



International Science and Technology Institute, Inc.

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EXTERNAL EVALUATION TEAM REPORT
ON THE TIHAMA PRIMARY
HEALTH CARE PROJECT

A Joint
Yemen Arab Republic
and
United States Agency for International Development
Project

April 30, 1985

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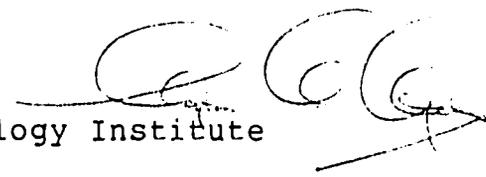
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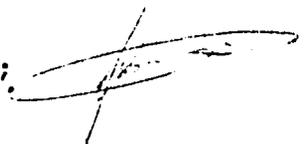
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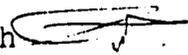
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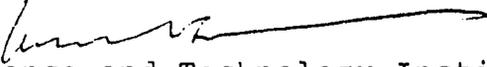
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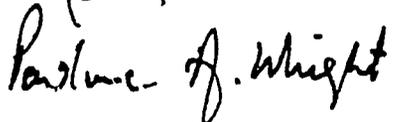
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LIST OF ACRONYMS

CRS	Catholic Relief Services
EOP	End of Project
EPI	Expanded Program of Immunization
HMI	Health Manpower Institute
KAP	Knowledge, Attitudes, and Practices
LBA	Local Birth Attendant
LDA	Local Development Association
MOH	Ministry of Health
OPG	Operations Program Grant
ORT/S	Oral Rehydration Therapy/Salts
PHC	Primary Health Care
PHCU	Primary Health Care Unit
PHCW	Primary Health Care Worker
TBA	Traditional Birth Attendant
TPHCP	Tihama Primary Health Care Project
UNICEF	United Nations Children's Emergency Fund
USAID	United States Agency for International Development
WHO	World Health Organization
YAR	Yemen Arab Republic

EXECUTIVE SUMMARY

Background and Scope of Work

The Tihama Primary Health Care (TPHC) Project is a MOH project being conducted in cooperation with technical assistance from Management Sciences for Health (MSH) provided by USAID. The existing project finds its roots in work initiated by Catholic Relief Services (CRS). In the late 1970's, CRS formally presented USAID with an unsolicited proposal to expand and strengthen CRS's initiatives with the MOH in Primary Health Care. The CRS/MOH project operated through 1982 at which time USAID cancelled funding to CRS due to unsatisfactory performance by CRS in fulfilling MOH policy. After a period of negotiations, MSH (previously a subcontractor to CRS) was invited by USAID to assume a technical assistance contract to support MOH efforts in Primary Health Care in Tihama. While much progress has been made at the service delivery level, the MOH and USAID jointly agreed that there was a need for an independent external evaluation of the TPHC Project to accomplish three things:

- Determine by way of a process evaluation the extent of progress to date and the likelihood of accomplishing all project objectives by the end of the life of the project;
- Identify key factors related to past, present and future project progress;

-- Propose specific recommendations as appropriate to improve, strengthen and/or redirect the project; and propose specific recommendations to resolve specific issues which have been viewed to become intractable.

Methods

The evaluation team (including four Yemenis, two Americans and one British) developed an approach to the evaluation which includes:

- Introductory discussions with all parties participating in the project in Sana'a, as well as selected agencies with no direct interest in the TPHC Project;
- Extensive field investigation starting with two days of discussions with project staff in Hodeidah followed by field trips to 55% of all project sites, as well as visits to Taiz for general information. Site visits included an informal but structured discussion with field staff about predetermined topics, testing of knowledge and, where possible, direct testing of skills. The field investigation in Hodeidah ended with a presentation/discussion session of findings with all project staff;
- Extensive discussions with all principal parties to the project and many with indirect interest in the project;

-- This process was accompanied by evaluation team discussion sessions so as to develop consensus among evaluation team members.

Progress to Date (Process Evaluation)

The TPHC Project has made substantial progress to date. It has developed a list of health problems from which specific intervention packages have been developed. Specific roles and responsibilities have been developed and are beginning to be formalized in the project. PHCW's, LBA's and midwives have been competently trained by the project. They have, for the most part, been brought into the civil service. These staff have a high degree of demonstrated skill and knowledge. With attention specific to problems identified, the project should be able to complete all PHCW training on schedule. LBA training could be completed, but questions associated with the LBA cadre (eventual cost, role, relationship to TBA's, etc.) make suspension of LBA training in this project a topic for serious consideration, especially given the pilot studies being conducted elsewhere in Yemen by the MOH.

Systems for basic and inservice training, supervision, information, financial management, and logistics have all been initiated and implemented to varying degrees. With a focusing of attention to smoothing of these systems, each could be functioning effectively by the end of the project.

An innovative approach to TBA training in the form of women's health meetings has been developed and is to be encouraged. However, some slight modifications to the program are suggested to expand the information derived by the project for helping to develop a national approach to TBA training in the future. The specific modifications include the involvement of Yemeni anthropologists/sociologists consultants in women's health meetings.

The project has also made some successful linkages to other projects, notably the World Bank program strengthening HMI, and the HMI strengthening of trainer/supervisor training. Maintaining and strengthening these linkages is to be further encouraged.

Community support in the form of LDA participation has been remarkable, and probably can be expanded in the future to cover greater costs of PHC in villages. LDA participation regarding drug funds is one avenue to explore.

Drug list development has proceeded satisfactorily. However, size of list needs to be monitored constantly. Confusion about the need to order more drugs has prevented drug reorders from occurring.

With regard to specific logframe matrix objectives described in terms of outputs and outcomes, substantial progress has been made as noted above on approximately 50% of the 23 logframe objectives.

Confusion about immunization policy regarding target groups has impeded progress of late. Miscommunication has slowed progress regarding promotion of oral rehydration therapy. Information to determine particularly financial sustainability and nationwide generalizability are only now beginning to be tabulated. Disagreements between the MOH and USAID regarding MOH contributions to overseas participant training have impeded progress in this area. Clarification of the appropriate kind of baseline/follow-up surveys is needed pending agreement upon the future direction of the project.

With regard to the remaining 50% of logframe outputs, little or no progress has been made. In most cases, the outputs themselves, based on project experience, are either unrealistic in that they are too ambitious given the practical realities of implementation and personnel shortages; or the outputs/outcomes are probably not able to be affected by the project inputs. Reducing infant mortality is possible in the life of the project if greater emphasis is placed on TBA training, immunizations and ORT promotion; but reductions will be much slower than originally anticipated. Reducing mortality from tuberculosis and malaria cannot be addressed by this project in the life of the project. However, treatment of malaria in infants and young children should be a part of curative services. Reducing the incidence and prevalence of malnutrition seems unrealistic given the input (weighings and

tracking of weights), but health education should be strengthened in this regard as should knowledge of PHCW's in the interpretation of weight information.

In-country seminars and workshops by short term experts have not been conducted to date. These have been de-emphasized mainly because of the belief that they are expensive, and it is difficult to maintain participation. Only experience will determine these suppositions. In-country (short-term expert) training should proceed immediately and can make a significant contribution by the project's end. Promotional documentaries for radio and TV, while needed, cannot be accomplished in the life of this project (and have not been undertaken to any significant degree), given existing staff resources, and should be deleted (funds allocated to other areas).

Observations and Recommendations

The evaluation team has, as a result of its experience, been able to make some observations which have implications for the future of the project. These observations are listed below and accompanied by specific recommendations. While important factors related to each observation are noted and discussed in the text, these are only briefly noted here in this summary.

1. Observation: Clear understanding of and agreement by all principal parties to the project regarding purpose, overall objective, and specific objectives of the project have not been accomplished.

The circumstances reflected in this observation seem to stem from an extraordinary amount of poor communication among the principal parties to the project. The major recommendation by the evaluation team is for a work session to be held at which major issues can be discussed and resolved by the principal parties to the project. Further, funding for the project would be contingent upon the holding of such a session and reaching agreement on all issues. A facilitator and a Yemeni counterpart (from among the evaluation team members) would co-organize the session. Specific issues to be resolved and outputs required are enumerated.

Recommendations for Immediate Implementation

1.1 USAID should absorb all airfare costs for overseas participant trainees (and made retroactive to all previous overseas participant trainees) until a negotiated agreement can be reached in the work session. The contractor should be reimbursed immediately as appropriate.

1.2 The MOH should enter immediately into discussions with CPO regarding a likely timetable by which the MOH could expect to obtain funds for a portion of airfare costs for overseas participant trainees. The MOH should be prepared to discuss findings during the work session.

1.3 USAID and YARG should independently and immediately explore alternatives for enabling overseas participant trainees with unusual financial needs to support themselves. Suggestions for research are provided. Both USAID and YARG should be prepared to discuss findings during the work session.

2. Observation: There has been a perception of a slowing of decision-making on urgent issues, and consequently of project outputs of the project in general; and is specifically reflected in problems related to (but not limited to) participant training, LBA/TBA training, and immunization program policy.

This situation has arisen mainly as a result of communication problems. However, disagreement between MOH and USAID regarding respective contributions to participant training has caused slowing of training outputs. Poor communication has caused the MOH to provide inconsistent guidance or to be slow to provide essential guidance on urgent issues.

With regard to this observation, the evaluation team makes six recommendations directed at both USAID and the MOH as steps they need to take immediately before the work session recommended above takes place. These recommendations deal with financial matters for the most part.

The evaluation team also enumerates eight additional recommendations for consideration by the participants of the work session.

3. Observation: Based upon project experience to date, there is a need to focus and consolidate project activities while intensifying/strengthening of selected project activities/components.

This observation stems from the evaluation team's feeling that project experience demonstrates that too many activities have been planned for the limited personnel resources available. Long-term TA staff are insufficient in numbers for the development tasks at hand, but there are an insufficient number of Yemeni counterparts available to allow an increase in TA. More long term staff at Hodeidah should not be considered. Contractor TA has been too intense and too sophisticated in its approach to specific project activities despite its overall appropriate perceptions of PHC. Project experience with staff, PHCW's, TBA's, and systems development all suggest a need to focus better the objectives of PHC and the project.

With regard to this set of circumstances, the evaluation team makes twelve recommendations to the participants of the work session. These deal with specific suggestions to focus the project, where to place increased emphasis, and how to strengthen project activities.

4. Observation: The ability of the YARG to sustain the TPHC Project, technically and financially (apart from external assistance contributions) needs to be examined. Whether existing efforts and accomplishments can be generalized (i.e. replicated) from the TPHC Project to all of Yemen cannot be determined with information available to the evaluation team.

Underlying this observation, particularly the financial issue, is the fact that the financial management system is under development and will need several more months of work to function in a useful manner. From the technical side, systems to support a PHCW program have been initiated but will require more time to function smoothly. Each of these systems has a very good potential for being institutionalized in Tinama by the end of the project. MOH ability to maintain existing services by the end of the project are now middle to high. The information to determine ability to replicate these activities is being developed but is not yet available.

In this regard, the evaluation team makes three recommendations to the work session participants. These deal with the

need for increased training at all levels in the project and an urging of continued project effort to develop and use the financial management system to obtain information for answering questions regarding sustainability and replicability.

1.0 INTRODUCTION AND BACKGROUND

The Tihama Primary Health Care Project was originally authorized as a three year OPG (Operational Program Grant) to Catholic Relief Services beginning in June 1980 through June 1983. The grant was approved primarily on the strength of CRS presence in Hodeidan and familiarity of their staff with the health problems of the Tinama. Following a project evaluation in June 1981, it was agreed that the CRS project implementation plan be revised to reflect MOH guidelines. Despite agreement to the revision, it was not effected and, moreover, many problems in communication and administration had arisen. Eventually, following an evaluation in 1982, it was found necessary to terminate CRS's OPG in September 1982. After an interim period, the new contractor Management Sciences for Health was engaged to provide technical assistance to support the development of primary health care services in the Tinama region of the YAR. The effective date was April 5, 1983 and the projected completion date June 30, 1987. The contract document outlines a seven-point general scope of work: four of these were to provide technical assistance, one to carry out surveys, one for participant training and one for developing a commodity procurement agreement. A detailed scope of work was outlined and outputs listed. Project evaluations were planned for the end of the second year of the contractor's work, and also at the fifth year.

At the time of the original design of the TPHC Project, not only was the concept of PHC relatively new to Yemen, but CRS was likewise moving into a new field of activity. At the commencement of the project there was meager information available, making it very difficult for the project designers and implementers to know what were the major health problems to be addressed, and where to put emphasis in order to arrive at attainable outcomes. Despite these circumstances, a project was needed to further PHC in Yemen. It was felt that even if accomplishments might be limited, such a project might demonstrate the country's potential for addressing PHC, and provide direction for PHC through experience accumulated. Through experience gained, the need for changing emphasis within the original project design has become evident. The project is currently at a milestone where it needs to reaffirm its objectives, focus its current activities, and to intensify/strengthen with new emphasis other project activities.

2.0 EVALUATION METHOD

2.1 General

The overall objectives of this external evaluation are three:

-- An assessment of the original project design, specifically emphasizing a review of the inputs and their logical relationship to outputs and subsequently to outcomes. This is referred to as an "input evaluation";

-- An assessment of the progress of the project to date, specifically emphasizing a review of the levels of outputs (predetermined at the outset of project and enumerated in the logframe matrix) achieved, as well as their quality as appropriate. This is referred to as an "output evaluation";

-- A presentation and analysis of the major issues facing the project, and specific recommendations to resolve these issues.

The purpose of this section of the external evaluation report is to present the details of the method used by the external evaluators to achieve these three overall objectives.

2.2 The Method

The method for conducting the input evaluation which appears in this report as a summary of findings in Chapter 1 comprises a review of the project logframe matrix and the accompanying explanatory documents. This review depends pri-

marily upon the project paper (Amendment No. 1), the contract between Management Sciences for Health (the contractor) and USAID, and the contractor's consulting report of 1983 entitled: "TPHCP Yemen Arab Republic: Project Development". The input evaluation is primarily subjective and depends in large part upon the collective experience and expertise of the external evaluation team. The input evaluation assesses, as best as possible, project design in the context of circumstances which existed when the project was initiated. However, the evaluation team also provides an indication of the changes which have occurred in circumstances since the time the project was initiated.

