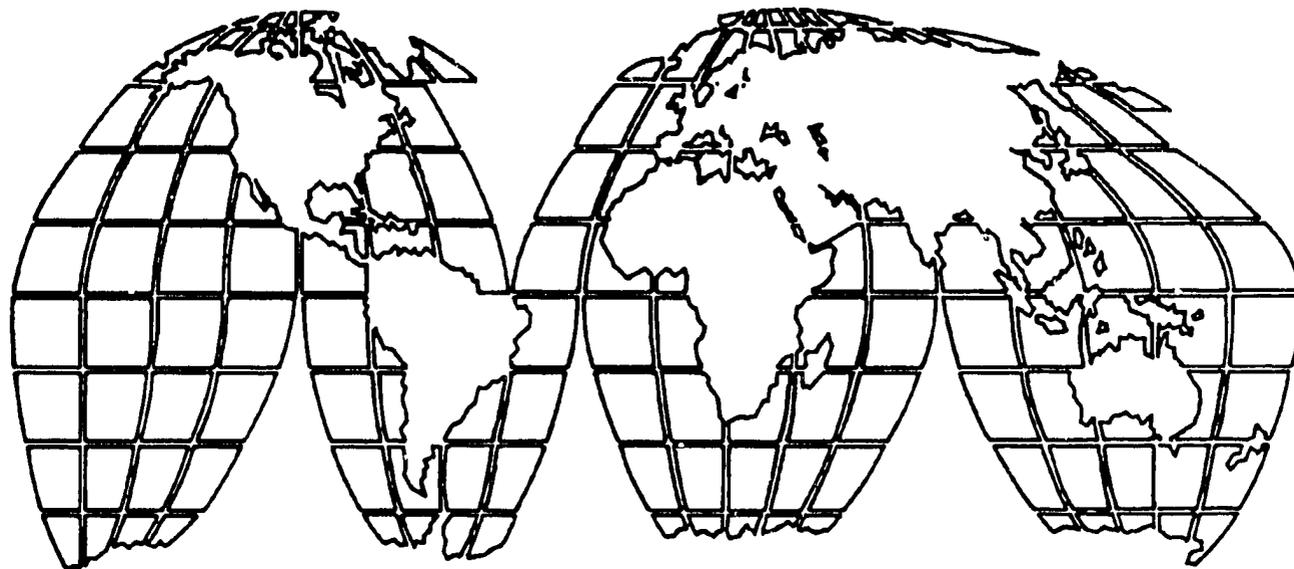


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Factors Influencing the Sustainability of U.S. Foreign Assistance Programs in Health 1942-1989: A Six Country Synthesis



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Sustainability of U.S. Foreign
Assistance Programs in
Health, 1942-1989:
A Six-Country Synthesis**

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PREFACE

The Center for Development Information and Evaluation (CDIE) first focused on the sustainability of A.I.D.'s projects as an issue requiring attention in the mid-1980s. In a review of the Agency's FY 1984 project evaluation reports, CDIE found that "although sustainability is one of the elements of A.I.D.'s institution building concept, the weight of evidence...suggests that this goal is not yet being pursued with adequate diligence, seriousness of purpose, or by means of clear enough criteria...." A review of the Agency's FY 1986 project evaluations two years later produced similar results.

In the years following these early CDIE reviews, the sustainability of A.I.D. projects has become a focal concern of A.I.D. administrators. At the Administrator's request, the FY 1990 Congressional Presentation (CP) Guidance required that all project fact sheets for new projects discuss sustainability. This requirement has been retained in annual CP guidance. In addition, in 1989, the Administrator requested that each Bureau report on their plans to ensure that PID, PPs and project implementation plans adequately address sustainability.

Like A.I.D., other donors have also been focusing on sustainability. The World Bank, in fact, may have been the earliest to call attention to this issue with a report on the topic in 1985, followed by a second report in 1989. A variety of United Nations organizations have undertaken sustainability analyses, including the UNICEF and the UNDP. Many other international donors have undertaken studies of their own bilateral programs. And in 1989 CDIE published a paper prepared by the Development Assistance Committee's (DAC) Expert Group on Aid Evaluation, consolidating not only A.I.D.'s experience with the sustainability of development programs but also the experience of 15 other donor agencies.

Recently the S&T/RD Rural Development Sector Council Committee on Sustainability chaired a series of meetings to review the substantial work done on sustainability by A/AID, ANE/TR, FVA/PVC and PPC/CDIE, regional bureau evaluation offices and S&T/RD and H, among others. They also reviewed selectively the work of other donors on sustainability. This review is laying the basis for developing an action memorandum on sustainability for the Administrator.

This paper, the basis of which began in 1986, analyzes the results of six country-level, historical evaluations of the sustainability of U.S.-assisted health, population and nutrition programs. It promotes a better understanding of the factors that influence sustainability and proposes a set of guidelines for enhancing sustainability that should be useful to development professionals.

SUMMARY

This study has attempted to identify and explain those factors most frequently associated with sustainability toward the primary goal of developing guidelines for the design of projects that would be more likely to be sustained. Secondly, it has developed a comparative methodology for the study of sustainability which may be useful in future similar or related investigations.

This study reviewed U.S. assistance in health, population and nutrition programs between 1942 and 1988 in six countries in three regions--Honduras and Guatemala in Central America; Senegal, Tanzania and Zaire in Africa; and Thailand in Asia--to assess the sustainability of project activities and benefits after U.S. funding ceased. The specific objectives of the analysis were: 1. to examine whether there were significant differences in level of sustainability among countries and regions, 2. to examine whether there were significant differences in level of sustainability between project types, 3. to examine a set of variables in terms of their explanatory power in relation to these differences, and 4. to begin to develop a set of guidelines for development practitioners to help increase sustained project outcomes and benefits.

Our analysis revealed striking differences in the levels of sustainability, i.e., the continuation of project activities and benefits after U.S. funding ceased, between projects within countries, between countries, between project types, and between regions. There was relatively little variation in project sustainability within regions, although our sample was too ~~small~~ (e.g., in Asia we studied only one country - Thailand) to place much confidence in this finding.

Examining average sustainability ratings by country and region, based on a scale of "0" (unsustained) to "5" (highly sustained), we found that in Thailand, with an average sustainability score of "4," many activities were sustained at high levels; in Central America, with an average sustainability score of "2.5," significant levels of continuation of project activities also existed, albeit at levels below those found in Asia. However, in Africa, with an average sustainability score of "1.6," many projects were only marginally sustained at much lower levels of activity than had occurred during the life of the project. Even those projects that were judged fairly well sustained appeared constantly threatened with extinction through loss of budgetary funding or failure of beneficiaries to pay for services.

We found considerable variation in sustainability between different types of projects within countries, and these differences held up across countries.. Health services projects, such as training of health workers, construction of

clinics and other infrastructure development, and water projects were the most highly sustained. Malaria projects received an average sustainability score, while nutrition activities were never more than moderately sustained in any country included in our study. Family planning projects ranked last among the projects observed, and were not sustained in any country--although sustainability could not be measured in Thailand because of the recency of continued U.S. assistance there.

Our analysis divided the factors that were examined for association with sustained projects into two categories: "context factors," i.e., factors over which project managers could exercise relatively little control, and "project characteristic factors," which were more malleable to decisions made by project officials. We identified four contextual and six project characteristic factors that were associated with sustainability.

The contextual factors most closely related to sustainability were: (1) the political environment, including governmental infrastructure, the ability to collect and channel revenues, established administrative routines, skill levels of officials, governmental capacities to develop policy, plan and manage, and decentralization, (2) the economic environment or the general state of a country's economy, including income levels, balance-of-payments, debt situation, institutional and human capital endowment, economic infrastructure, and so on, (3) the institutional environment, determined by its integration, administrative capacity, leadership, budget, skills, and objectives, and 4) national commitment to project goals, determined by consensus among important decision makers and interest groups that the goals and objectives of a project were a national priority. The political and economic factors were associated with sustainability in all six countries studied, while the institutional environment and national commitment were associated with sustainability in four out of six countries studied.

The six project characteristics most closely related to sustainability were: (1) perceived project effectiveness; (2) integration of the project into existing institutional hierarchies rather than operated as a separate vertically-run organization; (3) established financing, either by a government budget or cost-recovery mechanism; (4) training components included as project activities; (5) a mutually respectful project negotiation process between A.I.D. and host country; and (6) community participation. Two of these six characteristics - perceived project effectiveness and integrated projects - were found to be associated with sustainability in all six countries. Three project characteristics - financing, training and the negotiation process - were associated with sustainability in most of the countries. And one project characteristic - community participation - was related in Africa and Asia, but not Central America.

