technologies Action Group, Ltd., London.
- . Infant Mortality: They Expect Some to Die. Sudanon, Vol. 8. 5:33-35.
- . Our Children and the Future. The Eastern Clinic Rural Health Bulletin, Sierra Leone. (4)2:1-6, April, 1979.
- . Recent Developments in the Storage and Transport of Vaccines. Appropriate Health Resources and Technologies Action Group, Ltd., London.
- . The Prevention of Dehydration with Oral Electrolyte Fluid. Draft for Appropriate Health Resources and Technologies Action Group, London, England.
- . Setting Up a Nutrition Rehabilitation Center, Contact, October, 1974.
- . WHO-UNICEF Nutrition Support Programme Country Proposal: Sudan.

APPENDIX A

Appendix A

Suggested List of References for Resource Library
at Project Headquarters in both Sudan and Madagascar

Books:

- Aarons, Audrey and Hugh Howes. Child-to-Child. London: The MacMillan Press LTD, 1979.
- Anderson, Mary Ann and Tina Grewel, Editors. Nutrition Planning in the Developing World. Bogota, Colombia: Programas Editoriales, 1976.
- Ballidin, Bo; Hart, Richard; Hulgues, Rolf, and Zier Versluys. Child Health: A Manual for Medical Assistants and Other Rural Health Workers. Nairobi: Prudential Printers, 1981.
- Brown, Judith, Ph.D., and Richard Brown, M.D. Finding the Causes of Child Malnutrition, Atlanta: Taskforce on World Hunger, 1979.
- Ebrahim, G.J. Care of the Newborn in Developing Countries, London: The MacMillan Press LTD, 1979.
- Ebrahim, G.J. A Handbook of Tropical Paediatrics, London: The MacMillan Press LTD, 1978.
- Falkner, Frank. Prevention in Childhood of Health Problems in Adult Life. Geneva: World Health Organization, 1980.
- Griffiths, Marcia. Growth Monitoring of Preschool Children: Practical Considerations for Primary Health Care Projects. Washington, DC: Office of Health, Agency for International Development, 1981.
- Hickerson, Francine and John Middleton. Helping People Learn: A Module for Trainers. East-West Communication Institute, Hawaii, 1975.
- Jequier, Nicolas. Appropriate Technology: Problems and Promises Part One; The Major Policy Issues. Stanford, California: Appropriate Technology Project, Volunteers in Asia, 1977.
- King, Maurice; Felicity King and Soebagio Martodipoero. Primary Child Care: A Manual for Health Workers. Oxford: Oxford University Press, 1978.
- King, Maurice; King, Felicity and Soebagio Martodipoero. Primary Child Care: A Guide for the Community Leader, Manager and Teacher, Book Two. Oxford: Oxford University Press, 1979.

- Latham, Michael. Human Nutrition in Tropical Africa. Rome's Food and Agriculture Organization of the United Nations, 1978.
- Lynton, Rold and Udai Pareek. Training for Development, West Hartford, Connecticut: Kumarian Press, 1978.
- Macagba, Rufino. Health Care Guidelines for Use in Developing Countries. Monrovia, California: World Vision International, 1978.
- McMahon, Rosemary; Elizabeth Barton and Maurice Piot. On Being in Charge: A Guide for Middle-level Management in Primary Health Care. Geneva, World Health Organization, 1980.
- Morley, David. Paediatric Priorities in the Developing World. London: Butterworths, 1979.
- Scotney, Norman. Health Education. Nairobi: African Medical and Research Foundation, 1976.
- Shack, Kathryn. Teaching Nutrition in Developing Countries. Santa Barbara, California: The Meals for Millions Foundation, 1977.
- Uberai, I.S.; Laliberti, D.; Deseveemer, C.; Masik, N.; Kielmann, A., Vohra, S., et. al. Child Health Care In Rural Areas: A Manual for Auxiliary Nurse Midwives. Bombay: Asia Publishing House, 1977.
- Vella, Jane. Visual Aids for Nonformal Education. Amherst, Massachusetts: University of Massachusetts, 1979.
- Wallace, Helen; Gold, Edwin; and Alan C. Oglesby. Maternal and Child Health Practices: Problems, Resources, and Methods of Delivery, Second Edition, New York: John Wiley and Sons, 1982.
- Werner, David and Bill Bower. Helping Health Workers Learn. Palo Alto, California: The Hesperian Foundation, 1983.
- Williams, Cecely and Derrick Jallife, Mother and Child Health: Delivering the Services, London: Oxford University Press, 1972.
- , Bridging the Gap: A Participatory Approach to Health and Nutrition Education. Westport, Connecticut: Boyd Printing Company, Inc., 1982.
- , A Growth Chart for International Use in Maternal and Child Health Care. Guidelines for Primary Health Care Personnel. Geneva: World Health Organization, 1978.
- , Nutrition and Health Care for the Young Child.
- , School Health: A Guide for Health Professionals, 1981. American Academy of Pediatrics, Box 1034, Evanston, IL, 60204.
- , Standards of Child Health Care, 3rd Edition, Evanston, IL: American Academy of Pediatrics, 1977.

-----, The Training and Support of Primary Health Care Workers:
Proceedings 1981 International Health Conference, Washington,
DC: National Council for International Health, 1981.

Example of Journals:

Bulletin on Infant Feeding and Maternal Nutrition

Contact

Journal of Maternal and Child Nursing

Population Reports

Salubritas

WHO Chronicle

Others

87A

APPENDIX B

APPENDIX B

Proposed Curriculum Content for Various Training Sessions in Fulfillment of Project Developmental Component Objectives for Sudan.

Please note: This is only "skeleton". Much further work needs to be done. In these training sessions, it is quite possible to join 2 groups together for presentation of identical material, then divide the group for more specific information pertaining to the group's working needs. Also, sessions may need to be repeated in order to accommodate all who should attend.

1. Sessions for Physicians and Medical Assistants Involved with MCH Facilities.

a. Session (in Program Phase I)

- introduce services of Title II PL480 commodities program to Sudan; targeting
- importance comprehensive MCH Service in Sudan
- relevance nutrition to prevention of disease in young
- identification of risk factors in mothers and children
- growth monitoring
- latest research in malnutrition/nutrition in childhood and prevention of
- nutritive content of PL480 Title II commodities

- b. Session 2 (in Program Phase II)
 - Review of scientific rationale for ORT.
 - Review latest research pertaining to malnutrition of children.
 - Discussion regarding PL480 Title II commodities with targeting; satisfactions and dissatisfactions.
 - Significance of health education in preventing/treatment of malnutrition.
- c. Session 3 (in Program Phase III)
 - Update on advances in treatment, detection, malnutrition.
 - Review scientific findings on ORT.
 - Review importance of growth monitoring.
 - Discussion regarding commodities and targeting; satisfactions and dissatisfactions.
 - Pediatric update.
 - Obstetric update.
 - Concept of behavior change.
 - Malnutrition rehabilitation.
- d. Session 4 (in Program Phase IV)
 - Concept of family planning to prevention of malnutrition.
 - Maternal and Pediatric nutrition update.

- Update in Pediatrics and Obstetrics cognitive content.

2. Initial Introductory Session for All Non-physician Workers in MCH Facilities (1-2 days)

- importance of MCH to future of the nation.
- importance of every worker in health system.
- problem of malnutrition in Sudan and effect of this on nation.
- importance of detection of malnutrition.
- ways of detecting malnutrition.
- philosophy of PL 480 Title II commodities and targeting; importance of each child getting a good start in life; policy review.
- use of volunteers.
- discussion of questions.

3. Training session for Health Visitors

a. Session 1

(1) Recognition of malnutrition.

- review human growth and development and importance of adequate nutrition at each stage.
- importance of growth monitoring.
- review growth monitoring with clinical experience.

- why monitor growth.
 - what to measure
 - defining adequate growth
 - the recording system
 - tools for measuring
 - methods to measure arm circumference
 - weighing
 - boards for measuring length and height
 - child development characteristics and local events calendars to help determine age
 - using monitoring results for family education
 - problem identification
 - training auxiliary workers in growth monitoring
- (2) Review PL 480 Title II targeting concept
- (3) Clinic organization
- supervision and clinic management skills
 - reports and records of MCH system
 - concept of home based cards
 - choosing and training of volunteers to help in clinics
- (4) Oral Rehydration Therapy
- common etiological agents and the way they produce diarrheal diseases in man
 - basis of oral rehydration therapy
 - preparation ORS and identification locally available utensils

- clinical features dehydration
- outpatient responsibilities
- health education methods and principles
- nutrition education
- clinical demonstration with follow-up and discussion of cases
- demonstration of dehydration model (made by producers of "Recussi'Ann")
- treatment and prevention in community
- possible ways of organizing community-based treatment centers with involvement of local people
- community visits

(5) Other appropriate subjects

b. Session 2 (Phase II)

- (1) Update on ORT
- (2) Update on growth monitoring
- (3) Clinic management
 - IPR skills (interpersonal relationships)
 - supervisory skills
 - maintaining communication
 - forum for discussion of problems and solutions
- (4) Malnutrition prevention
 - breast feeding
 - weaning period
 - use of behavior modalities in health education
 - latest update/research in malnutrition

- Review immunizations; their role in preventing malnutrition
 - Recognition of "at risk" factors for malnutrition in mothers and children
 - Review of child assessment skills
 - Review PL 480 Title II targeting; discussion problems and solutions
- (5) Community involvement
- Community assessment
 - Community nutrition problems
 - Working with community in planning nutrition activities
 - Review home visiting skills
- (6) Other appropriate subjects
- c. Session 3 (Phase III)
- (1) Update in ORT
 - (2) Update in growth monitoring
 - (3) Update in clinic management skills
 - (4) Nutrition rehabilitation
 - (5) Cognitive update in Pediatrics and Obstetrics
 - (6) Other relevant subjects
- d. Session 4 (Phase IV)
- (1) Review necessary information
 - (2) Role of family planning in malnutrition prevention
 - (3) Community skills

(4) Other appropriate subjects

4. Training Sessions for Nutrition Officers

a. Session 1

(1) Detection of malnutrition

- Review human growth and development; importance of adequate nutrition at each stage
- Problem of malnutrition
- Review growth monitoring (see previous curriculum)
- Use of PL 480 Title II commodities and targeting; role of food in providing good start for each child
- Composition of preparation ideas of PL480 Title II foods

(2) Role of community in nutrition promotion

- Assessing community nutrition problems with actual field experience and feedback sessions
- Planning community nutrition activities
- Working with the community

(3) Review health education techniques

- Various health teaching methods; advantages and disadvantages
- development of appropriate teaching materials
- concept of behavioral change and values clarification in health teaching
- brainstorming approaches to cultural practices leading to malnutrition in childhood; develop ideas for counteracting

(4) Oral Rehydration Therapy

- common etiological agents and the way they produce diarrheal diseases in man
- basic oral rehydration therapy
- use of locally available utensils for preparation solution
- clinical features dehydration
- health education methods and principles to mothers; use, utensils provided
- nutrition education with diarrhea
- demonstration dehydration model and "baby" gourd for each participant
- role play of teaching modalities to mothers

(5) Other appropriate subjects

b. Session 2 (Program Phase II)