The method for conducting the output evaluation (inputs, outputs and outcomes are summarized in the project's Logframe Matrix reproduced in Appendix I) comprises the following steps:

- A reading of all project-related documents (a list of all documents available to the external evaluation team is provided in Appendix II);
- An orientation to Sana'a and general project-related matters provided by the contractor in Sana'a;
- Preliminary discussions with agencies which might provide information relevant to the evaluation or identify additional sources of information;
- Site visit to the project office in Hodeidan; two days of project-prepared presentations;

-- Approximately two weeks of evaluation team site visits to randomly selected project areas. These included 18 PHCU's, training center and other selected facilities (see list of all sites in Appendix III). Site visits included a tour of the facility, an interview with staff, and discussions with village persons who happened to present themselves. Interviews with LBA's and PHCW's included general discussion, a review of facility log books, an informally administered (but structured and predetermined) test of knowledge, and as possible a test of selected skills;

-- Approximately three days of visits to Primary Health Care sites in Taiz governorate for general informational purposes;

-- Discussion periods with all project staff in Hodeidan interspersed among site visits;

-- Intensive discussion periods of a fact-finding nature with a wide variety of agencies in Sana'a (see Appendix IV for complete list of organizations and persons);

-- Review of outputs (in project logframe which as noted earlier appears in Appendix I) on a one-by-one basis. Expected output levels are matched to actual levels (objective assessment); and the quality of the outputs are commented upon (subjective, but based as far as possible upon generally accepted international standards).

During and following the above steps, the evaluation team held several private meetings to identify project strengths and accomplishments as well as key issues important to the project's future. An attempt is made to identify the underlying factors which have contributed to the formation of these issues. It has been through this approach that specific recommendations have been formulated to resolve issues and provide guidance for future direction to the project.

3.0 OUTPUT OR PROCESS EVALUATION

3.1 Introduction

In this chapter, we describe the outputs of the TPHCP in terms of the Logical Framework Summary found in Tihama Primary Health Care Project Development - YAR Consultancy Report, April-May, 1983 (pp A1-A7). This Logical Framework (attached as Appendix I) is being used in the absence of a comprehensive Logical Framework in the MSH Contract of October, 1982 and because it supersedes, we believe, the Logical Framework of the Project Paper Amendment of August, 1982.

We present our field observations on the quantity and quality of outputs and, based on progress to date, analyze them in terms of the likelihood that the TPHC Project will fulfill its end-of-project objectives by July, 1987.

3.2 Output Evaluation by Logframe Objective

3.2.1 Logframe Objective: reduce infant mortality. 50% of mothers had three prenatal visits and 50% of children delivered by LBA.

Observations

Ten of a projected 35 LBA's have been trained to date, and eight are functioning in villages. The government has tempor-

arily suspended LBA training as they reassess the appropriate role for LBA's. The MOH and the TPHC project are examining several possible approaches to TBA training in small pilot studies.

In the three villages with LBA's that we visited, one was functioning successfully alongside TBA's, one was unable to practice in her own village because of hostility from TBA's there but had done a large number of deliveries in surrounding villages, and one was functioning very well in a village with no competing TBA's.

In the villages with LBA's, we do not know the proportion of mothers with three prenatal visits, nor the proportion of children delivered by LBA's. Systematic data collection is just being developed.

Analysis

Because of difficulty in LBA recruitment and potential conflict of LBA's with TBA's, the future function of LBA's is uncertain. TBA's trained in hygienic practices are likely to be the basis of improved maternal care in the YAR in the future. When the functions of birth attendants are defined by MOH, the Logical Framework should be adjusted.

3.2.2 Logframe Objective: reduce morbidity due to immunizable disease. 80% of children under 3 years have received all EPI vaccines.

Observations

In the initial stages of the TPHC project, immunizations were delivered by outreach teams and the emphasis was on infants. Battersby (1985) found that 21% of children 12-23 months in the project area were fully immunized (except polio, which was not available for a long period in 1984), in contrast with 2% in areas not served by the TPHC project.

In early 1985, as the TPHC project was introducing a package of immunization, growth monitoring, and nutrition education focused on infants, the EPI program of the MOH initiated a new approach. In each village, the PHC worker was instructed to register at least 500 children 0-4 years of age. (This number should represent virtually all of the children in the 0-4 year age group in a population of 2,500-3,000, the average population served by a PHCU.) Following three monthly vaccination sessions, conducted by the PHCW working with the trainer/supervisor, close to the entire 0-4 year age group would be fully immunized. The PHCW would, during and after the initial phase, register and immunize newborns on an ongoing basis as part of integrated PHC.

We observed an immunization session in progress. The PHCW was following proper cold chain procedure and vaccination technique. Children were being weighed and weights were being written in a column on the Road-to-Health charts, but weights were not being plotted on the graph. In addition, there was no nutrition education during the session.

Many villages that we visited reported that they had no immunization since last fall. A great deal of trainer/supervisor time was being applied to immunization, rather than other PHC activities, according to the assignment schedules.

At the TPHC Project vaccine cold storage facility in Tanreer Health Center, there was no thermometer in the refrigerator or freezer.

Analysis

The new EPI approach has the disadvantage that it temporarily disrupts the studied and planned delivery of a PHC package worked out by TPHC Project. However, the low immunization coverage of children, as well as infants, is perceived by MOH as requiring urgent and concerted effort. If registration and immunization of newborns is diligently carried out on an ongoing basis, the EOP objective is likely to be reached. Moreover, we concur with the MOH that this intensive initial approach will be a popular and high-profile opening wedge for PHC. However, if resource constraints such as shortages of

vaccine, equipment or personnel develop in the course of carrying out this initiative, the target group should be constricted to the 0-3 year or 0-1 year age group.

Immunization of child-bearing-age women against tetanus is due to begin soon. Addition of an EOP output objective for this important activity should be considered.

3.2.3 Logframe Objective: reduce mortality due to tuberculosis. All villages surveyed, sputum exams for 90% of TB suspects, 100% of TB patients have case-finding record, 65% of contacts had sputum exam and 100% of contacts with TB are under treatment.

Observations

No case-finding activities have been undertaken.

Analysis

This objective should be deleted.

3.2.4 Logframe Objective: reduce morbidity due to malaria. 75% of villages have larvae prevention programs.

Observations

All PHC units were supplied with chloroquine and all PHCW's properly described clinical diagnosis of malaria and its treat-

ment. At one PHCU blood smears were being obtained from febrile patients and saved for later microscopic examination. However, to our knowledge, no larvae prevention activities were being undertaken.

Analysis

This should be deleted. An objective relating to treatment of all patients but with emphasis upon infants and young children with malaria could be considered.

3.2.5 Logframe Objectives: reduce morbidity and mortality due to diarrhea. 50% of households with children 0-4 years with diarrhea in last 3 months have used ORT.

Observations

As described in Appendix V on the MSH ORT proposal, we found the following in our visits to PHC units:

1) Diarrhea was not perceived as a high-priority problem (N.B. this is not the diarrhea season, however) by most PHC workers, probably because many have not yet been in service during the diarrhea season. Nonetheless, their awareness about dehydration, its relation to diarrhea, treatment methods, and presentation appear high;

2) ORS packets were found available in all health units and were passively distributed;

3) PHCW's used 1.75 L. bottles marked with a pen at 1 L. to help mothers identify how much water is needed to dilute ORS pickets;

4) PHC workers use variable amounts of salt and sugar when asked to describe/prepare the homemade salt and sugar solution. Confusion seems to stem from previous campaigns which stressed mixing different volumes than are currently stressed;

5) Use of homemade salt and sugar solution is not aggressively promoted by PHC workers.

To our knowledge, no systematic figures on ORT use-rates have been collected. However, it is our impression that use of ORT is very low.

Analysis

Far more intensive promotion of ORT will be necessary to reach the EOP objective. Studies on alternative personnel and settings for ORT distribution and alternative types of ORT (e.g. packets, homemade, bottled) are needed.

3.2.6 Logframe Objective: reduce malnutrition as a contributing cause of child mortality. 50% fewer malnourished children and 50% of 0-4-year children have growth charts.

Observation

There were no scales at many PHC units because they were not received from UNICEF. Some PHC workers did not balance the scale and some could not read the proper weight. Road-to-Health charts were found in some PHC units and, in some of these areas, parents had charts for their children. Although weights were written in a column on the chart, they were never plotted on the graph.

Nutrition education was not in evidence.

Analysis

PHC workers need further training on use of scales and plotting weights on graphs. Road-to-Health graphs are particularly important as a basis for education and diagnosis in a population that does not understand nutrition.

The objective related to growth charts may be achievable by EOP with enhanced training effort, but the magnitude of the objective related to reduction of malnutrition seems unrealistic in the allotted time frame.

3.2.7 Logframe Objective: financial sustainability. 75% of recurrent program costs absorbed by MOH; LDA's and 50% of villagers have purchased drugs through trial drug replacement program.

Observations

The MOH has put all but one of the PHCW's on payroll and has agreed to assume, each year, 25% of salary supplements paid by TPHC Project. A system of cost accounting, as recommended by MSH consultants Peter N. Cross (1984) and detailed by Maggie A. Huff (1985), is being developed by TPHC Project. In this sense, the project is making progress in identifying the information which will be necessary to document and assess the essential financial sustainability of existing Primary Health Care Services delivered by the project.

No progress has been made on issues involving reimbursement of program costs through LDA's.

Analysis

When a cost accounting system is operational, it will be possible to analyze expenses by cost categories such as training, PHCU service delivery and health center service delivery, and to calculate the proportion of costs paid by MOH.

There is need for a revolving drug fund. Perhaps LDA's might be involved in this and other program costs. When costing information becomes available, the project needs to assess these data and their implications for maintaining existing project developed Primary Health Care Services in project areas.

3.2.8 Logframe Objective: sustained community support.

100% of target villages have a PHCW and 50% have an LBA; 80% of households in target villages aware of PHC goals; 60% of households in target villages have had contact with PHCW in last six months.

Observations

As noted elsewhere, 33 of a projected 70 PHCW's and eight of a projected 35 LBA's have been placed in villages. LBA training has been suspended and the future role of LBA's is unclear. Some problems have arisen with PHCW's in respect to selection and placement.

In most villages, the LDA selected a 17- to 19-year-old male to be PHCW. Some of these individuals want to get further education and advance to positions such as medical assistant or doctor. The few older (mid-20's to -30's) PHCW's seemed content with their place in the village.

The curative skills of some PHCW's were underutilized because they were placed in villages with an established nurse, injectionist, or traditional healer. In addition, some PHCW's lacked credibility in their preventive work because of youth and inexperience.

The average PHCW saw only three to seven patients per day, with malaria and trauma first aid being most common. The quantity of contact through preventive services is difficult to

gauge. Plans are underway to collect systematic data on utilization of PHCW's and the awareness of the community about PHC.

LDA's are playing a significant role in the project both financially and through direct participation in the selection of PHCW's and LBA's. As such this represents tangible community support.

Analysis

The EOP goal of 70 PHCW's will probably be reached.

In view of the problems encountered with young PHCW's, consideration should be given to selecting somewhat older, more established individuals as PHCW's. In the future, placement should be more carefully considered to avoid competition with other health providers that results in underutilization of the PHCW's skills and time. The precise degree of utilization and awareness levels will have to await the results of systematic data collection.

As noted elsewhere, when the functions of birth attendants are defined by MOH, the Logical Framework should be adjusted.

3.2.9 Logframe Objective: systems management. 100% of facilities have monitoring system displayed; 80% of facilities have monitoring score greater than 75%; 100% of facilities using unit dose packing.

Observations

PHCW's keep a register of patient visits. They also have a register of infants and children, thought to be relatively complete, listing immunizations given. To date, neither of these data sources have been used for any sort of performance evaluation system, monitoring of program, progress or disease surveillance.

Although unit dose packing has been strongly advocated by consultants Bates and Sacca, no progress seems to have been made in this area.

Analysis

The TPHC Project does not yet have in place a simple, appropriate management information system that makes use of information about diseases, drugs, and immunization routinely collected by the PHCW. Without it, the project's ability to evaluate performance, monitor program progress, provide disease surveillance data, and make informed management decisions is handicapped. The TPHC Project recognizes this need and will probably be able to develop an appropriate information system by EOP.

3.2.10 Logframe Objective: cost-effective PHC. Government-approved standard package of priority preventive and curative

services being delivered by 100% of facility staff PHCW's and LBA's according to prescribed guidelines.

Observations

We found that PHCW's were engaged in a very wide range of curative and preventive services. They were being asked to treat a host of different diseases and to engage in many types of preventive initiatives. An example of the latter would be oft-stated efforts to improve solid waste disposal.

In the absence of prescribed guidelines or standing orders, PHCW's have only the notes taken during training to refer to for guidance.

Analysis

We feel that the package of curative and preventive services should be more narrowly focused in order to be functioning smoothly by the end of the project. The TPHC Project and MOH need to reach consensus on health priorities and effective interventions.

A manual of standing orders (prescribed guidelines) relating to the health problems and interventions selected would be a useful work product by EOP.

3.2.11 Logframe Objective: standardized and certified in-country training. 70% PHCW's, 35 LBA's 6 midwives;

continuing education/supervisory system designed and implemented for PHCW's and LBA's.

Observations

1) PHCW's: So far 33 PHCW's have been trained, have passed the HMI certification examination, and are functioning in their assigned villages. Of these, only one is not yet on MOH payroll. Eight PHCW's now in training will complete the course in November. Future plans call for cycling eight trainees at three-month intervals. LDA's supported the PHCW's by initially selecting them and by contributing to their financial support during training.

A manual (1985) to be used by trainer/supervisors in training PHCW's has been prepared for the TPHCP by Dr. Arsalan Anmed with assistance from MSH consultant Evelyn F. Thomas. It was based on the HMI training manual. This comprehensive manual includes coverage of subject matter, teaching notes, and evaluation methods. It has been approved by HMI.

We gained a favorable impression of PHCW confidence in their knowledge, skills, and role. We observed limited preventive activities such as an immunization session and written speeches prepared by several PHCW's for presentation in the mosque. However, we have the impression that health education, directly related to patient illness, was lacking.

We questioned PHCW's about diagnosis, treatment and prevention of common diseases. Their answers indicated a generally good level of success in their basic training. In some instances, they were observed in their work. With some few exceptions, they handled procedures and equipment well.

2) LBA's: See 3.2.1 foregoing.

3) Midwives: The TPHC Project has upgraded the skills of six midwives who were already in practice in the area and are on MOH payroll.

Analysis

1) PHCW's: Considering all the constraints, the PHCW's are, in general, providing remarkably good service. If projected training continues, EOP objectives on the number of PHCW's ought to be achieved.

