

**THE SUSTAINABILITY OF U.S.-SUPPORTED
HEALTH, POPULATION, AND NUTRITION
PROGRAMS IN TANZANIA: 1971-1988**

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The views and interpretations expressed in this report are those of the authors and should not be attributed to the Agency for International Development.

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Bibliography

For any Tables, Figure Boxes, or Graphs that may be omitted from this document may be found on Microfiche.

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PREFACE

Why are the activities and benefits of some health development assistance programs sustained while others are not? Which contextual factors seem most important for sustainability? Which project characteristics? Do some types of health programs seem inherently unsustainable? How should sustainability be defined and measured? What guidance can we offer policymakers and project and program managers? What type of research is called for?

In 1986, the Center for Development Information and Evaluation (CDIE) initiated a group of studies with special emphasis on assessing the sustainability of health project and program activities and benefits after A.l.D. funding ends. The decision to conduct these studies followed a prior set of evaluations carried out by A.l.D. in the early 1980s to try to understand more about the impact (the actual effects) of its projects and programs in the health sector. The impact evaluations show clearly that many of those activities had difficulty continuing after outside assistance was terminated. Sustainability has become an important development issue in health (as well as in other sectors) for both lender/donor countries and borrower/recipient countries.

The studies undertaken by CDIE in this area have taken several forms, including literature reviews, syntheses of existing A.l.D. evaluation reports, field studies of single completed health projects, and field studies taking a broad, sectoral, historical perspective. The present study of Tanzania falls into this last category.

The Tanzania report is based primarily upon documents reviewed, and interviews conducted in Washington - followed by a two-week field review in Tanzania in October, 1988. This study is one of three studies conducted in Africa, including Zaire and Senegal, using the same methodology. In addition, two studies were completed earlier in Latin America (Guatemala and Honduras) using a modified approach. By compiling a larger sample of cases in a range of country settings, we hope to be able to develop generalizations about the determinants of sustainability in different types of health projects in different types of social, economic and political contexts.

Finally, a significant body of related work by other offices in A.l.D., as well as other lenders/donors, has begun to accumulate which focuses on sustainability and adds to the issues and the discussion set forth in this study. This report does not attempt to reflect these recent works, which will be incorporated in subsequent analyses. The reader is asked to bear in mind, therefore, that we are presenting this report as an important study and set of findings in one country in the larger effort now in progress, not as the final word on the important issue of sustainability.

SUMMARY

This report is part of a series of sustainability studies implemented by the Center for Development Information and Evaluation (CDIE). These studies use a comparative historical methodology to review health, nutrition, population, and water supply and sanitation projects supported by the United States Government in five countries. The central purpose of the studies is to identify the project characteristics and contextual factors that were likely to have contributed to the continuation of project activities and benefits after project funding ceased. The Tanzania study is one of three recent studies in Africa (Zaire and Senegal) and follows two completed studies in Central America (Honduras and Guatemala).

In Tanzania, we examined six major projects that were implemented and completed at least three years prior to the sustainability study:

- 1) A series of urban water projects implemented from 1963 to 1984
- 2) A project to train Maternal and Child Health Aides
- 3) Hanang Village Health project to develop a pilot primary health care program at the village level in one district
- 4) Cancer Control Project to provide both curative and preventive programs associated with the Muhimbili Medical Center
- 5) School Health Project to develop school health programs and curriculum and construct latrines
- 6) Continuing Education Program for Health Workers

This review suggests that several contextual factors and project characteristics are related to the continuation of project activities and benefits in Tanzania.

1. Context Factors

Three contextual factors influenced sustainability in Tanzania:

- **Economic Decline:** A significant decline in GNP/P, lower government revenues, a decline in per capita health expenditures of 45% during the 1980s, and severe foreign exchange shortages have all limited the ability of Tanzanian government and private sector to provide funding to continue project activities and, in the case of foreign exchange scarcity, drug and transportation

imports.

- Political Environment: A broad-based and strong ideological commitment to the poor, articulated in the 1967 Arusha Declaration, has promoted sustainability.
- Donor Coordination: Donor coordination has been very good, often providing complementary support and follow-on funding when A.l.D. project funding stopped.

2. Project Characteristics

Three major project characteristics were found to be related to sustainability in Tanzania:

- Project Integration: Projects which were well integrated into established administrative structures were more likely to be sustained than were vertically administered projects.
- Constituency Development: Projects which demonstrated their effectiveness and created a demand for services among important constituencies of providers and/or beneficiaries were more likely to be sustained than those which failed to gain significant constituent support. The government responded to these constituencies with continued funding support--to the extent the government could provide resources, and health policy and practice modifications to permit contributions directly from beneficiaries.
- National Financing: Projects which received national funding--either by obtaining direct government budget support, or by cost recovery, even if the total revenue from such sources did not cover all costs--were more likely to be sustained than projects which depended on donor funding alone.

3. Future Guidelines for Sustainability

This study suggests that USAID provide long term support to develop an economic context that could be more favorable to sustainability in the long-run.

Even in this weak economic context, however, a number of project guidelines should be taken into account by project designers and implementors:

- Integrate project activities into existing administrative structures. Avoid vertical project design.

- Design projects so that national sources--budgetary and cost recovery mechanisms--provide a high (or increasing) level of project funding throughout the life of the project.
- Develop constituency demand among relevant provider and beneficiary groups by providing visible services and demonstrating effectiveness of project activities.

GLOSSARY

A.I.D.	Agency for International Development
AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical & Research Foundation
CDC	Center for Disease Control
CDIE	Center for Development Information and Evaluation
CODEL, Inc.	Coordination in Development, Inc.
DANIDA	Danish International Aid Agency
DDH	Designated District Hospital
DHO	District Health Officer
DMO	District Medical Officer
EPI	Expanded Program of Immunization
HO	Health Officer
MCH	Maternal and Child Health
MCHA	Maternal and Child Health Aide
MMC	Muhimbili Medical Center
MO	Medical Officer (a physician)
MOH	Ministry of Health
MONE	Ministry of National Education
NGO	Non-Governmental Organization
OPG	Operating Program Grant
ORT	Oral Rehydration Therapy
PHN	Public Health Nurse
PVO	Private Voluntary Organization
RMA	Rural Medical Aide
RMO	Regional Medical Officer
TANGOV	Government of Tanzania
TSHP	Tanzania School Health Project
UNICEF	United Nations Children's Fund
VHW	Village Health Worker
WHO	World Health Organization

1. INTRODUCTION

In 1979 A.l.D. began a series of evaluations in the health sector which focused on project impact. These evaluations increased A.l.D.'s awareness of the difficulty of sustaining project activities and benefits after U.S. funding ceased. A.l.D.'s concern about sustainability became increasingly acute with respect to its efforts to improve health sector programs and the delivery of primary health care in response to the world wide effort to attain the goal of "health for all by the year 2000." Finally, the economic recession of 1980~2 in the industrialized countries adversely affected the ability of many developing countries, particularly in Africa,¹ to financially sustain the recurrent costs of development activities.

As a result of these concerns, A.l.D.'s Center for Development Information and Evaluation initiated a new evaluation series focused on sustainability. These studies use a comparative historical methodology to review health, nutrition, population and water supply and sanitation projects supported by the government in 5 countries. The central objective of the studies is to identify the project characteristics and contextual factors that were likely to have contributed to the continuation of project activities and benefits after project funding ceased. The Tanzania study is one of three recent studies in Africa (the others being in Senegal and Zaire). It follows 2 completed studies in Central America (Guatemala and Honduras).²

Table 1: Project Characteristics and Contextual Factors Affecting Sustainability

This study of sustainability in Tanzania follows an established methodology that was developed and refined in the Central American cases. The methodology defines sustainability as the continuation of a significant portion of project activities and benefits at least three years after the termination of U.S. government funding. Sustained and unsustained projects were then reviewed for contextual factors and project characteristics hypothesized to be related to sustainability. (see Table 1)

For more discussion of the methodology, see Appendix A. For Tanzania, a desk study first defined the central projects and areas of investigation, and was followed by a two week field visit by a team of evaluators in October 1988.

In the course of conducting this analysis, (a) USAID's

¹According to the World Development Report, 1987, pg. 16, real GD growth in Sub-Saharan Africa was negative from 1981 to 1985.

²Thomas Bassert et al., Guatemala, 1990 and Bossert, et al., Honduras, 1988.

contribution to Tanzania's health sector, including specific projects, is described; (b) the determinants of project sustainability are analyzed; and (c) generalizable "lessons learned" are developed for enhancing the sustainability of future health sector projects.

2. USAID HEALTH SECTOR PROJECTS IN TANZANIA

A.l.D.'s predecessor agency initiated its development program in the former British colony of Tanganyika in 1955 with a nearly \$1.0 million dollar agricultural improvement services project. The value of A.l.D.'s 93 projects in Tanzania since that time has been about \$169 million through September 1987 (see Table 2). The 6 health and 5 water projects initiated during this period constituted about 17 percent of the total portfolio (28.2 million).

TABLE 2: A SUMMARY OF USAID/TANZANIA PROJECT ACTIVITY, FROM 1955 TO 1987

About 17 percent of A.l.D.'s project activity in Tanzania was initiated during the 1960s (the first decade of Tanzania's independence). Most (72 percent) of the remaining projects were started during the 1970s. Further US bilateral assistance was curtailed in 1983 because Tanzania had infringed provisions of the Brooke Amendment³ Tanzania's inability at that time to repay debts and obtain additional foreign commercial loans resulted from falling cotton and coffee prices, the second oil price increase, and the war in Uganda in 1979, and was exacerbated by the countries macroeconomic and development policies.⁴

In this evaluation we reviewed five health projects and two urban water projects that were completed at least three years before this evaluation. (see Table 3 and figure 1) The following section gives a brief description of each project. More detailed descriptions can be found in the Appendices.

Table 3: CHARACTERISTICS OF THE HEALTH. POPULATION, NUTRITION AND WATER PROJECTS

³The Brooke Amendment requires a suspension of foreign assistance when a country does not pay outstanding obligations to the U.S. treasury.

⁴For a further analysis of the macroeconomic situation in Tanzania, see the section on contextual factors and Appendix B. See also the USAID/Tanzania, 1987, document.

Figure 1: CHRONOGRAM USAID HEALTH SECTOR PROJECTS IN TANZANIA

2.1 MCH Aides Training Project (1973-1984)

Among A.I.D.'s health sector projects, the Maternal and Child Health Aides (MCHA) training project was the first developed, has been the largest,⁵ and was more integrated into the overall development of the Tanzania rural health care delivery system than any other A.I.D.-funded health project. It was designed to: (a) construct and equip 18 MCH Aide training centers and 64 "outstations," (b) develop and implement an MCH Aides training curriculum, (c) provide local trainers with additional education outside the country, (d) provide recurrent cost support for the training schools and MCH trainees, and (e) procure contraceptives and simple MCH equipment for rural health facilities.

Eighteen health training schools and demonstration MCH clinics were constructed and equipped and 2509 MCH Aides were trained during the life of the project. Fifty persons were trained in the U.S. for over a year each and an additional 25 persons were trained for shorter periods. Access to basic preventive MCH services was expanded through 58 percent of rural health clinics, 45 percent of which offered child spacing.

Project impact on service delivery and health status was constrained during the life of the project by the ever deepening economic crisis. The MCH and child spacing supply distribution network and the cold chain were plagued by lack of spare parts and vehicles due to the country's financial difficulties. The service statistics system did not work during the last three years of the project (1980-1982) due to an absence of paper.

The sustainability assessment team found project activities and benefits still largely intact in October 1988, though possibly with some deterioration in service quality. The majority of trained MCH Aides were continuing to work in MCH, though some were in a hospital setting. All 18 training schools were still in operation, though three had been converted for the upgrading of MCH Aides to nurse midwives. Preservice training has been increased from 18 to 24 months to permit increased input in family planning and dental health. New MCH Aides were continuing to be trained at the rate of approximately 400 per year.

Coverage for ante-natal and immunization services appears to

⁵This project was initially authorized at \$8.9 million in 1973. Some documents suggest authorization was subsequently increased to \$12.5 million. However, in 1989, A.I.D.'s Project Budget Data System (PBDS) reported a total expenditure identical to the originally authorized figure, i.e., \$8,883.

have expanded since the end of the project. Three Regional Medical Officers contacted in 1988 reported that 80 percent of their outpatient facilities were providing MCH services. A 1987 EPI evaluation found that 50 percent of mainland rural children under one were fully immunized. UNICEF and the Danish Development Agency (DANIDA) are currently providing up to \$20 million annually in financial and technical assistance to support EPI, the essential drugs program, primary health care, and nutrition education --all of which constitute complementary support for the MCH aides trained under the project.

Continuing problems include restricted supervision of remote areas, poor data management, difficulty replacing instruments and drugs for maternal health, and lack of continuing education for MCH tutors and medical officers. Questions about possible deterioration in service quality could not be objectively resolved due to time constraints.

The family planning component was largely inactive during the life of the project. However, in 1985, the UNFPA-supported National Child Spacing Programme was launched. There is now a National Family Planning Programme with its own manager, quite separate from those of MCH and EPI. Also, interest in and use of condoms has increased in the country in recent years due to the increased knowledge of AIDS and its transmission.

2.2 Hanang Village Health Project (1977-1982)

This project was implemented by the Medical Missionaries of Mary, a private voluntary organization, in conjunction with Coordination in Development, Inc. (CODEL Inc.), in the Hanang District of the Arusha region between 1977 and 1981. Its purpose was to develop a viable national model for community-based primary health care, using Village Health Workers (VHWs) and health leaders. These two cadres were to: (a) teach good health practices, (b) treat minor illnesses, (c) support maternal and child health services, (d) supervise environmental health work, and, (e) collaborate with village health committees.

During the life of the project, 95 out of 114 villages in Hanang District participated. One hundred ninety-two persons had entered, and 43 persons completed, VHW training by October, 1981. MCH mobile clinics had been established for twelve villages and medicine boxes for basic curative care provided to 18. A monthly reporting system had been established and childhood nutrition surveys conducted.

A village health worker program was still in place in Hanang District in late 1988, though with somewhat lower levels of activity than during the life of the project. Responsibility for project maintenance was given to the District Council in June 1985, but its role at the village level has been limited by budgetary

constraints on fuel and spare parts. One hundred forty-four VHWS have been trained, of whom 73 are thought to be currently active; of the others, 21 have resigned and 50 only work sometimes. Community support remains vital: the district team estimated during our visit that about 50% of the villages financially supported the VHWS.

Results of the Hanang Project appear to have only minimally influenced the development of a national VHW program. The Hanang project was one of several activities which were reviewed and evaluated by a Tanzania Government team in the early 1980's prior to the design, and implementation of their national VHW program.

2.3 Cancer Control Project (1978-83)

In 1978, USAID provided \$549,000 through CODEL to assist Muhimbili Medical Center (MMC) and Howard University to establish a cancer control program in Tanzania. The project began at a time when few believed that cancer was a problem in Africa and when Tanzania was emphasizing the development of rural health care.

In addition to treating cancer cases, project staff promoted cancer prevention and early detection by: (a) conducting a series of surveys and studies, (b) training health personnel, (c) conducting research, and (d) developing a cancer control network.

Curative objectives were largely achieved by project termination in 1983. A cancer control center had been equipped and was providing diagnosis and treatment and the curriculum of the medical school was improved. The project developed a staff of well trained personnel (four each of physicians, scientists and technologists) in a variety of oncology services for the operation of the national cancer center, even though some left the service following the death of the first project director. A large number of other health workers were also provided continuing education about cancer prevention and treatment and the curriculum of the medical school was improved. Several research studies on skin and liver cancer as well as Kaposi's Sarcoma were initiated. A public education campaign was implemented on the symptoms of cancer, the dangers of smoking and pollution, and the need for an adequate diet. Collection of data from a network of regional and zonal hospitals had become routine as had the maintenance of a cytological tumor registry. However, planned epidemiologic surveys and review of rural hospitals' records were dropped because of limited resources.

Several activities from this project have been sustained. First, the Cancer Control Center at Muhimbili Medical Center has been institutionalized. It continues to be funded by the central government and to provide diagnosis and treatment. Second, the center has continued to maintain a tumor registry. Third, it has attracted donor support to continue research activities. Fourth, health education activities, though limited, are continuing--e.g.,

periodic newspaper articles and other media presentations. Fifth, the center will begin, in the near future, to provide a base of clinical expertise in oncology for the training of residents at the medical center. Lastly, the Tanzanian Director of the center has gained an international reputation and will be a contributor to a WHO manual on cancer treatment in Africa.