SUSTAINING HEALTH BENEFITS: FINDINGS FROM SIX COUNTRIES

1. INTRODUCTION TO THE SUSTAINABILITY QUESTION

The widespread attention now devoted to sustainability issues in A.I.D., and the development community generally, is a relatively recent phenomenon--and potentially an important one. Although sustainability was often an implicit goal in past programs, until the last few years no substantial body of empirical work addressed sustainability issues. Even today, most literature extrapolates from project implementation experience to discuss sustainability, or it limits itself to exploring the subject theoretically. Yet, there is no necessary or invariable relationship between the nature of the implementation process and what is sustained after donor funding ceases. Projects may be successfully implemented --only to deteriorate rapidly or disappear when donor support ceases. Alternatively, albeit probably with less frequency, donor support may cease in the midst of a host of project implementation problems -- only to have the struggling activity concluded or continued with some other donor sponsorship or with indigenous national or local resources.

Intellectually, development planners understand the importance of program sustainability very well. Development assistance has never been conceived as an endless infusion of external resources. On the contrary, development assistance ideally aims to build indigenous capacity that will continue to evolve after the termination of external support.

However, the fact is that, too often, the actual emphasis of larger development organizations, such as A.I.D., the World Bank and U.N. agencies (e.g., WHO, UNICEF, UNDP), has been on getting projects started and keeping the implementation process moving rather than on long term viability. Most project and program evaluation occurs during the life of a project, or at the latest, the end of the project. The focus of the studies is most often on accountability or process, or more ambitiously, on impact--but not on what is sustained during a significant period of time after donor funding ceases; nor, perhaps more importantly, on why something is or is not sustained.

Yet what happens after donor funding ceases is the very heart of our work. Children may be immunized and the benefits to that child are life-long. But what of those children born in the year following--and years subsequent? When activities terminate with the donor's funding cycle, how do we judge accomplishment? This situation is all too familiar.

2. THE CDIE SUSTAINABILITY STUDY IN HEALTH

2.1 Background. The decision to undertake a study of the sustainability of A.I.D. assisted projects in the health sector was made within the context of broad Agency concern about sustainability, but it was also influenced by specific concerns in the health sector.

First, in 1986, CDIE consulted A.I.D. health professionals to determine potential issues for a review planned in the health sector. Health professionals identified five issues: community co-financing, use of the private sector, relative effectiveness of integrated and categorical programming approaches, effectiveness of policy dialogue with host countries and sustainability. (Blumenfeld, Stewart, and Marty Pipp. 1986. "Issues in Health Sector Evaluation," University Research Corporation.)

Secondly, a 1987 review of CDIE evaluations of seven A.I.D. health projects (Morocco, Senegal, Colombia, Korea, Tanzania, Swaziland, and the West African Onchocerciasis Control Program) revealed that the issue of sustainability was a recurrent theme. Each of these evaluations raised questions about the long-term viability of health program activities. (Buzzard, Shirley. 1987. "The CDIE Health Impact Evaluations: A Review of Issues." Washington, D. C.: Center for Development Information and Evaluation, A.I.D. Draft.)

In ensuing discussions it was determined that sustainability, rather than being just an issue at the same level as the others, was really the sine qua non of the program and all other issues were means for reaching that goal--or factors that affected sustainability. (Blumenfeld, Stewart, 1986. "Evaluation of A.I.D. Health Programs in the Context of Sustainability." University Research Corporation.)

The decision was made by CDIE, therefore, to conduct a series of evaluations in the health sector that would focus on sustainability. In addition, it was decided that, rather than focusing on single projects as in previous evaluations, the new series of studies should focus on the A.I.D. program historically in that country. Lastly, it was decided that the evaluations should include all the projects in health, population, nutrition and water supply and sanitation that the U.S. had been involved in, in that country, since the earliest assistance program.

2.2 Conceptual Approach The study was conceptualized, planned and carried out as a set of comparative retrospective case studies of U.S. supported projects in the health sector in each of six countries spanning three continents: Honduras and Guatemala in Central America; Tanzania, Zaire and Senegal in Africa; and Thailand in Asia. Health sector projects were defined to include those in health services, family planning, malaria programs, nutrition, and water supply and sanitation.

The conceptual framework of the study is based on a systems analysis approach, which examined project sustainability within the overall context of the health system of the country, especially the development, delivery, and use of services in the health sector. Each project, or project series, is examined in terms of (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.I.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 3 years after the project terminated; and (9) longer term and unintended consequences of the project. Outputs that led to an improvement in health and that could be identified as having resulted from project inputs were considered to have been benefits of the project. (Blumenfeld 1986).

2.2.1 Defining Sustainability--The Dependent Variable: How Do We Know if a Project Was Sustained? We defined sustainability as the continuation of health benefits (outcomes) and activities (outputs) at least 3 years after U.S. project funding terminated. Ideally, we would have liked to have seen the health benefits, such as reductions in specific diseases or general improvements in health levels that the project is intended to produce, continue after the life of the project. However, determining what health benefits are achieved by most health care delivery activities is extremely difficult. Most frequently we have to assume that the activities put in motion during a project will produce expected health benefits. Therefore, except in those clear cases where project activities were notably not producing any benefits--for instance construction of latrines that are not used, we considered projects sustained if at least one significant project element or activity continued at least three years after the life of the project.

The focus of our study was the extent to which the outputs and benefits of health projects, not the projects themselves, were continued; that is, for example, the extent to which the activities, practices or systems developed under a project continued to benefit the health sector. Since a wide variety of types of project elements and activities potentially could continue after cessation of U.S. support, we found it useful to categorize these elements and activities to facilitate analysis and discussion. The categories of potentially sustainable project elements and activities listed in Box 1 were found to be useful by some team members in the studies. They provide a complex checklist that is useful in considering the potential outputs of each project and evaluating each component separately. This checklist has also been useful in developing the final synthesis.

INSERT BOX 1

The teams differentiated between two types of outcomes: Immediate outputs, which were achieved during the life of the project and that began to provide immediate benefits (e.g., trained personnel, installed wells and latrines) and replicating outputs, the institutions that reproduce the immediate outputs (e.g., the schools that train the personnel or the water and sanitation agency that constructs wells).

The final dimension considered was source of funding for continuation. Some continuing projects were funded by national sources (private or public) after the U.S. funding ceased, and these were clearly sustained. In some cases, however, outputs were sustained, or replicated, 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.

[Footnote: The Thailand study team defined sustainability as "the extent to which the objectives and benefits of the USAID-assisted activity continued to be met for at least three years after project assistance terminated, and the extent to which, where appropriate, the groups affected want to or can take charge of the activities to continue achieving the results" ... "(Sustainability was analyzed) at three levels: policy, program and individual activity." The author has tried to look beyond this particular definition to capture the substantive findings in the report pertinent to the definition established for the study series as a whole.]

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Box 1. Types of Project Elements or Activities
That Could Be Sustained

1. Personnel: Specific types of trained personnel (trained through overseas participant training, formal in-country training, and on-the-job training), their employment and activities, and training programs

- Are they working in the health sector?
- Are they working in the project implementing institution?
- Are they working in positions and carrying out activities appropriate to their specific training?
- Are they receiving sufficient support to perform their function as planned?

2. Physical Infrastructure

- Does it still exist?
- Is it being well maintained?
- Is it being used by the implementing agency or other institution for its original purpose or for other purpose in keeping with the project or sector objectives?

3. System Characteristics

- Are institutions and subsystems still functioning, including training programs established under (or modified through) the project(s)?
- Are organizational structures still intact?
- Have system capacities been maintained or expanded?
- Are functions and activities still being performed, and if so, how effectively and efficiently?
- Have resources been allocated to support these efforts?

2.2.2 Factors Expected to Affect Sustainability--The Independent Variables.

In our first country study, Honduras, we hypothesized that nine major factors would potentially influence the sustainability of a project. This list was expanded in subsequent studies to sixteen, with the exception of the Thailand study where the team employed a modified methodology. (Footnote: The Thailand study approach was to query senior people involved over the long period of U.S. assistance as to their own understanding of why things worked relatively well in the health sector. The team then tried to determine the necessary and sufficient conditions of greatest importance. Again, the author has tried to take account of this methodological variation when incorporating the Thailand findings with those from the other five country studies in this series.) The selection of factors to be examined for their association with sustainability was based on the emphases that emerged from our early document reviews and from the evaluation team's discussions during early work in the field.

Following the first study in Honduras we also divided the factors, or independent variables, that we examined for association with sustained and unsustainable projects into two categories: "contextual factors," i.e., factors over which project managers could exercise relatively little control, and "project characteristic factors," i.e., factors which were more malleable to decisions made by project officials.