We concur with Evelyn F. Thomas's consultant report (1985) that training skills of trainer/supervisors could be improved, that the curriculum be modified, and that more effective training techniques be introduced. She recommended that trainer/supervisors would benefit by taking the PHCW training course that they would be teaching. We would add that they would also benefit by having a specific course on training methods, as recommended elsewhere in this document.

The relative balance of preventive and curative practice continues to favor the curative. PHCW's need to seize upon

every occasion of contact with clients to strengthen and propagate prevention. Getting the public to understand the benefits of prevention will be a gradual process.

2) LBA's: See 3.2.1 foregoing.

3) Midwives: Although training of six midwives is called for in the Logical Framework, this objective was unnecessary because they were already in practice in the area; TPHCP only needed to upgrade their skills. This training objective could be dropped from the Logical Framework.

3.2.12 Logframe Objective: participant training. Eight master's degrees, 16 U.S. short-term and 20 third country snort-term.

The planned number of U.S. Master's Degrees has been reduced to four for budgetary reasons. No participants have gone to the U.S. for Master's Degree level training because of disagreements between MOH and USAID about airfares and stipends. Two people have gone to the U.S. for short-term training. Two training/supervisors have gone to third countries for snort-term training. In addition to these persons training for two long term participant trainees in the U.S. was initiated under the CRS Contract.

Analysis

The disagreement about airfares and stipends needs to be

resolved immediately so that vital training of project leaders can move forward as expected.

Greater emphasis needs to be placed on training of mid-level managers, either in the U.S. or a third country, as appropriate. Trained mid-level managers will be the foundation for a well-functioning PHC system for Yemen in the future. The logical framework should be adjusted to reflect the change from eight to four U.S. Master's Degrees.

3.2.13 Logframe Objective: baseline and follow-up data during first, second and fourth year. Facilities survey and community survey.

Observation

A baseline facilities survey was completed as part of the Project Development Consultancy (1983) and a community KAP survey was carried out in 1981. TPHCP is just now beginning to gather baseline data on morbidity and mortality of the high-priority target diseases in Tinama; the timing is based on the assumption that project interventions have not yet impacted on the incidence and outcome of disease.

Analysis

If TPHCP interventions have already begun to impact on morbidity and mortality, comparison of 1985 with EOP statistics

will result in an underestimation of project impact. However, as previously noted, we believe that it is more relevant to evaluate improvements in numbers of trained personnel, functioning of support systems and facilities, and community KAP, given the short time frame of this project.

Repeat facilities and community KAP surveys are outputs called for this year in the Logical Framework, but are not in the workplan that has been projected to July, 1985.

3.2.14 Logframe Objective: in-country seminars. Two seminars for project staff, two seminars for government officials, donors, and community leaders, and four refresher training workshops for PHCW's and LBA's.

Observation

No in-country seminars for officials, donors, and community leaders have been conducted to date. Two major workplan workshops, two refresher training workshops, and five other small workshops for project staff have taken place.

Analysis

This category of activities is on schedule.

3.2.15 Logframe Objective: cost-accounting system. Health facility unit cost, training unit cost, and community outreach.

Observation and Analysis

See 3.2.7 foregoing.

3.2.16 Logframe Objective: facility monitoring system -
designed and implemented.

Observation and Analysis

See 3.2.9 foregoing.

3.2.17 Logframe Objective: standardized operations manual
for 1) Facilities and 2) Community Outreach Activities.

Observations

- 1) Facilities Operations Manual: This is under development by the TPHC Project.
- 2) Community Outreach Activities: See 3.2.10 foregoing.

Analysis

- 1) Facilities Operations Manual: Will be a useful contribution to the technical sustainability of the TPHCP.
- 2) Community Outreach Activities: See 3.2.10 foregoing

3.2.18 Logframe Objective: policy statement developed by
YARG.

Observation

A number of issues were not addressed in the BHS/PHC Plan 1983-87, or have become even more important with time. They have become apparent as PHC grew in Tinama. Examples of these issues include the target age group for immunization, use of LDA's for recovering program costs and the role of LBA's.

Analysis

The TPHC Project should continue to assist the government in refining detailed, comprehensive PHC policy.

3.2.19 Logframe Objective: standardized format for LDA/government contract for PHCW/LBA support.

Observation

This has been accomplished for PHCW's but not for LBA's since their job is still to be defined.

Analysis

This objective may have to be altered for LBA's.

3.2.20 Logframe Objective: standardized drug list for PHC designed and implemented.

Observation

The PHCU's were stocked with a limited number of simple and effective drugs. However, we also observed parenteral atropine and aminophylline in many PHCU's and the universal use of gentian violet as a skin disinfectant.

The warehouse was secure and well-organized. A recently-developed inventory system was not functioning well, because it required the participation of the auditor every three months. No drugs have been ordered for three years. Some drugs are low or out of stock.

Analysis

The TPHC Project has done an excellent job of drug selection and distribution. We feel, however, that parenteral atropine and aminophylline are not appropriate to the training and role of the PHCW and that gentian violet is an ineffective skin disinfectant; an iodopnol or chlorhexidene would be a better choice.

New drugs need to be ordered to replace those that are out of stock. The inventory system would be less cumbersome if the pharmacist did the inventory every three months and the auditor checked it yearly.

3.2.21 Logframe Objective: manual or unit dose packaging procedures designed and implemented.

Observation and Analysis: See 3.2.9 foregoing.

3.2.22 Logframe Objective: manual for development and administration of drug replacement trial program designed and implemented.

Observation and Analysis

See 3.2.7 foregoing.

3.2.23 Logframe Objective: promotional documentaries on PHC produced and provided on regularly scheduled basis through television.

Observation

This activity has not been pursued, except for the consultant's report of Tisa (1984).

Analysis

We feel that this activity should not be undertaken by TPHC Project and that this output objective should be deleted.

3.3. Summary

The TPHC Project has been particularly successful in training of PHCW's. LBA training is in abeyance and the output objective for birth attendants may need to be changed. Some

management systems, such as drug logistics and supervision are in a more developed state than others, such as information and cost accounting. In order to achieve technical sustainability, major reemphasis needs to be placed on achieving training goals involving physician managers and midlevel managers.

In some instances, such as national media efforts and major impacts on malaria, tuberculosis, malnutrition, and infant mortality, objectives are overly ambitious or inappropriate. They should be altered or deleted.

4.0. EXTERNAL EVALUATION TEAM OBSERVATIONS AND RECOMMENDATIONS

4.1 General

In previous sections of this report the overall design of the TPHC Project has been evaluated, and the progress to date in accomplishing relevant outputs has been assessed. These activities have led the external evaluation team to observations which have implications for the future of the TPHC Project. It is the purpose in this section of the external evaluation report to:

- List the team's major observations which have implications for the future of the TPHC Project;

- Describe important conditions, factors and circumstances related to these observations;

- Enumerate specific recommendations as might be appropriate to facilitate project progress.

4.2 Observations, Related Facts and Recommendations

4.2.1 Observation.

Clear understanding of and agreement by all of the principal parties to the project regarding purpose, overall objective, and specific objectives of the project has not been accomplished.

Central Factors Related to this Observation

A. Certain factors have undermined the consensus building process:

-- The planners and implementors are different sets of people;

-- The project paper is a legal document of USAID, and therefore necessarily can officially only present USAID views. The process for creating a project paper, however, attempts to reflect as much as possible the view of the government;

-- The implementor's role is, at the outset, to develop a workplan. A workplan is in reality a timetable to accomplish activities predetermined in the project paper. Even where the MOH and USAID agree upon a project paper, the logframe of the project paper provides the basis for workplan development. Even where a project paper is relatively flexible, specific outputs are enumerated in the logframe and are the principal pre-determined activities which guide workplan development. Hence, implementors have little opportunity to determine through their own "problem diagnosis phase" if the outputs are feasible, given the cultural and practical working environments. (Implementors here refer specifically to the project staff assisted by the contractor.)

B. The nature of the funding mechanism. Technical assistance provided to the MOH is made available by way of a contract

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between USAID and a private contractor. The YARG accepts this technical assistance by way of a bilateral agreement with the United States Government. The nature of these agreements does not foster MOH participation. CPO speaks for the YARG and is the official signatory to their bilateral agreement, not the MOH. Nonetheless, there was indirect MOH participation in framing of the project. Despite goodwill of all parties, under these circumstances miscommunication and misunderstandings can, and have, occurred.

C. Unfamiliarity with USAID rules and regulations on the Yemeni side. The MOH has had to develop knowledge and understanding of complicated USAID rules and regulations through practical experience without the advantage of prior understanding of these rules and regulations. Time constraints contributed in part to this circumstance, and have been further complicated by the changing nature of USAID rules and regulations.

D. Lack of communication and misinterpreted communication within and between especially the MOH and USAID. Infrequent, misunderstood and/or imprecise communication has resulted in misunderstandings which have gone uncorrected for months. This circumstance has led to a deterioration in morale and enthusiasm for the TPHC Project at all levels among all parties to the project. Consequent irritation among all parties has grown in working relationships. Deteriorating working relationships

nave only served to further obscure the purpose and objectives of the project, and the role of old and new initiatives in fulfilling the project purpose.

Recommendations For Immediate Implementation

-- Further project funding should be contingent upon all principal parties to the project (MOH, USAID, MSH, and UNICEF) participating in a work session to clarify the purpose and general objectives of the project. The work session would be approximately one week in length, and be guided by an independent facilitator. A Yemeni counterpart, designated by the external evaluation team, will work with the facilitator to provide "institutional memory" from the external evaluation team to the work session. The Yemeni counterpart would also orient the facilitator and co-organize the work session. Job descriptions for the facilitator and counterpart appear in Appendix VI. Activities in preparation for and organization of the work session would require four to five weeks of full-time work by facilitator and the Yemeni counterpart immediately prior to the work session.

The products of the work session would include:

-- A letter of understanding between the MOH and USAID (possibly requiring the countersignature of CPO) which spells out agreement on all of the issues identified in Appendix VII;

-- A letter of understanding between the MOH and USAID which identifies the project-related documents which require modification to reflect the agreements achieved in the work session (and who will modify these documents);

-- A letter of understanding between the MOH and USAID which identifies a mechanism or ad hoc committee/group of persons to whom any of the principal parties to the project may bring significant issues for problem-solving and follow-up.

During the work session, participants would be required to consider the vision of the strengthened project as provided by this external evaluation team in Appendix VIII as a point of departure for discussion. However, Appendix VIII is to be viewed only as a recommendation and is not binding on any party.

4.2.2 Observation.

There has been a general slowing in the outputs of the project in general and is specifically reflected in problems related to (but not limited to) participant training, LBA/TBA training, and immunization program policy.

Central Factors Related to this Observation

A. All factors cited with regard to section 4.2.1.

B. USAID-MOH disagreement regarding respective contributions to participant training. Several pieces of information are relevant:

-- The MOH believes, apparently correctly, that the bilateral agreement does not require YARG to pay any portion of airfares for overseas participant trainees;

-- The contractor's agreement with USAID is accompanied by a budget approved by USAID which calculates the cost of airfare for U.S.-based training using Sana'a as the point of departure and return -- not some point outside of Yemen to which the national carrier flies and which connects with U.S.-bound flights;

-- Waivers for individuals have been granted by USAID to relieve YARG of responsibility of airfare costs in selected cases in the past;

-- The MOH, relative to ministries of health in other countries, is a disadvantaged ministry and could be viewed as needing special temporary relief from shared airfare costs. YARG's MOH is budgeted about 3-5% of the national budget, while other third country MOH's on average receive 5-8% of national budgets;

-- USAID believes, apparently correctly, that its bilateral agreements with all other YARG ministries contain clauses which require these ministries to participate in airfare costs for U.S.-based training for Yemeni participants. The failure to include this clause in the bilateral agreement with the MOH is viewed by USAID as an oversight;

-- CPO is the organization which has approved budgeting of other ministries' share of participant training airfare costs related to USAID bilateral agreements. To achieve essential approval for disbursement of funds by the MOF, the MOH needs first to request the approval of required budgeting from CPO. It is uncertain to the evaluation team whether the MOH has made such a request to CPO;

-- USAID believes that it cannot grant an indefinite waiver of shared airfare costs because of the precedent it would set for its world-wide operations (and which it is not prepared to back financially world-wide), as well as for the implications for other YARG ministries and their existing bilateral agreements with USAID.

C. The MOH has been slow to provide guidance to the project on urgent issues. Miscommunication, misinterpreted communication and lack of communication have been key factors in slow MOH decision-making. In this regard, clear procedures and channels for communication and decision-making are not known to all parties of the project. Incorrect procedures/improper channels for communication and decision-making have been used.

D. The project staff perceives that there has been inconsistent explanation and application of MOH policy by the central MOH on key issues requiring decisive action and/or guidance by the central MOH. This perception is noted in

reference specifically to LBA training and the operational policy of the MOH regarding target groups of EPI. While there is some merit to the perception, more frequently poor or misinterpreted communication has fueled the perception of MOH inconsistency.

E. There is a perception by the central MOH that the project has been, at times, resistant in its attitude in following MOH policy. This perception appears to be without merit, and due entirely to poor communication.

Recommendations for Immediate Implementation

-- Pending negotiated agreement to YARG contribution to participant training, USAID should immediately issue waivers (for all overseas participant trainee applications currently under review by the Project) releasing the Yemen Government from paying that portion of airfare which ordinarily under USAID regulations, would be borne by YARG.

-- The MOH should immediately enter into discussions with CPO regarding a likely timetable by which the MOH could expect to obtain budgeting for a portion of airfare costs for overseas participant trainees in order to bring it into conformity with established practice of all other YARG ministries who take advantage of USAID participant training programs. The MOH should be prepared to discuss their findings during the work session.

-- USAID and YARG should independently and immediately explore alternatives for enabling overseas participant trainees with unusual financial needs to support themselves adequately. These might include sponsorship of a special program through a private foundation which independently determines need; or a special work-study program administered through universities for participant trainees tailored to include work related to their area of study; or, special salary supplementation of participant trainees while study is ongoing. USAID and YARG should be prepared to present their findings during the work session. USAID should focus on short-term solutions and flexible plans for exceptional cases; while the MOH should focus upon routine supplements for living expenses for all of its overseas participants. The MOH should examine how other ministries handle supplements to overseas participants.

-- Pending presentation of findings by both YARG and USAID, and identifying a solution to the problem of unusual financial needs of some overseas participant trainees, USAID should give one-time approval to the contractor's plan for determining and allocating supplemental financial support for overseas participant trainees. This support should be applicable only for overseas trainee applications currently under review by the project on a case-by-case basis. This temporary measure should not be viewed by YARG or USAID as a

precedent, and need not be offered by USAID for future overseas participant trainees without some jointly agreed-upon solution obtained during the work session.