2.4 Continuing Education for Health Workers Project (198~83)

In 1980, USAID/Tanzania authorized the expenditure of \$2.206 million to fund a three year project for the continuing education of Rural Medical Aides, MCH Aides, and Health Assistants. The project was to be implemented by the Ministry of Health (Division of Manpower Development and Training), in conjunction with a Nairobi-based PVO, the African Medical and Research Foundation (AMREF) .

The following activities were eventually implemented: (a) overseas training for a core senior staff of seven persons, (b) pilot regional and then zonal continuing education courses (71 in total for 1500 staff), (c) creation of about 40 district medical and health libraries, and (d) construction of a facility in Arusha to house continuing education activities

A planned correspondence course for various staff cadres was not implemented because AMREF had not developed the requisite curricula.

The USAID-sponsored project clearly stimulated demand for continuing education, and significant (but poorly coordinated) activities are occurring at the present time. Four of the seven staff members trained overseas still work in continuing education in Tanzania, including the head of the MOH Continuing Education section. About 40,000 participant slots were scheduled for continuing education for 1988, in about 20 distinct topics. Donor support is high, but the lack of resources for coordinated program management has been a problem.

2.5 Tanzania School Health Project (TSHP) (1979-85)

This project was initiated in 1980, implemented by John Snow, Inc. (JSI) in cooperation with the Ministry of Health, and was to have been completed in three years at a cost of 5.2 million dollars. Activities were subsequently extended to July 31, 1985 without additional funding.

Its objectives were to develop and test a school health program for integration into a national expansion plan prior to the close of the project. Principal activities included: (a) development of a School Health Handbook and curriculum for integration into the existing domestic science curriculum, (b) construction of ventilated pit latrines, (c) improvement of school

water supply, (d) school feeding programs, including gardens, animal husbandry, and/or community cash or in-kind contributions, (e) health screening and first aid for students, through construction of first aid rooms, training of school staff, and provision and resupply of first aid kits, and (f) participant training in the U.S. for five health coordinators.

Activities were to be piloted in 80 schools in the eight districts of Dodoma and Singida regions. About a dozen vehicles were provided, and two staff houses were constructed in Dodoma.

The project achieved most of its objectives for Dodoma and Singida but not its national curriculum and program development objectives. Five participants were trained in the United States, and 156 teachers were locally trained for their first-aid and health education responsibilities. Seventyeight of the targeted 80 schools constructed pit latrines, 63 either built or arranged first-aid rooms, and 23 built shallow wells. Most developed some kind of school garden or feeding program.

A 400 page School Health Handbook was drafted by August 1982, but was not fully pretested during the life of the project, nor was it printed or incorporated into local teacher training. Little progress appears to have been made towards extension of project concepts or materials to the national level.

Limited school health activities continue in the two project regions through a largely intact infrastructure. Latrines and water supply systems are still in use, though in need of maintenance. Some first-aid rooms remain devoted to this purpose, though with inadequate drug supply. The majority of teachers trained in school health are still in place, but those who teach health subjects use a curriculum developed before the project by the Ministry of National Education (i.e., not the project implementing agency.) Four of the five project-trained participants continue to work in the School Health Program. Feeding programs reportedly continue in some areas, at least at harvest time.

The program has become more active at the national level in recent years under the leadership of a former TSHP participant trainee. The School Health Handbook has been revised twice and will be ready for printing as soon as pretest results can be incorporated and donor funding obtained. The active cooperation of agriculture, education and water officials has been sought, and an interministerial National Coordinating Committee has been recently established with greater input from the Ministry of National Education.

2.6 Urban Water Projects (196~1969)

A.l.D. helped support both urban and rural water supply development in Tanzania. During the 1960s, A.l.D. contributed to

two urban water supply projects that improved water quality and distribution within Dar es Salaam and other urban areas. Beginning in the mid-1970s A.l.D. supported more comprehensive rural development projects, such as the Arusha Planning and Village Development project, although the number of village water systems assisted by A.l.D. is not known. Also, the U.S. was a minor actor in rural water supply development, with the Swedes, Finns, Germans, Dutch, Canadians, Norwegians, and Australians playing a more substantial role.⁶

This study focused only on the two major projects co-funded by A.l.D. completed before 1970--the urban water supply projects. We were not able to locate any documentation in Tanzania on these projects, nor were we able to find anyone with personal knowledge of A.l.D.'s specific participation. The histories obtained by the team in Tanzania indicated that the development of the urban water supplies in Moshi and Morogoro, two cities that received assistance from A.l.D. in the mid-1960s, was significant and technically sound. Today these systems are working and providing good quality water due in part to that early assistance. All of the systems have received subsequent assistance from other donors, and have extended coverage as the cities and towns have grown. At the time these activities were implemented, they were an integral component of the country's priorities as indicated by their inclusion in the national Five Year Development Plan of 1965-1969. A.l.D.'s funding represented about twenty-five percent of the total cost of the two projects, with the remaining funding coming from the World Bank and the country's own funds.

The investments made by both of these projects have been well sustained and remain an important reason for the relatively improved living standards which exist in the urban centers of the country. Daily maintenance on these systems has been provided by national sources. The fact that operations are maintained by regional sources of funding, rather than district level funding (and in the case of Dar es Salaam, some national funding), has contributed to the sustainability of these systems. However, for additional capital investments for expansion and for major rehabilitation, all of which required significant amounts of foreign exchange, the Government of Tanzania continues to rely on loans or grants from other donors. Donor cooperation in water supply development has been exceptionally high, with coordination managed by the Tanzania National Water Authority, a well managed and stable organization.

The recurrent costs of each urban water system is financed by governmentally administered and collected user charges. All urban

⁶Daniel Dworkin, Rural Water Projects in Tanzania: Technical, Social, and Administrative issues, A.I.D. Evaluation Special Study No. 3, Washington, D.C.: A.I.D., November 1980.

centers are run on a fee basis. Consumers have always paid for water. There used to be meters for every consumer in Dar es Salaam, as well as public taps. However, to avoid the heavy expenditure on maintenance of meters, a flat rate was adopted which varies by category of user (domestic, commercial, industrial, and institutional).

In the case of Dar es Salaam, user fees go to the National Water Authority, which in turn finances operations. If sufficient funds are not available, the Water Authority submits a proposal for higher water rates for approval by the Ministry of Water. For other urban centers, revenue goes to the Treasury, which then allocates money for regional administration. Prior to 1985, water systems were subsidized since more revenue was spent than was collected. However, a recent rate increase was producing at least twice as much revenue as recurrent cost expenditures in Moshi at the time of our site visit, resulting in a temporary net transfer from Moshi to the national treasury. Similar rate increases in other cities have produced large increases in revenues.

In general, the recurrent costs have not been overly burdensome for the government. The foreign exchange requirements in the recurrent budget of these activities has been viewed as a necessary investment in a significant public service. Technology which could have required large amounts of foreign exchange, e.g., meters, was abandoned.

U.S. - Tanzania bilateral relations were good when these projects were initiated and for most of the ensuing years. The U.S. was interested in supporting activities that were a high priority for the Tanzanian Government. The demand for these water systems was and has remained very high. Virtually all water systems in Tanzania have generated constituents, from individual consumers through the highest government levels.

2.7 Non-mission Health Project Activity

While this evaluation focuses on USAID/Tanzania-supported projects, it is useful to briefly mention the numerous health projects and studies funded by A.I.D. directly from Washington. These include: (a) the Masai Health Services Project which helped to develop a cadre of community health workers (co-funded by the Lutheran World Federation and now totally funded by the PVO); (b) a special evaluation of the Expanded Program of Immunization (EPI) program by Centers for Disease Control (CDC) staff in 1979; (c) a series of nutrition and food consumption studies conducted between 1972 and 1983; (d) an environmental sanitation master plan for training and education which was developed in 1982 with WASH project assistance; (e) an analysis of the impact of agricultural policies on food consumption; (f) a study of the relationship between fertility, mortality, health care and economic development; (g) a study of the economic impact of water projects on

schistosomiasis; and h) a study of the impact of the mass health education campaign of the mid-1970s. With the exception of the Masai health project, none of the other centrally funded activities has been sustained. However, the results of many of these studies have permeated the policy dialogue regarding health, nutrition, water and demographic change in the country, and have contributed to the international knowledge base in these areas.

3. WHAT WAS SUSTAINED IN TANZANIA?

Following the methodology established in the CDIE studies in Central America, the Tanzanian assessment team defined sustainability as the continuation of substantial project activities (outputs) and benefits (outcomes) at least three years after USAID funding had ceased.

In Tanzania, as in other African cases, it was useful to examine separate project components to differentiate aspects of projects that were generally judged to be well sustained from those that were less well sustained or unsustained. The team reviewed each project component and evaluated the status of project activities after the funding stopped. This evaluation was often difficult, since accurate information about many project activities was hard to obtain.

As can be seen from Table 4 project components that were deemed to be sustained included all the urban water projects, the health components of the MCH Aides Training Project, the curative aspects of the Cancer Control Project and the village health services component of the Hanang Village Health Project. The water projects were all continuing to provide services, although maintenance was weak and future demand could not be met with present capacity. The MCH Aides who were trained were still providing health services although there was some deterioration of services. The hospital based cancer control center was fully operational and gaining an international reputation. The village health worker program was still active in many villages in the Hanang District, although there had been significant dropout of trained workers. It should be noted, however, that in all cases, although a substantial portion of the project activities that had been in place during the life of the project were continuing, there were severe weaknesses in subsequent implementation. Even projects that were judged to be sustained were having difficulty continuing to provide activities and benefits.

TABLE 4: SUSTAINED AND UNSUSTAINED PROJECT ACTIVITIES IN TANZANIA

In three cases it was difficult to judge the actual level of sustainability, and the team judged these areas to be "partially sustained". The preventive health education program of the Cancer Control project was continued but at a very reduced level, e.g., occasional newspaper articles authored by former project staff. The Continuing Education Project encouraged the development of MOH continuing education, and some of the staff who received overseas training from the project were working in the field. None of the actual activities that were implemented during the life of the project have continued. However, many other continuing health education activities have evolved with the support of other donors. In this case it was judged that some of the benefits of the demand created by the project did continue. Finally, the local activities component of the School Health project was also judged to be partially sustained. Latrine and water systems were still in use, but needed maintenance; most trained teachers were still in place, but using pre-project curriculum; some first-aid rooms continued, although with inadequate drug supply; and, four of the five project-trained participants continued to work in the program.

The project components that were unsustainable were the family planning component of the MCH Aides project, the epidemiological surveys and record review of the Cancer Control Project, the curriculum development and health screening components of the School Health Project and the MCH mobile clinics in the Hanang Village Health project. While each of these activities was at least partially implemented during the life of the projects, none continued after the USAID funding stopped.

4. CONTEXT FACTORS

Context factors were defined by the CDIE methodology to be those factors that are generally beyond the control of project managers and designers. They nevertheless are likely to be important determinants of project implementation and need to be taken into account by project designers and managers. In a sense these are conditions that good managers must adjust to and may try to influence over the long run.

The analysis that follows reviews the factors that were hypothesized to be related to sustainability (see Appendix A for details of methodology). Hypotheses were tested by use of a chart (Table 5) that assigned a rating of those factors that were deemed to support (+) or undermine (-) sustainability in each project according to the hypotheses. Factors were judged to be related to sustainability if there were more sustained projects/components with positive ratings than negative ratings and among unsustainable projects/components the ratings were more often negative than positive.

In most cases, these context factors are relatively constant for all projects and do not discriminate between sustained and

unsustained projects within Tanzania. However, they provide a country context which can be compared to other countries--with other contextual factors--and provide the basis for comparative analysis across countries. They have been used for the analysis presented in the synthesis report "Sustainability in Africa: A.I.D. Health projects in Zaire, Senegal and Tanzania,"⁷ available from CDIE.

⁷Thomas Bossert, the Sustainability of U.S. - Supported Health, Population and Nutrition Projects in Africa: Zaire, Senegal and Tanzania (Washington, D.C.: A.I.D., 1989)

TABLE 5: CONTEXT FACTORS

4.1 Natural Disasters

It was hypothesized that projects would generally have greater difficulty being sustained when natural disasters occur, especially if the disaster came at the end of the project when national resources would have to be assigned to continue project activities. In Tanzania the most notable natural disaster occurred in 1974/75 when the country faced a major drought. The drought brought significant food aid and this assistance has continued since that time.

The drought itself, however, did not directly affect any of the projects under review since it occurred long before any ended. However, the drought influenced the long term economic conditions of the country (see below).

4.2 Political Factors

The state in Tanzania has three characteristics that were generally hypothesized to be favorable to sustainability. It is a stable, civilian regime that has a firm ideological commitment to providing support for the poor. Since independence, the government of Julius Nyerere and his successor has been based on a strong single party for establishing its legitimacy and for maintaining stability and some degree of popular mobilization. Ideologically committed to an African nationalist form of socialism--with a strong collectivist tradition and commitment to egalitarian principles--the government has been favored by assistance from democratic socialist regimes in Europe, particularly Scandinavia.

In general, since A.I.D. projects target the poor, the ideological commitment of the regime was considered important for the acceptability of project activities. However, in the Tanzanian case, while this factor is favorable for most of the projects, the Cancer Control project, since it tends to serve the elite more than the poor, had to overcome this ideological bias to be adopted, implemented and sustained.

The state in Tanzania, despite its strong ability to mobilize the population and to implement some programs, is still, as in most of Africa, an extremely weak institution, lacking capacity to carry out many of the functions that states assume in other parts of the world. While the Tanzanian state has been more effective than most in redistributing wealth, it has done so at the cost of efficiency and has experienced many economic setbacks because of poor implementation of government programs. Furthermore, the government has been weakened by its military operations in Uganda from 1979 to 1982, when it responded to an invasion by troops in support of General Amin with an occupation force that deposed him.

Governmental decentralization was initiated in 1974. This decentralization shifted responsibility for implementation of

government programs to the regional and district levels; however, it did not provide the financial means for the districts to collect taxes in order to provide revenue to continue programs. While in the long run decentralization may provide a more conducive basis for sustainability, in this case it had a negative effect on some of the projects under review.

It appears likely that the general weakness of the state capabilities in Tanzania, related to the economic weakness of the country, is an important contextual factor contributing to the weak levels of sustainability that were observed in this study. It is not clear from this analysis that stable or civil regimes are particularly important for sustainability of project activities, and we found some ambiguity about the importance of ideological commitment to the poor.

4.3 U.S.-Tanzanian Bilateral Relations

To a certain extent, bilateral relations between the U.S. and Tanzania have been dictated by the political and economic strategies which Tanzania has followed. Relations between the two countries were generally warm until after the 1980 U.S. elections, with the possible exception of the emphasis which A.I.D. placed on population and family planning during the 1970s. Since 1980, Tanzania and the U.S. have differed on many economic and southern Africa issues and the U.S. in 1984 invoked the Brooke Amendment which prohibited new bilateral assistance, with the possible exception of Food Aid.

Although the Brooke amendment does not appear to have directly affected the only relevant health project underway at that time (School Health),⁸ it may well jeopardize the development and sustainability of future projects as well as A.I.D.'s overall ability to work in Tanzania. This is due, in part, to the reluctance of Tanzania to request assistance from the U.S. for activities requiring long term technical and financial support, as in the case of the MCH Aides Project, given their perceived unreliability.

4.4 Socio-Cultural Context

While there are a number of different ethnic groups in Tanzania, there are no major cleavages in the body politic for ethnic reasons. The country has not experienced the ethnic problems which have occurred in many other African countries, e.g., Uganda, Kenya, Nigeria, Sudan, Ethiopia, and Zimbabwe. Some parts of the

⁸Activities were suspended in this project throughout 1984 but due to alleged financial improprieties rather than to Brooke. The Zanzibar malaria project was also underway, but was not studied for this report

country benefitted from western education prior to others, such that there are more persons from the northern mountain areas in senior government positions than would be expected according to their number in the population.

As in many countries of Africa, women do not have the same status as men in the "modern" economy, and they do not dominate trading activities as is the case in many West African countries. However, given the country's significant investment in primary education, women are obtaining some parity with men. According to data from the World Bank, 84 percent of primary school aged women are enrolled in primary school and the same figure for men is 91 percent. At the secondary school level, however, men are still favored with 4 percent of the relevant age cohort enrolled and only 2 percent of women are so enrolled.