(1) Malnutrition prevention

- Immunizations; role of in preventing malnutrition
- Latest developments (research malnutrition)
- problems and solutions to PL 480 Title II targeted program

(2) Community activities

- Skills in home visiting
- community surveys
- involvement with community leaders
- use of community leaders in MCH activities
- teaching ORT to community leaders

(3) Health education

- IPR skills
- Behavior changes modalities
- Continued brainstorming on effective approaches to behavioral change in cultural nutritional practices
- Improved effectiveness of group teaching
- Improved effectiveness of one to one teaching
- Improved effectiveness in lecture method
- Generation of recipes for demonstration of Pl 480 Title II commodities

(4) Cognitive knowledge of MCH

- Review human growth and development; scientific aspects of (relevant to their level)
- Importance of breast feeding and proper weaning foods
- Review prenatal care

(5) Other appropriate subjects

c. Session 3 (Program Phase III)

(1) Malnutrition

- Rehabilitation
- Update on latest developments

(2) Community skills

(3) Health teaching skills

(4) Cognitive knowledge in MCH

(5) Other appropriate subjects

d. Session 4 (Program Phase IV)

(1) Malnutrition

- Concept of family planning as factor in malnutrition reduction

(2) Community skills

(3) Health teaching

(4) Cognitive knowledge in MCH

5. "Training of Trainers" Sessions

a. Session 1 (Program Phase I)

(1) Leadership

- Role of leader/manager
- Types of leaders
- Preparation for

(2) Task analysis

(3) Leadership in teaching

- Preparation objectives

(4) Factors affecting learning

- Principles of learning
- Teaching methods with practice of all methods
- Planning instruction

(5) Presentation skills; communication/feedback

- Organization of presentation
- Evaluation of teaching
- Teaching aids:

use of pictures

demonstrations
story telling
role playing

(6) Other appropriate subjects

b. Session 2 (Program Phase II)

(1) Review task analysis

(2) Review leadership in teaching

(3) Leadership in community

- Learning and working with the community

- How to help people look at customs and beliefs

- Use of teaching aids

- How human relations affect health

(4) Health team approach

- Working with people

- Leading a health team

- Organizing health team activities

- Controlling and assessing the work

(5) Other appropriate subjects

c. Session 3 (Program Phase III)

(1) Review task analysis

(2) Review teaching in leadership

(3) Review community development

(4) Review Health team approach

(5) Managing resources

- Equipment

- Drugs
- Money
- Time
- Space
- Paperwork
- People

(6) Writing manuals, policies and job descriptions

d. Session 4 (Program Phase IV)

- (1) Review previous topics
- (2) Concentrate on area of need
- (3) Other

(Suggest use Center for Development and Population Activities, 1717 Massachusetts Ave., N.W., Suite 202, Washington, DC 20036 as resource for three previous groups. This organization has received grant from USAID to conduct training sessions in developing countries; has curriculum materials and teaching aids for such training sessions.)

6. Training Sessions for Nutrition Educators

a. Session 1 (Program Phase II) (Suggest "Training of trainers" participants assist/lead with this)

- (1) Prevention malnutrition
 - Importance of MCH to future of nation
 - Review basic nutrition
 - Review growth monitoring with supervised field experience
 - Use of Title II commodities and targeting; role of food in providing good start for each child

(2) Health education

- Review health teaching methods with practice
- Development and practice in use of appropriate visual materials and aids
- Review IPR skills including listening and interviewing
- Composition, preparation and use of foods to be distributed
- Preparation recipes

(3) ORT

- What is diarrhea
- Causes of diarrhea
- Why diarrhea is dangerous
- How diarrhea causes dehydration
- How salt and water losses can be replaced
- Assessment of patient
- Treatment for infants and young children
- How to feed a child with diarrhea
- Prevention of diarrhea
- Demonstration dehydration model and use of gourd baby for teaching mothers
- Teaching mothers how to prepare solutions and administer to children

(4) Other appropriate subjects

b. Session II (Program Phase III)

(1) Malnutrition prevention

- Review growth monitoring with supervised practice

- Review Title II commodities with targeting
- Importance of weaning foods and breast feeding
- Review immunizations and role of these in preventing malnutrition

(2) Health education

- Review IPR
- Review teaching skills
- Development of appropriate visual aids for teaching
- Use of behavior change modalities and values clarification in nutrition education with practice

(3) Review of ORT

- Role play in teaching mothers

(4) Nutrition rehabilitation

(5) Cognitive material in MCH

(6) Other appropriate subjects

c. Session III (Program Phase IV)

(1) Malnutrition prevention

- Concept family planning in malnutrition prevention
- Review other concepts

(2) Health education

- Weaning practices
- Breast feeding

(3) ORT

7. Training Session for Nurse Midwives

(Participants in "Training of trainers" sessions should assist)

a. Session 1 (Program Phase II)

(1) Malnutrition Identification

- Human growth and development; role of nutrition in this
- Review basic nutrition
- Prevention of malnutrition
- Growth monitoring with supervised field experience
- Use of Title II commodities and targeting; role of food in providing good start for each child

(2) ORT

- Common etiological agents and the way they produce diarrheal diseases in man
- Basis^{of} oral rehydration therapy
- Use^{of} locally available utensils for preparation solutions
- Clinical features^{of} dehydration
- Prevention of diarrhea
- Health education methods with role play and practice; teaching mothers how to use preparations and administer to child/children

(3) MCH cognitive

- Review prenatal care
- Review neonatal health; newborn care

- Review IPR skills with role playing; listening and interviewing
 - Methods for teaching mothers
 - (4) Other appropriate subjects
- b. Session II (Program Phase III)
- (1) Malnutrition identification/prevention
 - Review factors
 - Rehabilitation aspects of malnourished children
 - Review growth monitoring
 - Review Title II commodities with targeting
 - Review ORT
 - (2) Health Education
 - Good IPR
 - Use of behavior change modalities in teaching antenatal care to pregnant mothers
 - Teaching mothers good weaning and breast feeding habits
 - (3) MCH cognitive material
 - Review intrapartal care
 - Importance of breast feeding and proper weaning
 - Update on antenatal care
 - Importance of adequate nutrition during antenatal period
 - (4) Other relevant material
- c. Session III (Program Phase IV)

- (1) Malnutrition prevention
 - Role of family planning in prevention of malnutrition
 - Review CRT
- (2) Health education
- (3) MCH cognitive material
 - Update on newborn care
 - Update on infant/child care
 - Review developmental milestones

8. Training Sessions for Traditional, Midwives

(Have participants of "Training of trainers" session lead out. Suggest this be more frequent than other sessions)

a. Session 1 (Program Phase II)

- (1) Problem of malnutrition
 - Importance ^{of} MCH to nation
 - Basic human development; importance nutrition at each level
 - Recognition ^{of} malnutrition
 - Critical times for malnutrition
 - Growth monitoring with practice
 - Use of Title II commodities and targeting; concept giving each child a good start
- (2) MCH cognitive material
 - Review antenatal health and care
 - Review safe labor/delivery practices
 - Home visiting/follow-up of deliveries to encourage clinic attendance

(3) ORT

- What is diarrhea
- Causes of diarrhea
- Why dangerous
- How diarrhea causes dehydration
- Replacement of salt and water losses
- Assessment of patient
- Treatment for infants and young children
- Demonstration dehydration model/give gourd baby for teaching mothers
- Teaching mothers how to prepare solutions using local utensils and ingredients

(4) Other appropriate material

b. Session II (Program Phase III)

(1) Malnutrition prevention

- Review basic nutrition (balanced diet)
- Review growth monitoring
- Weaning foods and breast feeding; good practices to prevent malnutrition

(2) MCH cognitive material

- Review developmental milestones
- Newborn care

(3) Health teaching

- Importance of effective IPR
- Review ORT with teaching to mothers
- Teaching mothers

c. Session III (Program Phase IV)

(1) Malnutrition prevention

- Mothers and babies "at risk" for
- Use of family planning in prevention of malnutrition
- Importance of good diet to post partal mothers
- Review growth monitoring

(2) MCH cognitive material

- Review post partum care
- Importance of immunizations

(3) Health teaching

- Use of simple demonstrations to mothers
- Review ORT and teaching to mothers

(4) Other appropriate material

9. Training Session for Vaccinators

(Use participants in "Training of trainers" program in assisting and leading)

a. Session I (Program Phase II)

(1) Malnutrition prevention

- Review fetal growth and human development; role of adequate nutrition
- Problem of malnutrition in childhood
- Identification of malnutrition
- Growth monitoring
- Problem of childhood diseases on malnourished child and diseases causing malnutrition

- Importance of prevention diseases through vaccination; when not to give immunizations to malnourished children
 - Use of Title II commodities and targeting; importance of each child getting a good start in life
- (2) Cognitive material pertaining to vaccinators
- Review sterile technique with supervised practice
 - Brief concept of physiology of immunizations
 - Review vaccination schedule with rationale
- (3) Health education
- Health teaching to mothers on one to one
 - IPR; importance of when dealing with mothers
- b. Session 2 (Program III)
- (1) Malnutrition prevention
- Review growth monitoring
 - Signs/symptoms malnourished child
 - Concept rehabilitation in malnutrition
- (2) ORT
- What is diarrhea
 - Causes of diarrhea
 - Why dangerous
 - How diarrhea causes dehydration
 - Replacement of salt and water losses
 - Demonstration dehydration model
 - Teaching mothers how to prepare solutions using local utensils and ingredients

- Review basic immunology
- (3) Other appropriate subjects
- c. Session 3 (Program Phase IV)
 - (1) Malnutrition prevention
 - Concept family planning as preventive factor in malnutrition
 - (2) Review previous material
 - Child growth and development
 - Effect of communicable diseases on child development
 - Effect of communicable diseases on nutrition/malnutrition
 - Growth monitoring
 - (3) ORT review
- 10. Seminar for Professionals Working with Parents & Children

(Suggest participants in "Training of trainers" lead out/assist in this session) (Suggest one-day session offered several times)

 - a. Session 1 (Program Phase II)
 - (1) Problem^s malnutrition
 - .. Malnutrition in infancy/early childhood and effect on later intellectual development
 - Detection of malnutrition in school-age child and pre school
 - Ways to teach children how to observe for siblings at risk for malnutrition
 - (2) Health teaching
 - Importance of encouraging parents to take under 5's to MCH clinic

- Use of Title II commodities and targeting in MCH clinics
- Ideas on teaching nutrition in primary schools in attractive way

b. Session 2 (Program Phase III)

(1) ORT

- Definition diarrhea
- Causes diarrhea
- Why dangerous
- Causation dehydration
- Replacement of salt and water losses
- Demonstration dehydration model

(2) Health education

- Points on teaching children how to observe for and treat diarrhea in younger siblings (see Werner & Bower, Helping Health Workers Learn, 24:17)
- Plays and games to do with children to emphasize concept of ORT in helping younger siblings

c. Session 3 (Program Phase IV)

(1) Elementary school teachers

- Nutrition update of research on nutrition in learning
- Further helps on teaching nutrition in primary schools (see Werner & Bower, Helping Health Workers Learn for ideas; also contact National Dairy Council for ideas and visual aids and games)
- Importance of immunizations; effect of this in preventing malnutrition

(2) Other appropriate subjects

(3) Review of ORT

104a

APPENDIX C

APPENDIX C

Suggestions for Curriculum Content for Various Training Sessions
Involved in Fulfilment of Project Developmental Component.