-- Technical assistance for support of LBA training should be suspended until after the work session decides the future of LBA training in the project.

-- The contractor should be directed to supply, all quarterly reports and executive summaries of all consultant reports to the Hodeidah Governorate and the Central MOH in Arabic.

Recommendations to the Work Session Participants

-- Continued funding of the project should be contingent upon both the MOH and USAID identifying proper procedures and channel for obtaining decisions and/or guidance from the central MOH or USAID. These procedures and channels should be made known to all parties of the project.

-- The project should obtain the services of a liaison officer through the contractor. Qualifications and job description appear in Appendix IX.

-- USAID should assume the full cost of airfares for overseas participant trainees until some mutually agreed point of time in the future. This point in time should be determined by the time required by CPO to approve and assure funding for airfares similar to that paid by other YARG ministries involved in USAID-funded overseas participant training programs.

-- LBA training in the TPHCP should be discontinued until pilot testing of LBA/female PHCW's being conducted by the MOH is completed, and the long-term financial viability of LBA's/female PHCW's is assessed.

-- MOH policy regarding target population for EPI needs to be further clarified for all principal parties to the project. Current MOH policy is one which targets children 0-5 years of age, but which pays careful attention during the community preparation phase to ensure attendance by all children 0-5 years of age, by especially by all children 0-1 year of age. It may be well however to bear in mind lessons learned from some similar vaccination campaigns in other countries, which experienced practical logistical operational problems associated with the extra load required to cover children older than 1 year, for example:

- variable/insufficient vaccine supplies
- a tendency to miss a larger proportion of children in the 0-1 age group, than in other age groups.

EPI has informed us that provisions have been made for follow up on progress (e.g. by coverage surveys), in order to reflect and deal with changing and varying problems as they arise, the need to constantly review both the initial campaign progress, as well as follow-up progress, should be borne in mind.

-- USAID and YARG should identify and activate the series of steps needed to initiate appropriate stepped-up promotion and use of oral rehydration therapy in the forms of a balanced electrolyte and a "home-prepared" solution in project areas.

-- All parties to the project need to acknowledge the "pilot" nature of the project and apply MOH policy in a flexible manner to project activities.

-- Participants should agree upon a method to provide the PHCU's without equipment sets with these sets, and should initiate action upon drug re-ordering.

4.2.3 Observation:

Based upon project experience to date, there is a need to focus and consolidate project activities, while intensifying/strengthening of selected project activities/components.

Central Factors Related to this Observation

-- Long-term TA team is too small to address effectively all activities outlined in the Life-of-Project Workplan; at the

same time there are not enough appropriately trained Yemeni counterparts available to the project. Hence, an increase in the TA team at the Hodeidan level is not feasible.

-- Because the range of project outputs and outcomes is too ambitious for the small project staff, the TA team have found themselves forced into assuming roles and taking actions which are inconsistent with their primary function as trainers and co-operators with their Yemeni counterparts.

-- While the contractors perception of Primary Health Care is appropriate, their approach to specific activities is too intense and sophisticated.

-- Some Yemeni project staff in Hodeidan have been unavailable to the project on a full-time basis because of other official obligations.

-- Based upon project experience, the lack of clear linkages between long-term expatriate staff and Yemeni project staff (i.e. as counterparts) undermines the effectiveness of the project.

-- Project experience suggests that performance among PHCW's is generally of a high level. However, technical skills and activities are uneven across PHCW's, suggesting that the functioning of the supervisory system is not yet optimal.

-- Project experience with regard to TBA training suggests that the project approach to training requires adjustment and

consolidation. The external evaluation process identified several factors leading to this conclusion:

- Village reaction to project-trained TBA's is one of mixed acceptance;
- Not much is known about TBA practices or the cultural environment in which they work. Training is still at a stage where it needs to be undertaken/developed on an individual or community-by-community basis;
- TBA relationships to other MOH/non-MOH health care providers need to be researched and considered in both training and placement of TBA's and placement of MOH/Project-trained health care providers.
- Project experience suggests that priority health problems are in excess of the project's capability to develop and implement interventions.
- The project office cannot continue to supervise, directly, the service delivery staff it trains (as a generalizable model) without appropriate linkages to the health centers and subcenters.
- Expansion of service delivery by the project is encountering limits imposed by the lack of a sufficiently large pool of trained midlevel management personnel at the governorate and central levels.

Recommendations to the Work Session Participants

A. Regarding Focusing and Consolidation

-- Project should seek to reiterate a list of priority health problems. From these priority problems a core package of interventions for an initial list needs to be developed. A second list of interventions should be assembled which relates to the remaining priority health problems and acted upon as human resources permit. This secondary list would be phased in only after all systems required to support the primary list of interventions are working effectively. The primary list of interventions should probably be related to immunizable diseases (including against tetanus), diarrheal disease, lower respiratory tract infections, malaria and possibly eye and skin infections. Each intervention should emphasize causes, treatment and prevention.

-- The project should undertake to train the remaining numbers of PHCW's originally established in the output statement of the contractor's 1983 consultancy report.

-- Project should seek to consolidate simple systems for supervision, in-service training, information, financial management and logistical support based on project experience related to the core package of services.

-- Project should immediately undertake planning, development, and implementation of the two separate training programs for trainer/supervisors: one to train them as trainers, and

one to train them as supervisors. These programs should be implemented within the next 12 months, and should be in addition to routine, existing in-service training of trainer/supervisors in these areas. Each program would be of at least one week duration.

-- Project should undertake planning, development, and implementation of similar training for all Yemeni project staff in Hodeidan.

- Project should seek to nurture its "women's health" meetings as its central approach to TBA training. Women's health meetings should be used to:

- impart to TBA's who elect to come to meetings information consistent with accepted practices of antenatal, natal, and postnatal care;
- impart to mothers who elect to attend meetings information about causes, treatment and prevention of specific health problems as these topics arise in casual conversation;
- ascertain information about existing TBA practices by Yemeni social scientists/anthropologists who might discreetly take part in these meetings. This information would be used as one way to help revise the formal TBA training program as previously suggested.

-- The Project should encourage its PHCW's to initiate outreach activities. Strong and continued emphasis needs to be placed upon the need to utilize PHCW's simple curative responsibilities as a way to gain access to individual households, and thus as a vehicle to explain causes and prevention of specific health problems. Every visit to a household for administering curative care must be taken advantage of by the PHCW to provide related health education and direct intervention regarding causes, simple treatment and prevention of that specific health problem. The underlying importance of the home-visit initiated by the family for curative treatment is the potential for contact by the PHCW with the population groups at greatest risk (mothers and children under 5) to impart preventive information at a moment of greatest attention by the family.

-- The Project should seek to reassess its placement of PHCW in light of problems experienced in past; and to determine if nurses placed by government into some project areas might be trained as PHCW's.

-- Work session participants should be encouraged to agree upon:

- composition and skills required of four long-term TA positions;
- job descriptions for long-term TA;

- linkages between long-term TA and project counterparts;
- methods for assuring that Yemeni counterparts will be available full time;
- MOH objectives regarding short-term consultants and how to achieve these.

The evaluation team suggests that:

- each long-term TA position have a counterpart;
 - long-term TA positions in Hodeidan be supervised with a deputy chief of party who would act as a counterpart to the project director (currently Dr. Halim);
 - at least one of the Hodeidan TA staff be a master trainer;
 - the deputy chief of party be a physician or qualified nonphysician with extensive experience in all aspects of rural health systems development.
- It is recommended that the project delete the media development component of the project involving TV and radio. Rather, emphasis should be placed upon more appropriate local effort of informational campaigns related to specific health problems and able to fit into routine or ad hoc home-visits of PHCW's.
- Contractor should revise downward its use of short-term consultants. They should concentrate on service delivery systems development at the operational level.

-- Contractor should review it's use of consultants so as to assure:

1. The MOH participates in the development of consultant needs and scopes of work.

2. MOH participation in selection of consultants.

3. That where possible, consultants have full time counterparts.

4. That consultants act as trainers as appropriate in all stages of consultations, namely: problem diagnosis, problem resolution, assisting MOH digest all reports, and initial implementation. Hence, most consultations need to be increased in length while maintaining the contractor's policy of repeat visits of the same consultants.

B. Regarding Intensifying/Strengthening of Project

-- Contractor should be directed as appropriate after work session for developing consensus, to redirect some short-term TA to problems only now evident at central MOH as a result of project experience. Specifically, strong consideration should be given to sponsoring:

-- intra- and interministry in-country workshops/training in management and planning;

-- additional and/or shifting of existing funding for TA to Central Ministry to advise departments deemed appropriate by the participant of the work session;

- establish Tihama as a demonstration/field practice area
- identification and training of midlevel supervisor/trainers in Tihama and other governorates (i.e. equivalent to Yemeni counterpart staff and trainer/supervisors in Hodeidan; and travel by these identified to Hodeidah demonstration area for training and field practice; and expand participant training to other governorates to selected, promising individuals so identified to develop a core of talent at the governorate level. Similar efforts should be developed with additional funding as needed to develop pool of central MOH talent and expertise to make the MOH environment more conducive for future project expansion.
- Contractor with agreement of MOH should be directed to explore the following issues:
 - career advancement;
 - alternative financing of PHC; however, we do not recommend that third party insurance schemes and HMO (health maintenance organizations) schemes be investigated at this time, in this project;
 - Alternative financing of drugs;
 - Increased contribution by LDA's for support of PHC;
 - Financial sustainability generalizability by the MOH of midlevel management training programs.

4.2.4 Observations.

The ability of the YARG to sustain the TPHC Project, technically and financially (apart from external assistance contributions) needs to be examined. Whether existing efforts and accomplishments can be generalized (i.e. replicated) from the TPHC Project to all of Yemen cannot be determined with information available to the evaluation team.

Central Factors Related to this Observation

-- On the basis of the accomplishments of the project to date, it would appear that the existing national staff can sustain the current level of technical activity. Problems will eventually occur in the quality of the technical services because systems of the project are not fully developed. Full systems development in the context of the evaluation team's recommendations in section 4.2.5 can be expected by the end of the project.

-- From the financial side, the government is unlikely to be able to maintain development costs if these were not provided through technical assistance. However, it appears that the MOH can maintain the existing recurring costs associated with training, supervision, supplies and salaries/supplements of MOH project staff for the existing level of effort of the project.

-- Given the need to further develop mid-level management in the country, it is not yet clear that the technical lessons of PHC projects (not just TPHCP) can be generalized in Yemen. A major failing of this project has been the inability to get participant training going at a meaningful level.

-- The information needed to determine or estimate the cost of nationwide generalizability of the PHCW system is being developed in part by this project. Preliminary results will be submitted as a separate report by Mr. Richmond Allen (USAID economist) to USAID. Time constraints have not permitted this evaluation team to analyze his findings. However, based upon the evaluation team's investigation, it is unclear that TPHC Project services can be generalized from the financial side to Yemen without further analysis of desired services and available resource allocations. Time has permitted Mr. Allen to provide this team (verbally) with one encouraging sign in this regard. For the latest years available (1982-1984) the total real dollar expenditures of the MOH have grown by 11.4%, while the real dollar value of expenditures of all other YARG ministries, on average, have declined by 6.7%. This suggests a special commitment by the YARG to health services in general even in difficult times.

-- Project expenditures for the period June 1983 to December 1984 are attached as Appendix X.

Recommendations to the Work Session Participants

-- The work session participants must emphasize upper and midlevel management and master trainer training in the project's future. All parties must be earnest in their efforts to resolve the airfare and stipend problems.

-- Increased in-country training programs conducted by the contractor are strongly recommended despite the drawbacks to such training. This is true particularly in light of the difficult financial issues.

-- The project is urged to continue to develop a simple financial management system so as to be able to answer pressing questions about generalizability regarding, especially, the cost of training PHCW's, Yemeni master trainers, and midlevel managers.

APPENDIX I

Project Logframe Matrix

Technical Assistance Draft Workplan

Tihama Primary Health Care Project- Yemen Arab Republic

AID Project No. NEB-0065-C-00-3032-00

Annex 1

TPHCF Logical Framework Summary (PART I)

Goal	Measure of Achievement	Means of Verification	Important Assumptions
To develop an effective and sustainable delivery of priority primary health care services within the TPHCP's catchment area.	<p>Measurable Improvement by October 1987 in:</p> <ol style="list-style-type: none"> 1. Number of prenatal consultations 2. Number of under 5 immunizations 3. TB Case - Finding and Treatment 4. Community Malaria-Prevention/Control Activities 5. Use of ORT for diarrhea 6. The incidence of malnutrition 7. Ministry of Health absorption of recurrent costs for TPHCP activities 8. Community-based conceptual understanding and support of primary health care activities 9. Management of TPHCP facilities 10. MOH Policy in Support of well-defined priority PHC initiatives and curative care priorities 	<p>Project Survey Data</p> <p>Project MIS Data</p> <p>MOH MIS Data</p> <p>MOH Policy Statements</p> <p>LDA Policy Statements</p>	<p>Stable Economic Conditions</p> <p>Continued Political Commitment to PHC</p> <p>Stable Political Environment</p>

(MSH/May 1983)

Technical Assistance Draft Workplan

Tihama Primary Health Care Project- Yemen Arab Republic

AID Project No. NEB-0065-C-00-3032-00

Annex 1

TPHCP Logical Framework Summary (PART II)

Purpose	End of Project Status (EOPS)	Means of Verification	Important Assumptions
1. To reduce infant mortality	1.1 50% of mothers of children under 6 months of age in target villages received at least 3 prenatal consultations by PHCW or LBA.	-Survey data and LBA records	-LBAs can be recruited and trained -MOH agrees to TPHCP expansion and target villages
	1.2 50% of children born in target villages during last 6 months were delivered successfully and with assistance of LBA.	-Survey Data and LBA records	
2. To reduce child morbidity due to childhood immunizable diseases	2. 80% of children under 3 years of age in target villages have received 100% of WHO-recommended vaccinations.	-Survey Data	-Collaboration with EPI program
3. To reduce mortality due to tuberculosis	3.1 100% of Target Villages have been surveyed for tuberculosis within last 12 months.	-PHCWs' and Supervisors' Records	
	3.2 90% of TB suspects identified during survey had sputum examinations with positive/negative diagnosis obtained	-PHCW's Records and Lab Results	-System for referral and analysis functions effectively.
	3.3 100% of suspects with confirmed TB have case-finding record.		
	3.4 65% of suspected TB contacts have had sputum examination with positive/negative diagnosis obtained	-PHCW's Records and Lab results	
	3.5 100% of contacts with confirmed TB are under medications	-PHCW Records and Survey Data	-Compliance of patients

(MSH/May 1983)

Technical Assistance Draft Workplan

Tihama Primary Health Care Project- Yemen Arab Republic

AID Project No. NEB-0065-C-00-3032-00

Annex 1 TPHP Logical Framework Summary (PART II cont.)