There was some concern that the analysis would become too complex to be useful to project managers and designers who often seek short checklists to assist them in their practical decision-making. In general, however, it was felt that the expanded set would be a more appropriate basis for drawing conclusions; this set could later be summarized and simplified on the basis of empirical evidence of which factors were most critical. The expanded list of variables is presented in Box 2.

INSERT BOX 2

**Box 2. List of Variables
Potentially Affecting Sustainability**

Contextual factors

- Natural disasters
- Political environment
- Bilateral relations
- Sociocultural influences
- Economic context
- Private sector (including private voluntary organizations)
- Implementing institution
 - Leadership
 - Centralization
 - Integration
 - Skill levels of personnel
 - Goal conflicts
 - Competition among private voluntary organizations
- Other Donors (policies and coordination)
- National commitment to project goals

Project Characteristics

- Project negotiation process
- Institutional organization and management
 - Vertical versus integrated project structure
 - Administrative leadership
 - Administrative systems and training
- Financing
 - National absorption of project costs
 - Foreign exchange demand
 - Demand for a shift in priorities from established programs
 - Cost recovery
 - Cost-effectiveness
- Content factors
 - Project design
 - Training
 - Technical assistance
 - Appropriate technology
- Type of Project
- Community participation
- Project effectiveness

2.2.3 Study Hypotheses

The project design proposed a number of hypotheses related to the factors being examined (See Table 1: Summary of Hypotheses for the Sustainability Study). The table distinguishes between hypotheses that were thought likely to enhance sustainability and those that were thought likely to inhibit sustainability. These hypotheses are discussed in more detail in Section 4 of this report, "Findings: What Factors Influenced Sustainability?"

INSERT TABLE 1

2.2.4. Data Collection Guide

On the basis of the hypotheses presented above, team members developed a list of questions which they used as a guide in reviewing documents, conducting interviews and visiting sites. (Box 3: Data Collection Guide)

INSERT BOX 3

2.3 Data Collection and Analysis:

We examined health program sustainability in six countries-- Honduras, Guatemala, Tanzania, Zaire, Senegal and Thailand. Each country study reviewed the history of all U. S. government assistance to the health sector to evaluate whether the activities and benefits achieved during the life of the projects continued after the project funding was terminated. Because sustainability was defined as the continuation of at least some significant project outputs or benefits for at least 3 years after U.S. funding had ceased, we selected projects for which U. S. funding had terminated at least 3 years before the date of the country study.

The principal sources of information were document reviews, selected individual and group interviews, and brief site visits. Based on these information sources, team members drafted retrospective case studies in each of the areas comprising U.S. assistance. In Honduras and Guatemala, drafts were circulated and a workshop was held where the study's findings were reviewed and discussed in small workgroups and plenary session prior to the team's departure from country. In the remaining countries, a draft report was circulated and debriefings were held with officials and staff from the mission

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Table 1. Summary of Hypotheses for the Sustainability Study

| Contextual Factors | Decrease the Likelihood of Project Continuation | Increase the Likelihood of Project Continuation |
|--|--|--|
| Natural Disasters | Occurrence of natural disasters | |
| Political Context | Regime instability Low State capacity Military regime Low commitment to the welfare of the poor Strong interest group opposition | |
| Bilateral Relations | Difficult relations with the United States | Good relations with the United States |
| | Changes in U.S. Government development policies related to the health sector | |
| Sociocultural Context | Marked sociocultural divisions Marked urban-rural inequality Marked gender inequalities | |
| Economic Context | | U.S. funding ended in a period of economic growth U.S. funding ended in a period of public sector growth U.S. funding ended in a period of growth of Ministry of Health share of government budget |
| Private Sector and Private Voluntary Organizations | Private sector opposition or competition with project goals and objectives | Private sector support of project goals or objectives Private voluntary organizations available to implement project activities |
| Implementing Institutions | Rapid turnover and poor leadership of top officials Centralization of decision-making | |

Table 1. Summary of Hypotheses for the Sustainability Study (cont.)

| Contextual Factors | Decrease the Likelihood of Project Continuation | Increase the Likelihood of Project Continuation |
|---------------------|---|--|
| | <p>Fragmentation of authority and responsibility (relatively vertical, program-determined subunits with little interaction, coordination, and communication among them)</p> | |
| | <p>Low skill levels of personnel outside of the project on whom the project's implementation depends</p> | <p>Personnel selection based on skills, motivation, and job description</p> |
| | <p>Personnel decisions motivated by political or patronage considerations</p> | |
| | <p>Conflicts between organizational goals and project objectives</p> | |
| Other Donors | <p>Competition among PVOs for funds or beneficiaries</p> | <p>Project components and activities are congruent with health sector policies and activities promoted by international health agencies and donors at the time of continuation decisions</p> |
| | | <p>Availability of donor funds for health projects in the country at the time of project continuation decisions</p> |
| | | <p>Coordination among donors to avoid excessive concentration of donor resources on a single area</p> |
| | | <p>Coordination among donors to provide ongoing funding of project activities</p> |
| National Commitment | | <p>Consensus among important interest groups and decision-makers in the health sector that project goals and objectives are a national priority</p> |

Table 1. Summary of Hypotheses for the Sustainability Study (cont.)

| Project Characteristics | Decrease the Likelihood of Project Continuation | Increase the Likelihood of Project Continuation |
|--|--|---|
| Negotiation Process | Project designed with little consideration for participation and a feeling that project is being imposed by A.I.D | Project negotiations based on mutual respect, leading to consensus on project goals, objectives, and implementation plans |
| Institutional Organization and Management | | |
| Vertical/Integrated Structure | Project organized with vertical implementing units, especially if projects receive preferential funding | Projects integrated into existing national institutions |
| Administrative Leadership | Projects with high turnover among leaders and with incompetent leaders | Projects with stable, well-qualified leadership (both A.I.D. project managers and counterparts) |
| Administrative Systems and Administrative Training | Projects that neither improve the administrative systems of the executing agency nor provide administrative training | Projects that improve the administrative systems of the executing agency and provide administrative training |
| Financing | | |
| National Absorption | Projects receiving high levels of external funding throughout the project lifetime | Projects for which recurrent costs are gradually absorbed by the national budget |
| Foreign Exchange Requirement | Projects imposing repeated and long-term demands for large amounts of foreign exchange | |
| Tradeoffs Among National Priorities | Projects requiring large changes in national budgetary priorities | Projects not requiring large changes in national budgetary priorities |
| Cost Recovery | | Projects with capacity to recover a significant portion of their costs |
| Cost-Effectiveness | Projects with high costs in relation to the effectiveness of their outputs and benefits | Projects that use their resources efficiently |
| Content Aspects | | |
| Project Design | | Projects with clearly defined goals and objectives |

Table 1. Summary of Hypotheses for the Sustainability Study (cont.)

| Project Characteristics | Decrease the Likelihood of Project Continuation | Increase the Likelihood of Project Continuation |
|-------------------------|---|---|
| | | Projects designed with a long implementation period |
| | | Projects with low total budgets |
| | | Projects that produce visible benefits and generate significant demand among beneficiaries |
| | | Projects that provide for ethnic and gender balances in all aspects of project implementation |
| Training | Projects with technical training components, especially in fields for which the likelihood of later employment was high | Projects without a training component |
| Technical Assistance | | Projects that include a large technical assistance team |
| | | Projects that increase the technical capability of host country counterparts |
| | | Projects with long-term technical assistance (or repeated short-term technical assistance over a long period of time) |
| Appropriate Technology | Projects that use technology inappropriate to the context | Projects that use technology generally considered appropriate |
| Type of Project | Family planning projects | Health services projects |
| | Nutrition projects | Water and sanitation projects |
| | Malaria projects | |
| Community Participation | | Projects that stimulate considerable levels of community participation and respond to community-defined requests |
| Effectiveness | | Projects that have a reputation for achieving objectives with cost effective and efficient use of project resources |

Box 3. Data Collection Guide

CONTEXTUAL FACTORS

Natural Disasters

- 1. Were there any major events, such as earthquakes, that influenced project activities and benefits during or after the life of the project?

Political Factors

- 1. What effect, if any, did a change in government have on the project with which you were associated and its prospects for continuation after A.I.D. funding ended? Please give concrete examples of how changes in the government affected your project.
- 2. Did you find significant differences in the way different governments treated the project? To what would you attribute variations in treatment?
- 3. Did you find that various organizations, groups, or important individuals influenced the initiation, implementation, or continuation of the project? Which groups or individuals were the most important and how did they exercise their influence?