Objectives for Madagascar

Please note: this is only a "skeleton". Much further work needs to be done to refine the content. In these training sessions, it is quite possible to join two groups together for presentation of identical material, then divide the group for more specific information pertaining to the group's working needs. Sessions may need to be repeated in order to accommodate all who should attend.

1. Sessions for Physicians and Medical Assistants involved with MCH facilities

a. Session 1 (in Program Phase I)

- introduce services of Title II PL480 commodities program to Sudan; targeting
- importance comprehensive MCH service in Sudan
- relevance nutrition to prevention of disease in young
- identification risk factors in mothers and children
- Growth monitoring
- Latest research in malnutrition/nutrition in childhood and prevention of
- Nutritive content of PL480 Title II commodities

b. Session 2 (in Program Phase II)

- Review scientific rationale for ORT

- review latest research pertaining to malnutrition of children
- discussion regarding Title II PL480 commodities with targeting; satisfaction and dissatisfaction
- significance of health education in preventing/treatment malnutrition

c. Session 3 (Phase III)

- update on advances in treatment, detection malnutrition
- review scientific findings on ORT
- review importance growth monitoring
- discussion regarding commodities and targeting; satisfaction and dissatisfactions
- pediatric update
- obstetric update
- concept behavior change
- malnutrition rehabilitation

d. Session 4 (Phase IV)

- concept family planning to prevention of malnutrition
- maternal and pediatric nutrition update
- update in Pediatrics and Obstetrics

2. Initial Introductory Session for All Non-Physician Workers in MCH Facilities (1-2 days)

- importance of MCH to future of the nation
- importance of every worker in health system
- problem of malnutrition in Madagascar and effect of this on nation

- importance of detection of malnutrition
- ways of detecting malnutrition
- philosophy of Title II PL480 commodities and targeting; importance of each child getting a good start in life; policy review
- use of volunteers
- discussion of questions

3. Training Session for Nurse-Midwives in Leadership Positions in MCH Facilities

a. Session 1

(1) Recognition^{of} malnutrition

- review human growth and development and importance of adequate nutrition at each stage
- importance^{of} growth monitoring
- methods to measure arm circumference
- weighing
- boards for measuring length and height
- child development characteristics and local events calendars to help determine age
- using monitoring results for family education
- problem identification
- training auxiliary workers in growth monitoring

(2) Review Title II PL480 targeting concept; clinic organization

(3) Supervision and clinic management skills

- reports and records of MCH system

- concept of home-based cards
- choosing volunteers to help in clinics

(4) Oral Rehydration Therapy

- common etiological agents and the way they produce diarrheal diseases in man
- basis of oral rehydration therapy
- preparation ORS and identification locally available utensils
- clinical features dehydration
- outpatient responsibilities
- health education methods and principles
- nutrition education
- clinical demonstration with follow-up and discussion of cases
- demonstration of dehydration model (made by producers of Recussi'Ann)
- treatment and prevention in community
- possible ways of organizing community-based treatment centers with involvement of local people
- community visits
- further material on supervision and clinic management, home visitation, appropriate subjects

(5) Other appropriate subjects

b. Session 2 (Program Phase II)

- (1) Update on ORT
- (2) Update on growth monitoring

(3) Clinic management

- IPR skills (interpersonal relationships)
- supervisory skills
- maintaining communication
- forum for discussion of problems and solutions

(4) Malnutrition prevention

- breast feeding
- weaning period
- use of behavior modalities in health education
- latest update/research in malnutrition
- review immunizations; their role in preventing malnutrition
- child assessment skills
- review PL480 Title II targeting; discussion problems and solutions

(5) Community involvement

- community assessment of nutrition
- community nutrition problems
- working with community in planning nutrition activities
- review home visiting skills

(6) Other appropriate subjects

c. Session 3 (Program Phase III)

- (1) Update in ORT
- (2) Update in growth monitoring

- (3) Update in clinic management skills
 - (4) Nutrition rehabilitation for malnourished children
 - (5) Cognitive update in Pediatrics and Obstetrics
- d. Session 4 (Program Phase IV)
- (1) Review necessary information
 - (2) Role of family planning malnutrition prevention
 - (3) High risk factors
 - (4) Community skills
 - (6) Other appropriate subjects
4. Training Sessions for Midwives and Nurses Working in MCH Facilities in Non-administrative Capacities
- a. Session 1 (Program Phase I)
- (1) Prevention and recognition of malnutrition
 - review importance of MCH to future of nation
 - review human growth and development; importance of adequate nutrition
 - review child nutrition
 - recognition of malnutrition
 - prevention of malnutrition
 - review growth monitoring
 - use of Title II commodities and targeting; role of food in providing good start for each child
 - ideas of ^{resources in} food to be donated
 - nutritive components of foods
 - (2) Health teaching

- review health education techniques
- various health teaching methods; advantages and disadvantages
- development of appropriate teaching material
- concept of behavioral change and values clarification in health teaching
- brainstorming approaches to cultural practices leading to malnutrition in childhood; develop ideas for counteracting

(3) Oral Rehydration Therapy

- common etiological agents and the way they produce diarrheal diseases in man
- basic oral rehydration therapy
- use of locally available utensils for preparation solution
- clinical features dehydration
- health education methods and principles to mothers; use utensils provided
- nutrition education with diarrhea
- demonstration dehydration model and "baby" gourd for each participant
- role play of teaching modalities to mothers

(4) MCH cognitive content

- review prenatal care
- review neonatal health; newborn care
- review IPR skills with role playing; listening and interviewing
- methods for teaching mothers

b. Session 2 (Program Phase II)

(1) Malnutrition prevention

- immunizations; role of in preventing malnutrition
- problems and solutions to Title II PL480 target program
- review growth monitoring

(2) Community activities

- skills in home visiting
- community surveys
- involvement with community leaders
- use of community leaders in MCH activities
- teaching ORT to community leaders

(3) Health education

- IPR skills
- use of behavior change modalities in health education with mothers
- continued brainstorming on effective approaches to behavioral change in cultural nutritional practices
- improved effectiveness of group teaching
- improved effectiveness of one to one teaching
- improved effectiveness of lecture method
- generation of recipes for demonstration of PL480 Title II foods

(4) MCH cognitive content

- review of post partum care

- review newborn care and physiology
- importance breast feeding and proper weaning foods

c. Session 3 (Program Phase III)

- (1) Malnutrition prevention
 - rehabilitation of malnourished children
 - update on growth monitoring
 - review ORT
- (2) Community skills
- (3) Health teaching skills
- (4) Cognitive knowledge in MCH
- (5) Other appropriate subjects

d. Session 4 (Program Phase IV)

- (1) Malnutrition prevention
 - concept of family planning as a factor in malnutrition reduction
- (2) Community skills
- (3) Health teaching skills
- (4) Cognitive knowledge in MCH

5. "Training of Trainers" Sessions

a. Session 1 (Program Phase I)

- (1) Leadership
 - role of leader/manager
 - types of leaders
 - preparation for

- (2) Task analysis
 - (3) Leadership in teaching
 - preparation objectives
 - factors affecting learning
 - principles of learning
 - teaching methods with practice of all methods
 - planning instruction
 - (4) Presentation skills; communication/feedback
 - organization of presentation
 - evaluation of teaching
 - teaching aids:
 - use of pictures
 - demonstrations
 - story telling
 - role playing
- b. Session 2 (Program Phase II)
- (1) Review task analysis
 - (2) Review leadership in teaching
 - (3) Leadership in community
 - learning and working with the community
 - help people look at customs and beliefs
 - use of teaching aid
 - how human relations affect health
 - (4) Health team approach
 - working with people
 - leading of health team

- organizing health team activity
 - controlling and assessing the work
 - (5) Other appropriate subjects
- c. Session 3 (Program Phase III)
- (1) Review task analysis
 - (2) Review teaching in leadership
 - (3) Review community development
 - (4) Review health team approach
 - (5) Managing resources
 - equipment
 - drugs
 - money
 - time
 - space
 - paperwork
 - people
 - (6) Writing manuals, policies and job descriptions
- d. Session 4 (Program Phase IV)
- (1) Review previous topics
 - (2) Concentrate on area of need
 - (3) Other subjects

(Suggest use Center for Development and Population Activities, 1717 Massachusetts Ave., N.W., Suite 202, Washington, DC 20036 as resource for three previous groups. This organization has received grant from USAID to conduct training sessions in

developing countries; has curriculum materials and teaching aids for such training sessions).

6. Training Session for Individuals Without a Medical Background Who Will Operate Growth Surveillance for PVO Clinics

Would suggest choosing women already identified as leaders in the community; wives of teachers, pastors, or other community leaders; choose 5 from each locality where food will be distributed = 25.

Proposed curriculum contents; (^{begin}biggest initial 3-month training with frequent upgrading sessions thereafter).

(1) Basic first aid and nursing care.

(2) Maternal-child health.

- prenatal care
- importance of breast feeding
- newborn care; cord care, hygiene of baby
- postpartum care
- weaning -- when to start solids
- immunizations
- dental care

(3) Growth monitoring

- nutrition relating to mothers and children (use ideas from Nutrition for Developing Countries)
- balanced diet

- growth and development of children and influence of nutrition on this
- recognition of malnourished child
- children "at risk" for malnutrition
- concepts of growth monitoring:

Why monitor growth

What to measure, general considerations

Defining adequate growth

The recording system

Tools for measuring

Organizing the monitoring session

Use of Title II PL480 foods and policies

- have field work experience at MOH clinics with feedback sessions following field work

(4) Oral rehydration therapy

- what is diarrhea
- causes of diarrhea
- why diarrhea is dangerous
- how diarrhea causes dehydration
- how salt and water losses can be replaced
- assessment of patient
- treatment for infants and young children
- how to feed a child with diarrhea
- prevention of diarrhea
- teaching mothers how to prepare solutions and administer to children

(5) Common childhood diseases; emphasize prevention

Malaria

Tuberculosis

Fever

Worms (parasites)

Skin conditions

Tetanus

Bilharzia

Measles

Diarrhea, with emphasis on oral
rehydration

Dental problems

Respiratory conditions

- community development
- home visiting
- various methods of health teaching
- preparation and use of visual aids
- interpersonal relationships
- clinic management

7. Seminar for Professionals Working with Parents & Children

(Suggest participants in "Training of Trainers" lead out/assist in this session) (Suggest one-day session offered several times)

a. Session 1 (Program Phase II)

(1) Problem of malnutrition

- importance of MCH to future of nation
- problem of malnutrition in Madagascar
- problems of malnutrition in children and

and lasting effect of these

- malnutrition in infancy/early childhood and effect on later intellectual development
- detection of malnutrition in school-age child
- characteristics of a healthy child
- detection of malnutrition in pre-school child
- screening for malnutrition
- use of Title II commodities and targeting in MCH clinics
- effect of communicable diseases on child development
- effect of communicable diseases on nutrition/malnutrition
- importance of immunizations in preventing malnutrition