Purpose	End of Project Status (EOPS)	Means of Verification	Important Assumptions
4. To reduce morbidity due to malaria	4. 75% of target villages have active mosquito larvae prevention programs.	-PHCW records and Survey Data	-LDA cooperation
5. To reduce morbidity/mortality due to diarrhea	5. In target villages, 50% of households which have had a case of under 5 diarrhea within last 3 months have used ORT as treatment	-Survey Data	
6. To reduce malnutrition as contributing cause to child mortality	6.1 50% fewer children in target villages are malnourished (according to standardized measurements) compared with BOPS.	-Survey Data	-Stable Food Supply
	6.2 50% of children under 5 years in target villages have road-to-health charts maintained by PHCW	-Survey Data and PHCW/LBA records	-Appropriate equipment supplied by donors
7. To provide for long-term financial sustainability of the program	7.1 75% of recurrent costs for the program have been absorbed by the Ministry of Health and/or LDAs within last fiscal year.	-Financial records	-Stable economic conditions
	7.2 50% of villagers (in target villages) with prescriptions during the last 6 months have purchased drugs from trial drug replacement program	-Financial records and drug logistics system records	-Government policy support of trial drug program; and financial resources available for start-up costs.

Technical Assistance Draft Workplan

Tihama Primary Health Care Project- Yemen Arab Republic

AID Project No. NEB-0065-C-00-3032-00

Annex 1 TPHCP Logical Framework Summary (PART II cont.)

Purpose	End of Project Status (EOPS)	Means of Verification	Important Assumptions
8. To provide for sustained community support of the program	8.1 100% of Target Villages have been assigned PHCW and 50% of villages have been assigned LBAs with support from LDA	-Survey data and project records	-LDA support
	8.2 80% of households in target villages are aware of goals of PHCP	-Survey data	-Financial resources available for media development -Cooperation with Ministry of Education
	8.3 60% of households (in target villages) have been given consultation and/or treatment for curative and/or preventive reasons by PHCW within last six months	-Survey data	-Resources available for PHCW outreach program.
9. To provide for effective system of management of PHC facilities	9.1 100% of Facilities have current monthly facility monitoring system displayed in facility	-Facilities survey data	
	9.2 80% of Facilities have facility monitoring score above 75%	-Facilities survey data	
	9.3 100% of Facilities using unit dose packing on trial basis.	-Facilities survey	-Government approval of trial program
10. To provide for cost effective primary health care program	10. Government approved standard package of priority preventive and curative services is being delivered by 100% of facility staff, PHCWs and LBAs according to prescribed guidelines.	-Operations manual and facilities survey	-Government agreement on health priorities

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Tihama Primary Health Care Project- Yemen Arab Republic

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Annex 1 TPHCP Logical Framework Summary (PART III)

Outputs	Means of Verification	Important Assumptions
1. Standardized and certified in-country training for: <ul style="list-style-type: none"> a) Primary health care workers (70) b) Local Birth attendants (35) c) Midwives (6) 	1-Project semi-annual reports <ul style="list-style-type: none"> -MOH payroll -BHS training office files 	1. Government provide 70 primary health care units <ul style="list-style-type: none"> -Midwives can be identified -LDA support for PHCWs and LBAs -Adequate salary for PHCWs and LBAs
2. Continuing education/ supervisory system designed and implemented for PHCWs and LBAs.	2.-Project semi-annual reports <ul style="list-style-type: none"> -Supervisory records 	2. Government supplies personnel and other resources in support of supervisory system
3. Participant training: <ul style="list-style-type: none"> a) US Masters Degree (8) b) US Short Term (16) c) Third Country Short Term (20) 	3.-Project semi-annual reports <ul style="list-style-type: none"> -Individual candidate files 	3. Qualified candidates available for training
4. Baseline and follow-up data during first, second, and fourth year <ul style="list-style-type: none"> a) Facility survey b) Community survey 	4.- Project annual reports <ul style="list-style-type: none"> -Project survey reports -Project evaluation reports 	4. Approval of Government and continued Government support of PHC.
5. In-Country Seminars: <ul style="list-style-type: none"> a) Workshops for Project Staff (2) b) Workshops for Government Donors, and community leaders (2) c) Refresher training workshops for PHCWs and LBAs (4) 	5.-Protect annual reports <ul style="list-style-type: none"> -Workshop reports 	5. Approval of Government

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Tihama Primary Health Care Project- Yemen Arab Republic

AID Project No. NEB-0065-C-00-3032-00

Annex 1 TPHCP Logical Framework Summary (PART III)

Outputs	Means of Verification	Important Assumptions
6. Cost accounting system designed and implemented to provide: a) Health facility unit cost b) Training unit cost c) Community outreach cost	6.-Project annual reports -Consultants' first and third year reports	6. Government availability of financial records
7. Facility monitoring system designed and implemented	7.-Project annual reports -Facility survey -Consultants' second year report	7. Government approval -Senior supervisory staff available
8. Standardized operations manual for: a) Facilities b) Community Outreach activities	8.-Reproduced copies of two operations manual	8. Government approval
9. Policy Statement developed by the YARG	9.-Reproduce copy of policy statements	9. Government approval
10. Standardized format for LDA/Government contract for PHCW/LBA support designed and implemented	10.-Contracts for each PHCW/LBA placed -Project annual reports	10. Government approval -LDA support of PHC
11. Standardized drug list for primary health care designed and implemented	11.-Reproduced copy of drug list -Project annual reports -Drug supply system records	11. Government approval

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Technical Assistance Draft Workplan

Tihama Primary Health Care Project- Yemen Arab Republic

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Annex 1 TPHCP Logical Framework Summary (PART III)

Outputs	Means of Verification	Important Assumptions
12. Manual on unit dose packaging procedures designed and implemented	12.-Reproduced copy of unit dose packaging manual -Project annual reports	12. Government approval of trial program
13. Manual for development and administration of drug replacement trial program designed and implemented	13.-Reproduced copy of drug replenishment trial program Development and administration manual -Project annual reports	13. Government approval of trial program
14. Promotional documentaries on PHC produced and provided on regularly scheduled basis through national television	14.-Videotape of documentaries -Television schedule -Project annual reports	14. Approval and cooperation of Ministry of Education and National Television -Additional Donor financial resources provided for non-budget documentary development costs

(MSH/May 1983)

APPENDIX II

Documents Examined

General Background

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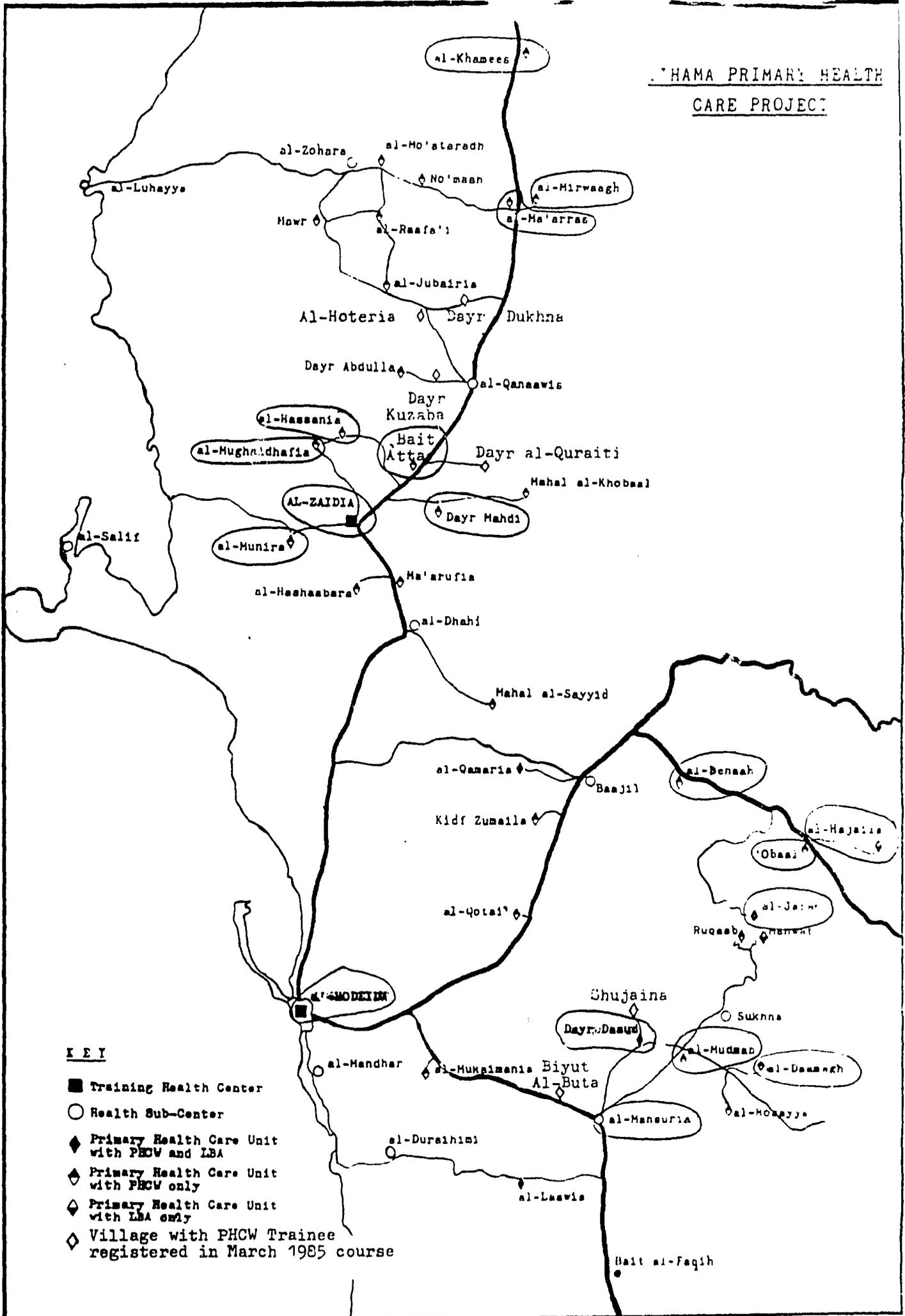
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APPENDIX III

Map of All TPHC Project Sites
Visited by External Evaluation Team

HAMA PRIMARY HEALTH CARE PROJECT



KEY

- Training Health Center
- Health Sub-Center
- ◆ Primary Health Care Unit with PHCW and LBA
- ◆ Primary Health Care Unit with PHCW only
- ◆ Primary Health Care Unit with LBA only
- ◆ Village with PHCW Trainee registered in March 1985 course

TIHAMA PRIMARY HEALTH CARE PROJECT: PROJECT VILLAGE INFORMATION
MARCH 1985

NOTES

1. Abbreviations/Arabic words employed:

PHCW: Primary Health Care Worker
PHCU: Primary Health Care Unit
LBA: Local Birth Attendant
Nahia: Equivalent- more or less - to a county.
LDA: Local Development Association: Responsible for local government and support of village activities.

2. *1: The ratings, as determined by the TPHCP's six trainer/supervisors, are defined as follows:

"Above Average" : among the better 25% of the TPHCP's Primary Health Care Units;

"Average": among the middle 50% of the TPHCP's Primary Health Care Units; and

" Below Average": among the weaker 25% of the TPHCP's Primary Health Care Units.

3. *2: An LBA was certified in 1984 for the Al-Khamis PHCU but because LDA has not provided her with the required housing , she is currently working at Zaidiya Training Health Center.

4. *3: LBA training candidates were recruited from the villages of Al-Ma'arufia, Kidf Zumailia, and O'bal in 1984 prior to the MDH/Sana'a suspension of LBA training programs for the Tihama Governorate.

5. *4: PHCW trainees are currently being trained for the PHCUs in Al-Hajaila and Manwab.

6. *5: The motor roads to the mountainous area of Bura' do not reach all the way to the villages of Al-Juran, Ruqab, and Manwab. The final portion of the travel to these PHCUs must be made on foot.

7. *6: The LBA who was working at the Ruqab PHCU moved away from the area in October 1984.

8. *7: In addition to the PHCW, the unit in Al-Qotzi' has a physician, a medical assistant, and a nurse. It is considered to be a sub-center rather than a PHCU.

9. *8 The owner of the temporary PHCU building repossessed his building in December 1985 for non-payment of rent by the LDA. The PHCW is presently without a place to work.