Bilateral Relations

- 1. Were you aware of any way in which the general state of bilateral relations with the United States influenced the evolution and prospects for sustaining the project?
- 2. Were there any significant changes in the project that were believed to have occurred because of shifts in A.I.D. policy or funding? Did these changes affect prospects for project continuation after A.I.D. funding ended?
- 3. Did you ever feel that changes in the Mission or changes of Mission Director or project officer affected the project and its possible continuation?

Sociocultural Context

- 1. Did social inequalities (e.g., ethnic, class, gender) influence the effectiveness and continuation of project activities and benefits?
- 2. Did economic or regional inequalities influence the project?
- 3. Were there any major social or demographic changes that had significant influence on the project.

Economic

- 1. Describe the general economic environment that existed before, during, and after the project.
- 2. Were there any ways in which these factors influenced the design and execution of the project?
- 3. Was the project modified in any way as a result of these conditions?
- 4. Were the resources of the public sector in general and the Ministry of Health in particular expanding, remaining unchanged, or declining during this period?
- 5. Were budgetary priorities within the Ministry of Health favorable to project activities?

Box 3. Data Collection Guide (cont.)

Private Sector

- 1. Did activities in the private health sector (e.g., doctors, pharmacies, HMOs) affect project activities and benefits? Could the project have taken the private sector into account more effectively?
- 2. Were private voluntary organizations available for implementing project activities?

Implementing Institution

- 1. In your opinion did policy, personnel, or organizational changes at the top levels of the Ministry of Health affect the initiation, implementation, or continuation of projects supported by A.I.D.? Can you give examples?
- 2. What are the effects of changes in the levels of Ministry funding on the project and its continuation?
- 3. Who is more important to the success and continuation of a project, the Minister or the administrator directly responsible?
- 4. Did the centralization (or decentralization) of decision-making in the Ministry influence project effectiveness during or after the life of the project?
- 5. Did lack of communication and coordination among units within the Ministry of Health influence project effectiveness during or after the life of the project?
- 6. Did the implementing agency have access to sufficiently trained personnel to support important project activities?
- 7. Were other goals and objectives of the implementing agency (Ministry of Health or private voluntary organization) in conflict with the goals and objectives of the project?
- 8. Were many private voluntary organizations competing for the same sources of funds and for the same beneficiaries?

Donor Coordination

- 1. How did the support of international donors for project objectives and activities influence decisions about project continuation?
- 2. Did the availability of alternate international sources of funds influence decisions on project continuation?

National Commitment to Project Goals

- 1. Who (individuals, groups) supported the goals and objectives of the project and who opposed them?
- 2. Were there major conflicts or debates?
- 3. How widespread was project support or opposition?

PROJECT CHARACTERISTICS

Project Negotiation Process

- 1. Describe the process by which the project was negotiated.
- 2. Who participated in the process?

Box 3. Data Collection Guide (cont.)

- 3. Was the project an indigenous initiative, or was it brought in by A.I.D.?
- 4. What was the tone of the discussions during the negotiation? Was there mutual respect and give and take?
- 5. Are there people who view the process differently than you do?

Institutional Organization and Management

1. Vertical Versus Horizontal Design

How was the project administered? Did it have its own chain of authority or was it under the Director General or a regional official?

Could the project have been better integrated into the Ministry of Health?

Were communication linkages open between project officials and officials in the Ministry of Health?

Did the project generate jealousies within the Ministry of Health?

Did the project receive special attention or resources for nurses and physicians (or other equivalent personnel) ?

2. Managerial Leadership

Who headed (or who were the counterparts for) the project during the life of the project?

Did changes of leadership affect the project?

Were project leaders effective managers and promoters of their projects?

3. Administrative Systems and Training

Did the project contribute to administrative improvements in the Ministry of Health (or other agency)?

What happened to people who were trained overseas?

Was training effective?

Financing

1. National Absorption of Project Costs

What percentage of total recurrent costs had the Ministry of Health absorbed by the end of the project?

Were there any differences in the absorption rate for different kinds of cost categories (salaried positions, materials, equipment, training)?

Was it anticipated that alternate sources of funding, such as other donors, beneficiaries, other levels of government, or private voluntary organizations, would continue to finance the project after A.I.D. funding ended?

2. Foreign Exchange Component

Did the project depend on the continuing importation of major materials and supplies?

Were local or regional sources for these imports unavailable or was importation a project requirement?

Box 3. Data Collection Guide (cont.)

3. Tradeoffs Among National Priorities

Would the project reduce the funding available for other Ministry of Health programs, such as curative care?

Were financing requirements and mechanisms at the end of the project essentially the same as those during the project?

4. Cost Recovery

Did the project include means of recovering costs through user fees or other charges?

5. Cost-Effectiveness

Was the project able to achieve its goals without waste and corruption?

Content Aspects

1. Project Design

How clearly defined were project goals and activities?

Were there a large number of beneficiaries, and did they see the benefits as important enough to demand continuation of the project?

Did project design provide for ethnic and gender balance in all aspects of project implementation?

2. Training

What type of training program (on-the-job training, long-term or short-term courses) was included in the project? What was its size? Was it continued after the project funds ceased? How has it changed over time?

Were there sufficient salaried positions for the newly trained workers to assume after their training?

Were beneficiaries trained in project activities?

3. Technical Assistance

What was the role, size, and duration of the technical assistance provided under the project?

Were counterparts trained to take over project activities after the project technical assistance team left?

Was technical assistance acceptable to the national Government during project negotiation and implementation, or was it imposed by A.I.D.?

4. Appropriate Technology

Was the specific technology appropriate for achieving project goals in this particular country context?

Community Participation

1. Was the project successful in developing a high level of community participation? Did the community provide labor and materials? Was a health committee formed? Did the community actually establish priorities for health activities in the community?

Project Effectiveness

1. Was this project able to achieve its goals and objectives?

2. What were the major achievements and major failures of the projects?

and the host country prior to the team's departure. These meetings served both to correct the team's factual information and to test preliminary analyses.

Although the country studies reported findings on what was sustained, the central question addressed was "Why were some benefits and activities sustained while other were not?" The primary thrust was to identify and attempt to explain those factors that were found most frequently associated with sustainability. The core of each country analysis sought to relate the characteristics of projects and their contexts to sustained and unsustained activities and benefits in that country. Each study culminated with a report outlining the country-specific findings, analyses, conclusions and proposed guidelines.

2.4 The Current Report

The current report is the final report in this larger series of studies. It describes, synthesizes and analyzes the findings from the six completed country studies.

Ideally, in order to draw comparisons, we would have liked quantitative results from the various studies indicating magnitude, or level, of sustainability in various categories of sustained benefits or activities. Realistically, it was not feasible to achieve strictly comparable categories and weightings in every country. In spite of our attempt to achieve objectivity in our definition, there was considerable subjectivity in identifying what was and what was not sustained, and how well it was sustained. In each country, team members responsible for a particular project type (health services, water and sanitation, malaria programs, family planning, or nutrition) had to determine precisely what constituted sustainability for that type of project. Essentially each country was evaluated by a separate team. However, each team shared at least one overlapping member.

Adding complexity to the task of synthesizing data across studies was the shifting unit of observation and analysis employed by teams both within and between countries, in response to the richness of the available project data base and the level of team resources (people and time) available to carry out the case studies. The unit of analysis ranged from project components, to projects, to project clusters. For example, in "project-rich" countries such as Thailand, with some thirty separate completed projects in health, population and nutrition, the unit of analysis was like-project groups, i.e., all projects in a health subsector. In "project-poor" countries such as Senegal, with only two completed projects appropriate for this study (historical data were unavailable on

a third completed project), the unit of analysis was the project component. In still other countries, e.g., Tanzania, the unit of analysis included a mix of projects and project components.

Caveats thus noted, we assigned each project, project component or project cluster a descriptive sustainability designation and a corresponding numerical sustainability rating. Sustainability descriptors and corresponding ratings are:

| | |
|---------------------|---|
| Unsustained | 0 |
| Minimally sustained | 1 |
| Modestly sustained | 2 |
| Sustained | 3 |
| Well sustained | 4 |
| Highly sustained | 5 |

The next step was to construct tables showing the projects, project components or project clusters about which judgments were made by team members, and the sustainability scores assigned to those units, in each of the six countries studied (Table 2 through Table 7, presented in Section 3 following, "Results: What Was Sustained?").

The sustainability ratings or scores assigned and presented in the tables are those of the writer. They are based on an analysis of the judgments made by the individual team members, the descriptive material contained in the individual country reports and the writer's own perceptions from participation in four of the six country studies. The "comments" column of the tables presents highlights of the findings reviewed by the writer that formed the basis for the judgments presented in the table. The bottom row of each country table provides an average sustainability score for that country.