(2) Health teaching

- ways to teach nutrition to pre-schoolers
games, cooking
- ways to teach school children how to observe for younger siblings at risk for malnutrition
- importance of encouraging parents to take under 5's to MCH clinic
- ideas on teaching nutrition in primary schools in attractive way

b. Session 2 (Program Phase III)

(1) ORT

- definition diarrhea
- causes diarrhea
- why dangerous

- causation dehydration
- replacement of salt and water losses
- demonstration dehydration model

(2) Health education

- points on teaching children how to observe for and treat diarrhea in younger siblings (see Werner & Bower, Helping Health Workers Learn, 24:17)
- plays and games to do with children to teach them about oral rehydration and how to inform their parents
- nutrition update of research on nutrition in learning
- further helps on teaching nutrition in primary schools (see Werner & Bower, Helping Health Workers Learn for ideas; also contact National Dairy Council for ideas and visual aids and games)

1202

APPENDIX D

Appendix D

List of Possible Subjects and Modalities
for Production of Mass Media
for Sudan and Madagascar

1. Possible subjects
 - a. Importance of child health to future of the nation
 - b. Problem of malnutrition in childhood
 - c. Recognition of malnutrition
 - d. Importance of breast feeding
 - e. Weaning foods
 - f. Importance of immunizations
 - g. School child nutrition; importance of eating good breakfast
 - h. Nutrition in pregnancy
 - i. Prevention of diarrhea
 - j. Dangers of diarrhea/dehydration
 - k. Treatment of diarrhea using oral rehydration
 - l. Family planning and malnutrition prevention
2. Possible modalities
 - a. 30-second radio spots
 - b. 1-2 minute TV spots
 - c. TV documentaries
 - d. newspaper coverage
 - e. magazine articles
 - f. jingles and songs
 - g. 5-10 minute film strips for use at theatres prior to feature movie
 - h. posters and leaflets (suggest "saturation approach")

Suggest contact the following resources for possible consultation services:

Dr. Anthony Meyer
International Education Specialist
Agency for International Development
Division of Educational Technology and
Development Communication
S & T/ED, Room 603-C
Washington, DC 20523

Dr. William Smith
Academy for Educational
Development
1414 22nd Street, NW
Washington, DC 20037
(202-862-1959)

A PROPOSAL

by

SEVENTH-DAY ADVENTIST WORLD SERVICE, INC. (SAWS)

for

PL480 TITLE II TARGETTED MCH PROGRAM

May, 1983

This is a proposal by Seventh-day Adventist World Service, Inc. (SAWS) for a five-year Title II Targetted MCH Program in Sudan, serving the City and Province of Khartoum, with later extension to the Province of North Kordofan, and possible eventual inclusion of other provinces. The proposed program contemplates regular food delivery to 30,000 beneficiaries within one year from date of approval, expanding to 60,000 within one year thereafter, and reaching a peak total of 75,000 during the third year of operation.

The program will target pregnant women until delivery, lactating women during the first year of breast-feeding, infants between six months and twenty-four months of age, and children, between twenty-four and sixty months, diagnosed as having second or third degree malnutrition.

The Program described below will be operated by the Ministry of Health's Nutrition Division, regional and provincial health offices, and SAWS logistic and technical assistance staff. Although need for such programs in the target areas will continue far beyond the five year period, the Program contemplates substantial reduction of need at individual sites, and initiation of self-sufficient non-Program alternatives, within the Program period.

INTRODUCTION

As a private voluntary organization dedicated to improving the spiritual and physical welfare of deprived peoples, SAWS has long viewed Sudan as an important target for activity. SAWS country presence dates from 1980, when development of a now-thriving clinic in Juba began. We look forward to establishing presence in

Northern Sudan, and later in the west, but recognize clearly the physical and institutional difficulties of working in the country. The CDSS characterization of Sudan as "An Economy in Crisis" reflects our view, but our experience and recent investigation also cause us to emphasize the harsh physical realities that make life difficult for the Sudanese and work formidable for those seeking to help them. Few of the 25 countries with SAWS development programs are as hard to work in and, though we are satisfied that the job can be done, we approach the proposed program with humility and full recognition of the costs and taxing tasks involved.

The financial limitations that prevent the Government of Sudan (GOS) from meeting peoples' needs more effectively cause us to view long-range goals in terms of building self-sufficient local institutions based on Sudan's unusually strong traditions of extended family, clan, and tribal mutual support. Institutional goals also include building of attitudes and practices that make feasible the management of family nutrition status with limited Government support. We share GOS concern for avoiding dependency-creating patterns that can too easily erode self-reliance and, while we welcome the PL480 resource, we view it primarily as a way of facilitating and accelerating our broader goal of self-sustaining development.

These are difficult times in Sudan, but the country remains proud, independent, and hospitable. An open-door policy that has admitted more than 500,000 refugees, though adding to economic and nutrition problems, reflects these traits. We respect the spirit that led to termination of an earlier PL480 program and approach this new one as partners in a shared commitment. SAWS understands well the importance of accountability by PVO and Government in using PL480 food. We are confident that we can maintain high standards of

125

accountability as collaborators without assuming a policing role incompatible with development assistance. History, and our desire to build self-sufficiency instead of just passing out food, suggest that building relationships of trust, confidence, and mutual respect with our Sudanese hosts may take more time but is the only way to proceed effectively.

NATIONAL STRATEGIES

The USAID and GOS share development priorities and approaches that, despite our program's modest beginning, serve as framework for SAWS planning. The joint CDSS and GOS emphasis on economic stabilization and revitalization of export agriculture affect us less than the priority to Kordofan food production and a national primary health care system. We look forward to linking our nutrition and social development work to broader AID activities, first by using PL480 food as incentive and later by building self-sufficiency through substitution, in individual sites, of local production for donated food as a key aspect of maintaining adequate family nutrition status.

USAID and GOS commitment to primary health care, coupled with our concern to perfect logistic and technical approaches before venturing too far afield, has led to an initial involvement with the Ministry of Health limited to Greater Khartoum. We have tempered our concern to help the most needy, who live primarily in unincorporated areas not yet served by the Ministry, by realization that strengthening Ministry capability will yield more long-term impact than a "SAWS feeding program." Our MCH help and food support to the Ministry structure seeks to demonstrate and institutionalize the nutrition-related health services

essential to primary health care, using food as incentive, intake, and educational tool. By emphasizing from the start and constantly thereafter that food distribution is an incidental and temporary expedient, while simultaneously demonstrating the feasibility of doing without it, the program will encourage development of self-perpetuating independent institutions and behaviors.

Sudan's socio-economic and nutritional situations compel our approach. This proposal is no place for a litany of Sudanese economic ills, but key nutrition-related aspects deserve mention. The country's aggregate food production now fails to keep up with the increased market demand generated by population growth, urbanization, and income increases. Nutrition improvement must rely on changes within the pattern of existing production, not on production gains. Sudan's food balance indicates average per capita calorie and protein availability above requirements, but indicates little about the national food situation. It masks seasonal, marketing, transport, and distributional distortions that create a macroeconomic context unfavorable to nutrition. Nevertheless, despite these limitations, possibilities for improving nutrition by encouraging better food distribution, within families and communities, offer promise. As other USAID activities simultaneously improve the macroeconomic framework, our MCI work seeks to improve nutritional use of what is available.

Urban influx, a food price inflation that exceeds wage advances, and endemic disease make Khartoum a classic example of high urban malnutrition that may be impossible to alleviate by health and supplementary food distribution interventions alone. Our Logical Framework for this program explicitly assumes that economic conditions will get no worse during the five-year period. If they deteriorate

further, the program will help to maintain nutritional stability but is unlikely to improve status.

Food and water contamination in Sudan produce diarrheal infection rates comparable with the worst in the developing world. Infant mortality, both neonatal and later, remains well over 100 per 1,000, with deaths from tetanus still seen. Regional and income differences in mortality suggest rates in some areas above 200. Child nutrition in Sudan, though better than some countries with similar per capita income, remains a serious problem. Despite absence of good national surveys, the literature reveals surprising consensus that 50 per cent of children under five suffer from malnutrition. SAWS interviews with local experts during project development confirmed this view. Sudanese data rarely distinguish adequately among under-fives between malnutrition of those under two and older children. Disaggregation reveals that Sudanese infants grow well during their first six months, then deteriorate sharply until the end of the second year. Though survivors recover adequate growth rates thereafter, the stunting and otherwise inadequate base from which they now proceed produces considerable first degree malnutrition. Despite the high prevalence, functional consequences of first degree malnutrition among this older group are far less serious than for those under two. Despite this refinement, Sudan's 20 per cent combined prevalence of second and third degree malnutrition among children under six indicates a serious public health and socio-economic problem that requires attention.

SAWS reviewed carefully current donor health and nutrition activities in Sudan, to assure complementarity of our targets and approaches. For example, we have omitted Red Sea Province from our plans, despite the earlier PL480

distribution there, because the USAID concentrates elsewhere and UNICEF now has a major project there that will tax absorbtive capacity.

We have reviewed UNICEF, Columbia University, MOH, and other approaches to primary health care and will incorporate their training materials and community-based approach into our work. We have explicitly based the PL480 program on Ministry of Health interests and capability, to reduce coordination problems and increase likelihood of useful and affordable institutional change. Our efforts to improve urban primary health care fill a gap identified by UNICEF and we anticipate especially close collaboration with that organization. Tailoring program aspirations and goals to MOH constraints requires sacrifice of more ambitious ends, but such realism offers better possibilities for permanent change.

Analysis of the socioeconomic and nutritional situations in Sudan with special reference to the causes of infant malnutrition yielded several key findings that have influenced program design and target group choices.

These include:

- 1) Low birth weights, susceptible to improvement by nutrition intervention, present a less serious problem than weaning (six to twenty-four months) malnutrition.
- 2) High incidence of breast-feeding, with some tendency to reduced duration, contributes to normal growth during first six months of life and to sharp early onset (eight-thirteen months) of high risk and rank malnutrition.
- 3) High prevalence of malaria, diarrhea, and other infections make synergistic and complementary health and food interventions the only possible way to improve nutrition status in a food distribution program.

- 4) Availability of low-cost ingredients makes adequate weaning with indigenous foods feasible for all but the poorest families.
- 5) Clear evidence of poor weaning practices (time of introduction, variety and frequency of feeding, quantities given) dictates emphasis on behavioral change.
- 6) Inadequacy of existing health services in Khartoum makes supplementary food distribution in health centers counterproductive unless accompanied by improved services.
- 7) Refugee influx, influence of male emigration, and cultural differences suggest need for initial study and flexible approaches in behavioral change strategies for urban health centers.