The coastal areas of the country, including the islands of Pemba and Zanzibar, have a strong Arabic and Islamic tradition. This cultural heritage has meant that the role of women, the value of modern education, and social development in general has been less rapid in these areas than throughout the country as a whole. On the other hand, these areas have benefitted from the economic development surrounding Dar es Salaam and Tanga, a major port and manufacturing town.

With 75 percent of the population still in rural areas, Tanzania is nevertheless showing strains of rapid urban growth. Urban areas are growing at over 11 percent per year.⁹ The government has historically favored rural development over urban areas; however, it has only been moderately effective in attaining a level of equality between urban and rural areas.

It was hypothesized that social conflict and inequalities would be poor contexts for sustainability. Since these factors have been generally favorable in the context of Tanzania, it is not clear what impact they have had on the levels of sustainability attained by the projects.

4.5 Economic Factors

It was expected that economic growth and a growing health budget would be conducive to sustainability. With greater resources in general and for the health sector in particular, it was hypothesized that it would be easier for governments and for beneficiaries to provide funding (or costrecovery payments) to replace the funding that USAID had provided.

In Tanzania, we found the opposite conditions. Per capita income has declined by about 1 percent per year in Tanzania since

⁹World Bank, Social Indicators of Development, 1988.

1975 with the steepest declines occurring during the first half of the 1980s. A number of factors have contributed, including: (a) agricultural policies discouraging private initiative; (b) a poorly conceived industrialization policy; (c) an adverse international economic climate (two oil price increases, a significant decline in Tanzania's terms of trade and a major recession in the early 1980s); (d) a war with Uganda in 1979; and e) continual economic pressure upon the Asian ethnic minority.

Given the government's desire to improve education and health standards and reduce regional inequities, the country embarked on a development strategy that was unsustainable without greater priority being placed on national productive capacity and economic infrastructure. By the early 1980s, the country was insolvent. Revision of macroeconomic policies was required along with a strategy to expand exportable agricultural output. These revisions were delayed for several years due to differences in the positions taken by President Nyerere, the IMF, and the World Bank. However, by early 1986, the country and these institutions had worked out an Economic Recovery Program whereby the Tanzanian Government would implement policies to reduce government intervention into the economy and make other reforms on government expenditure, exchange rate, and credit expansion policies. In addition, it was hoped that by instituting these and other reforms, the country's chronic trade imbalance would improve.

During this period the health system has become increasingly underfinanced. In terms of real per capita expenditure, the MOH has had a decline of over 45 percent from about 45 (1980) shillings per capita during the 1974-79 period to about 25 (1980) shillings per capita from 1984 to 1987. Real per capita pharmaceutical imports declined by about 65 percent between 1974-79 and 1981-85 from 17.4 (1980) shillings to 6.4 (1980) shillings. In addition to the aforementioned decline in financial support based on constant per capita Tanzanian shillings, the decline in the value of the shilling relative to international currencies between 1975 and 1985 is also included, the scope of underfinancing is even more profound. This reduction in financial support occurred during a period when the numbers of health facilities and trained manpower was being expanded by donor financed health system projects.¹⁰

4.6 Private Sector

Since the Arusha Declaration, in 1967, private health facilities and practitioners have been under pressure from the Tanzanian government to terminate their practices. Modern private

¹⁰David W. Dunlop, Underfinancing of Social Services in Tanzania: The Case of Primary Health Care, Paper Prepared for the Office of Evaluation, PPC/AID, February 1984, and Background Report, DWD, July 1988.

physicians were particularly singled out for harsh government treatment since the private practice of medicine was antithetical to the ideology of social equity as implemented by the state during that period and was officially banned effective July 1, 1980.

In an effort to expand the number of hospitals under its jurisdiction, the Tanzanian government passed legislation in 1977 to take managerial control from the mission hospitals and other facilities with the policy proviso that the hospitals would no longer charge for services rendered and would be subsidized according to the same criteria as government facilities. This act led to fourteen former mission hospitals becoming designated district hospitals (DDHs). However, this policy was quietly rescinded after a review of these facilities showed a substantial increase in utilization. Even at that relatively good time in the financial life of Tanzania, the budgetary implications of significantly increasing the number of hospitals and beds being fully subsidized overwhelmed even the most optimistic planners.

For a number of years, the pharmaceutical industry sent detail personnel throughout Tanzania to discuss their products with individual physicians posted as district or regional medical officers or hospital "house men". This practice was apparently profitable as long as such individuals had the decision-making responsibility for placing drug orders. Since the early 1980s, however, after the government procurement of drugs had dropped to a very low level, and an essential drugs program was initiated with assistance by the Danish government and UNICEF, the previous behavior of the industry was clearly no longer profitable since the locus of decision making had been moved to the central level and had been constrained to a limited list of items. It is unclear what the cost savings have been from this activity, but they are undoubtedly substantial. It is also unknown how mission hospitals procure drugs and whether the pharmaceutical industry still makes regular visits to these facilities.

Government policies toward the private sector appear to have facilitated sustainability, but effects would have been adverse had they been enforced as written. The apparently low level of staff turnover among A.L.D.-trained MCH and School Health personnel is almost certainly due in part to the government's status as the sole health sector employer. Reduction of private sector drug sales to government clinics clearly cut recurrent drug costs and made them more sustainable. The prohibition on user charges might have been a serious impediment to the Hanang Village project but for the government's willingness to allow a PVO to experiment, while the Cancer Control Project might never have started if it had been fully subjected to the government's primary health care policy.

4.7 Implementing Institutions

The characteristics of institutions are generally not under

the control of project designers and implementors, although the choice of appropriate institutions may be. It was hypothesized that institutions that have stable and skilled leadership, highly skilled officials throughout the institution, decentralized authority structures, and horizontally integrated, rather than fragmented, administrative relationships, would be more conducive to sustainability. It was also expected that institutions with organizational goals that conflict with the objectives of A.I.D. projects would be less likely to be sustained.

Only one of the six projects reviewed--the MCH Aides project--was fully integrated into the overall development of the Tanzania health care delivery system, with multiple divisions within the MOH playing important roles. The urban water projects were implemented under the coordinating management of the National Water Authority and were fully integrated into that system. The School Health Project was implemented by a U.S. contractor and had minor integration with the MOH, primarily at the local/peripheral level. The remaining three projects were implemented by PVO's and had significant association with the MOH only at the peripheral level, or with relatively narrowly construed programmatic units within the MOH, resulting in highly fragmented efforts. This fragmentation clearly contributed to their low levels of sustainability.

Leadership within and across implementing institutions was relatively stable throughout the period under review. The only project experiencing significant turnover of top leadership was the School Health Project. Thus we judged that leadership did not appear to differentiate sustained from unsustainable activities. Recently, reflecting the weakness of the state in general associated with low revenues, salary levels have been declining in real terms and members of the top Ministry staff have left. This may have implications for the sustainability of future projects.

Like leadership, skill levels appeared relatively strong and uniform across implementing institutions and thus also failed to differentiate among sustained and unsustainable projects.

Although the Ministry followed the general governmental pattern of decentralizing to regional and district levels, these levels had minimal revenue generating capacity and were not given sufficient financial resources to implement project activities. Thus decentralization did not appear to contribute to sustainability for projects whose funding was dependent upon government budget allocations. However, where local private cost recovery was involved, i.e., the Hanang VHW Project, decentralization appeared advantageous for sustainability. Most likely decentralization effects were masked by low levels of funding generally, and the relatively low degree of sustainability of all projects.

We concluded that the only characteristic of implementing

institutions that appeared associated with sustainability was the selection of the implementing institution itself. Projects most closely and most broadly integrated into the MOH were more frequently sustained.

4.8 Donor Coordination

It was felt that good coordination among donors--especially H they supported, rather than competed, with each others' efforts, and provided necessary follow-on funding for some project activities--would be conducive to sustainability. In Tanzania, donor coordination was purposefully directed by the government and was generally very supportive.

Since 1971, the Tanzanian government has coordinated the many donors interested in working in Tanzania. The most important effort was launched in 1971 to extend the delivery of health care throughout rural areas. During the 1980s the Nordic countries, in conjunction with UNICEF, have continued to work closely together to finance such health activities as immunization programs, other child survival activities, and an essential drugs program. They have also collaborated to finance evaluations of primary health care programs (1984), MCH services (1982), and the entire health sector (1979), and to support related planning studies.

Continuation of MCH services has depended on certain essential supplies, provided by Denmark under the Essential Drug Programme. The Expanded Programme of Immunizations, a major MCH component, has been funded by UNICEF and others. Continuing Education courses have been largely donor supported, though, as noted in Appendix F, the central coordinating function for continuing education that USAID helped to establish in the MOH, via the Continuing Education for Health Workers project (1982-1983), had not yet been fully implemented at the time of our field visit in 1988. A MOH plan to establish that coordination function was however, under discussion by the Ministry and donors that supported continuing education activities. Cancer radiation equipment for the Muhimbili Medical Center has largely been donated, though lack of funds for transport have constrained importation. Donors have also continued to support expansion of urban water supply systems (though their inputs do not appear to have been critical for maintenance of the original USAID-supported components). Hopes for reviving the School Health project, moreover, largely rest on donor support. That support will be determined by the MOH planning in conjunction with the MONE to develop a more coordinated approach to School Health than was implemented via SHP. Donor cost assumption - while not fully under USAID's control - appears to have been influenced by the donor coordination undertaken by the MOH that occurred throughout the life of the MCH Aides project but was generally lacking during the implementation of the School Health and Continuing Education projects.

The U.S. and the Tanzanian government agreed that USAID's role was to develop an MCH staff cadre to provide MCH and FP services within the context of rural health centers and dispensaries, and, given that objective, constructed a set of training schools, developed the curriculum, developed a training staff cadre to conduct the training, and supported the training cost of the MCH Aide cadre. Other donors, such as Sweden, were asked to expand the number of rural health centers. A MOH planning unit was established with further donor support to coordinate these development activities among the donors and to conduct relevant analyses to ascertain progress and problems encountered in achieving the national objectives.

4.9 National Commitment

National commitment was defined as the consensus among important decision-makers and interest groups in the Tanzanian health sector that the goals and objectives of a project are a national priority. Alternatively, the presence of major conflict among decision-makers or interest groups over the goals and objectives of the projects is taken as evidence of a lack of national commitment. This issue is distinct from whether or not the government applied national funds to support these objectives -- an issue treated in our project financing analysis.

It was clear in Tanzania, where a strong national ideology had a generally broad consensus among significant health sector actors, that the commitment to primary health goals was strong. There is no evidence of major conflict over this commitment.

However, the lack of commitment by the government to the Cancer Control Project did not prevent its sustainability. The government was relatively passive rather than in opposition to this activity, but it was clearly not consistent with PHC objectives. The fact that it was sustained in spite of inconsistency appears to be a testimony to the government's inclination to continue activities that have developed strong constituencies during their lifetimes.

And, the fact that projects had goals compatible with those of the national government did not guarantee their sustainability. PVO projects with goals similar to those of the national government were frequently not sustained, or not sustained at very significant levels. Thus national commitment was not able to overcome all other sustainability - threatening project factors.

5. PROJECT CHARACTERISTICS

In contrast to the contextual factors discussed above, project characteristics are factors that typically can be altered and controlled by project designers and managers with much greater latitude. Since these factors are more controllable, the lessons

from this section should have specific application in judgements on project design and in evaluation of on-going projects.

Table 6 presents a summary of the findings on project characteristics.

As in Table 5, hypotheses were tested by use of a chart (Table 6) that assigned a rating of those factors that were deemed to support (+) or undermine (-) sustainability in each project according to the hypotheses. The ratings were then summed for each category of sustainability (sustained, partly sustained, and unsustained) as seen in columns labeled "Score". A factor was considered to be related to sustainability if it attained a score of more than half the projects for sustained projects and less than half for the unsustained projects.

Table 6: Project Characteristics

In the following section we review each project characteristic to discuss the evidence and draw conclusions about its relationship to sustainability.

5.1 Project Negotiation

Previous studies in the CDIE series found that projects negotiated in a mutually respectful process of give-and-take were more likely to be sustained than projects that were perceived by participants as having been imposed by A.I.D.

It was difficult to test this hypothesis in Tanzania since there were few informants available who had participated in the negotiation process for any of the projects. We were able to ascertain that negotiations for the MCH Aides project were generally cordial, however the family planning component appeared to have been imposed by A.I.D. This was due, in part, to the fact that the A.I.D. population account provided at least fifty percent of the funds for implementation. The other projects implemented later, i.e., Cancer Control, Hanang Village Health and Continuing Education, were OPG projects where the tanzanian government was not actively involved in project negotiations and remained a passive observer of the project.¹¹

¹¹An Operating Program Grant (OPG) is an agreement under which A.I.D. provides funding to a private voluntary organization (PVO) to carry out an activity or project proposed by the PVO. Although the PVO must be registered in the country in which they are working, most frequently the project is carried out independently from any government participation or involvement.

5.2 Institutional and Managerial Characteristics

Four characteristics of the institutional structure of each project have been theoretically linked as being important for the sustainability of project activities and benefits: (a) integration of the administrative system (i.e. horizontal rather than vertical programs); (b) managerial leadership; (c) administrative systems and training as part of the project activities; (d) implementation with private voluntary organizations (PVO).

5.2.1 Integration of Administrative System

Projects are vertically organized if their administrative hierarchy is separate from the usual national implementing agency, or forms an autonomous unit within the existing structure, and if this administrative structure has its own narrowly defined goals and objectives. Autonomy exists if there is no clear chain of authority which involves required communication and coordination between project administration and various units and levels of the normal administrative structure.

In contrast, horizontally integrated management structures dovetail with the existing administrative structure of the implementing institution. This serves to draw upon and foster the existing expertise in substantive areas, avoid duplication of effort, enhance communication among relevant agencies and offices, and encourage the full integration of project activities into sectoral plans and priorities.

It was hypothesized that those projects which were horizontally integrated into the administrative structures of the implementing institution were more likely to be sustained after the termination of external funding.

This hypothesis was strongly supported by the Tanzanian projects. Projects that were integrated from the beginning into the established entities of the MOH--the normal administrative structure, were sustained, while those which were vertically run by PVO's--who were outside the normal administrative structure, were not. All components of the MCH Aides project were broadly and deeply integrated into the MOH. The FP component, however, was a low valued component from the GOT perspective. It could not overcome this lack of commitment, i.e., it failed to generate a constituency during the life of the project, and thus was not sustained in spite of being well integrated. Water projects were also well integrated into the structure of their normal implementing institutions and were well sustained. The School Health Project was implemented by a U.S. contractor working with regional levels of the MOH. The component normally within the purview of the MOH, i.e., the local activities component, was partially sustained. However, the curriculum development component was implemented apart from its normal implementing structure, the

MONE, and it was unsustainable. It is only now that the MONE is becoming involved and prospects for sustaining that activity now are emerging. The Hanang Village project was sustained at the village level where it was integrated with the normal administrative implementing agency; however, despite being integrated at the district level, it was not well sustained. Again, this was a PVO project under an OPG and did not have commitment from the government at the beginning. Insofar as it has developed a constituency it has achieved some elementary level of sustainability. The MCH mobile units were costly and unable to develop a constituency and were not sustained.

5.2.2 Administrative Leadership

It was expected that well qualified and stable administrative leadership would be an important factor in project sustainability. However, little pattern was seen with regard to administrative leadership and systems development. A stable management structure and trained personnel, though present, do not appear to have done much to sustain the School Health and Continuing Education projects, while the apparent lack of management training in the MCH Aides and Cancer Control projects does not appear to have affected their sustainability. On the other hand, this training was being provided within the MOH via non-A.l.D. activities.

5.2.3 Administrative Systems and Training

While it was expected that projects which included components on the development of appropriate administrative systems and managerial training would have developed a stronger institutional capability for sustainability, our cases did not find evidence that this characteristic affected sustainability. Projects without this systems development or training were sustained, while, the School Health Project which had some administrative training was not able to sustain activities at the national level.