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TIHARA PRIMARY HEALTH CARE PROJECT : PROJECT VILLAGE INFORMATION (MARCH 1985)

CODE NO.	VILLAGE	NARIA	POPULATION OF MAIN VILLAGE	DISTANCE FROM HOBEIDAH (KM)	ONE-DAY TRAVEL TIME FROM HOBEIDAH	STAFF		YEAR OF OPENING	TYPE OF BUILDING	SPECIAL PROGRAMS IMPLEMENTED				WORK RATING #1		
						PHCW	LBA			UNICEF EQUIPMENT	CHILD IMMUNIZATIONS	MALARIA CONTROL	T.B. CONTROL	PREVENTIVE ACTIVITIES	CURATIVE ACTIVITIES	INITIATIVE
1	AL-NIRWASH	AL-ZOHARA	341	113	1 HR 40 MIN	X		1983	TEMPORARY	PRESENT	X	X		AVERAGE	ABOVE AVERAGE	AVERAGE
2	AL-KANIS	AL-ZOHARA	800	133	2 HR 10 MIN	X	*2	1983	TEMPORARY	PRESENT				BELOW AVERAGE	AVERAGE	BELOW AVERAGE
3	AL-NO' TARRADH	AL-ZOHARA	4000	132	2 HR 20 MIN	X		1984	TEMPORARY	NOT PRESENT		X		AVERAGE	BELOW AVERAGE	AVERAGE
4	NO'KAN	AL-ZOHARA	637	124	2 HOURS	X		1984	TEMPORARY	NOT PRESENT		X	X	AVERAGE	AVERAGE	AVERAGE
5	AL-NA'ARAS	AL-ZOHARA	1410	116	1 HR 40 MIN	X		1984	TEMPORARY	NOT PRESENT				BELOW AVERAGE	BELOW AVERAGE	BELOW AVERAGE
6	AL-RAFA'I	AL-ZOHARA	341	138	2 HR 30 MIN	X		1984	TEMPORARY	NOT PRESENT				AVERAGE	BELOW AVERAGE	AVERAGE
7	NAWR	AL-LIMAYYA	1758	132	2 HR 30 MIN	X		1983	TEMPORARY	PRESENT				AVERAGE	AVERAGE	AVERAGE
8	AL-JUBAIRIA	AL-LIMAYYA	2800	124	2 HOURS	X		1984	TEMPORARY	NOT PRESENT		X	X	BELOW AVERAGE	BELOW AVERAGE	BELOW AVERAGE
9	DAYR ABDULLAH	AL-BARAWIS	2500	102	1 HR 35 MIN	X		1984	PERMANENT	NOT PRESENT	X			AVERAGE	AVERAGE	AVERAGE
10	BAIT ATTA	AL-ZAIDIYA	1026	78	1 HR 10 MIN	X		1982	PERMANENT	PRESENT	X			BELOW AVERAGE	AVERAGE	AVERAGE
11	MAHAL AL-KHOBAL	AL-ZAIDIYA	800	97	1 HR 45 MIN	X		1984	PERMANENT	PRESENT				BELOW AVERAGE	BELOW AVERAGE	AVERAGE
12	AL-NA'ARUFIA	AL-ZAIDIYA	1200	57	30 MINUTES	X	*3	1984	TEMPORARY	NOT PRESENT	X			ABOVE AVERAGE	AVERAGE	AVERAGE
13	AL-NASHABARA	AL-ZAIDIYA	1200	64	1 HR 15 MIN	X		1984	TEMPORARY	NOT PRESENT		X		ABOVE AVERAGE	ABOVE AVERAGE	ABOVE AVERAGE
14	AL-MUNIRA	AL-MUNIRA	5000	79	1 HR 15 MIN	X		1982	PERMANENT	PRESENT	X	X		ABOVE AVERAGE	ABOVE AVERAGE	ABOVE AVERAGE
15	AL-MUSHAIADAFIA	AL-MUNIRA	1400	83	1 HR 30 MIN	X		1984	TEMPORARY	PRESENT		X		AVERAGE	BELOW AVERAGE	AVERAGE
16	AL-HASSARIA	AL-MUNIRA	1400	86	1 HR 35 MIN	X		1984	TEMPORARY	NOT PRESENT	X		X	AVERAGE	AVERAGE	ABOVE AVERAGE
17	DAYR MAHDI	AL-NIGHLAF	1800	85	1 HR 25 MIN	X		1983	TEMPORARY	PRESENT	X			AVERAGE	ABOVE AVERAGE	AVERAGE
18	MAHAL AL-SAYYID	AL-SUKHNA	1000	69	1 HR 15 MIN	X		1984	TEMPORARY	PRESENT	X			AVERAGE	AVERAGE	ABOVE AVERAGE
19	AL-BAMARIA	BAJIL	1000	60	1 HR 25 MIN	X	X	1983	PERMANENT	PRESENT	X			BELOW AVERAGE	AVERAGE	BELOW AVERAGE
20	KIDF ZUMAILA	BAJIL	1400	48	1 HOUR	X	*3	1983	PERMANENT	PRESENT		X		AVERAGE	AVERAGE	BELOW AVERAGE
21	AL-BEHAH	BAJIL	90	67	1 HR 15 MIN	X		1983	PERMANENT	PRESENT	X	X		BELOW AVERAGE	BELOW AVERAGE	BELOW AVERAGE
22	D' BAL	BAJIL	500	87	1 HR 30 MIN	X	*3	1984	PERMANENT	NOT PRESENT	X			ABOVE AVERAGE	ABOVE AVERAGE	ABOVE AVERAGE
23	AL-HAJAILA	BAJIL	1200	97	2 HR 05 MIN	X	X	1984	TEMPORARY	NOT PRESENT				UNIT HAS LBA ONLY, NO PHCW		
24	AL-JARAN	BURA'	800	108	4 HOURS	X	X	1984	TEMPORARY	NOT PRESENT	X	X		ABOVE AVERAGE	AVERAGE	ABOVE AVERAGE
25	RUKAB	BURA'	364	89	6 HOURS	XX	*6	1984	TEMPORARY	NOT PRESENT	X			AVERAGE	AVERAGE	AVERAGE
26	MUNWAB	BURA'	229	67	5 HOURS		X	1984	TEMPORARY	NOT PRESENT	X			UNIT HAS LBA ONLY, NO PHCW		
27	AL-GOTAI	AL-NIRAWA'A	8000	36	40 MINUTES	X	*7	1982	TEMPORARY	PRESENT			X	AVERAGE	AVERAGE	BELOW AVERAGE
28	DAYR DAUD	AL-SUKHNA	1160	55	1 HR 20 MIN	X	X	1983	TEMPORARY	PRESENT		X		ABOVE AVERAGE	ABOVE AVERAGE	ABOVE AVERAGE
29	AL-MIDMAN	AL-SUKHNA	1050	56	1 HR 05 MIN	X		1983	TEMPORARY	PRESENT		X		BELOW AVERAGE	BELOW AVERAGE	BELOW AVERAGE
30	AL-DAMEGH	AL-SUKHNA	336	68	1 HR 25 MIN	X		1984	TEMPORARY	NOT PRESENT	X			ABOVE AVERAGE	AVERAGE	ABOVE AVERAGE
31	AL-LAWIA	AL-DURAIHINI	3098	65	1 HR 15 MIN	X	X	1982	TEMPORARY	PRESENT		X	X	AVERAGE	ABOVE AVERAGE	AVERAGE
32	AL-MUKAIMANIA	AL-DURAIHINI	520	23	25 MINUTES	X		1983	TEMPORARY	PRESENT	X			AVERAGE	AVERAGE	AVERAGE
33	AL-HOSSAYA	AL-MANSURIA	305	69	1 HR 25 MIN	X		1983	TEMPORARY	PRESENT			X	ABOVE AVERAGE	ABOVE AVERAGE	AVERAGE

APPENDIX IV

Persons Contacted

Ministry of Health

Dr. Anmed Ali Hammami	Director General of Health and Medical Services
Dr. Abbas Zabara	Director of PHC
Dr. Monammad Hajjar	Director of Health Administration Affairs
Dr. Najeeba Abdul Ghani	Director of MCH
Dr. Abdul Kareem el Junaid	Director of Health Services, Hodeidan
Dr. Abdul Majid el Khulaidi	Director of Medical Research Unit
Dr. Abdul Kareem Rasae	Deputy Director of MCH
Dr. Abdul Wanab el Ghurbani	Director of Yemeni Swedish Clinic, Taiz
Mr. Ahmed Said Zaid	Director of EPI

USAID/Yemen

Mr. Charles F. Weden, Jr.	Director
Mr. Bobby Allen	Acting Deputy Director
Mr. Howard Keller	Project Officer, H.D.
Ms. Gerry Donnelly	Program Officer
Ms. Lee Feller	Project Officer, H.D.
Ms. Rashida Hamdani	GDO Program Assistant
Dr. Anne Marie Kimball	Consultant

USAID:Washington

Ms. Barbara Turner	Deputy Director Office of Technical Support NE/TECH
Ms. Evelyn MacLeod	Yemen Desk Officer
Ms. Judy Willis	NE/Evaluation
Mr. Jerre Manarolla	NE/DP
Mr. Paul Hartenberger	Project Officer NE/TECH/HPN

MSH:Management Sciences for Health

Dr. William Emmet	Chief of Party/Management Specialist
Dr. Abdul Haleem Hashem	Director of Tinama Health Care Project
Dr. Anmed Arsalan el Knulaida	Director of Training
Dr. Monammed Taha	Director of Field Operations
Dr. Claude Letarte	P.H.C. Advisor
Ms. Rachel Feilden	Health System Analyst
Mr. Tim Irgens	Community Development Specialist
Ms. Kammar Hussein Saleh	Pharmacist
Mr. Don Cnauls	Project Liaison Officer
Mr. Peter Snipp	Consultant

W.H.O.

Dr. Abdullani Deria	WHO Representatiave and Program Coordinator
Dr. M.A. Parvez	Epidemiologist
Dr. M.A. Barzagar	M.O. for PHC

UNICEF

Dr. Lay Maung

UNICEF Representative

Ms. Catherine A. Beckley

Program Officer (Health)

World Bank

Dr. Abdul Wanab Makki

Projects Manager/Director

Dr. Rosher

Advisor

Mr. Janga Haider

Advisor

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Ms. Elizabeth Gascoigne

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Dr. Abdul Aziz Saqqaf

Economist Sanaa University

Dr. Peter West

M.O. American Embassy Sanaa

Mr. Richmond Allen

Economist USAID Amman Jordan

Mr. de Roos

Royal Embassy of the Netherlands

APPENDIX V

TPHCP ORT Proposal: A Review

This appendix describes the evaluation team's response to MSH's May 13, 1984 preliminary proposal on intensified ORT activities within the TPHC Project and to Lynn Carter's October 21, 1984 paper entitled "Oral Rehydration Therapy: Considerations for USAID Funding."

The MSH proposal seeks to intensify training and promotion for ORT use in the 70 villages expected to have PHC workers and/or LBA's by mid-1987 and to extend ORT use to an additional 330 villages, 280 in proximity to the PHC worker/LBA's village and 50 more distant. Two or three volunteer trainees in each village would be taught ORT in the course of three visits by the PHCW or a trainer/supervisor. Trainees, in turn, would teach other villagers. These efforts would require additional training, supervisory, logistical, research, educational, and promotional inputs. The MSH proposal envisions having mineral water bottlers retool the molds for their 1.5 L. bottles so that they have an ORT "logo" and are marked at 1.0 L. The total proposed budget is \$1.5 million over three years.

In our visits to PHC units, we found the following:

- 1) Diarrhea was not perceived as a high-priority problem (N.B. this not the diarrhea season, however) by many PHC workers, probably because many have not yet been in service during the diarrhea season. Nonetheless, their awareness about dehydration, its relation to diarrhea, treatment methods, and prevention appear high.

2) ORS packets were found in all PHC units and were passively distributed.

3) PHC workers used 1.75 L. bottles marked with a pen at 1 L.,* to help mothers identify how much water is needed to dilute ORS packets.

4) PHC workers use variable amounts of salt and sugar when asked to describe preparation of homemade salt and sugar solution. Confusion seems to stem from previous campaigns which stressed mixing different volumes than are currently stressed.

5) Use of homemade salt and sugar solution is not aggressively promoted by PHC workers.

In view of these observations, we feel that it is essential to consolidate the gains made by PHC workers and to rapidly intensify ORT promotion in the villages currently served by PHC workers. The service area will expand as new PHC units are added. Meanwhile, pressing questions about the sufficiency of UNICEF packet supply, commercial production and distribution of ORS packets, and the role of homemade ORS in the YAR ORT program need to be explored. Further information should be gathered about the feasibility of producing mineral water bottles inscribed at 1 L. A modest field trial examining delivery of ORT in various village settings, such as that

*The indentation above the middle of the bottle is at 1 L., facilitating instruction to mothers.

described in an attachment to the MSH proposal, seems an excellent idea. In addition, there should be ongoing monitoring of the ORT effort in the form of KAP surveys, use rate studies, and determinations of measurement accuracy by mothers (as well as the number of training encounters needed to ensure that mothers can mix a homemade ORS correctly).

Despite undeniable need, it is overly ambitious to extend ORT promotion through the project beyond the villages served by PHC workers over the next two years. It would exceed, we believe, the logistical and manpower capability of the TPHC project. In the future, as experience accumulates and managerial capacity develops, ORT promotion can be extended.

It is beyond our scope to make a judgment about the need for additional funds beyond those in the TPHC project budget for the proposed ORT activities.

According to the Director of the Diarrheal Disease Program, the MOH found the MSH proposal to be overly complicated and not congruent with the Diarrheal Disease Program approach to ORT.

It should be noted, however, that the Diarrheal Disease Program approach seems overly restrictive at this time, given the liberal guidelines of MOH policy in this regard, as well as the stage of ORT acceptance and practice in Yemen.

In summary, there is a need to find a Yemen-specific model or approach to the treatment of diarrhea using ORT. Practical considerations exist: existing ORS packet supply and production are inadequate for need; there is a need to promote treat-

ment at the earliest possible point in the disease process, and there is a lack of in-country experience with ORT. These considerations suggest that Yemen is at a stage where it needs to examine all potential approaches to treatment of dehydration by ORT. In this regard, the pilot study proposal advocated by the TPHC Project, with certain alterations and better efforts to document its effectiveness, can make a positive contribution to the development of a Yemen approach to promotion of ORT. If successful, the lessons could be incorporated into the role of the PHCW's in the villages in which they normally work (starting first in the village in which they live).

Lynn Carter's response to the MSH proposal is similar to ours in many respects. She expresses reservations about re-tooling the mineral water bottle molds, noting that there are six separately-owned bottlers. She questions the TPHC project's ability to manage a substantial increase in activity. She applauds the experimentation with training village volunteers, but questions the scale of the experiment. Finally, in reference to Carter's discussion about importation of Pedialyte, we concur that it is inappropriate as an oral rehydration solution, having too much sugar and not enough salt. Moreover, it is expensive.

ORT is relatively new to Yemen and a great deal needs to be learned in order to design an optimal program. Appropriate technical assistance to the national Diarrheal Disease Program, as well as to Tinama, would certainly be useful. A dialogue between the MOH and USAID is required.

APPENDIX VI

Job Description for Facilitator and Yemeni Counterpart

Facilitator:

1. Assist participants of work session to prepare for work session;
2. Determine the most appropriate setting(s) for work session;
3. Arrange all support and logistical arrangements for work session;
4. Act as secretary to the work session;
5. Guide work sessions so as to arrive at consensus or agreement on all outstanding issues;
6. Prepare written summaries and approval by group of summaries of each session for participants;
7. Prepare and obtain group approval on letters of understanding.

Yemeni Counterpart:

1. Provide orientation to facilitator;
2. Help facilitator meet with Yemeni participants to the work session;
3. Participate in all meetings of facilitator in order to provide institutional memory of external evaluation team.

APPENDIX VII

Issues to be Addressed by Participants of the Working Session for Which Agreements Between the MOH and USAID Must be Reached

1. Clarify and reaffirm sector goal, purpose of project, objectives (i.e. achievements which will indicate that purpose has been accomplished), outputs of project, statement reaffirming major areas of project emphasis.