SAWS has considered carefully these and other findings in the Program design that follows. We have enjoyed frank exchange with MOH counterparts, University of Khartoum Department of Community Medicine staff, UN agencies, and others concerning their reservations about use of PL480 food and their preferences in designing use of it. They and we recognize that our approach can initially be no more than a tentative hypothesis. Lack of information and novelty of some aspects of the program require us to proceed slowly and to emphasize prompt feedback and response to continued evaluation. We believe that the design represents a dramatic advance in programming use of PL480 commodities by:

- 1) Linking incentive and nutritional use of the food subsidy to specific behavioral change and institutional goals,

- 2) Emphasizing, from the start, the finite duration of distribution at individual sites and linking this with explicit plans for continued maintenance of adequate nutrition status without foreign donations,
- 3) Broadening the concept of "nutrition education" to include a community-based behavioral change strategy developed from participatory analysis of behavioral obstacles and cultural contexts,
- 4) Integrating baseline data collection and internal evaluation systems with special studies, to provide useful management information, and
- 5) Planning a partnership method of operation that assures adequate controls and development of local capability, without jeopardizing the collaboration essential for developmental change.

We emphasize that AID commitment to a developmental PL480 Title II approach implies some modification of past practices in relation to PVO's. SAWS risks departing from the security of conventional approaches, but asks that the increased uncertainties and difficulties of doing so, especially in Sudan, be considered in any review. Without surrendering for a moment our strong concern for control and accountability, we emphasize, too, that development must be partnership. Auditing, inspecting, and policing, for example should continue to be rigorous, but must be handled with far greater sensitivity than has sometimes been practiced. Despite these concerns, we think this Sudan Program can be done effectively and will demonstrate achievement of previously unrealized potential for creative use of Title II.

THE PROGRAM

The SAWS MCH Program will start in MOH centers in Greater Khartoum. The program area will eventually include unincorporated areas of the city, inhabited by recent arrivals who, as in many other developing country urban contexts, tax governmental service capacity and occupy the lowest socioeconomic strata. Growing at 6-7 per cent annually, in a stagnant economic environment, Khartoum's people suffer from all the classic manifestations of deprivation, with ill health and malnutrition endemic. Water, power, and fuel shortages add to risks and living expenses, while unemployment and low wages (two Sudanese pounds, less than US\$1.50, for day labor) reduce ability to meet them. These same shortages make assisting development in Khartoum a struggle comparable in severity with any country in the world.

SAWS and MOH have developed criteria for beneficiary selection that link a) etiology of malnutrition, b) concern for equity, c) minimization of dependence, and d) incentives for attendance and involvement, to maximize health and nutrition impact of the food. All pregnant and lactating women will be eligible to receive food, until twelve months after delivery. Incentive considerations, as much as more direct nutritional concerns, influenced this choice. Risks of low birth weight are small enough to suggest that only pregnant women at highest risk should be included. We rejected this, because of screening problems and because the Program's behavioral change strategy relies on intensive motivation and involvement of women through pregnancy and the first two years after delivery. Nutritional and equity considerations predominated in the decision to make all children from six through twenty-four months eligible for food allocations. Sudan's near-fifty per cent malnutrition rate for under-fives masks a clustering under

twenty-four months that suggests even higher rates for this group, especially in low-income areas. Furthermore, preventive use of food discourages any criterion that involves waiting for children to deteriorate into more serious malnutrition before giving food. The wide prevalence of infection means that even the apparently well-nourished infant remains at serious risk during the critical first two years. Adequate growth will often mask low reserves that precipitate severe malnutrition on insult.

The Ministry of Health properly resisted any beneficiary criteria likely to create resentment among ineligible families. Targetting by age avoids subjectivity and still achieves the preventive goals of food distribution with little "waste" of food through distribution where nutrition impact is unlikely.

Our behavioral change and self-sufficiency strategies recognize that the specific food delivered may not reach the target child. The income subsidy effect is expected to encourage increased food and other expenditures for the child's benefit. The priority to those under two reinforces the Program's concern to emphasize the critical importance of "a good start."

The Ministry emphasized the difficulties of targetting by nutrition status, but agreed that feeding all children through age five makes little nutritional sense, when resources are limited. After considerable deliberation, SAWS and MOH agreed to limit distribution among those over twenty-four months to second and third degree malnutrition or medical prescription. By making clear from the start that reaching two represents a milestone, for a child with satisfactory health and nutrition status, the design maintains appropriate nutritional targetting and minimizes intra-beneficiary family resentment. Identifying continued distribution as a separate medically oriented program thereafter, done successfully by SAWS in Chile, reduces resentment and dependence.

The Ministry agreed that use of food as an incentive should diminish after age two, acknowledging that lack of family response during the first two years suggests need for another approach. Furthermore, the likely pattern of pregnancies makes probable the occurrence of another one within thirty months, assuring that most families will continue to receive some food throughout the program period. Nutrition education will emphasize the role of the food in providing a good start for each child, to minimize perception of the continued ration as a permanent handout.

The foregoing criteria provide a degree of nutritional focus rare in Title II programming, while remaining feasible and equitable. They maximize contribution of food to the behavioral change strategy. They also reduce the trauma of eventual termination by avoiding family subsidies impossible to replace. Without such targeting, four-beneficiary families become common, encouraging excessive dependence. Linking distribution to the first two years of life, when dependence of the child must be accepted by all, challenges parents to assume independent and successful control thereafter.

SAWS will serve 75,000 beneficiaries in about fifty health centers. Most of the centers have been involved previously, though not currently, in food distribution, reducing need for construction to meet physical requirements for participation. Deferring extension to Northern Kordofan will permit close coordination with USAID activities there, so that meeting physical requirements will be integrated with other aspects of support to primary health care. Wider population dispersion there will mean smaller numbers and more delivery sites, compounding logistics problems.

Our eligibility criteria determine enrollment and exit specifications. Some ambiguity arises in treatment of lactating women, who will receive food for one year, since the increased risk to the child not breast-fed requires special consideration. Fortunately, the very high incidence of breast-feeding (95+ per cent) and MOH encouragement of the practice should keep the number of cases needing special supplementation very small, permitting response by medical prescription without discouraging breast-feeding or otherwise disrupting the Program. Since (2nd and 3rd degree malnutrition) children over two will exit their special program by medical prescription, tempered with consideration of socioeconomic circumstances in hardship cases.

The Program's objectives include different levels and dimensions. The hypothesis is, first, that five years of food distribution and related services will increase capacity of the health centers, and improve practices of their clientele, enough to allow effective prevention and management of malnutrition thereafter, without distribution of donated food. For target families, the hypothesis postulates that, through improved health services and food practices, supported by use of food as incentive and source of supplementary intake, pregnant women continuing in the program until the newborn reaches twenty-four months will have two-year olds with normal nutrition status that can be maintained thereafter through routine health services and without donated foods.

More concretely, these institutional or developmental goals include:

- 1) Health center delivery of supplies and guidance for use in oral rehydration,
- 2) Accurate recording of, and response to, growth monitoring, including educational use of charts and use in program evaluation,

- 3) Improved health, and nutrition-related behaviors, especially in reference to weaning practices, management of infant diarrheal infections, and compliance with immunization schedules.

The foregoing goals illustrate the SAWS conceptual approach. Until completion of baseline data collection and assessment of current services in centers, more precise delineation and quantification remain premature. The hierarchical nature of the goals makes achievement and independent maintenance of satisfactory growth dependent on intermediate institutional and behavioral goals. Unless services and practices improve, nutritional gains will be negligible. Initial growth rate aspirations and outcomes will be modest and consequential change is most unlikely for at least three years. Until then, although SAWS reporting will include growth, our reports will emphasize service, attendance, and behavioral outcomes. We are not avoiding accountability for results, but are concerned that expectations reflect reasonable assessment of change possibilities. Take-home food can have little nutrition impact in Khartoum, unless accompanied by the service and behavioral outcomes proposed here.

Use of PL480 Title II food in Food for Work and income generation offers promising possibilities in Khartoum eventually. Our community-based educational approach will encourage development of such activities, but programming should be deferred until logistic and other experience improves SAWS and Sudanese capacity. As the Program's training efforts in PL480 regulations, food handling, control, and reporting show results, MOH should become freer to seek new activities. World

12/6

Food Program experience with the Ministry suggests that building an adequate food distribution infrastructure presents formidable challenges.

Our description of the Program consciously avoids much reference to nutrition education. That term, conjuring up vision of impatient mothers forced to submit to lectures of dubious value, fails to reflect our concern to subordinate food distribution to a broad effort for encouraging behavioral change. Using food as incentive, justified because center services are of unknown value and it costs mothers time and money to attend, we view the entire attendance experience as education and training. Involving mothers in supplying baseline data, distributing food, and reinforcing learning, for example, we will seek to create an ambience that causes them to "buy into" the health center, to assure a "good start" for each child. If successful, the approach will assure their continued attendance with the children after two years, without food, and their independent care of the children's nutritional welfare thereafter.

THE IMPLEMENTATION PLAN

The MOH-SAWS Maternal and Child Health Program will rely on technical assistance, to be provided by SAWS, to achieve institutional, service, attendance, and behavioral goals. Likely fields for resident staff or consultant help, by joint agreement, include a) approaches to behavioral change, b) mass media, c) oral rehydration (ORS), and d) growth-chart based evaluation systems. SAWS has explicitly avoided any commitment to broad-range improvement in center services, because MOH absorbtive capacity is so limited. We have, instead, selected

behavioral change, ORS, and growth monitoring as key areas, basing choices on analysis of causation and feasibility of response. Immunization, for example, clearly merits attention, but presents difficulties that force deferral. The Ministry's Nutrition Division and health visitors offer a promising base that can improve and continue without major new financial requirements, if not overtaxed.

Food distribution buttresses this ambitious attempt to improve health and nutrition. By linking targets, incentives, and rations in a coherent strategy-oriented way, the proposed distribution reinforces behavioral change efforts without creating dependence among families or in the Ministry. It allows the Ministry to challenge women, at each pregnancy, to master the mothering task by the end of the child's second year, emphasizing Government's willingness to help during the critical period. The food ration, though clearly likely to serve the whole family, emphasizes attention to the target recipients' needs and facilitates behavioral responses that go beyond food behavior to include timely immunization, diarrheal therapy, and early childhood stimulation. The approach, though initially making participation in nutrition education a condition for receiving food, seeks to deliver a participatory experience of such obvious value and enjoyment that, in a short time, the food incentive and the required attendance can be omitted.

The Program will distribute oil, non-fat dried milk (NFDM), and red lentils. The Ministry chose these commodities after careful consideration of behavioral goals, local preferences, and market availability. Nutrition Division staff expressed confidence, based on experience, that counselling can reduce the risk that milk distribution will discourage breast-feeding. To simplify administration, and because it involves little nutritional distortion, all beneficiaries receive the

same ration and amounts selected minimize need for repackaging. The following table summarizes ration size, nutrient content, and total poundage:

<u>Beneficiary</u>	<u>NFDM</u>	<u>OIL</u>	<u>LENTILS</u>	<u>Total</u>	<u>Total</u>	<u>Number</u>	<u>Metric</u>
<u>GROUP</u>				<u>Calories</u>	<u>Protein</u>	<u>In Group</u>	<u>Tons</u>
Pregnant Women	1 kg	1 kg	2 kg	530	28 gr	10,000	480
Lactating	1 kg	1 kg	2 kg	530	28 gr	10,000	480
Infants(6-24mts)	1 kg	1 kg	2 kg	530	28 gr	18,000	864
Children(2-5yrs)	1 kg	1 kg	2 kg	530	28 gr	12,000	576
Severe Malnutrition							
						50,000	2400

Monthly distribution will take place at health centers under supervision of the health visitor, a paraprofessional with five years of training, who directs the center. The Nutrition Division has educators in all centers and Nutrition Officers in many. Other officers visit the rest, and food distribution will be coordinated with these visits. The nutrition staff will supervise weighing and growth chart use. A Ministry counterpart to the SAWS Country Director will manage food distribution, assisted by SAWS.