Our final step was to analyze the factors that had influenced sustainability (Chapter 4: Findings: What Factors Influenced Sustainability?). Here, again, we reviewed factors associated with sustainability across countries, supplemented these findings with cross regional analysis for economic and political contextual factors, and constructed analytical tables to identify those factors that significantly influenced sustainability (Tables 13 and 14). We defined factors as significant if they were associated with sustainability at least 50 percent of the time, i.e., in at least 3 out of the 6 countries studied. Having identified the significant factors that influenced sustainability we ranked these factors in terms of their relative degree of influence determined by the percentage of countries in which they were associated with sustainability (Box 4).

Although we couch some of our findings in regional terms, we are patently aware of the overreaching nature of these statements. Our sample of three countries in Africa, two in Central America and one in Asia provide us with no claim to regional representation. When we do indulge in these generalizations it is for the explicit purpose of stretching the limits of our research findings. Our "regional" conclusions, therefore, must be considered only as hypotheses to be examined in other efforts.

Finally, the different methodology of the Thailand study compromises our ability to make direct comparisons across all countries. It is possible, however, to draw on the Thailand report for examples that support, refute or otherwise add to the findings and conclusions from analysis of the Central America and Africa cases. Thus we have tried to integrate findings from the Thailand report with those from Central America and Africa.

Our final step was to draw conclusions from the findings and to suggest preliminary guidelines and recommendations for developing more sustainable projects. We also discuss outstanding issues in the study of sustainability.

3. RESULTS: What Was Sustained?

3.1 Introduction

The purpose of this section is not to try to explain why differences in sustainability occurred. That question is addressed in Chapter 4. Rather, our purpose in this section is to describe what has been sustained and to look for patterns in the data. Subsequently we will try to analyze and interpret these observed differences with reference to the factors that were hypothesized to influence sustainability.

3.2 Sustainability in Asia: Thailand. U.S. assistance in Thailand, initiated in the early 1950s, quickly reached into every important health subsector--specific disease control (malaria), population and family planning, rural water and sanitation, medical education and health training, primary health care and nutrition. In 1989, with bilateral assistance to the health sector in Thailand now basically completed, the sustainability study team reviewed some thirty projects funded over the past 38 years with a USAID contribution, not including substantial assistance by AID/Washington, well in excess of \$100 million.

In Thailand, researchers found many activities sustained at high levels. With an average score of 4, "well sustained," Thailand outranks all other countries studied in the strength of sustained activities and benefits by a wide margin (Table 2). Researchers reported that all significant USAID supported activities had been sustained at the policy and program levels in each of the program's five main areas where U.S. funding had ceased long enough ago to permit sustainability assessment: malaria eradication and control, rural water and sanitation, medical education and health training, and primary health care and nutrition. (Footnote: In Thailand's sixth and final program area, population and family planning--which, with a funding level in excess of \$42 million between 1968 and 1989, has been the largest element of U.S. assistance in health, we were unable to assess sustainability because U.S. bilateral funding for the program had only recently ended. However, this support for more than 2 decades has enabled the Ministry of Public Health to rapidly organize and expand nationally a family planning program that is acclaimed worldwide--birth rates have dropped sharply and contraceptive prevalence now matches that of the industrialized nations. This program has also been institutionalized in the Ministry of Public Health.)

INSERT TABLE 2

With USAID assistance the Ministry of Public Health developed a strong malaria control program which reduced malaria from the primary cause of death in the 1950s to a minor cause today. The Chiang Mai Medical School has continued to expand and improve long after USAID funding ended, and institutional relationships with U.S. counterparts have continued over the decades. USAID funds promoted rapid expansion of potable water and sanitary privies in selected rural areas. The Ministry of Public Health utilized USAID funds to test various approaches to delivering primary health care services, some of which have been adopted by the Ministry of Public Health, and to train health workers down to the level of village volunteers who continue to deliver services. With limited nutrition funds from USAID, the Ministry of Public Health tested formulated foods, especially for children, as part of a national effort to reduce malnutrition. USAID funds played a direct and important role in institution building, especially for the malaria and training divisions of the Ministry of Public Health and the Chiang Mai Medical School.

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THE EFFECTS AND SUSTAINABILITY OF HEALTH PROJECTS IN THAILAND, 1951-87

THAILAND

| Project/Project Component | Date | Sustainability Score | Comments/Descriptions |
|--|---------|----------------------|---|
| 1. Medical Education and Health Training | 1951-74 | 5 | 1. 1951-74. Thai health experts see most striking examples of sustainability in this area. Chiang Mai University Medical School constructed in 1950; some buildings still in use; costs split with RTG. Beginning of relationship with University of Illinois that continues to this day. Chon Buri training center was origin of Training Division in MOPH. This training center evolved into a regional public health training college and continues as the primary training facility for health personnel. MOPH added 3 more. Operating funds included in regular MOPH budget. Successful in developing a public health (as opposed to medical) orientation; provide training for other countries. |
| 2. Disease Control (Malaria) | 1951-84 | 5 | 2. Malaria dropped from the number one cause of death to a minor cause over period of USAID assistance (1951-84) Malaria Division well integrated into MOPH. MOPH has integrated costs of program fully into regular budget. Concern about some replacement costs. |
| 3. Health Care | 1975-87 | 4 | 3. Support 1975-87. Some of strategies tested were adopted by MOPH. Personnel trained under Rural PHC Expansion project still practicing. PHC is now cornerstone of MOPH national program with funds in regular budget. External donor assistance has dropped from 50% to less than 10% of total PHC costs. Operations research agenda largely unsuccessful. Wechakorn (community health paraphysicians) program not sustained; over the years a network of village volunteers and village health communicators to supplement government infrastructure and promote village self-finance including community financing. USAID assistance useful in evolutionary process. |
| 4. Rural Water and ????? | 1951-83 | 4 | 4. USAID assisted 1951-83. Problems with some of early projects, e.g., U.S. engines not sustained; Most recent village sanitation development funds have had mixed success and are being decapitalized in many villages; Mobile medical team of Comm Rural Health Project sustained and expanded; Thai insistence of financial self-sufficiency and community self-help in operating piped water systems; Sanitary Division established in MOHP and trained technical staff. |
| 5. Food and Nutrition | 1952-82 | 2 | 5. (limited U.S. funding 1952-82). Protein food development (silver bullet approach) not continued. Some useful research undertaken. Village nutrition funds decapitalized. Some weight monitoring continues. Experience and training received under project has strengthened Nutrition Division. |

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6. Population 1989-89 N.A. 6. Largest element of USAID assistance in health (1982-89-\$42 million) Bilateral assistance ended less than a year ago, so can't address sustainability yet. Strikingly successful program that receives worldwide acclaim.

AVERAGE SUSTAINABILITY SCORE 4.0

Legend: Unsustained = 0
Minimally sustained = 1
Modestly sustained = 2
Sustained = 3
Well sustained = 4
Highly sustained = 5

3.3 Sustainability in Central America: Honduras and Guatemala. Assistance to the two Central American countries studied has grown over the years to embrace a large number of separate project activities. Since the initiation of U.S. Government funding in 1942, there have been 17 specific health projects funded by U.S. Government agencies in Honduras. In Guatemala, there have been 19 major project initiatives (under 27 separate project numbers). Projects completed by the time of the CDIE studies totaled over \$40 million in Honduras and \$25 million in Guatemala. Current projects will provide an additional \$30 million in each country.

In Central America researchers were also able to identify significant levels of continuation of project activities, albeit at levels considerably below those found in the Asian country study. Whereas Thailand received an average sustainability score of 4, Central America achieved a 2.6, falling approximately midway between moderately sustained and sustained. Honduras, with an average sustainability rating of 2.8 (Table 3), contributed slightly more to this weighting than Guatemala, with an average sustainability score of 2.3 (Table 4).

Honduras. Of the six A.I.D. project cases we examined in detail in Honduras, three projects had major outputs that were sustained in high degree: the auxiliary nurse training program of the Integrated Rural Health/Family Planning project; the Rural Water supplies project; and the hand pump and latrine component of the Nutrition Planning project. Three other major project outputs were not well sustained after U.S. funding ceased: the malaria control activities that ended in 1969; the family planning activities under the Maternal and Child Health/Family Planning project that ended in 1976; and the multisectoral nutrition planning component of the Nutrition Planning project, which ended in 1981. All three of the sustained components of the projects were able to sustain immediate outputs (outputs that provide direct health benefits during the life of the projects--e.g., auxiliary nurses, water systems, latrines) with national funds. In addition, one project (the auxiliary nurse training component of the Integrated Rural Health project) was able to sustain replicating outputs (outputs that continue to produce immediate outputs--e.g., nurse training school) with national funds. Honduras was also able to sustain replicating outputs for two other projects (Rural Water and hand pumps and latrines component of the Nutrition Planning project) by obtaining alternate external funding from other donors.