2. Role of long term expatriate staff, relationship to Yemeni project staff, professional expertise desired, and job descriptions.

3. Role of consultants to project, how areas of consultant needs are established, how consultants are selected, how consultants will be used, and relationship to Yemeni staff.

4. Extent of USAID/YARG contribution to overseas participant training costs; timetable as appropriate.

5. Extent of USAID/YARG contribution to special support of overseas participant trainees with unusual financial needs.

6. Satisfactory identification of MOH and USAID channels of communication and decision making and specific procedures for entering these channels. How and by when the decision-making process can be facilitated.

7. Extent to which full time Yemeni staff can be obtained, and a timetable for accomplishing provision of full time staff.

8. Type of commitment to be required of project staff receiving overseas training, planning for roles/responsibilities/position of staff after training, and remuneration for staff after training.

9. Extent of use of Yemeni consultants in project.

APPENDIX VIII

Recommended Overview of a Strengthened TPCB Project

Background

The TPCB Project has achieved an operational PHC service. Services are being offered by PHCW's and some LBA's. The services are credible and the workers are well trained and supervised. Systems to support the PHCW have been established including systems of basic and in-service training, supervision, supply, financial management, and health information. Innovative approaches to TBA involvement with the MOH have been initiated. Linkages with HMI with respect to trainer-supervisor training have been established, and initial investigation of avenues to integrate PHCW's with health center/sub-centers has been undertaken.

The TPCB Project has established a foundation for PHC service development in Yemen, as well as a perspective on how the health system as a whole needs to be developed to accommodate PHC services. The basic finding of TPCB Project experience is that expansion of PHC in Yemen will require a significant expansion of the pool of upper and mid-level MOH expertise in health planning and policy development, administration, supervision and training. While this capability is being developed, it is necessary to further refine a Yemen-specific model of PHC.

In this context, the remaining years of the TPHC Project need to be used to strengthen certain activities, shift emphasis to emphasize more strongly certain existing project activities now deemed by project experience to be vital to long term development of PHC, and to delete some activities which cannot realistically provide a meaningful contribution to the project and PHC development in the remaining life of the project and for which funds could be better utilized to strengthen other project components.

Specifically, the TPHC Project needs to focus the scope and content of its service instructions in relation to a small list of health problems. Training of the originally identified number of PHCW's needs to be completed to provide a sufficiently large system of PHCW's to make the project area a training area/field practice area for trainer/supervisors from other areas of the country. Existing systems of training, supervision, financial management and health information need to be focused, consolidated and regularized. Linkages between the PHCW's and the static health system (health centers and sub-centers) need to be explored. Strengthening of the upper and mid-levels of the MOH needs to be undertaken particularly with regard to planning and policy development, administration, supervision, and training. The project can also play a role in fostering a greater awareness of PHC among policy makers in government, and coordination among external assistance agencies.

Sector Goal: To assist YARG improve health and health services through coordinated development of the various levels of the health service delivery system.

Purpose of Project: To improve upon existing operational models of primary health care in Yemen and their integration into the overall health services delivery system, and to improve the capability of management and policy levels of the MOH to develop, sustain and administer a primary health care system.

Objectives:

1. Achieve a more focused PHC service in Tinama by clearly defining a narrow set of health problems realistically able to be addressed by the limited personnel of the project; by clearly specifying the nature and scope of PHC interventions for each health problem; by refining specific roles, responsibilities, and (as appropriate) standing orders for all project and/or related MOH staff in Tinama; and by refining/consolidating/regularizing systems for financial management, training of trainer-supervisors, in-service training, supervision, logistics and information.

2. Establish the TPHC Project area as a training site/ field practice area for trainer/supervisors from other areas of the nation and with strengthened ties to HMI.

3. Achieve a set of recommendations regarding the feasibility of and as appropriate the ways to integrate the Tihama Project model of PHCW's into the health center/sub-center system based upon a trial testing of linkages.

4. Achieve a significantly expanded pool of expertise within the MOH for primary health care policy development, central and mid-level management and administration, and training of trainers; and establish preliminary estimates (based on actual experience) of the costs to sustain and expand this capability.

APPENDIX IX

Job Description for Project Liaison Officer

Brief Description of Proposed Person to be assigned as a Liaison Officer/Public Relations Assistant/Facilitator/Courier/Special Duties Officer:

1. Must be a Yemeni citizen;
2. Free of family responsibilities (relatively);
3. Able to travel continuously, whenever required, within Yemen;
4. Have good knowledge of written Arabic & English;
5. Have some knowledge of or background training in health-related subjects.

Personal qualifications

-A respected citizen, preferably from a known influential family;

-Must be totally honest, reliable, responsible, and sensible;

-Should have a pleasing and gentle disposition, and should be able to be patient and polite and diplomatic with all levels of persons in authority.

Note: Consideration should be given to lady candidates.

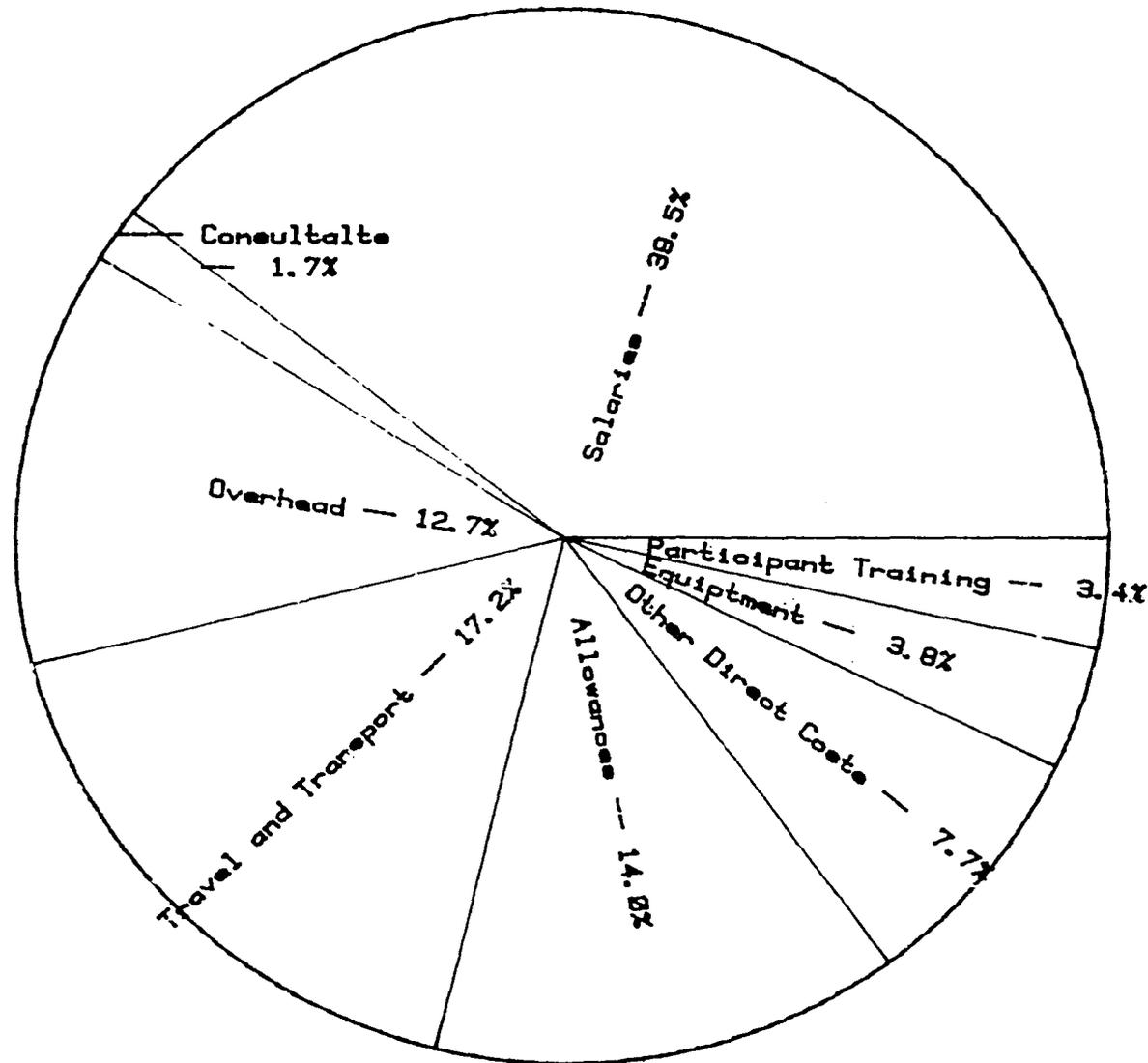
Suggestions: To be paid jointly by USAID/Project; To be provided by USAID/Project with a small office in Sanaa and in Hodeidan; A car & driver should be at permanent disposal; Should be provided with secretarial assistance.

APPENDIX X

TPHC Project Expenditures for the Period
June 1983 to December 1984

FIGURE No. 23

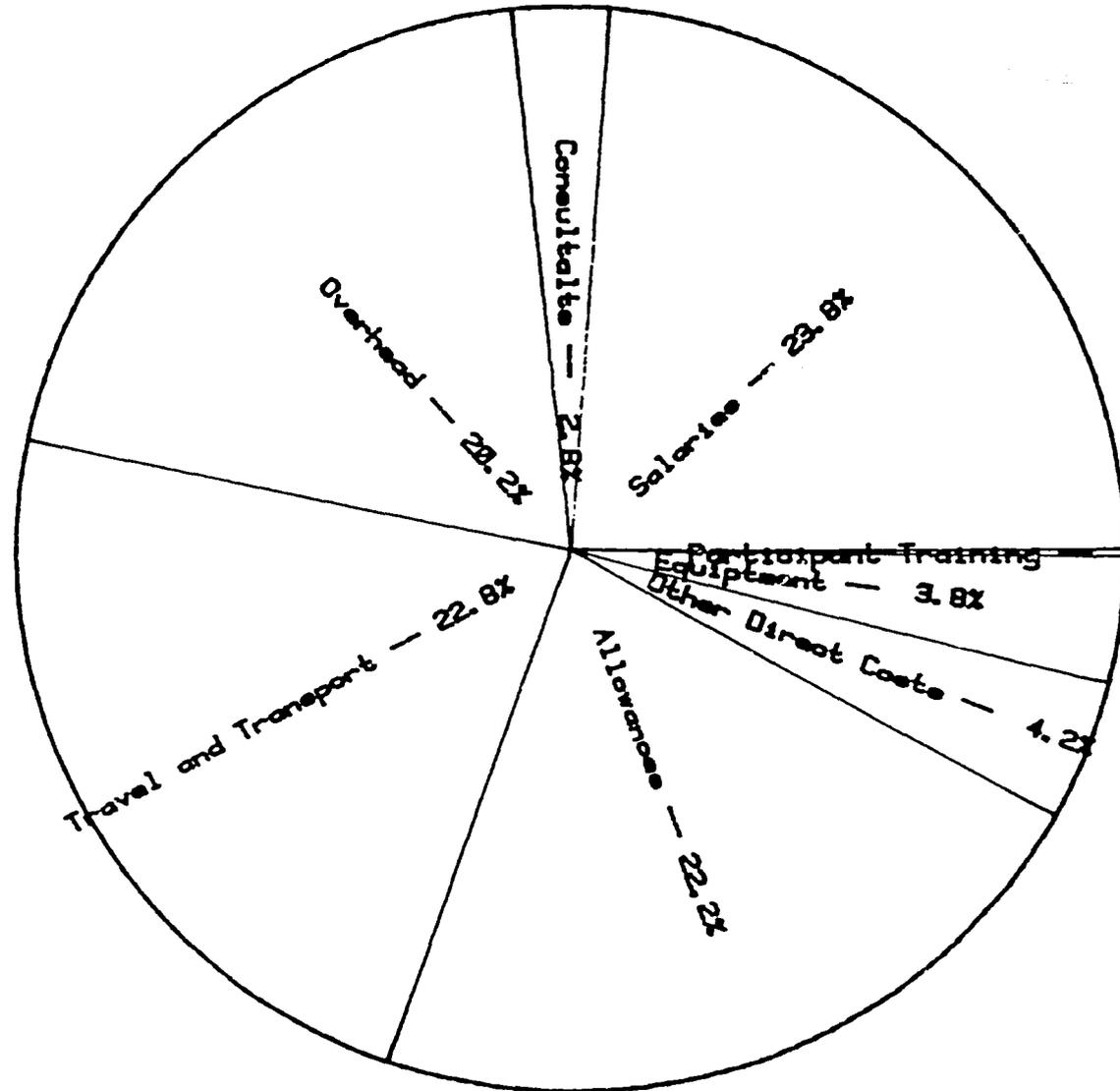
Tihama Primary Health Care Project Analysis of Expenses June 1983 - December 1984