Following arrival at Port Sudan, food will be off-loaded to the warehouse of a U.S.-based agent operating in Sudan, to be contracted by SAWS, avoiding time-consuming clearance through Government warehouses. It may be possible to avoid all warehousing in Port Sudan by loading directly to trucks for transport to a Khartoum warehouse. Feasibility and economics of this alternative are being explored, though scarcity and high cost of Khartoum warehousing may force rejection. The agent's trucks will bring the food to Khartoum, where five SAWS vehicles will transfer it from storage monthly to individual centers' storage facilities. No repackaging will be required, since distribution will be organized to involve beneficiaries in bringing and filling containers.

Recognizing the difficulties and high cost of developing a parallel transportation system, SAWS will choose between two private firms with excellent track records in customs clearance, warehousing, storage, transport, and inventory control. Transportation in Sudan is risky and uncertain at best, but we are confident that our arrangements are the best available and will provide satisfactory regular delivery.

(Bellmon Amendment) - The small quantity of food involved, coupled with distribution of it to urban populations whose limited market demand will continue unabated, assures that the Program will not affect incentives for local production. The Program's eventual goal of substituting locally grown output for Title II in specific sites should provide substantial impetus to local growers. SAWS will work closely with USAID and GOS agricultural officers to explore possibilities for linking community-based feeding programs to production-increasing interventions.

Introducing Distribution - The SAWS developmental approach to Title II in Sudan requires that regular distribution of the food be delayed until the health centers reach a reasonable degree of proficiency in managing it but, more important, in providing health and education services likely to be perceived as valuable by mothers. While technical assistance will continue throughout the Program, individual sites will be opened to food only after reaching a minimum standard of service delivery to be determined jointly. Our concern to collect adequate baseline data will also delay introduction of regular distribution, though some food will be provided as incentive for mothers to answer the questions, since the value of doing so will not initially be evident to them.

PROGRAM EVALUATION

SAWS technical assistance includes provision of an evaluation specialist to help build an internal data system adequate for meeting USAID, MOH, and SAWS monitoring, control, and evaluation needs. Although Ministry staff have some experience with control procedures, initial investigation and World Food Program experience make clear that considerable training remains to be done.

The centers' still-rudimentary use of growth charts requires attention.

Before beginning regular food distribution, each center will complete a baseline survey that simultaneously enrolls and classifies beneficiaries, while simultaneously recording a few basic food and health behaviors. The survey, by involving mothers in current practices, will provide an educational experience and also furnish data useful in identifying behavioral goals and change strategies. Considerable sensitivity will be required to move the Ministry from the now automatic assumption that all mothers are equally incompetent in food behavior and that nutrition education can be standardized without knowing what practices prevail. Only by involving more competent mothers in reinforcement of Ministry efforts can behavioral changes become likely and the baseline collection experience can be useful to identify good candidates. Despite difficulties and crudeness of capturing baseline behaviors in a brief period, the effort should be made and will improve Program.

The baseline growth records, and some limited socioeconomic information accompanying them, will be followed by regular growth monitoring and reporting of beneficiaries with a) satisfactory weight gain, b) stable weight, and c) weight loss. This data base can then eventually be linked to information about performance of

services, beneficiary attendance and behavioral responses, and socioeconomic characteristics, to identify problems and improve program. The Nutrition Division and the Department of Community Medicine at the University of Khartoum will, as necessary, make intermittent sample surveys of household behavior to assess changes in weaning and oral rehydration practices. These will verify regular informal observations of center staffs.

This evaluation plan will take years to institutionalize but, with SAWS help, minimum AID information needs can easily be met from the start. The experimental nature of the approach may justify eventual study and follow-up of cohort groups reaching two years old after continuous program participation. Demonstration of program efficacy, regardless of feasibility or efficiency, would provide a powerful argument for targetting the under-two group.

FINANCING

The Ministry of Health shares the financial stringency afflicting the Government of Sudan. It can barely maintain the existing Nutrition Division and health center network. Gasoline shortages, both physical and budgetary, limit supervisory visits and create many other problems. Possibilities for GOS financial support of the Title II Program, without jeopardy to other programs, remain negligible.

Very strong GOS commitment to provide free health and other social services limit possibilities for financing part of program costs through beneficiary contributions or charges. Previous disagreements about such payments created serious problems and the Ministry has made clear that it will consider no such

changes in any new program. SAWS prefers, in any event, to encourage self-help by means other than token payments for donated food. Nutrition education will emphasize family self-sufficiency without donated food. Making clear at all times that the subsidy is temporary and assisting families to prepare for withdrawal when infant beneficiaries reach two years of age.

Given these limitations, SAWS proposes that the Program be financed through an Outreach Grant. Discussion in the USAID indicated that GOS Title I priorities make access to this source unlikely. Title III funds already committed to complementing the Rural Health Support Project offers more promise, as food distribution expands to North Kordofan, but use is premature now. The special difficulties of distributing food in Sudan, and the costs associated with this innovative developmental use of Title II food, seem especially appropriate for Outreach Grant financing.

Absence of Food for Peace Officer in USAID/S places a high premium on simple financing and administration. SAWS use of an efficient logistics contractor and Outreach Grant financing meet this requirement.

ORGANIZATION AND ADMINISTRATION

SAWS proposes to hire a Project Director experienced in administration, to work closely with a Ministry Program Coordinator to be placed in charge of the Program. Although Program direction and supervision will be shared as much as possible, SAWS will retain full responsibility for compliance with all control and other requirements. We are confident that this partnership approach will improve relations and GOS response to the Program.

SAWS technical assistance staff, both resident and consultant, will work in and through the Nutrition Division of the Ministry of Health. Present plans contemplate placement of resident experts in nutrition education and oral rehydration, with other specialists to be supplied as needed. The nutrition education specialist will also provide assistance in growth chart use for monitoring and evaluation.

The SAWS Project Director will maintain continuous liaison with the private contractor hired to implement food transport and storage needs, providing direction, supervision, and inspection as required. In addition to center inspections conducted by the SAWS Project Director and technical staff in the course of their work, SAWS will also employ a supervisor who, with four drivers who deliver food, will inspect regularly for compliance with all legal and administrative requirements.

The SAWS Project Director will maintain regular contact with the REDSO or USAID, as instructed, and, through SAWS headquarters in Washington, will relate to appropriate AID/W offices.

SUDAN: PL480 Title II SAWS MCH Program

Narrative Summary

Goal

Improved health and nutrition status of children aged birth-60 months and their mothers (pregnant and lactating women)

Sub-Goals

Improved health and food-related behaviors

Purpose

Provide supplementary food, behavioral change assistance, to 50,000 75,000 pregnant and lactating women, infants 6-24 months and children 24-60 months with 2nd or 3rd degree malnutrition, at 50 clinics/health centers.

Provide growth monitoring, Oral rehydration service, incentives for attendance at health centers.

Verifiable Indicators

Improved growth
Reduced severity and duration of diarrhea.
Independent maintenance of nutrition status for infants over 24 months.

Consumption
Weaning practices
Center attendance

Food distribution, amount regularity, timeliness of delivery to centers and beneficiaries

Number of staff, training courses, presentations to beneficiaries

Means of Verification

MOH/SAWS health records, growth charts

Center staff observations. MOH and outside special studies.
Center records.

MOH/SAWS records.

SAWS and MOH records

Specific Targets

Regular growth monitoring-
Early and effective response to infant diarrheas

Improved service delivery
Improved maintenance and use of growth charts

Compliance with program norms
Adequate storage and transportation arrangements.

Participatory sessions with mothers. Food preparation and ORS demonstrations.

Means of Verification	Important Assumptions	Means of Verifying Assumptions
	Health center staff numbers and composition will remain stable.	MCH staff records
	Beneficiaries' economic status will remain stable.	Socioeconomic data, cost-of-living indices, unemployment, wages.
	Scales, growth charts, ORS and other logistic needs will be filled.	Ministry records.
	Families can provide more intake to vulnerable groups, without jeopardizing health and nutrition of others.	Baseline data Program interviews
	Food distribution will increase attendance and participation at health centers.	Food distribution and attendance records

Outputs	Verifiable Indicators	Means of Verification	Specific Targets	Important Assumptions	Means of Verification
Efficient logistic system for timely commodity delivery.	Prompt and full movement of commodities from port to centers.	MOH/SAWS records	Warehousing leased Trucks available and in working order.	Warehousing and vehicles available. Maintenance contractor available.	Agreements
Monthly distribution of correct rations only to eligible beneficiaries.	Numbers receiving food and showing growth charts.	MOH/SAWS records	Numbers attending Presentations and food distribution.	Duty-free entry. AID funding	
Center ORS and behavioral change services.	Technical assistance given. Services provided by staff.	MOH/SAWS records	Numbers attending and responding	AID funding. TA staff available.	
<u>Inputs</u> 2400 MT of PL480 commodities, with \$ value. Outreach Grant funding of \$, for logistic and program support.	Staff in place Food delivered	SAWS records	Host country Agreement. SAWS office.	GOS will sign agreement	Signed Agreement

DRAFT

A PROPOSAL

by

SEVENTH-DAY ADVENTIST WORLD SERVICE, INC. (SAWS)

for

PL480 TITLE II TARGETTED MCH PROGRAM

IN THE DEMOCRATIC REPUBLIC OF MADAGASCAR

June, 1983

146

This is a proposal by Seventh-day Adventist World Service, Inc. (SAWS) for a five-year Title II Targetted MCH Program in the Democratic Republic of Madagascar (RDM), beginning in the city and province of Antananarivo, and later extending throughout all six provinces of the Country. The proposed program contemplates regular food distribution monthly to 10,000 beneficiaries within one year from date of approval, expanding to 30,000 by the end of the second year, and thereafter reaching and continuing at a level of 60,000.

The program will target all pregnant women until delivery, lactating women for eighteen months following delivery, all infants between six months and twenty-four months of age, and children from twenty-four through sixty months diagnosed as having second or third degree malnutrition. Distribution will be through Ministry of Health facilities and through medical facilities and social service centers of the national Seventh-day Adventist Church. Though avoiding any formal connection with it, the MCH program will be integrated effectively with a pilot family planning project in the Government facilities, supported by the United Nations Family Planning Association (UNFPA), thereby responding to Ministry of Health (MOH) concern that family planning be introduced only in conjunction with nutrition services.

INTRODUCTION

SAWS views Madagascar as a promising area for introduction of food distribution as a temporary expedient during economic distress and as an incentive for use of improved maternal and child health, and family planning, services. The unusually competent Ministry of Health, operating through an infrastructure of well-established hospitals, MCH centers, and dispensaries (primary care facilities)

suffers currently from the economic problems that pervade Madagascar. Shortages of drugs and medicines, transportation difficulties, and other problems prevent the system from operating at full potential. The SAWS program, emphasizing the need to have effective services available before beginning food distribution, uses food as an incentive to the Ministry before it becomes an incentive to beneficiaries. SAWS technical assistance and resources will strengthen the Ministry capacity to provide broader and better MCH service.