5.2.4 PVO Implementation

It was felt that the choice of a PVO as implementing agency might have an impact on sustainability. However, it was difficult to compose a useful hypothesis about the positive or negative effects of this choice. It could be argued that PVO implementation would undermine sustainability since the PVO would have difficulty gaining alternative funding for major project activities. In addition, in countries like Tanzania and Zaire where competition between church and state is continuing, PVO implementation of A.l.D. projects may exaggerate that conflict. Alternatively, PVOs may provide a stronger and more flexible administrative structure and may allow implementation of components --such as cost recovery -- which are prohibited in public institutions.

In Tanzania, we found conflicting evidence on this issue. The

projects that were implemented by PVOs did have some advantages. The Cancer Project was implemented by a private sector institution within the context of the country's major medical center, MMC, without having to overcome government objections at the time of initiation. The fact that it was implemented by a PVO did not prevent later governmental funding support. In addition, the Hanang Village project was able to experiment with user-fees for village worker services which supported the continuation of some project activities after USAID funding ended.

On the other hand, the Hanang project was unable to be incorporated into the existing government structure for many reasons, including a number of costly project components such as mobile MCH teams and the relatively vertical manner by which the activities were originally implemented by the PVO involved. The Continuing Education project also seemed to suffer from the PVO participation, which left it a vertically run project isolated from the normal Ministry structure. This problem was also exacerbated by the physical distance and related logistical and communications problems which existed between the implementation site (Arusha region) and the location of the MOH, Dar es Salaam.

In general, PVO implementation was associated with administrative systems that were vertical and isolated --a characteristic discussed above in section 5.2.1 that is not conducive to sustainability. However, the PVO implemented projects have all influenced the development of Tanzania's health system even when they were not well sustained. The health community in Tanzania has reviewed and evaluated PVO activities to ascertain how and in what manner the idea or technology can be reconfigured to become more sustained in the future. This is particularly evident in the cases of Continuing Education and the Hanang Projects (as well as the non-PVO implemented School Health project), all of which have influenced subsequent national programs. What may be most important about PVO implementation may be the lack of national commitment and the lack of negotiation.

5.3 Financing

Four factors of project finance were evaluated for their impact on sustainability: (1) progressive absorption of project costs by the national government budget; (2) recurrent demand for foreign exchange; (3) trade-offs among government priorities; and (4) cost recovery.

5.3.1 National Absorption of Project Costs

In other country studies it was found that projects were more likely to be sustained if progressively larger portions of their funding was provided by the national budget during the life of the project. Inclusion of project activities in the national budget prior to the end of project, appear to make it easier for the

government to continue funding than it would if it had to absorb all project costs at once.

Although the Tanzanian government generally assumed all salary costs as soon as individuals involved were trained, it did not usually assume the recurrent costs of drugs, transport, and routine maintenance. In the case of urban water services, the government did provide heavy subsidies via direct budget support prior to the most recent increases in cost recovery. Except for the urban water projects and the Cancer Control activity, other sources of funding (municipalities, cost recovery, or other donors) absorbed most of the recurrent costs for the projects which were sustained.

We concluded therefore that this factor alone was not determinant for sustainability. However, the provision of salary funding, along with other sources of funding, may have been important for sustainability.

5.3.2 Foreign Exchange Demand

Demand for foreign exchange is usually a particularly severe financial constraint on national budgets. The scarcity of foreign exchange often forces governments to choose priorities for importing products, especially in the public sector, and to impose import limitations on the private sector. We expected therefore, that projects which impose a long-term recurrent demand for large amounts of foreign exchange would be less likely to be sustained.

Projects dependent on imported drugs and/or fuel have suffered from Tanzania's severe foreign exchange crisis, making it difficult for affected activities to continue without donor support. Examples include: MCH service delivery (dependent on drug supplies), School Health supervision (fuel, spare parts), and the Hanang mobile clinics. The Cancer Control project successfully adapted to foreign exchange constraints by avoiding chemotherapy, since radiation therapy has lower recurrent foreign exchange costs. To date, other donors have been willing to support these costs, due in part because this activity has provided a regional laboratory to ascertain how to treat cancer in a resource poor environment, and because it could provide training to other regionally based personnel.

Despite these effects, it does not appear that the foreign exchange requirements, by themselves, discriminated between sustained and unsustainable projects. Although two of the four sustained projects had high recurrent foreign exchange requirements for drugs or transport, they were sustained; while half the projects that were unsustainable had low foreign exchange requirements (see Table 6).

5.3.3 Trade-offs Among Government Priorities

Governments must choose among projects and activities when they distribute scarce national funds. It was expected that if an AID project required significant shifting in government funding from other priority programs that it would be less likely that the project activities would be sustained.

Most of the projects supported by AID did not require significant shifting of funding from other priorities. The Cancer Control project activity did require national funding, however, it does not appear to have been a significant burden. The School Health project may have suffered from competition with other priorities at the district level after financial responsibility for these activities was decentralized. However, in general the project activities did not require major commitment of funding to be shifted from other activities. Since this factor was uniform for all projects it did not distinguish sustained from unsustained projects.

5.3.4 Cost Recovery

Projects which recovered costs directly from the beneficiaries were hypothesized to have greater potential for sustainability. This alternative source of revenue, coming as it does from those who would demand the service, seems a stable means of supporting the continuation of project activities, even if it does not cover all costs. The Tanzanian case supports this hypothesis, and a more complete test of the hypothesis is underway in Tanzania at the present time.

Cost recovery via user charges has been particularly significant in the urban water projects. Since 1985, many urban areas have increased fees significantly and in some cases a surplus has been generated. Cost recovery was also important in the Hanang Village Project, but it remains an unanswered (albeit researchable) question whether those communities which introduced fees during the project have continued to sustain VHW services to a greater degree than those communities which did not (or did not subsequently). The latrine and feeding programs of the School Health Project were supported by beneficiaries and were partially sustained. Finally, the inclusion of cost recovery in other project service components initially supported by A.I.D. did not occur during the life of the project. However, increasing interest by the government and use of cost recovery in the private subset of the health sector has led to a major policy review of this financing mechanism in Tanzania.

5.4. Content Aspects

Project content is discussed in terms of the following three factors: (a) project design; (b) presence of a training component; and (c) technical assistance.

5.4.1 Project Design

We were able to find information on three central aspects of project design which were hypothesized to have a relationship to sustainability: the length of project implementation, size of project budget and whether the project created a demand for services. We were unable to obtain information on other aspects of project design--such as clarity of goals and objectives--which were analyzed in other studies.

a. Length of Implementation Period

It was expected that projects which were implemented over a long period would be more likely to be sustained because they would have greater opportunity to build institutional support and administrative routines, would gain constituencies among beneficiaries and be better able to demonstrate impact.

The Tanzanian case provides mixed evidence for this hypothesis. The MCH Aides Project was of long duration, and the MCH component was sustained while the FP component was not. The water projects and the Cancer Control project were both implemented over a period of approximately five years. The water projects were well sustained while some components of the Cancer Control project were sustained and others not. On the other hand the shorter projects did tend to have fewer sustained components. What is not clear from our analysis in the case of multicomponent projects, is whether each component of these projects was present throughout the life of the project. Further, a better definition is needed of what constitutes a long implementation period.

b. Size of Project

We expected that projects with small budgets would impose less requirements for national absorption of project costs and therefore be more sustained. In Tanzania, as elsewhere, we found no evidence to support this hypothesis. Projects with large and small budgets had components that were sustained and others that were not sustained.

c. Project Creates Demand for Services

Projects designed to produce visible and desired benefits and generate demand for services from beneficiaries were expected to be more often sustained than those not creating demand. It was clear in Tanzania that the creation of demand for services was related to sustainability. The project benefits were visible to important beneficiaries for all the sustained projects. The water supplies, MCH Aides, Hanang village workers, School Health latrines were visible and perceived as important benefits by the local communities who were beneficiaries. The curative cancer center was a benefit for the elites it served. On the other hand, the

unsustained family planning activities, epidemiological cancer studies, school health curriculum did not provide visible benefits to the beneficiaries. The Tanzanian evaluation team found that this characteristic, along with project effectiveness, would be better conceptualized as "constituency development", as is discussed below.

5.4.2 Technical Training

In other studies, projects with strong technical training components tended to be more sustained than those which did not include training, especially if those who were trained in the project had enhanced prospects of finding salaried positions at the end of their training.

Virtually all of the projects (with the possible exception of the water projects) included major training components. Many of the direct beneficiaries are still in place. While in some senses obvious, the separate effect of training on sustainability could not be objectively measured in these projects because all were affected.

5.4.3 Technical Assistance

Technical assistance is often a key element in project activities. It was hypothesized that projects which had effective and long-term technical assistance would be more likely to be sustained than those without technical assistance.

It was difficult to determine the quality and length of time of technical assistance for all projects. However, the evaluation team found that almost all major activities did benefit from some level of technical assistance. Since most projects had this characteristic we were unable to attribute sustainability to this factor.

5.5 Community Participation

We expected that projects which successfully promoted significant levels of community participation and responded to community-defined demands would be more likely to be sustained. An assumption of this hypothesis is that community demands are considered in decisions to continue project activities. In addition, projects which engage meaningful community participation might be more effectively implemented and more likely to generate benefits.

The Tanzanian case offered insufficient evidence to support this hypothesis. Only two of the project components in Tanzania involved significant community participation: the Hanang Village health services component and the community activities of the School Health Project. Both of these project components were

sustained, however other sustained and partially sustained projects had no community participation.

It is important to note that the components with participation were also ones with significant community contribution to project financing. These factors may be interrelated, as was found in other African cases.

In our discussion of constituency development below we touch on some other ways to conceptualize this issue which may have more meaning for sustainability.

5.6 Project Effectiveness

Effective projects were defined as those with a reputation for achieving expected goals and objectives with a relatively efficient use of resources. It was expected that effective projects would be seen to have sufficient benefit to be continued, while ineffective projects would be more likely to be abandoned when external funding stopped.

It was difficult to determine the perceptions of effectiveness for all the projects under review. Three of the sustained project components (Water, MCH Aides, and Cancer Control) were viewed as particularly effective by national decision-makers, while other projects appear not to have been rated in this way by these same elites. As noted below, however, other projects appear to have been viewed as effective by other constituencies.

The Tanzanian evaluation team felt that the concept of constituency development, discussed next, was more appropriate than project effectiveness as a determining factor for sustainability.

5.7 Constituency Development

As a concept that combines project effectiveness and demand creation, among providers as well as beneficiaries, constituency development requires the building of a strong base of political or personal support for project activities among constituencies which have influence over decisions to continue project activities--sometimes within the government, among health providers or among direct beneficiaries. Constituency development is a broader issue than perceived effectiveness or demand creation because it requires strategic identification of target audiences and a deliberate effort to involve key constituencies in project design and implementation.

All the sustained project components achieved significant levels of constituency support during the life of the project. As we found in the discussion of demand creation, beneficiaries were important constituencies for these projects. In addition, the providers in the Cancer Center and the MCH Aides themselves were

important pressure groups for sustaining these activities. Even the Continuing Education Project, which was not sustained in the form that was implemented, was so effective in creating a constituency among health worker cadres that similar activities have continued with support provided by other donors. The government has developed a plan to further support and coordinate these educational activities.

Unsustained project components, such as the family planning component, the curriculum development of School Health and the Hanang mobile clinics, failed to gain sufficient constituency among either providers or beneficiaries. It is useful to note that in the case of the curriculum development component, the project may have "targeted" the wrong constituency for its sustainability since during the life of the project it failed to gain support among the decision-makers in the Ministry of Education who would be ultimately responsible for maintaining a school-based program.

6. SUMMARY OF FINDINGS

In this section we review the major contextual factors and project characteristics which were found to be related to sustainability in the Tanzanian case.

6.1 Context Factors

Since context factors tended to be constant across all projects, we were generally unable to find a relationship between project sustainability as it occurred in Tanzania and specific context factors. Nevertheless, for comparative purposes it is important to underline some of our findings.

First, we found that even for those projects which had significant sustained components, economic and political factors were so weak that even modest levels of sustainability were threatened. These factors were pervasive enough to clearly limit the ability of the country to maintain project activities without donor funding and related logistic and administrative support.

In particular, the team found the economic decline of the country and the declining per-capita health spending to be a threatening environment for sustainability. The government simply has few resources to distribute, making it difficult to move resources toward covering costs that have been carried by foreign funds. Limited per capita income also threatened modest cost recovery efforts. The lack of foreign exchange made basic transport and drugs unavailable when donor funding stopped.

The Ministry of Health reflects the general financial weakness of the state. The government, while a civilian stable regime with a strong commitment to the poor, has not been able to allocate sufficient resources to implement and/or sustain effective

programs. Hobbled by declining revenues, declining salaries, and the loss of top administrators, the MOH is increasingly unable to implement health programs.

Nevertheless, the broadly based political consensus on ideological commitment to the poor is particularly strong in Tanzania. Unlike the other African cases, but similar to the Central American cases, this commitment may have been important in overcoming some of the strong economic, political and institutional limitations of the Tanzanian context.

Tanzania has also benefitted from relatively well designed and implemented donor coordination. A large number of donors have provided a continual base of support to the health sector priorities of Tanzanian government. Further, donors have supported each other's programs and have provided follow-on funding for important activities when other donor support ended.

6.2 Project Characteristics

This review found the following project characteristics to be related to project sustainability:

- integration of project activities into on-going administrative structures - vertical projects were not well sustained
- government budget allocations and/or cost recovery mechanisms contributing to financing
- project designed to produce visible outputs and create demand from health beneficiaries or health providers
- project viewed as effectively achieving objectives

These last two factors may be better conceptualized by a wider concept of "constituency development" which involves the development of demand and the perception of effectiveness among important constituencies (both beneficiaries and providers) who have influence over decisions to continue project activities.

7. POLICY CONCLUSIONS

Lessons from the Tanzanian projects suggest that USAID consider sustainability of health projects in a long-term perspective. The weakness of sustainability in a declining economic situation, with weak state capacity and weak implementing institutions requires significant on-going assistance from donors. USAID should develop a general long-term policy for African countries which assures funding through a period necessary for developing the economic, political and administrative infrastructure to provide a viable basis for sustaining project activities.

It is also particularly important that the kind of coordinated donor support that was found in Tanzania be used as a model for other countries.

Even in difficult contexts, however, there are some choices that project designers and implementors can make that appear from the Tanzanian case to favor sustainability:

- Projects should be integrated into established administrative structures and not be developed as vertical programs.
- Design projects so that national sources--budgetary and cost recovery mechanisms--provide a high level (or increasing level) of project funding throughout the life of the project.
- Efforts should be made to demonstrate effectiveness and create demand among key constituencies able to influence decisions that would continue project activities when USAID funding stops.

APPENDIX A

1. METHODOLOGY

The methodology for this study was a modification of the methodology developed for the two Central American cases (Honduras and Guatemala) in the CDIE series. The objective of this series has been to provide a comparative analytical frame work so that sustainability could be systematically examined in a variety of contexts and over a long historical period, to test the relationship between sustainability and a variety of factors that were hypothesized to have an influence on sustainability.

Since this series is one of the first to address the issue of sustainability, it was necessarily an exploratory effort from the beginning and it envisioned adaptation and evolution of the methodology in order to accommodate both the growing knowledge base about sustainability and the different conditions that each country study would find. In addition, different teams of professionals, with different backgrounds, were used in each country -- bringing varied perspectives, insights and interpretations to bear on the evolving methodology.

Nevertheless, a core methodology has guided all of the efforts in this series.

The first question to be asked is: how do we know if a project is sustained? What is it that we expect to be sustained? Ideally, we would like to see the health benefits, such as reductions in specific diseases or general improvements in health levels, that the project produces to be sustained after the Yahoo of the project. If the project activities can continue to produce future benefits, then we would like to see these activities also continue. In only a few cases -- such as the eradication of small pox -- are health benefits achieved that do not require continuing activities for benefits to spread to subsequent generations.

However, it is difficult to determine what benefits were achieved by most health care delivery activities. Most of the projects A.l.D. supports do not in themselves produce measurable benefits, except in rare cases of experimental field studies. The work of an auxiliary nurse may affect the health levels of her community, but current statistics are not likely to demonstrate that impact. In most cases, we have to assume that the activities of a project produce expected health benefits and that continuing the activities of the project would continue the benefits and thereby in some sense sustain the project. Nevertheless, there are clear cases where project activities are notably not producing any benefits -- for instance construction of latrines that are not used.