Grand Total Expenditures -- \$ 1,961,837.01

FIGURE No. 24

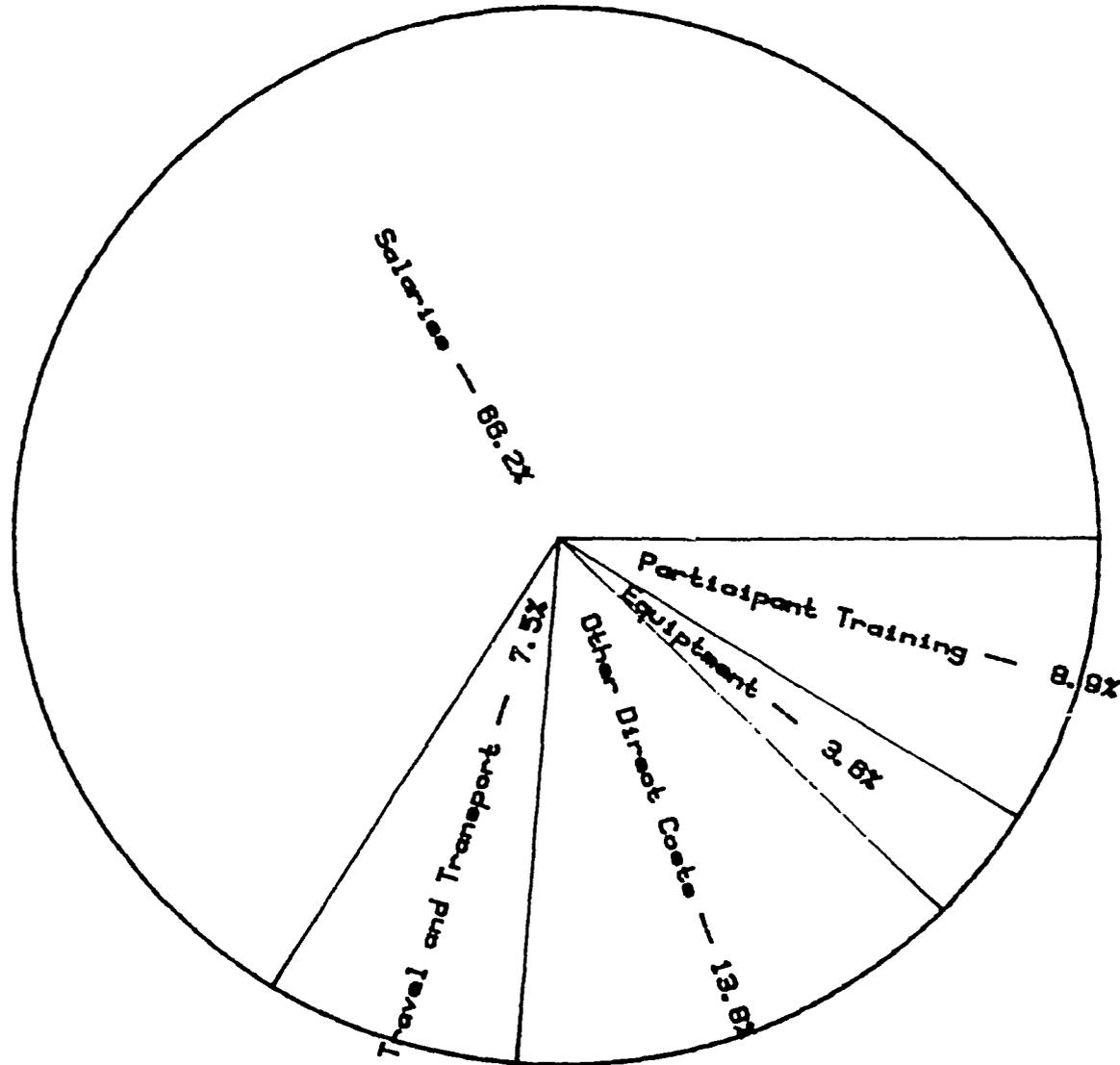
Tihama Primary Health Care Project
Analysis of Expenses
June 1983 - December 1984



Total M. S. H. /BOSTON Expenditures -- \$ 1,236,753.85

FIGURE No. 25

Tihama Primary Health Care Project
Analysis of Expenses
June 1983 - December 1984



Total Yemen Expenditures -- \$ 725,084.22

TOTAL EXPENSE SUMMARY (per month in US\$)

	Sana'a	Hodeidah	Boston	Total
June 83			29,632.68	29,632.68
July 83			33,051.67	33,051.67
Aug. 83			105,504.59	105,504.59
Sep. 83	29,567.28		38,602.89	68,170.17
Oct. 83	20,302.20	41,286.36	148,598.11	210,186.67
Nov. 83	5,072.77	45,069.68	60,162.65	110,305.10
Dec. 83	5,535.23	39,999.74	37,282.35	82,817.32
Jan. 84	5,736.25	51,669.98	95,126.82	152,533.05
Feb. 84	9,822.01	45,652.63	68,077.98	123,552.62
Mar. 84	5,011.17	41,761.77	87,706.71	134,479.65
Apr. 84	4,394.84	33,433.54	65,434.23	103,262.61
May 84	7,996.66	47,103.38	82,996.67	138,096.71
June 84	4,874.55	79,747.20	45,269.71	129,891.46
July 84	2,313.78	10,787.28	38,472.63	51,573.69
Aug. 84	16,357.21	43,727.60	44,626.20	104,710.01
Sep. 84	20,443.32	6,302.63	48,152.79	74,898.74
Oct. 84	5,364.83	27,033.71	41,463.05	73,861.59
Nov. 84	4,105.95	29,262.89	95,753.95	129,122.79
Dec. 84	5,605.26	29,742.52	70,838.17	106,185.95

Total expensed in Yemen Sep.83 - Dec.84 : 725,084.22 \$

Total expensed in Boston June 83-Dec 84 : 1,236,753.85 \$

Total 1961,838.07 \$

EXPENSE SUMMARY FOR LINE ITEM I : SALARIES

	Sana'a	Hodeidah	Boston	Total
June 83			5,253.83	5,253.83
July 83			7,512.28	7,512.28
Aug. 83			14,442.98	14,442.98
Sep. 83	1,210.23		14,558.46	15,768.69
Oct. 83	2,234.47	32,120.86	19,119.50	53,474.83
Nov. 83	2,556.0	37,254.16	17,693.75	57,503.91
Dec. 83	3,430.12	31,151.78	14,055.41	49,001.31
Jan. 84	4,103.57	31,770.48	16,558.49	52,462.54
Feb. 84	5,518.95	34,998.46	17,420.44	57,937.85
Mar. 84	3,007.03	27,898.64	23,158.55	54,064.22
Apr. 84	2,247.23	26,406.58	21,892.25	50,546.06
May. 84	6,326.63	31,191.30	20,935.08	58,453.01
June 84	3,094.91	72,852.0	8,388.07	84,334.98
July 84	1,037.72	1,802.16	11,829.97	14,669.85
Aug. 84	5,239.42	37,408.28	16,495.93	59,143.63
Sep. 84	2,741.88	2,570.98	13,355.58	18,668.44
Oct. 84	2,741.88	20,121.81	13,497.39	36,361.08
Nov. 84	2,700.0	19,142.90	19,101.76	40,944.66
Dec. 84	2,844.01	22,211.96	19,600.96	44,656.93

Total expensed on item I in Sana'a.: 51,034.05 \$

Total expensed on item I in Hodeidah: 428,902.35 \$

Total expensed on item I in Boston : 294,870.68 \$

Total 774,807.08 \$

EXPENSE SUMMARY FOR LINE ITEM II : CONSULTANTS

	Sana'a	Hodeidah	Boston
June 83			8,280.0
July 83			225.0
Aug. 83			121.0
Sep. 83			
Oct. 83			
Nov. 83			2,099.57
Dec. 83			306.59
Jan. 84			
Feb. 84			4,248.13
Mar. 84			
Apr. 84			51.87
May 84			
June 84			4,087.50
July 84			
Aug. 84			
Sep. 84			
Oct. 84			
Nov. 84			7,320.0
Dec. 84			7,434.0

Total expensed in Yemen on item II : 0.0

Total expensed in Boston on item II : 34,173.66 \$

Total : 34,173.66 \$

EXPENSE SUMMARY FOR LINE ITEM IV :• OVERHEAD

	Sana'a	Hodeidah	Boston
June 83			8,212.05
July 83			5,897.32
Aug. 83			11,615.32
Sep. 83			11,646.77
Oct. 83			15,295.59
Nov. 83			15,204.76
Dec. 83			11,397.63
Jan. 84			13,270.78
Feb. 84			16,060.43
Mar. 84			18,526.85
Apr. 84			17,540.60
May 84			16,748.07
June 84			6,002.92
July 84			9,463.98
Aug. 84			13,196.74
Sep. 84			10,684.46
Oct. 84			10,797.91
Nov. 84			18,941.42
Dec. 84			19,397.78
Total expensed in Yemen on item IV :			0.0
Total expensed in Boston on item IV :			249,901.38
Total :			249,901.38

EXPENSE SUMMARY FOR LINE ITEM V : TRAVEL AND TRANSPORT

	Sana'a	Hodeidah	Boston	Total
June 83			7,555.75	7,555.75
July 83			158.50	158.50
Aug. 83			10,273.67	10,273.67
Sep. 83	2,568.33		3,074.75	5,643.08
Oct. 83	1,631.73		79,381.34	81,013.07
Nov. 83	1,827.81	854.70	9,463.77	12,146.28
Dec. 83	694.89	2,410.38	6,618.03	9,723.30
Jan. 84	861.74	5,242.09	58,480.16	64,583.99
Feb. 84	247.23	1,630.36	8,776.20	10,653.79
Mar. 84	613.66	6,908.38	14,926.49	22,448.53
Apr. 84	477.58	3,481.65	12,289.19	16,248.42
May 84	1,490.34	2,905.72	18,860.11	23,256.17
June 84		2,912.86	14,353.33	17,266.19
July 84	1,248.85	1,428.20	3,038.63	5,715.68
Aug. 84	882.88	1,260.16	2,682.	4,825.04
Sep. 84	636.47	1,330.13	1,804.54	3,771.14
Oct. 84	764.03	2,539.48	9,606.66	12,910.17
Nov. 84	681.70	2,470.37	8,224.12	11,376.19
Dec. 84	1,509.22	2,456.52	12,803.59	16,769.33

Total expensed on item V in sana'a : 16,136.46 \$

Total expensed on item V in Hodeidah: 37,831. \$

Total expensed on item V in Boston : 282,370.83 \$

Total : 336,337.41 \$

EXPENSE SUMMARY FOR LINE ITEM VI : ALLOWANCES

	Sana'a	Hodeidah	Boston
June 83			
July 83			18,459.30
Aug. 83			44,648.71
Sep. 83			3,177.43
Oct. 83			34,165.69
Nov. 83			3,158.0
Dec. 83			4,421.0
Jan. 84			5,187.55
Feb. 84			21,114.91
Mar. 84			28,074.71
Apr. 84			7,141.32
May 84			24,030.76
June 84			11,280.79
July 84			10,561.20
Aug. 84			10,032.77
Sep. 84			19,616.40
Oct. 84			5,856.50
Nov. 84			14,657.59
Dec. 84			8,692.80
Total expensed on item VI in Yemen			0.0 \$
Total expensed on item VI in Boston :			274,277.43 \$
Total :			274,277.43 \$

EXPENSE SUMMARY FOR LINE ITEM VII : OTHER DIRECT COSTS

	Sana'a	Hodeidah	Boston	Total
June 83			331.05	331.05
July 83			799.27	799.27
Aug. 83			16,616.31	16,616.31
Sep. 83	24,568.68		2,422.94	26,991.62
Oct. 83	1,309.06	2,431.35	517.19	4,257.60
Nov. 83	432.94	500.67	764.31	1,679.92
Dec. 83	1,148.86	925.56	483.69	2,558.11
Jan. 84	770.94	5,141.20	1,629.84	7,541.98
Feb. 84	1,308.19	1,187.52	457.87	2,953.58
Mar. 84	626.67	637.17	1,020.11	2,283.95
Apr. 84	1,670.03	2,198.98	5,869.0	9,738.01
May 84	179.69	7,997.62	2,372.65	10,549.96
June 84	1,779.64	1,287.79	1,157.10	4,224.53
July 84	27.21	2,403.95	3,578.85	6,010.01
Aug. 84	9,874.79	2,678.58	2,218.76	14,772.13
Sep. 84	17,064.97	1,682.72	2,691.81	21,439.50
Oct. 84	1,283.01	1,765.62	1,704.59	4,753.22
Nov. 84	724.25	2,313.65	3,309.06	6,346.96
Dec. 84	1,142.64	3,334.77	2,909.04	7,386.45

Total expensed on item VII in Sana'a : 63,911.57

Total expensed on item VII in Hodeidah: 36,487.15

Total expensed on item VII in Boston : 50,853.44

Total 151,252.16

EXPENSE SUMMARY FOR LINE ITEM VIII : EQUIPMENT

	Sana'a	Hodeidah	Boston	Total
June 83				
July 83				
Aug. 83			7,786.60	7,786.70
Sep. 83	1,220.04		3,722.54	4,942.58
Oct. 83	15,126.94		118.80	15,245.74
Nov. 83	256.02		11,778.49	12,034.51
Dec. 83	261.36			261.36
Jan. 84		109.66		109.66
Feb. 84	173.82	2,706.54		2,880.36
Mar. 84	763.81	3,021.10		3,784.91
Apr. 84		722.26		722.26
May 84				
June 84		499.14		449.14
July 84				
Aug. 84	265.27			265.27
Sep. 84				
Oct. 84	575.91	148.34		724.25
Nov. 84		102.56	24,200.00	24,302.56
Dec. 84	68.37			68.37

Total expensed on item VIII in Sana'a : 18,711.54 \$

Total expensed on item VIII in Hodeidah: 7,309.60 \$

Total expensed on item VIII in Boston : 47,606.43 \$

Total 73,627.57 \$

EXPENSE SUMMARY FOR LINE ITEM IX : PARTICIPANT TRAINING

	Sana'a	Hodeidah	Boston	Total
June 83				
July 83				
Aug. 83				
Sep. 83				
Oct. 83		6,734.15		6,734.15
Nov. 83		6,460.15		6,460.15
Dec. 83		5,512.02		5,512.02
Jan. 84		9,406.55		9,406.55
Feb. 84	2,573.82	5,129.75		7,703.57
Mar. 84		3,296.48	2,000.00	5,296.48
Apr. 84		624.07	650.00	1,274.07
May 84		5,008.74	50.00	5,058.74
June 84		2,195.41		2,195.41
July 84		5,152.97		5,152.97
Aug. 84	94.85	2,379.58		2,474.43
Sep. 84		718.80		718.80
Oct. 84		2,458.46		2,458.46
Nov. 84		5,233.41		5,233.41
Dec. 84	41.02	1,739.27		1,780.29

Total expensed on item IX in Sana'a : 2,709.60 \$

Total expensed on item IX in Hodeidah: 62,049.81 \$

Total expensed on item IX in Boston : 2,700.00 \$

Total : 67,459.50 \$

EXPENSES IN YEMEN JAN. 1985 - MARCH 1985 IN US \$

Sana'a

	I SALARIES	V TRAVEL & TR.	VII OTHER	VIII EQUIPMENT	IX PARTICIPANT TR.
Jan 85	2847	1059.05	1160.29		
Feb 85	2779.22	1973.30	1276.53		5,625.37
Mar.85	2892.38	1239.38	678.61	15.38	
Total	8518.60	4271.73	3115.43	15.38	5,625.37

Hodeidah

	I SALARIES	V TRAVEL & TR.	VII OTHER	VIII EQUIPMENT	IX PARTICIPANT TR.
Jan.85	19,624.70	4,099.51	1,972.44	51.28	479.95
Feb.85	14,396.88	2,336.47	3,298.02		8,114.73
Mar.85	9,696.73	2,499.21	3,255.65	23.07	1,622.65
Total	43,718.31	8,935.19	8,526.11	74.35	10,217.33

TOTAL Sana'a and Hodeidah

	52,236.91	13,206.92	11,641.54	89.73	15,842.70
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TOTAL EXPENSED IN YEMEN MAR.85 - JAN.85 93,017.80\$

100