SAWS views the Country situation as precarious. Review of AID and World Bank documents, followed by field interviews, emphasized the uncertainty of Madagascar's economic future. Likely policy changes, in rice marketing for example, threaten the already fragile economic position of poor people. Economic stringency leaves little room for social expenditure and Madagascar's earlier efforts will deteriorate unless supported by outside donors. Foreign exchange pressures make food availability a constant problem, since increased local production will be used primarily to reduce imports. With population growing at 2.8 per cent annually, and urbanization increasing market demand even faster, per capita food availability among the poor will be stable at best.

The country's outstanding agricultural promise, emphasized by all experts and documents consulted, causes SAWS to view use of PL480 as temporary. Madagascar should, in five years for example, be able to reduce dependence on foreign donors. Constant disasters, including cyclones, floods, and droughts, make emergency needs frequent, but neither national agricultural nor social policies contemplate use of food distribution, with donated or national resources, as a permanent service. SAWS therefore, with full awareness of GDRM concern for self-reliance and independence, offers food distribution primarily as an adjunct to

150

health and social policies seeking to raise the people of Madagascar to a higher plateau of health and stability.

NATIONAL STRATEGY

The GDRM, after some disastrous experiments with state-controlled, externally financed industrialization and parastatal marketing organizations, now seems to have accepted IMF, World Bank Consultative Group, and U.S. Government recommendations aimed at bringing foreign debt under control and returning agriculture to private operation and prosperity. Present policies emphasize self-sufficiency in rice, revitalization of coffee and other exports, and restoration of deteriorated infrastructure, including highways and communications. The past five years produced severe deterioration in all sectors as debt service burdens forced reduction of imports and maintenance. Government policies include reducing 1982's 30 per cent inflation rate that, with a wage freeze, increased burdens on the urban poor. AID's Small Program Strategy Statement for Madagascar emphasizes desirability of a Commodity Import Program to ease transition problems. Absence of a USAID and broader program leads the Embassy to concentrate on political rapprochement and encouragement of changes in broad economic policies.

The SAWS program, though a modest beginning, serves a useful purpose by showing GDRM and the people of Madagascar the U.S. interests extend beyond the narrowly economic. With the earlier and continuing CRS program, AID exhibits sensitivity to the havoc that economic belt-tightening has brought, and will continue to bring, to the most deprived. The programs also assure that some part of commodity shipments, intended for broad economic purposes, serve those most in need. By helping to prevent further deterioration of MOH services, SAWS will

reduce the eventual burden on GRDM of building an adequate primary health care system. Support of the MCH program complements well both the political and economic policies of the United States and Madagascar.

THE NUTRITION CONTEXT

Madagascar's recent socio-economic situation presents cause for alarm. Real income fell by twenty (20) per cent from 1970 to 1978 and has not increased significantly since. Rice production declined along with everything else, causing Madagascar to import 360,000 metric tons in 1982. Increased production of cassava in the south suggests population pressures that force resort to maximum calorie production per hectare, with unfavorable nutrition consequences. Urban inflation and unemployment make it increasingly difficult for the poor to maintain food consumption levels. The early emphasis on industrialization, and the decline in Government revenues when it failed, caused social services to suffer though need was increasing. All sources confirm that socio-economic status of most people in Madagascar remains very marginal. Seasonal food shortages and intermittent disasters aggravate an already disturbing context.

Although little documentation exists, ample evidence of serious malnutrition abounds. Allegations that GRDM prevents disclosure of unfavorable data seem unfounded, since MOH staff joined eagerly in SAWS emphasis on the need for baseline surveys. CRS finds that 40-45 per cent of all children in the food distribution program fall below 80 per cent of a Madagascar standard that is lower than that used in most other countries. The physician administering UNFPA activities expressed shock at the number and severity of malnutrition cases seen in the Country's three major hospitals. The Seventh-day Adventist Hospital in Andapa

exhibits a similar pattern. SAWS preparation team health and nutrition specialists also observed widespread severe malnutrition in urban MCH facilities. MOH officials emphasize that the short periods between pregnancies, common in Madagascar, aggravate malnutrition among children under two and weaken women. The early age of first pregnancy makes malnutrition among pregnant women a serious problem. The under-one mortality rate of 147 per 1000 still includes some neonatal tetanus deaths, but also dramatizes severity of early malnutrition. Anecdotal evidence of food taboos and poor weaning practices also support the general impression of serious malnutrition concentrated among children between six and twenty-four months.

Malagasy xenophobia, until recently, limited donor activities in nutrition. World Food Program (WFP), obliged to charge MOH for inland transport, soon abandoned food distribution because the Ministry could not pay. UNICEF concentrates on other problems and Church World Service, also in food distribution for a while, left and now supports FICKRIFAMA, a local PVO working primarily on water development. A Lutheran group, working only in the south, has produced some good nutrition education materials, but serves only a small area. CRS food distribution continues to serve over 40,000 children under five and mothers, less than two (2) per cent of the target group, with expansion by 30,000 a possibility. Distributed almost exclusively through private facilities, the CRS food provides no direct support to Government services. SAWS, by working in MOH centers, will complement CRS activities. Friendly contacts between the two organizations to date make synergistic coordination a promising possibility.

The new UNFPA pilot program presents SAWS with an outstanding opportunity to complement host country and donor strategy. After years of

discussion and negotiation, UNFPA and GRDM have agreed on a training program, with related services, that will involve 60 health centers associated with four different district health offices. The Ministry has expressed concern to link population activities with efforts to improve nutrition and SAWS can help UNFPA by providing necessary services. The two programs offer a rare opportunity to demonstrate the much-asserted interdependence of demographic and nutritional interventions.

Although UNFPA administrative presence will assist SAWS control of food, the two programs and organizations will remain separate and distinct. Both the U.S. Embassy and the Madagascar Seventh-day Adventist Church emphasize the still-sensitive political nature of family planning policy, though IPPF's local affiliate indicated that GRDM Practice goes much further in supporting services than rhetoric would suggest. Nevertheless, SAWS remains sensitive to the need to keep the two programs dissociated and, though the food will also bring people to centers for family planning services, all promotional and educational activities will emphasize maternal and child nutrition. Interviews at UNFPA showed good possibilities for informal collaboration, but SAWS and U.S. Policies will focus on nutrition improvement as an independent goal.

THE PROGRAM

The SAWS program will begin in the capital city of Antananarivo and surrounding province. The need to get administrative and logistic systems working effectively before undertaking more difficult areas encourages this approach. Better Ministry capability in the capital province also supports it, as does the clear need for improved MCH care among the urban poor. Reference to the "SAWS

154

Program," because both MOH and Adventist facilities are included, should not detract from our partnership approach with the Ministry. Discussions emphasized that there would be a Ministry Program, assisted by SAWS, with site selection, ration composition, and related questions, to be determined jointly. The Government of Madagascar's attitude toward foreign donors makes any other approach impossible.

In addition to some twenty (20) Ministry facilities, the first-year program will also include five medical and social welfare centers operated by local Seventh-day Adventist churches in the province. The 60,000 beneficiary program, contemplated by the fifth year, will include more of both institutions' facilities, with the balance to be determined by absorptive capacity and initial experience. Work with the Ministry will emphasize expansion and strengthening of MCH services, while the church program will seek to build a modest, but self-sustaining, network of service centers intended to support women and infants. The local churches already maintain volunteer programs and responded avidly to the possibility of using food distribution to build a more solid and permanent base. The participating churches are in very poor areas, not served by the health system, and, though staffed primarily by church volunteers, offer their services to all without regard to race, creed, or color.

SAWS believes in open participation and will not limit the number of eligible beneficiaries to be served at any given site. Unfortunate CRS experience, when eligibles exceeded available allotments, has encouraged CRS to move toward open participation and SAWS has learned from this. Targetting by age allows SAWS to feed all eligible while avoiding difficult screening that often causes ill feeling and poor administration. Distribution to all pregnant and lactating women, and to all

infants between six months and two years, encourages emphasis on adequacy of breast-feeding and the need to supplement it before the sixth month. Termination at two years, except for those obviously ill with second or third degree malnutrition, emphasizes concern for helping infants to survive well their critical period, the need for independent parenting thereafter, and both the nutritional and anti-conceptive effects of long lactation.

The SAWS approach emphasizes the preventive use of food. Where concentrations of the poor produce malnutrition rates above fifty (50) per cent, as in much of Madagascar, few infants can be described as outside high risk. Rather than waiting for them to become malnourished, and then feeding them for years thereafter, SAWS prefers to target on the first two years in the hope of reducing need for later supplementation. In Madagascar, where early and frequent pregnancies present an unusually serious problem, inclusion of all pregnant and lactating women benefits both mothers and their infants. SAWS recognizes that considerable justification can be made for an "all children under five" criterion, but proposes that the "good start" approach of targetting below twenty-four months yields higher impact from resources, while reducing development of dependence.

In order to avoid "competition" with CRS, SAWS proposed that the Ministry of Health duplicate the CRS ration of two (2) kilos of rice, two (2) kilos of non-fat dried milk (NFDM), and 1 liter (app. 1 kilo) of oil. This ration provides a daily supplement of about 773 calories and 26 grams of protein, a significant addition to family consumption if no reduction of calorie and nutrient intake from other sources occurs. If the target beneficiaries receive a net supplementation of equal nutritional value, even if composed of other foods, likely nutrient gaps would be filled for most.

The Ministry may prefer other items from the PL 480 list and SAWS would try to honor their requests, but initial Ministry reaction seemed favorable to the SAWS proposal. Rice is Madagascar's "cultural superfood," as defined by Jelliffe, and few items on the list of available commodities can equal it in acceptability.

Food distribution as incentive for use of MCH services requires that centers have capacity to respond. SAWS will therefore assist development of MOH services by providing technical specialists in oral rehydration and immunization, the critical complementary services for the target children. Combined with a community-oriented nutrition educator, experienced in use of growth charts, this help will build a framework of MCH services that will be introduced and reinforced by food distribution. By linking nutrition with other MCH services, and viewing behavioral change in a broader perspective than that of conventional nutrition education, SAWS hopes to produce, through the Ministry and also in the Adventist facilities, a pattern of health center attendance and services that eventually diminishes the need for food distribution to sustain it.

AID should have no illusions about the goals achievable early in this five-year program. Distribution of non-specific foods to target beneficiaries, that will be shared by the family and may also diminish family food spending, cannot alone improve growth significantly. Only better weaning practices, adequate immunization, and effective detection and treatment of diarrheal infections offer promise of doing that. These will be achieved only after the related services are installed and operating effectively. Some increase in the number of children growing adequately, as shown by monthly review of charts, may be possible from initial exhortation and motivation, but the program's goal of self-sustained (without donated food) growth and health is likely to be achieved only among mothers with

extended participation in the program. Their continued performance should be measured by review of their attendance at health centers, and growth of their children, after their participation in food distribution ends.