For the five country studies, the framework for analysis was a systems analysis which identified a central system around each

A.l.D. project. The analysis examined: (1) the conditions in the health sector before the project began; (2) the goals and objectives of the project; (3) the inputs in funds, materials and technical assistance provided by the project; (4) concurrent activities by the national government and other international donors; (5) the implementation process of the A.l.D. project; (6) project outputs in terms of human resources, physical constructions, and institution building; (7) project outcomes: the health benefits gained by the national population; (8) the status of outputs and outcomes at least 2 years after the project terminated; and (9) longer-term and unintended consequences of the project.

Project (or project components) were considered to be sustained if project activities and benefits continued at least three years after the life of the project. Project outputs include the trained personnel, such as non-professional village level health workers or professional sanitary engineers; the physical infrastructure, such as hospitals and water systems; and the institutional systems, such as training schools, malaria and water and sanitation agencies, created during the project. Benefits (project outcomes) are the intended or unintended positive impacts of the activities for the health of the national populations. In most cases actual project benefits could not be determined; therefore, we expected that continuing activities were likely to have produced continuing benefits unless there was reason to believe that conditions which might influence the effectiveness of those activities had changed.

We examined both immediate outputs, those activities like water systems or trained personnel which were created during the life of the project and were likely to produce immediate benefits; and replicating outputs, the institutions which reproduce the immediate outputs, such as construction agencies and training schools.

For each project (or project component), we determined whether the project outputs were continuing after the life of the project and then identified the sources of funding for those outputs. Continuing projects which were funded by national sources (private or public) after the U.S. funding ceased were clearly sustained. However, for some projects, replicating outputs were sustained by other foreign donors. While this source is less desirable since international support can be withdrawn, projects were still considered sustained if the recipient nation appeared likely to continue to receive such support in the future.

It should be noted that our definition of sustainability does not address the issue of a more diffuse influence that projects may have had. Some projects may provide ideas or lessons that influence the design of future projects or influence national policy even though the activities that had been implemented during the life of

the project did not themselves continue after the funding stopped. We felt that such diffuse influence would be hard to examine systematically.

After identifying which project outputs were relatively more sustained we compared the characteristics of these projects and their contexts to those project outputs which were relatively unsustainable. These comparisons were made with regard to contextual factors and project characteristics which, based on previous studies and on the team's observations, were hypothesized to have an effect on project sustainability.

2. HYPOTHESES FOR INDEPENDENT VARIABLES

2.1 Contextual Factors and Project Characteristics Affecting Sustainability

In the following section we will discuss each of the factors and present specific hypotheses examined in the CDIE series of studies.

2.2 Contextual Factors

Several characteristics of the context in which projects are implemented may affect the sustainability of the project after the end of the project. The factors are not subject to the control of project designers or project managers but rather are factors which should be taken into account in project design and implementation. When faced with contextual factors which are likely to undermine the sustainability of a project, project designers and managers should modify projects so as to reduce the effect of these conditions on the project or should consider the implications of designing and implementing a project which is not likely to be sustained.

Some projects may be more influenced by these contextual factors than other projects. These characteristics may change over time within a nation and they may form a basis for comparison with other countries.

When we complete our series of studies in Latin America, Africa and Asia we will be able to compare national and regional characteristics among them.

2.2.1 Natural Disasters

We hypothesized that natural disasters would have inhibiting effects on the continuation of project activities and benefits. The logic underlying this hypothesis was that disasters would divert both attention and resources from normal development activities. Most natural disasters tend to require immediate, urgent assistance to provide food, water and shelter, prevent disease outbreaks, or

administer urgent medical care. At a minimum the effect might be to interrupt or dilute the activities; in extreme cases they may force the cancellation of activities which might not be reinitiated at a later time. This is particularly true of health, nutrition, and water resource development projects.

2.2.2 Political Regime

Characteristics of political regimes which may influence the sustainability of specific projects are: the strength of the state and its capacity to redistribute national resources. We hypothesized that: (1) a strong state is more likely to be able to assign and maintain higher levels of resources in social sectors like health and therefore is more likely to be able to sustain health projects, (2) a progressive regime, i.e., one more committed to social reorganization, is more likely to sustain health programs than a status quo regime, (3) a more stable regime, which maintains regular and orderly changes in leadership in political and bureaucratic positions, provides a more conducive environment for sustainability, and (4) regimes characterized by nationalistic sensitivity will be less conducive to sustain foreign supported projects. (Bossert, "Can We Return to the Regime for Policy Analysis," Comparative Politics, 1983).

2.2.3 Bilateral Relations

Relations between the U.S. and the host country may also affect sustainability. Good relations facilitate communication and provide a more responsive environment which is likely to result in projects that are better adapted to the local situation. We hypothesized that projects implemented or completed during periods of good relations would be more likely to be sustained.

In this section we also consider the change in U.S. Government development policies in the health sector. U.S. policy in health shifted from an emphasis in the 1960s on infrastructure and water development, to an emphasis in the 1970s on primary health care and an attempt to reach the "poorest of the poor." In the 1980s policies shifted again to a focus on child survival activities. These policy changes may undermine the sustainability of other activities, especially if support is abruptly or radically shifted or withdrawn, with no transitioning or ameliorating plan.

2.2.4 Social and Cultural Context

Sociocultural factors may affect the implementation and sustainability of health projects in a variety of ways. Perhaps most important for this study are the potential barriers between the cultures of the implementors and the beneficiaries. These barriers can lead project designers to propose and attempt to implement activities that are unacceptable to the intended beneficiaries. Since some activities designed to improve health in

a population must alter established social and cultural patterns, projects must be designed to be sensitive to the effective means of altering behavior within acceptable cultural boundaries. These factors may be particularly important for projects which expect significant levels of community participation.

We hypothesized that characteristics of sociocultural context which are likely to encourage sustainability of projects are: (1) cultural homogeneity, (2) egalitarian distribution, (3) equal access to power, and (4) sexual equality. Where there are particularly marked sociocultural distinctions between groups cultural conflict must be overcome.

2.2.5 Economic Context

Changes in the economic well being of the nation are likely to influence the sustainability of most projects. Projects that require national resources will be more likely to be sustained in periods of growth than they would be during periods of economic decline. We will examine each project within the context of the national periods of economic growth and decline.

A second economic factor is the portion of national economic resources available to the government. A Government with a large tax base may be able to devote more national resources to maintaining projects after foreign funding has been terminated. A larger government sector may even be able to weather brief periods of economic decline and provide resources for sustaining projects.

A third aspect of economic resources is confined to the health sector. Projects are implemented within an economic sector in which tradeoffs are implicit. If the health sector is devoting a large portion of its resources to urban based curative health systems, in particular costly hospitals, it may be less likely to shift resources to the A.l.D. supported rural primary care activities after the A.l.D. funding stops.

2.2.6 Private Sector

We hypothesized that the private sector health providers and the existence of an effective network of PVOs to implement A.l.D. projects are contextual factors which might influence the sustainability of projects. In some cases, A.l.D. supported projects incorporate the private sector in relatively effective ways into health delivery system projects. For the most part, however, these services are competing for clients and funding with the public health services that receive most of A.l.D. funding.

Another portion of the private sector is the PVOs and other private sector institutions which act as implementing agencies for A.l.D. and other donors. Sometimes PVOs provide effective alternative implementing institutions for A.l.D. projects. However,

sometimes they also compete with each other for clients. And they may have their own institutional routines that are not conducive to sustainability when funding ends. PVO projects may also be small and constitute a difficult project management problem.

2.2.7 Implementing Institutions

Some A.l.D. projects can have major impact on the structure and capacity of implementing institutions. However, in most cases, at least initially, A.l.D. projects are implemented within the existing institutional structures. The projects may be implemented by a variety of governmental organizations, and by non-governmental organizations as well, although the most prominent organization is often the Ministry of Health.

Six characteristics of these institutions were hypothesized to undermine sustainability: (1) rapid turnover and low quality of top officials, (2) centralization of decision-making, (3) fragmentation of authority and responsibility, (4) low skill levels of personnel, (5) conflicting organizational goals, and (6) for PVOs, the existence of competition among them for funds or beneficiaries.

2.2.8 Donor Coordination

While A.l.D. may try to influence other donors and attempt to coordinate activities with them, in most cases, A.l.D. must work within a context in which other donors define their own objectives and activities. There are few instances of clear and explicit coordination among donors in the countries we have examined. We hypothesized that donor "bandwagons" would jeopardize susceptibility, whereas donor coordination that provided for either explicit division of labor (with one agency providing support for one type of activity while another would support other programs) or sequential support (with one donor providing follow-on funds for the activities of another) was more likely to be conducive to the susceptibility of project activities and benefits.

2.2.9 National Commitment to Project Goals and Objectives

Previous studies have found that national commitment to project goals and objectives was one of the most important factors related to project sustainability. This factor is defined as the degree of national consensus on project goals and objectives and is conceptually distinct from commitment of national financial resources. Consensus is identified by the lack of conflict in the political and bureaucratic arenas. It is hypothesized that those projects which enjoy enduring national commitment are more likely to be sustained.

2.3 Project Characteristics

The following factors are those project characteristics that

can be altered and controlled by project designers and managers with much greater latitude for choice than is available for contextual factors.

2.3.1 Project Negotiation Process

Related to national commitment is the degree to which a project is designed and implemented through a mutually respectful consensus building process. Projects which are seen as imposed by A.I.D. rather than as emerging through a process of mutually beneficial dialogue are hypothesized to be less likely to be sustained. Our studies will examine each project design phase with care to determine the extent of consensus gained in this process.

2.3.2 Institutional and Managerial Characteristics of the Project

This study will examine several managerial factors, as well as the administrative structure of projects and their institutional contexts.

a. Vertical vs. Integrated Project Design

We hypothesized that vertically organized projects which were not well integrated into the existing national administrative structure would be less likely to be sustained. PVO implementation of health projects may provide a special case of institutional organization characteristics. PVOs are alternative implementing agencies which usually are not expected to become integrated into the governmental structure. A.I.D. projects with PVOs therefore tend to be vertical projects.

b. Managerial Leadership

Other evaluations of sustainability have identified managerial leadership qualities as a significant aspect of sustainability. In this study we will explore the managerial capacity of the project and its implementing agencies. One factor of managerial leadership is the continuation of qualified personnel in key implementing positions. We hypothesized that rotation could undermine the potential for sustainability-as well as effectiveness of projects.

On the other hand, projects which retain the same leadership, without periodic rotation, may make a project too closely identified with one person and undermine the sustainability of the project when or if that individual is replaced.

c. Administrative Systems and Training

We have hypothesized that projects which include effective reorganization and training in administrative capacity, will be

more sustainable than projects with little managerial support.

2.3.3 Financing

Within the context of the uncontrolled economic factors discussed above, several factors which project design and management can control may have an influence on sustainability.

a. National Absorption of Project Costs

We have hypothesized that projects which have an increasing share of project costs absorbed into the national budget during the life of the project will be more likely to be sustained than those which have not phased-in government funding. The logic of this hypothesis is that projects which have gained national budget lines are less likely to be cut off at the end of the projects, than projects which would require major new national funding at the end of the project in order to absorb the costs previously covered by foreign funds. The effect of Economic Support Funds which often provide counterpart budgetary funding resources should be discounted here. In earlier studies in Honduras and Guatemala we found that the growth in ESF support of counterpart funding for health projects caused considerable concern.

b. Foreign Exchange Component

Since most A.l.D. recipient nations have on-going scarcity of foreign exchange, projects which require large and continuing foreign exchange expenditures for imported inputs were hypothesized to be less likely to be sustained than those which rely on nationally available resources.

c. Tradeoffs with Other Priorities

Since resources devoted to the health sector generally are quite limited, any project which would demand the shifting of national resources in order to cover activities previously funded by foreign sources implies the withdrawal of resources from alternative uses of funding. We hypothesized that, given the generally static nature of health ministry budgets, projects which require greater substitution of resources will be less likely to be sustained.

d. Cost Recovery

It is assumed that if project activities can be supported by cost recovery mechanisms, including especially means of obtaining beneficiaries' payments, that these funds will provide a direct means of supporting the project activities after the A.l.D. funding has been terminated and thus contribute to sustainability.

2.3.4 Technical Requirements

Several factors of projects are related to the technical requirements of the type of project, such as the type and significance of the training component, the degree to which technical assistance is an essential component, and the appropriateness of the technology for the objectives and the context.

a. Technical Training

Training projects and training components of projects with broader objectives are by reputation assumed to be more sustainable than other types of projects. Our central hypothesis is that projects with large training components are more likely to be sustained than those which do not train human resources.

A corollary would be that even in large multi-purpose projects which are not fully sustained, the training component, unless it depends directly on the continuation of the rest of the project activities, is likely to be maintained.

One central component of training projects that may be essential for sustainability, is the establishment of clear salaried positions within the MOH or private sector for all levels of workers except the voluntary community workers. Training projects that train workers with little prospect of obtaining steady employment are not likely to be sustained.

Appropriateness of the training program may also contribute to the sustainability of a project. Many training programs are designed to provide personnel for the broad objectives of providing service to the undeserved populations. When training programs are evaluated, particular attention is paid to the curriculum and the location of training facilities. Training programs that provide curriculum designed for low cost, preventive-oriented service and are located in areas which encourage those trained to remain in undeserved areas while performing their duties, are deemed likely to be more sustained than those programs which do not focus attention on the broad goals of most A.l.D. projects: providing for the needs of undeserved populations.

Training in administration and management, as well as the effectiveness of training, will be discussed in the sections on project administration and effectiveness, respectively.

b. Technical Assistance

We hypothesized that projects which had large sized technical assistance and which did not provide for the increasing development of host country capability were least likely to be sustained. We also expected that technical assistance that was of long duration

was more likely to provide for a transfer of knowledge and capability than were short term consultancies.

c. Appropriate Technology

In several cases, it appears that the technology supported by U.S. Government projects may have been inappropriate for the objectives. For instance, the use of certain insecticides in the malaria projects, even after their effectiveness was questioned in the U.S. is an example of inappropriate technology. We hypothesized that projects which used demonstrably appropriate technology are likely to be sustained. Conversely, those that used demonstrably inappropriate technology are not likely to be sustained, nor should they be sustained.

2.3.5 Community Participation and Acceptance

Many projects are designed to encourage community participation and require community acceptance in order to be effective. Both these factors may be necessary for project activities and benefits to be continued after the A.I.D. funding has ceased. We hypothesized that community participation and acceptance will generate demand for the project services by the beneficiaries and thus promote sustainability.

2.3.6 Project Effectiveness

Many elements may have to be present in order for a project to be effective. We have suggested several elements, such as effective and appropriate training, acceptability by the community, etc. However, whatever contributes to effectiveness, we hypothesized that a project that is effective during its funding life is an important factor in determining sustainability.

Associated with effectiveness, is the appropriateness of project design and its clarity in defining objectives. We hypothesized that projects with clear and appropriate objectives, or with the flexibility to redefine objectives in order to apply project funds to changing needs or obstacles, will be more likely to be sustained.

Hypotheses were tested by use of a chart (see Tables 5 and 6 in Report) that assigned a rating of those factors that were deemed to support (+) or undermine (-) sustainability in each project according to the hypotheses. Factors were judged to be related to sustainability if there were more sustained projects/components with positive ratings than negative ratings and among unsustained project/components the ratings were more often negative than positive.

Individual judgements about each factor, sustainability of activities, relative importance and weighting were inevitably made

in the final choices about ratings and in reporting the final analysis. The major judgements are generally discussed in each report; however, many choices were made by each investigator and reviewed by other members of the team to assure some level of consistency and validity. The team had two members of the original Central American teams to assure consistency with prior interpretations.

3. INFORMATION SOURCES AND DATA COLLECTION

This study was initiated with a "desk study" written by a country expert and based on documentation and interviews in Washington. This study formed the basis for orienting the field team and for establishing the basic hypotheses to be researched in more detail. The desk study provided a good historical orientation about the projects and the processes; however, little was known about whether or not the projects had been sustained, and many of the factors could not be examined for lack of reported data.

The field visit involved intensive interviews with principles involved in all projects under review, as well as site visits to several project.

Preliminary drafts were shared with the USAID mission at a debriefing session before the end of the field visit. Comments and corrections were incorporated in the final drafts.

All final reports have been reviewed by the CDIE project manager and the team leader of the original Central American studies for comparative purposes. A synthesis of all African countries has been prepared as an initial step in comparative analysis, and is available from CDIE.