INSERT TABLE 3

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TABLE 2: THE SUSTAINABILITY OF HEALTH PROJECTS IN HONDURAS, 1942-86

HONDURAS

| Project/Project Component | Date | Sustainability Score | Comments/Descriptions |
|---|---------|----------------------|--|
| 1. Malaria Eradication Project | 1965-69 | 1 | 1. Both benefits and institution faltered; very checkered history. |
| 2. Rural Water Systems | 1963-70 | 5 | 2. 62 water systems built vs. 24 planned; and they continue to operate some 20 years later. |
| 3. Family Planning | 1965-72 | 0 | 3. The MOH integrated the vertical program (personnel and training) into its system in 1975, while shifting duties of personnel and training-subject-matter away from family planning to other priorities. |
| 4. Nutrition | | | |
| a. Multisector nutrition planning | 1976-81 | 1 | 4a. Limited achievements, most of which were lost soon after U.S. funding ceased; some trained personnel still work in nutrition related areas. |
| b. Handpumps and Latrine | 1976-81 | 5 | 4b. Water pumps and latrines were sustained; Government now pays proctor training and salary costs with national funds. Expansion to new communities by other donors. |
| 5. Rural Penetration (auxiliary nurse training) component | 1976-81 | 5 | 5. Immediate outputs (trained auxiliary nurses) and auxiliary nurse training program continued using national funds. Backbone of rural health system. |

AVERAGE SUSTAINABILITY SCORE = 2.8

- Legend:
- Unsustained = 0
 - Minimally sustained = 1
 - Modestly sustained = 2
 - Sustained = 3
 - Well sustained = 4
 - Highly sustained = 5



Guatemala. In Guatemala, significant aspects of three of the five major project clusters (i.e., original and follow-on projects) in Health Services were judged to be sustained. Roosevelt Hospital, constructed in the 1950s continues to function today. Inter-American Cooperative Public Health Service (SCISP) projects contributed to the continuing administrative structure of the Ministry of Health. The unique rural health technician program, while not as effectively sustained as it might have been, is still functioning throughout the country.

The water and sanitation projects that were more successfully sustained than others were the urban projects of the SCISP period, the urban projects implemented by the National Institute for Municipal Development in the 1970s, and the recent rural projects run by private voluntary organizations. Less effectively sustained were the rural projects of the SCISP period and more recent projects implemented by the Ministry of Health. Latrine components of the water and sanitation projects have been the least sustained component of all rural water and sanitation projects.

Malaria projects were relatively well sustained after U.S. funding ceased in 1970. Malaria rates dropped for four years before turning up slightly in 1975. Also, during the early 70s the program was able to make a series of pragmatic adjustments, all of them reflecting a managerial transition to control strategies and away from costly high-risk eradication strategies. After the 1976 earthquake, however, the failure to import insecticides for one spraying season, a decision beyond the control of the health sector, resulted in a dramatic increase in the incidence of malaria which has only recently started to decline again.

The least successfully sustained of the health delivery projects have been the family planning projects, particularly the public sector activities, which ceased when A.I.D. support ended. Even the private sector activities of the Guatemalan Association for Family Welfare (APROFAM) require continuing A.I.D. funding. Although early A.I.D. project papers gave the impression, sometimes explicitly, that sustainability of FP programs in Guatemala was possible, the 1987 proposed extension stated that "continued progress in the FP subsector in Guatemala is ...considered to be highly unlikely without the solid and continuing presence of A.I.D. support."

Of the Nutrition Institute for Central America and Panama (INCAP) nutrition projects, sugar fortification and corn hybrid projects were relatively well sustained, although the sugar fortification program was suspended for several years during the 1980s. Although nutrition planning has continued beyond the life of the project, it has produced no appreciable benefits either during the life of the project, nor subsequent to project completion; therefore, it was judged to be unsustainable. As mentioned above, the SINAPS project, which was implemented with INCAP technical assistance, also was not sustained.

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TABLE 4: THE SUSTAINABILITY OF HEALTH PROJECTS IN GUATEMALA, 1942-87

GUATEMALA

| Project/Project Component | Date | Sustainability Score | Comments/Descriptions |
|----------------------------------|----------------------------|----------------------|--|
| 1. Health Services Development | 1952-82 (various) | 5 | 1. Sustained outputs, and primarily with national rather than other donor funding. Significant aspects of 3 of 5 major clusters were highly sustained. Roosevelt Hospital (1950s) continues today; SCISP projects contributed to continuing administrative system; Overseas participant training and in-country has made important and lasting contribution; Freeway facilities are lasting and effective heritage from 4 of the 5 projects; Mobile units and SINAPS/FR.NAPS/CAFSVS unsustainable. |
| 2. Water and Sanitation | | | |
| a. Water projects | 1952-65 (except '51-54) | 4 | 2a. Water project maintained with national funds and replicated with other donor funds. Urban projects of SCISP period and urban projects instituted by the National Institute of Municipal Development in the 1970s and recent rural PVD projects were most sustained. SCISP rural projects and recent MOH projects less effectively sustained. |
| b. Latrine component | | 0 | 2b. Latrine components have been the least sustained component of all rural water and sanitation projects. |
| 3. Malaria Program | 1958-69 | 3 | 3. Well sustained after U.S. funding ceased in 1970. After 1976 earthquake, failure to import insecticides one spraying season resulted in dramatic increase in incidence which has only recently started to decline. |
| 4. Family Planning | 1967-87 | 0 | 4. This was the least successfully sustained of the health delivery projects, particularly the public sector activities, which ceased when A.I.D. support ended. Private sector activities require solid and continuing U.S. support. |
| 5. Nutrition Improvement (INCAP) | 1967-86 (various) | 2 | 5. Sugar fortification and corn hybrid projects relatively well-sustained, although vulnerable to political changes and pressures, Nutrition planning continues but has never produced any benefits (form without function). SIDAPS not sustained. |
| AVERAGE SUSTAINABILITY SCORE | | 2.3 | Range = 0 - 5 |
| Legend: | Unsustained | = 0 | |
| | Minimally sustained | = 1 | |
| | Moderately sustained | = 2 | |
| | Sustained | = 3 | |
| | Well sustained | = 4 | |
| | Highly sustained | = 5 | |

3.4 Sustainability in Africa: Tanzania, Zaire and Senegal:
Given the late start in Africa, there were many fewer projects that had been completed by the time of the sustainability studies. In Zaire there were four projects during the period 1972-1985 with a total funding of \$16.5 million; and in Senegal only three projects from 1977-1985 totaling \$1.4 million. In Tanzania, A.I.D. involvement began in 1963 with urban water supply projects. Six major project activities totaling \$20.7 million were evaluated in Tanzania.

While researchers were able to identify significant levels of project sustainability in both Thailand and the Central American studies, in the African countries studied many projects were only marginally sustained at much lower levels of activity than had occurred during the life of the project. The average sustainability score in Africa was only 1.6, compared with 2.6 in Central America and 4 in Asia. The range of average national sustainability scores was also very narrow across the three African countries studied: It was highest in Tanzania (1.7), and lowest in Zaire (1.5). Senegal fell midway at 1.6.

Tanzania. In Tanzania, projects or project components rated most sustained included all the urban water projects, the health components of the Mother, Child, Health Aides training project (MCH Aides), and the curative aspects of the Cancer Control 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. (See Table 5.)

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, 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.

The remaining project components were minimally sustained. That is, the preventive health education program of the Cancer Control project was continued at a very reduced level, e.g., occasional newspaper articles authored by former project staff. The Continuing Education project encouraged the development of Ministry of Health continuing education, and some of the staff who received overseas training from the project were working in the field. However, none of the actual activities that were

implemented during the life of the project have continued. Nevertheless, 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; the latrine and water systems provided by the local activities component of the School Health project were still in use but in need of 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.

INSERT TABLE 5

Senegal. In Senegal, our review of the the two completed projects suggests that one component of the Bakel project, the Epidemiological Survey Component, was unsustainable. It failed to provide significant epidemiological surveillance for determining the health impact of the irrigation project. Its findings were reviewed at a seminar late in the project's life and were not followed-up. There was no subsequent support for epidemiological surveillance in the region.

By contrast, the primary health care component of the Bakel project was not only sustained, but subsequent activities by local communities and the Ministry of Health have further improved PHC services since the end of the project. This project trained Ministry of Health health workers and village volunteers in 23 villages, and provided mopyettes (or mopeds) for the Ministry of Health health workers. It also assisted in the development and construction of 23 self-supporting village health huts and provided them with basic drugs as an initial step in establishing village-run revolving drug funds. Over the life of the project and beyond, villagers, taking advantage of additional resources provided by remittances sent home by migrant works from the area, not only continued the community activities sponsored by the project but also upgraded the health huts to Health Posts and petitioned the Ministry of Health to provide nurses to staff them. The Ministry has responded by providing salaried nurses for each Post.