Possible SAWS contribution to UNFPA goals also merits mention. This can be measured through the UNFPA-supported system and, though separate attribution may be difficult, any extension of child spacing, for example, may reflect behavioral and nutritional aspects of the MOH-SAWS program. Significant differences in the number of acceptors at centers with both programs, compared with those from centers involved only in the UNFPA activities, may also occur and would be of great importance for policy and programming.

Madagascar offers some outstanding opportunities for use of Food for Work in (e.g.) agriculture and highway rehabilitation. As AID presence increases and detailed strategies emerge. SAWS will collaborate by complementing Mission activities with appropriate Food for Work activities.

The Implementation Plan

Distribution food in Madagascar, where SAWS has not operated previously, presents formidable problems. CRS guidance has been very useful in identifying problems and suggesting solutions. The SAWS decision to trans-ship commodities from the Tamatave port-of-entry to secondary ports, and to provide regional

storage sufficient to permit semi-annual shipments, flow from CRS experience and current practice. Though frequently overcrowded, rail transport remains feasible throughout the country and SAWS vehicles will move food to sites from the railway delivery points. SAWS will lease warehouse space in Tamatave and clear shipments to them within fifteen (15) days, to avoid demurrage charges at government port facilities. SAWS will supervise construction of a warehouse in Antananarivo, on property to be donated by the local Seventh-day Adventist Church, and will oversee construction or renovation of adequate storage space at the participating government and Adventist distribution sites.

SAWS anticipates no difficulty in formalizing GRDM contributions, similar to those granted to CRS, in the form of duty-free entry, rail discounts, and exemption from part of fuel taxes (equal to a 15 percent discount).

Health center staff and beneficiary women will manage and handle distribution in MOH facilities, with repackaging performed at distribution through use of recipient containers. Quasi-volunteer staff (i.e., receiving nominal compensations) will work with beneficiaries at the Adventist facilities. The government could not contribute internal transportation costs for WFP food and will not for this new program. Use of beneficiary charges or contributions to meet national program expenses, undertaken successfully by CRS in private sites, is not now permitted by either the MOH or the national Seventh-day Adventist Church. SAWS proposes to implement a community-oriented behavioral change approach

that encourages mothers to accumulate a part of the money saved through the subsidy of distributed food, individually or collectively, for use in income-generating activities that will ease the transition to independence from the program.

Because it is concerned that the five-year program leave participating sites able to carry on program activities without PL480 food, SAWS offers the following institution-building plan for AID consideration. We propose to increase beneficiary rations to six (6) kilos and to charge a fee of approximately fifteen (15) per cent of retail value for participation. Fees will not be used to cover program costs, but will be held as trust funds by individual church committees. The churches will have, after five years, enough money to institute and maintain a revolving fund for purchase of local foods at wholesale, to be sold to beneficiaries at cost. Encouragement of private sector donations, in food or money, would also supplement the fund. This permanent arrangement for reducing food costs of poor people exemplifies a developmental use of Title II that could multiply program impact substantially. Funds will be controlled and audited with the same rigor as food. We are confident that church committees, assisted by the SAWS expatriate treasurer, can administer such funds honestly and efficiently.

Although most participants may just reduce expenditures on other foods, we recognize that this proposal may encourage sale of donated commodities, especially by the poorest beneficiaries. Providing increased rations, however, allows maintenance of the intended five-kilo supplementation as they share in building a more permanent source of cheap food. SAWS hesitates to introduce the substantial subsidy represented by the program, and accompanying dependence, without simultaneously helping people prepare for a future without donated food.

Following initiation of purchases from the revolving fund, PL480 food could be phased out at individual sites and distributed at others. Where possible, the revolving fund would be converted to capital for food cooperatives, to be operated by beneficiary families, but this must be viewed as a longer-term goal.

This proposal has not yet been presented to either the Ministry or the Madagascar Seventh-day Adventist Church, whose member churches would administer the funds. We prefer to secure AID approval before introducing the idea. There is no assurance that Church or Ministry will accept the proposal, especially since it appears to contravene existing policies, but we would offer it to emphasize the temporary nature of the externally-supported food distribution program at each site, and to illustrate the need to think about ways to maintain program activities without it.

Hiring and training local staff in PL480 food handling regulations, storage requirements, control procedures, and other policies will be a SAWS priority. The SAWS expatriate director, an expatriate treasurer, and three resident expatriate technical experts will assist control by periodic direct inspection of premises, though three local supervisors and four drivers will share the monitoring tasks. The MOH program director, with whom the SAWS director will work closely, will have primary responsibility for administration, though SAWS retains ultimate legal responsibility.

UNFPA supervisors will also assist in supervision and control by sharing observations made during their site visits. The national network of 121 Seventh-day Adventist churches throughout Madagascar, though not directly involved in program administration, can also assist program operations. It will provide a source of observation, promotion, and informal assistance that reinforces work of program staff.

(Bellmon Amendment)-SAWS food distribution will reach poor people whose market demand for food will diminish little because of the modest subsidy. The country's substantial imports of rice mean that PL 480 serves primarily to alleviate foreign exchange pressures and not as a disincentive to local production. Major current GRDM pricing policies and other changes addressed to improving agricultural production will not be impaired by the proposed MOH-SAWS program.

(AID Monitoring)-It will be some time, if ever, before a USAID Food for Peace Officer is assigned permanently to Madagascar, since even a Mission seems unlikely before 1986. Although REDSO interest and assistance remain notable, intermittent visits cannot substitute for continued presence. The MOH-SAWS program has been designed to minimize need for AID support. SAWS expects to rely heavily on cooperation with CRS to assure that presence of two voluntary agencies distributing PL480 food in Madagascar does not increase burdens on AID.

PROGRAM EVALUATION

SAWS does not plan to wait 18 months for program evaluation. The program will give high priority to collection of baseline data on nutrition status and food habits, in addition to clarifying pre-program status of health services. Baseline data collection will be an integral part of program introduction, serving as a training experience for both health center staff and beneficiaries. Initial food distribution will serve as an incentive for beneficiaries to provide detailed baseline information, since, having not yet seen the value of the program, they have no particular reason to do so. The virtual absence of current data on nutrition status in Madagascar makes baseline studies essential and useful far beyond the program. SAWS has arranged with Dr. Roger Andrianasolo, a Cornell-trained nutritionist who

now serves as a faculty member in the School of Medicine and as Chief of Madagascar's principal nutrition laboratory, to direct the baseline study. He will design it in a way that makes it the first stage of a national nutrition status survey and SAWS will try to help him find funding for the broader survey. Scarcity of donor funds for nutrition in Madagascar, partly a result of previous Government attitudes, makes the national survey a high priority.

Monthly review of growth charts and regular monitoring of health services and center attendance will provide continued assessment of progress. Until health services and nutrition education reach reasonable levels of proficiency, SAWS monitoring will primarily address them. Thereafter, the intermediate health and nutrition behavioral goals, especially immunizations, weaning behaviors, and use of oral rehydration therapy will receive attention.

The weight and growth chart review will look at month-to-month gain rather than weight-for-age nutrition status. This criterion has proven equally effective, and far simpler to teach and administer, than the idea of reaching normal range. Each center will report monthly the number of children showing adequate weight gain since the previous monthly weighing.

FINANCING

A proposal for an Outreach Grant will follow this program proposal. It will cover most costs of program installation and operation. SAWS also plans to use sale of Title II food to buy necessary local materials and equipment essential for individual center nutrition education and health service needs. Close coordination with UNICEF and other donors will provide other supplies.

The modest compensation necessary to enable church volunteers to make the permanent commitment of time essential for program operation will be paid by distributing commodities, or selling them and distributing the proceeds, as Food for Work. SAWS training of church volunteers will enable them to acquire skills transferrable to regular paid employment, with the program or elsewhere.

The absence of AID staff in Madagascar, and the limited Title I and Title III funds available, discourage reliance on these funds. The high priority being given to revitalization of agriculture by GDRM and the U.S. Government has made MCH access to such funds most unlikely. Funds already generated have been used in self-help agricultural projects linked to GRDM strategy and future amounts are expected to be used in the same way.

LOGICAL FRAMEWORK

191

Madagascar - PL480 Title II SAWS MCH Program

<u>Narrative Summary</u>	<u>Verifiable Indicators</u>	<u>Means of Verification</u>	<u>Specific Targets</u>
<p><u>Goal</u> Adequate and Independently maintained nutrition status of children over two years of age.</p>	<p>Growth status at two Continued attendance at centers. Continued adequate growth.</p>	<p>SAWS/MCH Growth charts Health Center Records</p>	<p>Tons of food distributed annually through centers 40,000 beneficiaries receiving food & services.</p>
<p><u>Sub-Goals</u> Improved weaning practices Improved oral rehydration Increased immunizations Improved delivery of MCH services in centers</p>	<p>Growth Charts. Severity & Duration of diarrheal episodes. Number of immunizations given. Home weaning behavior</p>	<p>Center records. Home visits.</p>	<p>Mothers receiving training in ORS weaning practices. Families in regular contact with health centers.</p>
<p><u>Purpose</u> Provide targetted take-home food supplement of five kilos monthly to 12,000 pregnant or lactating women, 20,000 infants between six & twenty-four months, and 8,000 children over two with second or third degree malnutrition through 80 private and governmental centers.</p>	<p>Services delivered. Food distributed</p>	<p>Center Records</p>	<p>Compliance with program norms. Adequate storage and transport arrangements.</p>
<p>Provide ORS, immunization, and nutrition education services in all participating centers.</p>			<p>Participatory sessions with mothers. Food preparation and ORS demonstrations. Trained staff in centers.</p>

Important Assumptions

Health center and church center staff numbers and composition will remain stable

Beneficiaries' economic status will remain stable

Scales, growth charts, ORS and other logistic needs will be met

Families can provide more intake to vulnerable members, without jeopardizing health and nutrition of others

Food distribution will increase attendance and participation at centers

Beneficiary mothers will continue to attend centers with their children after benefits of food are no longer received

Means Of
Verifying Assumptions

MOH and church staff records

Socioeconomic data, cost-of-living indices, unemployment and wage statistics

Ministry and church records

Baseline data
Program interviews

Food distribution and attendance records

Attendance records of families no longer receiving food

Outputs	Verifiable Indicators	Means of Verification	Specific Targets	Important Assumptions	Means of Verification
Efficient logistic system for timely commodity delivery.	Prompt and full movement of commodities from port to centers.	MOH/SAWS Records.	Warehousing leased or built. Trucks available and maintained.	Space and Vehicles available. Maintenance services available.	Agreements
Monthly distribution of correct rations only to eligible beneficiaries.	Numbers receiving food and showing growth charts.	MOH/SAWS Records.	Numbers attending. Presentations and food distribution.	Duty-free entry. AID Funding.	
Center ORS,. Behavioral change and immunization services	Technical assistance given. Services provided by staff	MOH/SAWS Records.	Numbers trained. Number delivering adequate services. Beneficiaries receiving services.	AID Funding. TA staff available	
<u>Inputs</u> 2400 MT of PL480 commodities with dollar value. Outreach Grant funding of dollars for logistic and program support	Staff in place. Food delivered.	SAWS Records	Host country agreement. SAWS office with full staff.	GRDM will sign agreement.	Signed Agreement