APPENDIX B

THE MACRO-ECONOMIC CONTEXT AND HEALTH CARE FINANCING

The purpose of this appendix is not to provide a detailed analysis of the macro-economic context in relation to health sector financing in Tanzania. This type of analysis has already been conducted by Dunlop, 1984, UNICEF and TANGOV, 1985, and Dunlop and Over, 1987. The purpose of this appendix is to present updated information about the trends in health sector financing and an analysis of the dominant economic forces which have affected the health sector financing trends.

1. HEALTH SECTOR FINANCING TRENDS

From a macro-economic perspective in Tanzania, there are two principal aspects of health sector financing which must be monitored.¹² These items include: (a) real per capita health sector expenditures by the TANGOV, and (b) real per capita pharmaceutical imports. It would also be useful to know the extent to which individuals increasingly pay for health care and the extent to which local/community sources of financial support is being mobilized in the country as well. However, these items warrant special studies.

In Table B.1 data are presented which show the trend in TANGOV expenditure for health from fiscal year 1971 to 1987. The data show the impact of government priority setting in 1971 which sought to expand the rural component of the health sector, starting in that year. Per capita health expenditures rose from about 31 (1980) Tanzanian shillings in 1971-73 to an average of about 45.5 shillings during the next six year period (1974-79) which is a nearly 50 percent increase in expenditure. However, by 1982, government support to the health sector declined to the level recorded a decade earlier, i.e., 323 shillings. Finally, in the subsequent four years, through 1987, expenditures declined to an average of 25 shillings, which is a reduction of an additional 22 percent from that recorded in 1983.

The reduction in percapita health expenditures by the TANGOV during the decade of the 1980s occurred during a period when the expansion of the TANGOV health care system led to significant increases in the number of health facilities, particularly those in rural areas, and the number of trained health professionals and

¹²In a complete analysis, there are a number of other issues such as sectoral allocations within aggregate health expenditures which require monitoring. However, the items reviewed in this Appendix define the broad parameters of the financing situation in Tanzania.

paraprofessionals working in the TANGOV system.¹³ The reduction in total per capita health expenditures occurred during the same period when the health sector was experiencing a decline in per capita pharmaceutical imports to the entire health sector (which includes mission health facilities and some private providers as well).

Per capita pharmaceutical imports is a measure of financial performance of those health sector inputs which require foreign exchange to procure and sustain. The trends in this indicator is depicted in Table B.2 for the period from 1960 to the mid-1980s. These data show a similar trend to that depicted in Table B.1 where per capita expenditures rose over the early 1970s to a peak in the 1975-78 period. Subsequent to that period, per capita pharmaceutical imports for all health sector providers in the country have declined and have leveled off at a level below that experienced in the early 1970s.

¹³See Jonsson, 1986; Henn, 1980 and 1986, and Dunlop, 1984.

Table B.1: Total tanzanian Government Expenditures on Health, FY 1971-1987 Recurrent and Capital Expenditures in Millions of Tanzanian Shs.

To some extent, a decline in the importation of pharmaceutical can be explained by the more efficient procurement of drugs included in the UNICEF essential drug kit and the country's participation in the WHO/UNICEF essential drugs program. However, it is estimated that only about 25 percent of the country's pharmaceutical imports enter the country via the DANIDA-financed essential drugs program.¹⁴

In order to ascertain the linkage between the availability of health sector inputs which utilize foreign exchange, such as pharmaceutical and the macro-economic performance of the country, a preliminary analysis of the determinants of per capita pharmaceutical imports was conducted in seven selected countries, including Tanzania.¹⁵ This analysis has demonstrated that macro economic performance, as measured by one or more of the following indicators: (a) GDP growth rate, (b) government share of GDP, and (c) trade balance, affect real per capita drug imports. While not explicitly analyzed in the afore-cited study, it is also assumed that the importation of other items are similarly affected by the macro-economic performance of the country.

2. TANZANIA'S MACRO-ECONOMIC PERFORMANCE AND HEALTH SECTOR FINANCING

Tanzania's health sector requires both local currency and foreign exchange financing. Given the policy milieu existing in Tanzania during the period from independence to 1987, the principal sources of both foreign exchange and local currency financial support for the government operated health system was from government budget allocations. The size of both the local currency and foreign exchange allocations are based on the government's ability to raise revenue from taxes and other sources, and is generally affected by the performance of the entire economy.

In Table B.3, data are presented regarding the macro-economic performance of Tanzania over the 1961-1987 period according to three important indicators which help to define the relationship between the economy as a whole and the financing of the government's component of the health sector. These indicators are: (a) the growth of GDP, (b) the trade balance, and (c) the imbalance between government spending and revenue, i.e., the deficit.

With respect to the growth of the economy as a whole, the

¹⁴pg. 38, Brian Cooksey, 1986

¹⁵See Dunlop and Over, 1987.

economy experienced negative real rate of economic growth, as measured by the growth in GDP, in only three years over the 1961-1987 period and two of them were in the early 1980s. However, over the last decade, 1978-1987, the rate of economic growth was less than the rate of population growth such that the rate of growth in GDP per capita has been declining for nine of the ten years at an average of nearly 1.9 percent per year, or about a 19 percent total decline in per capita income. The only other times when per capita incomes fell were in either periods of drought, as in the case of 1974, or when world prices for Tanzania's main export crops dropped as in the case of 1961.

Thus, in summary, the period from independence to the late 1970s represents a period of economic growth and relative economic prosperity. However, since the late 1970s, the economy has not performed well for many external and domestic reasons. When the entire economy is not expanding rapidly, it is increasingly difficult for governments to raise additional revenue from taxes. Thus, without either external support or deficit financing, governments cannot continue to finance an expansion of a health system or sustain the expansion which has occurred.

Second, information about the trade sector presented in Table B.3 (columns 4-8), show an increasingly adverse situation regarding the supply of foreign exchange earned by direct economic activity within Tanzania. Three other principal components of the balance of payments are not presented in the table (external capital flows from donor entities, including food aid, foreign exchange earnings from worker remittances from abroad, and foreign exchange earnings from services, principally tourism). With the exception of donor assistance, the other two items mentioned above are not significant factors in the Tanzanian context. Thus, these data show that the trade balance shifted from one of positive foreign earnings through the first decade of independence. However, after 1970, the country has run an increasing trade deficit. This deficit has grown to over 100 percent of merchandise exports in half of the last ten years and appears to be growing since 1983.

In order to finance this trade deficit, the country must either obtain additional donor assistance (which has tended to decline in the last few years), borrow from other international lenders on more stringent terms, or float and depreciate the value of the currency, and thereby increase domestic prices. Increasingly, the latter option has been the one employed by the government. Clearly, when there is such an imbalance in the trade sector, a foreign exchange shortage occurs throughout the economy and affects every sector, including the delivery of health care. The observed trends in per capita pharmaceutical imports presented in Table B.2, no longer remain a mystery in such a situation.

Table B.2: Total Tanzanian Pharmaceutical Imports, FY 1960 - 1987 in Millions of Tanzanian Shs.

Table B.3: Macro-Economic Performance of Tanzania, 1961 - 1987
in Millions of Tanzanian Shillings or US \$

Finally, Table B.3 shows the trend in government expenditures and the extent to which the government is financing these expenditures from tax and other revenue. The data show that the government has had a significant deficit over the two decade period, 1964 to 1985. There has only been four years out of twenty-two when the government had a deficit which was less than twenty percent. In the early 1980' it reached its peak at about 30 percent per year.

The government has been financing the additional expenditures (beyond its capacity to raise revenue from taxes) primarily by borrowing from the central bank, and , thereby increasing the money supply and creating additional inflationary pressures. This financing strategy erodes worker incentives to work when they face a fixed money income, and this phenomenon had pervaded the health sector as it has all other sectors of the economy. It also exacerbates the financing problem faced by the government operated health sector, since there is continuous and increasing pressure to cut expenditures due to the large annual deficit. Given the virtual nonexistence of foreign exchange available to the government, the financing problem first manifests itself in the availability of pharmaceutical items, repairs and maintenance of equipment and buildings, and the operation of the sector's logistics and information systems.

In summary, while there are many factors which affect the sustainability of any project, including those in the health sector, it is necessary to forthrightly address the financing sustainability issues which have been discussed in this appendix.

It is a necessary, if not a sufficient condition in the design phases of new and worthy programmatic activities. It is hoped that this type of analysis will become an integral component of the design activities and will temper the discussion by all involved in what is financially possible to sustain.

APPENDIX C

MANPOWER TRAINING FOR MCH AIDES PROJECT, NO. 621-0121

1. PROJECT DESCRIPTION

Among the health sector projects funded by A.l.D. in Tanzania, the Maternal and Child Health Aides (MCHA) training project (a) was the first developed, (b) has been the largest (initially authorized at \$8.9 million in 1973 and increased to \$12.5 million in the June 1978 amended project paper), and, (c) has been more integrated in the development of the Tanzania rural health care delivery system than any other A.l.D.- funded health project. It was conceived as an essential component of the planned expansion of rural health facilities designed to improve access and equity of health services throughout the country. This expansion was coordinated by the MOH and financed by a number of donors, most importantly by Norway, Sweden, Denmark, and the U.S..

The U.S.-financed activity was funded primarily from A.l.D.'s population account rather than health, and some of the funding was in-kind contraceptives. During the project paper development, the case was made that the only way population and family planning activities could be introduced into Tanzania at that time was by encouraging improved MCH services first, thereby, reducing infant mortality. The project was to accomplish the following: (a) construct and equip eighteen MCHA training centers and 64 ~outstations~ in eighteen of the twenty regions, (b) procure MCH equipment such as baby scales for use in about onethird of the rural health facilities, (c) develop and implement a MCHA curriculum in all of the training schools via a technical assistance contract with Loma Linda University, (d) provide local trainers with additional education outside the country via participant training, (e) provide recurrent cost support for the training schools and MCHA trainees, and (f) procure contraceptives.

1.1 End of Project Status

From the Tanzanian perspective, the project accomplished what was intended. Eighteen health training schools and demonstration MCH clinics were constructed and equipped throughout the country. (The remaining 46 outstations were not constructed.) A large cadre of paraprofessional MCHAs were trained (2,509) and posted (2,437) to health facilities throughout the country. The balance of 72 MCHAs entered a course for upgrading to nurse midwives (NMW) Grade B in 1982 when two of the 18 schools were converted for such training. A third school was converted for upgrading NMV's to Public Health Nurses (PHN) Grade A.

A variety of personnel received short- and long-term training in the U.S.. Of the 50 who received a year or more of training, primarily at Loma Linda University or Meharry Medical College, 74

percent were nurses and 20 percent were physicians. Of the 25 who received short-term training, 48 percent were nurses.

The end of project evaluation conducted in 1983 reports that the MCHA posting information available from two regions (with about 10 percent of the total number of the MCHA's) shows that 18 percent had been posted to hospitals, 19 percent to rural health centers, and 62 percent to rural dispensaries. This is in contrast with a 28 percent hospital posting of MCHAs in 1978 (b of Table 2).

Table 1 - MCH Aides: Comparison of Data from Four Sources

Access to basic preventive MCH services which includes antenatal/postnatal/midwifery care, immunization, and childspacing services was expanded by the project. In 1978 and MOH Health Inventory reported that 40 percent of the health facilities in the 10 districts evaluated provided MCH services at least weekly. District Medical Officers (DMO) interviewed in a 1981 evaluation reported that 58 percent of the clinics in their districts had MCH services.

However, the end of project evaluation in 1983 indicated that child spacing was not always a part of those services. Child spacing was being provided in about 45 percent of the MCH clinics though the number of acceptors could not be quantified. The report concluded that widespread demand for such services, particularly among men was lacking.

Increased knowledge about MCH services was documented by the MOH in a survey of 2,623 mothers in 1982. Seventy-nine percent of the mother could name at least one reason for coming to a MCH clinic (immunization, child weighing, supplementary food). Half of the mothers knew that children were weighed to assess health status and knew the correct number of doses of vaccines to protect against the six diseases included in the Expanded Program on Immunization (EP).

Table 2: Comparison of Numbers of rural Facilities 1978, 1984 and 1987

As the end of project evaluation reports, the impact of the project on health status and the delivery of preventive MCH health services was constrained by the ever-deepening economic crises which Tanzania faced throughout the period of project implementation. An MCH and child spacing supply distribution network and the cold chain were experiencing problems due to the country's financial difficulties that resulted in lack of spare parts and vehicles. It was reported that the information system which was to provide service statistics had not worked over the last three years of the project (1980-1982) due to an absence of paper.

Toward the end of the project, many MCHA schools were experiencing training staff turnover and three had not been able to fill their long standing vacancies. The final evaluation recommended that some of the schools should be closed in order to operate effectively with existing available staff.

1.2 Current Status

As of 1988, 15 project schools and one mission school continue training MCHAs and three schools continue to upgrade MCHAs to NMWs Grade B or to PHNs Grade A. Previously, five of the 16 schools provided nine months of inservice training to upgrade village midwives (VMW) to MCHAs. Beginning in 1988, all 16 schools are providing preservice training as all eligible VMWs (Standard VII leavers) have been trained as scheduled. Preservice training has been increased from 18 to 24 months to provide for increased input in family planning and dental health.

The number of MCHAs trained to date varies depending on the data source. Table 1 illustrates some of the inconsistencies. One report claims that there were 650 MCHAs in 1971, five years before the first training began. The MCHA Training Coordinator theorized that these were the village midwives who have now been upgraded to MCHAs. The end of project report indicated that 2509 had been trained through 1982. Adding to this base the numbers of MCHAs trained per year since, one arrives at less than 4100 MCHAs trained by 1987, not 4648 as reported by the MOH Planning Unit. However, the pool of MCHAs available for posting is less than 3900 because 216 have been selected for upgrading since 1982. Time was insufficient to rectify the discrepancies revealed in this table.

In 1984 it was reported by Jonsson that MCH services were being provided on a daily basis in 100 percent of the rural health centers (N = 239) and 74 percent of the rural dispensaries (N = 2,644) by a trained MCHA (an overall frequency of 76 percent.) The corresponding numbers for 1978 were 59 percent and 14 percent, respectively. Further, ante-natal care coverage was reported to have increased from a figure of 85 percent of all pregnant women receiving such care in 1981 to 95 percent in 1984. Of three regions visited in 1988, Regional Medical Officers (RMO) report that 80

percent of the outpatient facilities are providing MCH services (see Table 2) though not all with MCHAs.

Immunization coverage has increased. The 1987 evaluation of the EPI reported about 70 percent fully immunized coverage in mainland urban areas for children under one. The rate for mainland rural areas was over 50 percent though pockets still existed with coverage of under 20 percent.

These MCH services are continuing with the support of UNICEF and DANIDA. In mid 1988, these two donors are annually providing up to \$20 million in financial and technical assistance to: a) operate an EPI, b) implement an essential drugs program (EDP) throughout 3,000 rural health facilities, c) support primary health care, and d) promote nutrition education.

Refresher training for MCHAs seems to have been less of a problem than would have been expected given the deteriorating economy. The MCHAs have been the key staff upon which child survival activities depend. Thus, many have been updated on vaccinations or introduced to oral rehydration therapy with funds provided by DANIDA through UNICEF for EPI or EDP. However, tutors and medical officers have often not been included in the refresher courses. UNFPA has provided about \$250,000 for the retraining of MCHA tutors and MCHAs in family planning.

In one of four regions visited, a DMO described how he maximized the one/two annual refresher courses. He has a small budget sufficient to add one days per diem to two donor-funded refresher training courses per year. AIDS was the topic added to a June 1988 course.

Continuing problems include restricted supervision of remote areas, difficulty replacing instruments and drugs for maternal health, lack of continuing education for MCHA tutors and medical officers. Data management is an enormous problem as illustrated in the discussion of Table 1 above.

From Table 2 it is evident that expansion of the rural health delivery system has continued, albeit at a pace that stays just ahead of the population growth for health centers, 92,000 population per rural health center (RHC) in 1978 vs 87,000 per RHC in 1987. However, population growth has outstripped any earlier gains in terms of dispensaries, e.g., 6,700 population per dispensary in 1978 vs. 8,000 per dispensary in 1987.

The demand for child spacing services has not rapidly expanded since the end of the project. As of 1985, it was estimated that only five percent of women of child bearing age were using modern contraceptive methods. The Family Planning Association reports continuing increases in acceptors but hard data was unavailable. One urban health center visited had registered 669 acceptors this

year out of 2,625 registered since the opening of the clinic several years ago.