Faced with partial and conflicting evidence for the Casamance Project, the team concluded that it was only minimally sustained. The project focused on health and nutrition education and chloroquine treatment for malaria, and parasite treatment. It also provided support for village pharmacies, similar to the revolving drug funds in the Bakel project. The project trained Ministry of Health nurses and Rural Development Agents to provide nutrition and health education. While it was difficult to evaluate systematically what was sustained in this

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TABLE 5: THE SUSTAINABILITY OF HEALTH PROJECTS IN TANZANIA, 1971-85

TANZANIA

| Project/Project Component | Date | Sustainability Score | Comments/Descriptions |
|--|---------|----------------------|---|
| 1. MCH Aides | | | |
| a. Training and Health Care Delivery Component | 1973-84 | 4.5 | 1. All 18 health training schools continue to operate although 3 had been converted to upgrade MCH aides to nurse midwives. New aides continuing to be trained at 400/yr. Preservice training increased from 18 to 24 months. |
| b. Family Planning Component | 1973-84 | 0 | Access to preventive MCH expanded, but project impact constrained during project by deepening economic crisis. Activities and benefits largely intact in 1985, although deterioration in service quality. Family Planning component was largely inactive during the life of the project and remains so (longer training of aides -- does it give more in family planning?). |
| 2. Cancer Control | | | |
| a. Curative component | 1978-83 | 4 | 2. Cancer control center at Muhimbili Medical Center has been institutionalized, and continues to diagnose and treat. Central government funds. Other donors support continuing research, new equipment; sporadic and limited health education; epidemiological component unsustainable. |
| b. Prevention Component | 1978-83 | 1 | |
| c. Epidemiol. component | 1978-83 | 0 | |
| 3. Urban Water Supply | 1963-69 | 4 | 3. Water projects were all continuing to provide services, although maintenance was weak. Future demand cannot be met with present capacity. |
| 4. Hanang Village Health | | | |
| a. Village Health Services component | 1977-82 | 2 | 4. In late 1985, a VHS program was still in operation, but at lower levels of activity than during project. District Council responsible since 1985, but role at village level limited by budgetary constraints on fuel and spare parts. |
| b. Mobile Clinics Component | 1977-82 | 0 | Of 144 VHMs trained, 73 are currently active; 50 work sometimes; about 50% of villages financially support VHMs at various levels. Project results have influenced development of national program only minimally. Mobile clinics were not sustained. |
| 5. School Health | | | |
| a. Local Activities component | 1979-85 | 1.5 | 5. Latrine and water systems still in use, but need maintenance. Most trained teachers still in place but using pre-project curriculum. Curriculum never implemented, but still in publication queue. |
| b. Curriculum Development | 1979-85 | 1 | |
| 6. Continuing Education | 1960-83 | 1 | 6. None of the activities implemented during the project have continued. Many other continuing education activities have evolved supported by other donors. Project created demand that continued. |
| AVERAGE SUSTAINABILITY SCORE | | 1.73 | Range = 0 - 4.5 |

Legend: Unsustained = 0
 Minimally sustained = 1
 Modestly sustained = 2
 Sustained = 3
 Well sustained = 4

project, the team was able to determine that several villages continued to enjoy the benefits of these programs. Village pharmacies still operated in some areas and the nurses and Agents were still reported to be providing health and nutrition education. However, it was also clear that in many villages these activities were no longer functioning.

INSERT TABLE 6

Zaire. In Zaire two of the four projects reviewed were sustained: The Maternal Child Health Centers, implemented by Mama Yemo Hospital, and the Community Health/Integrated Rural Development project, implemented by the Salvation Army. The Maternal Child Health project made lasting changes to maternal and child health care in Zaire. The clinics are still providing the complement of services that were provided during the period of USAID support although drugs are not distributed. Family planning services are still being provided to a relatively limited number of users. Even the educational materials developed during the period of A.I.D. assistance are still being used. The information systems developed also are still functioning, even in the absence of paper supplies. Moreover, the clinics still serve as a model for other urban maternal and child health services and as in-service maternal and child health training sites for health professionals.

At present, most activities and systems set up under the Community Health project are being sustained. There is some indication that over time, the support of major equipment such as vehicles, X-Ray machines, and so forth will pose a major difficulty. Currently, other recurrent costs are covered by user fees.

By contrast, after A.I.D. funding for the malaria project was discontinued, the project was completely dismantled. The vehicles, spraying equipment, office furniture and microscopes were turned over to the Expanded Program of Immunization (EPI) program, but were not used for malaria activities. None of the project personnel were absorbed by the EPI Program, and the director was not employed for over a year after the project terminated. Since the Combatting Childhood Communicable Diseases (CCCD) project, which was implemented in part as a follow-on to the EPI project component, initially only supported immunization activities and only later adopted a malarial component, there was a period of several years before any malaria activities were implemented by the Ministry.

The Health Systems Development Project may have been A.I.D.'s most difficult and least productive HPN effort. Essentially, none of the direct project activities was sustained. The

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APPENDIX: THE SUSTAINABILITY OF HEALTH PROJECTS IN SENEGAL, 1945-89

SENEGAL

| Project/Project Component | Date | Sustainability Score | Comments/Descriptions |
|---|---------|----------------------|--|
| 1. Bakel Rural Development PHC Component | 1978-85 | 4 | 1. Bakel Rural Development: PHC component. Project trained MOH health workers and village volunteers in 23 villages; provided mopeds for MOH health workers; assisted in development and construction of 23 self-supporting village health huts and provided basic drugs in establishing village-run revolving drug funds; Activities by MOH and local communities has further improved PHC services since end of project. Over life of project and beyond, villagers, taking advantage of additional resources provided by remittances sent home by migrant workers from the area, not only continued the community activities sponsored by the project, but also upgraded the health huts to Health Posts and petitioned the MOH to provide nurses to staff them. MOH has provided salaried nurses for each post. The NWHs trained in the project have become aides to the nurses, and are paid with funds raised through the revolving drug fund. The MOH and PHC seemed to be well accepted and are continuing. Sanitation programs, especially the Sanitation Days to clean the communities and the latrines, were not sustained. |
| 2. Bakel Rural Development Epidemiological Survey Component | 1977-85 | 0 | 2. Bakel Rural Development -- Epidemiological surveillance Component. Did not utilize MOH nurses who had been trained to assist project; didn't provide significant epidemiological surveillance for determining health impact of irrigation project; No follow-up on survey findings; no support subsequent to project for this activity. |
| 3. Casamance Rural Development Health and Nutrition Component | 1978-85 | 1 | 3. Casamance Rural Development -- Health and Nutrition component. Nutrition component designed to complement the agricultural activities by training rural development agents in nutrition and health education; chloroquine treatment for malaria and parasite treatment; training of MOH nurses in health and nutrition education; assisted other PHC activities, e.g., creation of village pharmacies and stimulating community participation. Village pharmacies still operating in some areas, and nurses and agents reported to be still providing health and nutrition education. But in many communities these activities were no longer functioning. MOH provided salary support for GDS counterpart -- a health assistant who provided technical assistance - through October 1988. |

AVERAGE SUSTAINABILITY SCORE 1.7 Range = 0 - 4

- Legend: Unsustained = 0
 Minimally sustained = 1
 Modestly sustained = 2
 Sustained = 3
 Well sustained = 4

planning unit disappeared even before the project ended. The pilot health zone component never was fully implemented--although this health zone is now absorbed into the Basic Rural Health project. A less tangible output of the project that has had continued impact on the health sector in Zaire was the long term training of four Zairian physicians. Although they did not return to a functioning planning cell within the Ministry of Health, three out of the four currently are high level administrators associated with USAID-supported primary health care and family planning programs (Basic Rural Health and Family Planning Services).

Sustaining projects in Zaire was difficult. The projects that were sustained were relatively limited in scope and appeared to be threatened with continuing and future difficulties which may weaken their sustainability. The maternal child health clinics are perhaps the strongest activities that have been sustained. However, there are plans to integrate them into the Ministry of Health -- a corrupt and far weaker institution than the semiautonomous Mama Yemo Hospital administration. Furthermore, the clinics depend on material and human resources that were created for the initial project and it is unclear how these resources, especially, the highly motivated nurses, will be replaced over time. While the clinics are likely to continue to operate they currently function at a lower level of effectiveness, and probably will continue to do so. The Community Health clinics are also threatened since they depend on fee-for-service charges that have barely been able to cover basic recurrent costs. The vehicles and other equipment are already in need of replacement and no source has yet been found.