Government policy had not been supportive of family planning services with the exception of its support of MCH services in general. That policy position is under review at the present time with assistance from USAID and UNFPA. A draft population policy document will be considered in November 1988.

Tanzania completed a census in August 1988. It is expected that analysis of the data will be delayed because of limited access to an overloaded mainframe computer system. UNFPA plans further assistance to try to resolve this problem.

1.3 Sustainability Factors

Clearly MCHA training has been sustained by the MOH and MCH services have continued to increase. In addition, donor support continues to sustain many foreign currency requirements such as drugs, vaccines, cold chain supplies, transport for related vertical programs and specialized refresher training related to those programs.

The question has been raised whether services quality has been preserved in the face of economic difficulties which limited rural field training and curtailed supervision. One District MCH Coordinator felt that the MCH program in her region was not as good now as during the life of the project because replacement of equipment and drugs for maternal health has been difficult.

The family planning component was not very active during the LOP. It may have been 15 years ahead of its time because it is only now that the environment looks more receptive. There is significant population policy work being conducted, the Medical School is looking to develop a family planning clinic, and there is open discussion about AIDS and child spacing.

1.4 Donor Coordination

Many donors cooperated to assist the GOT in the expansion of the rural health delivery system. Danida and UNICEF continue providing major support to the MOH. The imposition of the Brooke Amendment forced the U.S. out as one of the actors and may have created such feelings of mistrust that it is not feasible to consider further programming in health.

2. PROJECT CHARACTERISTICS

2.1 Negotiation

We found no specific data on project design and negotiations. However, significant collaboration with the MOH can be inferred

from the descriptions of the curriculum development process by those tutors who were involved from the start.

2.2 Institution & Managerial Aspects

MCH has been created as a vertical program at least through the dispensary level but it is highly integrated as one of the basic health services offered at each facility, just as is basic curative ambulatory care. The MCHAs are the key staff upon whom the EPI, ORT, and child spacing counseling depend and the more focused vertical programs are being channeled through the MCH base. The leadership of the program has changed through the years but the key support staff for MCH still includes many of the nurses trained under this project (six of the eight nurses we asked about).

The commitment to continuing MCHA training is demonstrated by the planning meeting in October 1988 to update the MCHA curriculum and to review the criteria for selection of MCHAs. However, the opportunity to update MCHA tutors and administrative staff has largely been overlooked until now.

2.3 National Commitment & Financing

As described above, this project enjoyed the strongest national commitment of any of the A.I.D.funded health activities. As an illustration of the continuing commitment, the Government of Tanzania (GOT) continues to pay MCHA salaries and to staff MCHA training schools. The MOH has even allocated its own development funds to remodel one of the schools.

The foreign exchange requirements for replacement instruments and drugs for maternal health, however, have not been readily met. Equipment for growth monitoring and for EPI appears to have been included under other donor funding.

2.4 Design

The project achieved its goal of leaving in place a mechanism for training a multipurpose cadre. Over the years other programs have built upon the availability and the training of the MCHAs. Thus, whether the project created a demand for MCHAs or whether the project grew out of an already existing demand, lasting effects are evident.

2.5 Training

The former participant trainees (nurses) who were interviewed felt that their training at Loma Linda U. was very good. It had been a major factor in their continued work in MCH.

Of eight nurses for whom employment history was gathered, all worked in MCH - five in MOH, one at the Medical School, and two for

NGOs. It was reported that of 18 participant trainee nurses known to the coordinators of the MCHA training program, all were in-country dealing with MCH in one way or another; of four physicians, one was a medical officer associated with MCH, one had left MCH, one had died and one was in Ethiopia. Thus, it appears that participant training for nurses has had a more lasting benefit for the country.

The GOT has created a career ladder by converting MCHA training schools to upgrade MCHAs to Nurse/Midwives and then to Public Health Nurses. Criteria have been defined for selection of candidates for upgrading. Virtually all MCHAs have been employed in MCH work, even in the hospital setting (at least in the four regions visited). It appears that well over two-thirds of MCHAs trained are posted. An estimated 10 percent drop out for family considerations. Approximately 10 percent are posted to Zanzibar. About five percent have been selected for upgrading.

MCHAs, often wives of other civil servants, appear to be more concentrated in urban areas than was initially envisioned. Recently, in an effort to encourage postings to rural areas, new regulations were instituted: MCHAs will be accepted for upgrading only if working in a rural facility. It remains to be seen whether these changes will accomplish the intended purpose or will cause more MCHAs to leave government service for family reasons.

2.6 Appropriate Technology

The project appears to have instituted appropriate technology in the training of MCHAs, though they may not have been appropriately prepared for the task of promoting child spacing in the environment of the late 70s. One item that was totally inappropriate was the design and furnishing of completely electrical kitchens in the training schools in the absence of a steady supply of electricity. As a result outdoor kitchens using traditional methods of food preparation have had to be constructed in all training schools.

APPENDIX D

TANZANIA SCHOOL HEALTH PROJECT (TSHP), NO. 621-0150

1. PROJECT DESCRIPTION

This project was initiated in 1980 and was to have been completed in three years at a cost of \$5.2 million. Activities were subsequently extended to July 31, 1985 without additional funding.

Its objectives were to develop and test a school health program for integration into a national expansion plan prior to the close of the project. Principal activities included:

- development of a national School Health Handbook and curriculum for integration into the existing domestic science curriculum
- construction of ventilated pit latrines
- improvement of water supply systems, mainly through construction of shallow wells
- feeding programs, including gardens ("shambas"), animal husbandry, and/or community cash or in-kind contributions
- health screening and first aid for students, through construction of first aid rooms, training of school staff, and provision and resupply of first aid kits
- participant training in the U.S. for five health coordinators.

About a dozen vehicles were provided, and two staff houses were constructed in Dodoma. Activities were to be piloted in 80 schools in the eight districts of Dodoma and Singida regions, but were to be integrated into a national expansion plan during the life of the project.

2. PROJECT IMPLEMENTATION

The project was to be implemented by John Snow Inc. (JSI) in cooperation with the Ministry of Health (MOH). Two technical advisors arrived late in 1980, and one eventually took up residence in Dodoma. According to the 1982 midterm evaluation, however, the project experienced numerous delays due to "contractual difficulties over reimbursement to JSI for construction activities, unavailability of transport, a cholera epidemic . . . and difficulties with procuring construction materials." A new chief of party, project manager, and sanitarian arrived in mid-1983.

Alleged financial improprieties on the part of both Tanzanian and American staff led to a Price Waterhouse audit in early 1984.

Project activities were virtually frozen throughout 1984, reportedly because of procurement irregularities. The freeze was lifted in January-February 1985 for completion of already started latrines, water systems, and first aid rooms.

Apparently, it was not until these final seven months of the project that most of these facilities were fully operational. Virtually all training of village school health coordinators occurred during these final months as well.

3. END OF PROJECT STATUS

The project achieved most of its objectives for Dodoma and Singida regions but did not achieve national curriculum and program development objectives. Five participants were trained in the United States, and 156 teachers were locally trained for their first-aid and health education responsibilities. Seventy-eight of the targeted 80 schools constructed pit latrines, 63 either built or arranged first-aid rooms, and 23 built shallow wells. Most developed some kind of school garden or feeding program.

The degree to which health education activities occurred beyond those already embodied in the Ministry of National Education's domestic science curriculum is not clear. A 400 page draft School Health Handbook in Kiswahili was completed even before the midterm evaluation (August 1982), but was not fully pretested during the life of project (LOP), nor was it printed or incorporated into local teacher training.¹⁶ Thus, little progress appears to have been made towards extension of project concepts or materials to the national level.

4. CURRENT STATUS

Interviews and limited observations in Dodoma and Singida Regions indicate that project-built latrines and water supply systems are still in use, though in need of maintenance. In a very few cases, District Development Councils have allocated locally generated revenue for latrine construction at additional schools or for fuel. The majority of teachers trained in school health are still in place, though those who have left have not been replaced. Some of the first-aid rooms have been diverted to other uses. Drug resupply for still functioning first-aid rooms has been an increasing problem: in Singida Region, two districts have been able to restock drugs at least some of the time, but the best that

¹⁶Unfortunately, the Tanzania School Health Project was not fully completed and implemented in the country. According to Dr. Al Henn, the revised curriculum was never printed and distributed throughout the country due to a lack of paper and financial support to pay for the printing cost. It would also be useful to evaluate its health behavior impact.

teachers can do in most cases is to refer students to dispensaries, other themselves without drugs.

Of the five project-trained participants, four remain with the school health program at the central, regional (Dodoma and Singida) and district (Dodoma) levels. At least some of the vehicles remain in use (four of six in Singida Region), but funds for fuel and maintenance are very scarce.

Limited school health activities continue in the two project regions through a largely intact infrastructure. District coordinators in Singida reportedly visit the former project schools at least once every three months to screen students and deliver occasional health education presentations. BCG is administered to Standard I entrants. Teachers do make referrals but to unstocked dispensaries. They also provide some health education, but only that derived from the domestic science curriculum developed by the Ministry of National Education prior to project assistance. Feeding programs reportedly continue in some areas, at least during harvest time.

Outside the project area, however, the Ministry of Health has used its own funds and technical resources to pilot school health programs in Coast, Dar es Salaam, and Morogoro Regions. In Morogoro Rural District, the School Health Coordinator is a medical assistant who works actively with 50 of the district's 233 schools (an average of two per week). The coordinator travels by public transportation, inspects children for prevalent conditions, and then delivers health education regarding these problems (most prominently schistosomiasis). Two schools have VIP latrines, and about 20 are planning latrines and/or first-aid rooms. Two specific schools have had special programs including lunches three days a week. In these two schools, the coordinator also administers BCG for Standard I entrants.

At the national level, the MOH School Health Coordinator (a former TSHP participant) started new programs at the rate of 10 per year between 1984 and 1986 in each of these three regions. Under her direction, the project's School Health Handbook has undergone three drafts and has been pretested. It will be ready for printing as soon as pretest results have been incorporated. (Responsibility for publication is being discussed by the Ministries of Health and Education.) A proposal has been prepared for possible DANIDA funding; the active cooperation of agriculture, education and water officials has been sought, and an interministerial National Coordinating Committee has been established.

5. SUSTAINABILITY FACTORS

The School Health project clearly contributed ideas to the expanding National School Health Programme and helped train a key individual (the National Coordinator) for this process. The

project developed curriculum has eventually been adapted and pretested and may be incorporated into the primary school curriculum.

The project encountered replicability and sustainability problems from the start, many outside staff control, and further problems were created by Tanzania's macro-economic difficulties and the shift of responsibility for recurrent costs to districts. At the same time, important operational decisions were made in the final year with a conscious eye to sustainability. This section discusses some of these factors and decisions.

5.1 Project Design

5.1.1 Negotiation Process

No information is available on the degree to which this project was developed in full collegial collaboration with the Tanzanian government, although the Ministry of National Education reportedly declined to participate. The MOH Director of the School Health Programme traveled to Washington to help select the contractor.

5.1.2 Regional Focus

Though intended for national replication, the pilot efforts were clearly more costly than Tanzania can afford now or could probably afford then. By focusing on only 80 of the country's 10,000 schools, the project developed models that could be neither replicated on any significant scale nor even sustained within the target area. A minimal program, focused, for example, on curriculum development and extensive teacher training throughout the country, might well have led to more sustained benefits and fewer recurrent costs. Elements that were inherently difficult to replicate or sustain included vehicles (one per district plus regional offices), well construction, and first aid supplies.

5.1.3 Integration

The TSHP appears to have been well-integrated into district and regional health offices but less well integrated at the national level or with the Ministry of National Education (the governmental unit in charge of schools). There appears to have been only minimal coordination with the ministries for agriculture and water. Plans to incorporate resupply for school-based first-aid rooms into the Essential Drug Programme do not appear to have been implemented.

5.2 National Commitment

The Ministry of Health has been fully committed to school health activities since at least the late 1970s as, in a very

different way, has the Ministry of National Education. The MOH's commitment has sustained interest (though not funding) for finalization of the School Health Handbook and for program expansion to new areas.

The Ministry of National Education, while interested in strengthening its domestic science curriculum, was not interested in the AID-designed activity at the start and participated at best only passively during implementation. This disinterest may have been fatal; the MONE should have been the principal implementor for at least the health education aspects of the TSHP, and USAID might have been wiser in the long run to have delayed this element until MONE commitment had been secured. Only recently has MONE's Director of Primary Education shown interest and agreed to co-chair a National School Health Committee. We also found in Morogoro Rural District that the education officer was supporting teacher training in health education and health screening by releasing time and paying per diem.

The shift to district financing in 1984, however, (see discussion below), made district and even community commitment vital for financing of petrol, first aid kits, feeding programs, and other recurrent costs. Commitment to latrines and water supply systems appears very strong at these levels, but there has been no obvious interest (except among teachers) in health education or school feeding. District offices were clearly unprepared in terms of both commitment and capacity to take over the school health programme so soon after decentralization and resumption of project activities.

5.3 Implementation Processes

New contractor staff, coming onto the scene late in the life of the project, consciously planned for sustainability and should be credited for the current status of at least the project's physical outputs. Water supply systems were designed to last: equipment was selected so as to be difficult to vandalize (by either humans or elephants!), a five-year supply of spare parts was ordered, and revolving funds were created to help pay for maintenance costs.

Relations between contractor staff and senior MOH officials appear to have been strained during the final two years, possibly due to (a) confused lines of authority, especially for financial management, (b) personality conflicts, and (c) allegations arising from financial mismanagement and misuse of funds. The one year (1984) interruption in project activities, apparently due to financial mismanagement, almost certainly exasperated relations and weakened sustainability prospects through abrupt withdrawal of funds.

5.4 Financing

In spite of the difficulties alluded to above, school health activities in the 80 pilot schools might be more fully sustained now and in the future if they were not so dependent on district resources and revenue generation capacity. This dependency results from the government's overall decentralization plan initiated (in its present form) in 1984. Conditions for local revenue generation are especially difficult in Dodoma and Singida Regions because they are two of the poorest in the country, and at the present time because mechanisms for local revenue collection and management are in early stages of development.

Recurrent costs for existing school health activities include those for:

- salaries of national, regional, and district school health coordinators (all paid by MOH)
- vehicle operation and maintenance costs (essentially unmet at present)
- regular restocking of first-aid kits (occasionally supported by District Council decisions to use funds provided by the Ministry of Local Governments)
- school feeding programs (to be supported by community groups but now largely abandoned)
- latrine and water supply maintenance costs (virtually uncovered at present).

District Executive Directors (DEDs) are in many cases allocating locally generated revenues to school health, as the following examples illustrate:

- In Dodoma Urban District, 345,000 shillings were allocated in the last fiscal year.
- Two districts in Singida have built additional latrines since project termination.
- Manyoni District has allocated its own revenue for school water systems.
- Morogoro Rural pays the local transportation for the School Health Coordinator's visits to schools.

However, the amounts allocated are clearly below those previously available through the TSHP. Funds for vehicle operation and maintenance, latrine and water supply upkeep, and other routine functions are largely unavailable.

In spite of severe financial difficulties, the central MOH has sustained core program staff and supported expansion in Coast, Dar es Salaam, and Morogoro Regions. Its longer term strategy for sustainability emphasizes strengthened collaboration with other ministries and further donor support (being negotiated with DANIDA).

APPENDIX E

HANANG VILLAGE HEALTH PROJECT, NO. 621-0138

1. PROJECT DESCRIPTION

A private voluntary organization (PVO), the Medical Missionaries of Mary (a Catholic religious order), in conjunction with CODEL Inc. (Coordination in Development) which works with Catholic churches around the world, designed and implemented a health project in the Hanang District of the Arusha region. The project was initially conceived in 1975 and finally became an operational project in 1977. It was originally designed to be a two and a half year project but was extended for an additional two years until November 1981.

1.2 Project Purpose

The purpose of the project was to develop a viable model for Tanzania to extend the rural health care delivery system of primary health care to the village level by training a set of Village Health Workers (VHWS) who would activate their respective communities and train a volunteer cadre of village health leaders. These two cadres of staff would work at the village level to: (a) teach the village about good health practices, (b) treat minor illnesses and provide first aid, (c) participate in maternal and child health services in the village, (d) supervise environmental health activities (especially the construction of pit latrines), and, (e) participate with village health committees on discussions and decisions regarding village health concerns.

The project staff was to recruit Hanang District villages to participate in the program, develop a curriculum for training both cadres of worker VHWS and VHLs, train VHWS, supervise VHWS in their village development activities, and develop an information and monitoring system about the health and nutrition situation prevailing at the village level. During the LOP, 95 villages (out of 114 villages in total in Hanang District) were accepted into the project, and 192 trainees received VHW training, although at the time of the end of project evaluation (October 1981) only 43 trainees had completed their training and received certificates. MCH mobile clinics were also established in twelve villages with MOH and mission hospital staff assistance and project transport. In addition, in eighteen villages basic curative services were established and supported by the project by providing medicine boxes to those villages. A monthly reporting system was established for each VHW and it was regularly sent to MOH officials, CODEL, and USAID/Tanzania. Nutritional surveys were conducted on children 0-10 years of age in all project villages in order to establish which children required further nutritional supplementation assistance. A follow-up nutritional survey was conducted in a sample of villages during the last year of the project. Finally, in order to obtain further support for the project among village leaders, a

series of leader seminars were held for teachers and other education personnel, MOH staff of health facilities in the district, and other government and village leaders.

In order to assess the potential for project sustainability the end of project evaluation team conducted an analysis of the Arusha region and Hanang district health recurrent and capital budgets to ascertain whether the MOH budget could absorb the project's operating costs.¹⁷ The result of that analysis suggested that the government could provide only one-half of the support required to operate it at the level of project implementation which occurred, given the financial support provided by AID. This support did not provide any salary support to the VHWS who were responsible for implementing the bulk of the project's activities defined above. In 1980, about 28 percent of the reporting villages indicated that the VHWS obtained a modest (median 500 - 700 TShs, range 40 - 4,174 TShs) contribution during the last 10 months of that year.¹⁸ It was also reported that other villages also assisted VHWS by providing additional labor for certain agricultural and other household tasks. This aspect of the project has not been investigated further to ascertain whether VHWS continued to carry out their responsibilities subsequent to the end of the project to a greater extent than those VHWS who did not receive such support.

2. FIELD FINDINGS

- Hanang activities were handed over to the District Council June 1985.
- In Hanang there has been a motivation problem. By 1983 114 of the 192 trained were still active. It was estimated by the district team that about 50 percent of the villages in districts financially supported the VHWS.
- Village leadership is the key to continued VHW activity from payment decisions to supervision, since district level supervision is limited due to budgetary constraints on fuel and spare parts purchases.
- The most important service provided by the VHWS in the two villages we visited in Hanang and Mbulu districts, according to the respective village secretaries, were environmental surveillance and pit latrine monitoring, and home visiting to motivate local MCH clinic attendance.

¹⁷Pg. 23 and 24 of Frank Dimond, et al., 1981.

¹⁸Pgs. 37-1 to 4, Hanang Village Health Project Evaluation, Annex B, October 1981.

- In 1985 Hanang and Babati districts motivated the training of VHWS to conform to the government guidelines (1983), i.e., six months total training. They have trained 144 and posted them in 67 villages; 73 are still listed as working fully now; 21 have resigned; 16 are in other training programs, i.e., nurses, MCHAs, etc.; and 50 only work sometimes, but have not officially resigned.
- A total of six VHWS have been posted to the two villages visited. In the village of Hanang, two were posted in 1978. By 1982 they had both left - the male VHW had not been paid (1980), and the other, female, relocated with her husband. The two presently posted in 1985 and 1986 were still active but had not been paid their 200 TSh/month allowance since May 1988. But the village expects to begin paying them soon from revenue generated by the flour mill investment, basket selling and the town shop. The VHWS were initially not paid last year but payments resumed in October or November.
- In the Babati village (more affluent than in Hanang) the two VHWS started October 1987 and were paid 600 TSh/month for the first two months but have not been paid since. One VHW has left and the other is ready to leave and has discussed her situation with the village. The village intends to pay as soon as there is revenue from their village farm.

APPENDIX F

CANCER CONTROL PROJECT, NO. 621-0147 (OPG)

1. PROJECT DESCRIPTION

In 1978, A.I.D. provided \$549,000 through CODEL to assist Muhimbili Medical Center (MMC) and Howard University in a \$790,000 activity to establish a cancer control program in Tanzania. This activity was funded as a consequence of the personal energies of Dr. Ulrich Henschke, a professor and chairman of the Department of Radiation Therapy at Howard University, Washington D.C., who had worked in Tanzania in 1971 establishing a radiotherapy unit at MMC. He served as the project's first director until his untimely death in 1981. The project began at a time when few believed that cancer was a problem in Africa and when Tanzania was emphasizing the development of rural health care.

According to the project paper, the Cancer Control Project was initially developed with an emphasis on cancer prevention and early detection. It was designed to address these concerns by: (a) conducting a series of cancer surveys, including a computerized cancer tumor registry, and conducting analyses of hospital records; (b) training health personnel (from physicians to paraprofessional workers) about the common symptoms and causes of cancer, how to treat the disease and when to refer a case to a major treatment center established at MMC; (c) conducting research on a number of types of cancer identified to exist in Tanzania; and (d) developing a cancer control network throughout the country by expanding the oncology service at MMC and improving cancer diagnosis and treatment services at other major hospitals in the country including Kilimanjaro Christian Medical Center (KCMC), Bugando Hill Hospital in Mwanza, and other regional and district hospitals.

2. END OF PROJECT STATUS

According to the final evaluation in 1983, the project was successful in achieving a number of the objectives. A sophisticated cancer control center at MMC had been equipped and was providing diagnosis and treatment for cancer patients. As of December 1982, 3,514 patients had been treated at the center. The project developed a staff of well trained personnel (four each of physicians, scientists and technologists) in a variety of oncology services for the operation of the national cancer center, even though some left the service following the death of the first project director. A large number of other health workers were also provided continuing education opportunities in cancer prevention and treatment. Several research studies on skin and liver cancer as well as Kaposi's Sarcoma were initiated (one, financed by the National Cancer Institute of the U.S. National Institutes for Health [NIH]). A public education campaign was developed and implemented in conjunction with the MOH on the symptoms of cancer,

the dangers of smoking and pollution, and the need for an adequate diet. Collection of data from a network of regional and zonal hospitals had become routine as had the maintenance of a cytological tumor registry. However, planned epidemiologic surveys and review of rural hospitals' records were dropped because of limited resources.

The cost of the national cancer center was integrated into the Government of Tanzania's budget through the funding provided to the MMC. Medical care cost savings, particularly in the form of foreign exchange, can be attributed to the development of this center since patients no longer need to travel to countries in Europe to obtain care for cancer.

3. CURRENT STATUS

The National Cancer Center at MMC continues as the largest one of five such centers in SubSaharan Africa. Services have continued to increase from a level of 48 new patients in 1976 to 1,000 new patients in 1987. Nurse counselors are being trained to improve patient education for dispelling myths about cancer. The center routinely sends an "end of treatment letter~ back to the referring facility to summarize the course of treatment administered and the future follow-up actions requested. Continuing education to providers and the public has been conducted through speeches to professional organizations as well as radio and newspaper presentations. These activities have contributed to a shift in the type of care provided, due to earlier detection and treatment, i.e., 80 percent palliative treatment early in the history of the center vs the current situation of 55 percent curative treatment. And the quality of services offered have been sufficient to justify continued funding by the government.

Because chemotherapy is dependent on foreign currency to purchase the drugs, radiation therapy, as the most cost-effective, is the mainstay of the program. During the last three years, the machine used to treat the third of the patients who have cervical cancer, has had only three weeks of down time. The center has a promise of outdated X-ray equipment from developed countries if funding for packing, freight and appropriate housing can be found. Recently, equipment has been received to perform six serologic tests, including syphilis, HIV and hepatitis.

The center has continued to attract donor support e.g., for external training and research. Donors include Germany, Johns Hopkins University, NIH, and WHO. Among the research activities, an analysis of data from the tumor registry has begun and is expected to substantiate the observation that skin cancer has declined. Reports from a mission hospital have shown that skin cancer was the most frequently seen cancer diagnosis in 1979 but in 1986, not a case was reported. This change is thought to be a result of more effective treatment of infections to prevent chronic ulcerating

lesions of the skin.

4. SUSTAINABILITY

Several activities from this project have been sustained. First, the Cancer Control Center at Muhimbili Medical Center has been institutionalized and continues to be funded by the central government. Second, the center has continued to maintain a tumor registry. Third, it has attracted donor support to continue research activities. Fourth, health education activities, though limited, are continuing. Fifth, the center will begin, in the near future, to provide a base of clinical expertise in oncology for the training of residents at the medical center. Sixth, the Tanzanian Director of the center has gained an international reputation and will be a contributor to a WHO manual on cancer treatment in Africa.

APPENDIX G

CONTINUING EDUCATION FOR HEALTH WORKERS PROJECT, NO.621-0154 (OPG)

1. PURPOSE

During the 1970s, Tanzania, with the assistance of many different external agencies, including A.l.D., invested in the expansion of the rural health care system and the manpower cadres to provide services. Given the lack of good communication with and between staff and that new ideas regarding service delivery were continually being introduced, it was considered important to reinvest in the human capital embodied in the staff. Training needs were previously met through continuing refresher education and upgrading courses to develop a capacity within Tanzania to further develop and extend the activity throughout the country.

2. PROJECT ACTIVITIES

During the LOP, the following activities were implemented:

- provide overseas training to a senior core staff of seven persons who would manage a national program of continuing education and provide technical assistance to the ministry of health in curriculum and learning materials;
- pilot regional (Arusha) and then zonal (including Tanga, Coast, Morogoro, and Singida regions) continuing education program was implemented with a set of seventy-one refresher and extension courses being held for RMs, MCHAs, MAs, HAs, and other staff cadres working in rural areas (about 1500 staff attended these courses);
- about forty district medical and health libraries with about 125 books and related materials were developed and established in a room of the district hospital where the DMO and other team members were stationed; and,
- construction of a facility in Arusha to house the implementation of the continuing education program.

In addition, the program envisioned implementing a correspondence course program for various staff cadres in MCH, diarrheal disease control, immunizations, and family planning. However, the project implementor, AMREF, did not provide the requisite curricula for this component of the project.

3. PRESENT STATUS OF THE CONTINUING EDUCATION PROGRAM IN TANZANIA

- There is a clear and growing demand for continuing education by health workers in Tanzania. The head of the CE section of the Health Manpower Development and

Training Division of the MOH, who was trained by the A.l.D.-supported CE project implemented by AMREF, believes that this demand was sparked by the A.l.D. finance project. The MOH now must find a way of providing it in an efficient manner (see below).

- Of the seven staff that received overseas training four still work in continuing education in Tanzania. The head of the CE section of the manpower division who received the most overseas training (one year at the Univ. of Illinois) remains in that position as an active member of the MOH management team. Of the three who are no longer working in Tanzania, one has retired, one is on the faculty of the University of Liverpool in Public Health, and one works in Nairobi for AMREF in Continuing education. Thus, despite the dropouts, the staff required to continue to develop the CE program remains on the job in Tanzania.
- There are numerous continuing education courses ongoing in the country. For example, it is planned that about 40,000 participant slots will be included in the courses for health personnel in 1988 (this training will encompass perhaps as many as 23 cadres of staff and about twenty distinct topic areas). However, continuing education for health workers is uncoordinated. At present each vertical public health program such as EPI, CDD, PHC, MCH, EDP, and FP conducts its own continuing education programs which are funded by a multiplicity of donors. They often invite the same persons to a different course a week later and thereby reducing the time health personnel can provide services to the people and increasing the cost of continuing education by not consolidating the training into multipurpose seminars which would require less travel and per diem costs.
- While there is strong donor support for continuing education within the context of each vertical program, there are few resources available for coordination. The resulting problems from this lack of coordination, include per diem differentials between donors, lack of common training and curriculum learning materials, development strategy, and a plan for longer term sustainability within the resource constraints of the MOH. The head of the Continuing Education Section of the Division of Health Manpower Development and Training in the MOH is aware of these problems and is attempting to address them. He has established a Steering Committee for Continuing Education within the ministry and is completing a draft plan for resolving the aforementioned and other problems.

4. OTHER COMMENTS AND CONCLUSIONS

- It is generally viewed that the A.I.D.-assisted continuing education for health workers program implemented by AMREF extended the demand for CE. However, it is viewed that it was implemented as a vertical program without much integration into the structure of the MOH or without providing funds to develop a coordination role for the many other CE activities underway for various workers in vertical programs, such as MCH, EPI, CDD, EDP, and FP. Apparently the institution building component of the project established a technical unit for assisting in implementing CE courses, but without donor and preventive program coordination, the CE courses which were implemented by AMREF project staff based in Arusha were often duplicative of other offerings.
- It is generally viewed that the resources which were spent on the courses were more than what the GOT could sustain without continuous donor support. This is especially true with respect to the transport and other supervision support provided by AMREF staff based in Nairobi.

APPENDIX H

INTERVIEW CONTACTS

Ministry of Health (MOH) - Central

Dr. Temba	Asst. Chief Medical Officer (MO), Preventive Services
Mr. Malinka	Principal Health Officer (HO), Preventive Services
Mr. Raphael Saidi	Sr. Nursing Officer, MCH Training Division
Mrs. Tunda Gugu	Coordinator, MCHA Training Schools, MCH Training Division
Mrs. M.T. Massila	Nursing Officer, MCH Services Division
Ms. Sophie Ngahyoma	School Health Coordinator
Dr. Edward Moshi	Sr. MO, Regional Health Services & Director, Essential Drugs Program

MOH - Arusha Region

Regional Medical Officer (RMO)
Moshi District Medical Officer (DMO)

Babati District

Dr. Lawrence Lay	District Medical Officer (DMO)
A.A.M. Killinga	District Health Officer (DHO)
E. Hangali	DMCH Coordinator
N.L. Moshi	Senior Health Officer
J. Makenga	District Nursing Officer (DNO)
T.A. Mtika	Health Administrator

Mbulu District

Dr. J. Christopher Mrema	Acting DMO
William N.P. Lema	Health Officer
Catherine Arsemi	Senior Nurse Midwife & MCH Coordinator
Samuel Mwao	Pharmacist Mbulu Hospital
Marko Tluway	North District Mental Health Coordinator
Mashombo Mkamba	EDP Coordinator
Zacharia Kinawawa	District Nursing Officer
V.C. Hondi	Nursing Officer

MOH - Dodoma Region

Dr. Opunda	RMO
Mr. Kahesa	Regional HO
Dr. G.P. Temu	Dodoma Urban DMO
Ms. Elizabeth Sabundi	DHO, School Health Coordinator, Dodoma Urban Family
Nursing Officer	Planning, Dodoma Urban Health Center
MCHAs (2)	Dodoma Urban Police Dispensary

MOH - Morogoro Region

Dr. Peter Kilima	RMO
Dr. Nkulila	Deputy RMO; Surgeon, Morogoro Regional Hospital
Mrs. Mary Mygoma	Principal, PHN Gr A Training School
Mrs. Margaret Mtwali	Tutor, PHN Gr A Training School
Mrs. Mypeli	Head Nurse, Demonstration MCH Clinic associated with PHN Gr A Training School
Dr. Machilia	DMO, Morogoro Rural District
Mr. Kayturo	DHO, Morogoro Rural District
Mrs. Kagaywa	District Secretary, Morogoro Rural District
Mrs. Simba	MCH Coordinator, Morogoro Rural District
Mr. Nguma	School Health Coordinator, Morogoro Rural District
Planning Officer	Morogoro Region
Planning Officer	Morogoro Rural District
Mr. A.B. Kimaryo	Rural Medical Assistant, Watumishi Dispensary
Ms. Mwaluseke	MCHA, Watumishi Dispensary
Ms. Kihyo	MCHA, Watumishi Dispensary
Mr. A. Magagaza	Health Assistant, Watumishi Dispensary

MOH - Singida Region

Dr. Marico	RMO
Mr. Raphael Kukula	RHO
Mrs. Kukula	Assistant Principal, MCHA Training School
Mrs. Muzazi	Singida Region
Treasurer	Singida Rural District

Muhimbili Medical Center

Dr. J. Luande	Director, National Cancer Center
Dr. Mgaya	Chairman, Department of OBGYN

UMATI (Tanzanian Family Planning Association)

Dr. A. Rukonge	Medical Director
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UNFPA

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Program Officer

Health Program Officer

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