INSERT TABLE 7

3.5 Sustainability Comparisons Within and Between Countries and Regions. The following three tables display project sustainability ratings in a variety of formats. They reveal striking differences in project sustainability (1) within countries, (2) between countries and (3) between regions. There is relatively little variation in project sustainability within regions.

Table 8 presents the average sustainability ratings by country and region for all of the studies. It reveals significant differences in project sustainability between regions, but little difference between countries within regions. In Thailand, with an average sustainability score of "4," researchers found many activities sustained at high levels. They reported that all significant USAID supported activities

TABLE 7: THE SUSTAINABILITY OF HEALTH PROJECTS IN ZAIRE, 1972-86

ZAIRE

| Project/Project Component | Date | Sustainability Score | Comments/Descriptions |
|---|---------|----------------------|--|
| 1. Mother-Child Health Centers | 1972-80 | 3.5 | 1. Mother Child Health Clinics -- 1972-1980. Created 6 MCH centers in Kinshasa to decentralize maternity services and to provide other services including FP; clinics outfitted with appropriate equipment; training materials well-designed; essentially good clinic design and layout of services; have become a model for other maternities in Kinshasa and other major cities of the country (Mama Yemo Hospital implemented) providing complement of services that they provided during project, although drugs are not distributed; program is doing more training now than it did during project; FP services to limited number of users; education materials still in use, information systems still functioning, even in absence of paper supplies. But project rather limited in scope and seems constantly threatened. Plans to integrate with MOH, a corrupt and far weaker institution than the semi-autonomous Mama Yemo. Unclear how resources, including highly motivated nurses, will be replaced over time. Precarious, but continued 6-9 years after project. |
| 2. Health Systems Development | 1976-82 | 0 | 2. Health system Development -- a. Central Planning Unit in MOH and b. development of model primary and autonomous organizational entity for health systems delivery -- Even with 2 year extension, neither objective met; Least sustained - most difficult and least productive HPN effort. None of direct project activities was sustained. Planning unit disappeared before project ended; pilot health zone component never fully implemented (although this health zone now absorbed in SANRU) 3 of 4 physicians trained under project are high level administrators associated with later USAID supported project. |
| 3. Endemic & Communicable Disease Control/Malaria Component | 1976-83 | 0 | 3. Endemic and Communicable Disease Control Project -- Two components a) EPI component which was to absorb the smallpox eradication administrative structure--was absorbed into CCCD project b) Antimalaria project no longer supported by A.I.D. - a pilot project to document effects and costs of different approaches to malaria in target areas -- AID shifted policy, making vector control the least preferred approach. Project demonstrated was far too costly as a national program -- Unsustained -- project completely dismantled. Vehicles, spraying equipment, office furniture, microscope turned over to EPI, but not used for malaria activities; None of project personnel absorbed by EPI, and Director unemployed for over a year at end of project; CCCD, implemented as follow-on to EPI, initially only supported immunization activities and only later adopted a malarial component. Thus several year interval before any malaria activities by MOH. (Appropriate to discontinue vector control approach -- but staff and prevention and treatment aspects should have been picked up by MOH.) |

4. Community Health
Integrated Rural Development

1981-86

3

4. Community health and Integrated Rural Development (Salvation Army) uses over 100 clinics all of which are to be self-supporting. Project supported construction of an MCH central reference clinic with 10 satellite clinics; central clinic's dispensary, maternity and nutrition wards and training programs, primary care, nutrition and health education and development of community participation from satellite clinics; Clinics expected to be self-sufficient by end of project. - Sustained--Most of activities and systems are being sustained. Support of major equipment (vehicles, X-ray machines) may cause problems. Other recurrent costs covered by user fees. But projects seem limited in scope and seem to be constantly threatened; Although these clinics have been able to cover basic recurrent costs with fee-for-service charges, vehicles and other equipment already need replacement and no source has been found.

AVERAGE SUSTAINABILITY SCORE

1.6

Range = 0 - 3.5

Legend: Unsustained = 0
Minimally sustained = 1
Modestly sustained = 2
Sustained = 3
Well sustained = 4
Highly sustained = 5

had been sustained at the policy and program levels in each of the program's five main areas where funding had ceased, in some cases for decades after the bilateral project terminated.

In Central America, with an average sustainability score of 2.55, researchers were also able to identify significant levels of continuation of project activities, albeit at levels below those found in Asia. However, in Africa, with an average sustainability score of 1.6, many projects were only marginally sustained at much lower levels of activity than had occurred during the life of the project. Even those projects that were judged fairly well sustained appeared constantly threatened with extinction through loss of budgetary funding or failure of beneficiaries to pay for services.

INSERT TABLE 8

Tables 9 and 10 present within-country variation in project sustainability and within-region variation in project sustainability. The greatest within-country variation in project sustainability is in the Central American cases where both countries studied, Honduras and Guatemala, have project sustainability scores ranging from 0 - 5. The least variation is in Asia, where Thailand's project sustainability scores range from 2 to 5. The African countries fall midway with scores ranging from 0 to 4.5. Only in Africa do we see no project receiving the highest ranking score, 5, and only in Thailand do we see no project receiving a sustainability ranking less than 2.

INSERT TABLES 9 & 10

How might we interpret these findings? If the variation in sustainability is great between projects within a country, it suggests that project characteristics play a larger role in explaining sustainability in that country than contextual factors. Conversely, if there is little variability in sustainability between projects within a country, it suggests that contextual factors are a more important influence on sustainability than project characteristic factors. This has implications for policy makers and project designers which we address in a later section.

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TABLE B AVERAGE SUSTAINABILITY SCORE BY COUNTRY AND REGION

| Region | Country | National Avg. Sust. Rating | Regional Avg. Sust. Rating |
|------------------|-----------|-------------------------------|-------------------------------|
| Asia | Thailand | 4 | 4 |
| Latin America | Honduras | 2.8 | 2.55 |
| | Guatemala | 2.3 | |
| Africa | Tanzania | 1.7 | |
| | Senegal | 1.6 | 1.6 |
| | Zaire | 1.5 | |

Legend: Unsustained = 0
Minimally sustained = 1
Modestly sustained = 2
Sustained = 3
Well sustained = 4
Highly sustained = 5

24B

Table 9: Within-country variations in project sustainability

| Country | Low | High | Range |
|-----------|-----|------|-------|
| Thailand | 2 | 5 | 3 |
| Honduras | 0 | 5 | 5 |
| Guatemala | 0 | 5 | 5 |
| Tanzania | 0 | 4.5 | 4.5 |
| Senegal | 0 | 4 | 4 |
| Zaire | 0 | 3.5 | 3.5 |

Table 10: Within-region variations in project Sustainability

| Country | Low | High | Range |
|-----------------|-----|------|-------|
| Asia | 2 | 5 | 3 |
| Central America | 0 | 5 | 5 |
| Africa | 0 | 4.5 | 4.5 |

3.6 Sustainability Comparisons Between Types of Projects

We found considerable variation in sustainability between different types of projects. Table 11 shows projects by country, type of project and sustainability score. Table 12 rank orders project types by average sustainability score.

INSERT TABLES 11 & 12

Health Services Projects. Health services projects, such as training of health workers, construction of clinics and other infrastructure development, achieved an average sustainability score of 4.3. Along with water projects--which also received a sustainability score of 4.3, health services projects produced the highest level of sustained outputs and outcomes among A.I.D. health sector programs. They were also the type of project most frequently supported by A.I.D.

In each of the six countries studied, researchers identified health services projects that were significantly sustained. The Thailand team reported that projects in medical education and health training funded by USAID provided the most striking evidence of long term sustainability. In Guatemala, Health Services Development projects had the most sustained outputs of all projects examined, and they were sustained mainly with national rather than other donor funding. Similarly, in Honduras, the auxiliary nurse training program of the Integrated Rural Health/Family Planning project was highly sustained. In Zaire, health services development projects were the only ones sustained: the MCH centers and the Community Health and Integrated Development. In Tanzania, health services development projects or project components were also the most highly sustained, although they were having difficulty continuing to provide services and services had deteriorated. And in Senegal, the PHC component of the Bakel project was the only project component judged sustained.

On the other hand, not all types of health services delivery projects were sustained. Most notably unsustainable were the mobile health clinics. These were sustained nowhere, except in Thailand.

Water Projects. Water projects ranked equally as high as Health Services Development for sustainable outputs. They were also able to be maintained with national funds (often involving local sources), although they usually required other donor funds for replication. Maintenance was often weak, water quality may have deteriorated and modifications in technology may have been required, yet the systems continued to operate.

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TABLE 11: SUSTAINABILITY SCORE BY PROJECT TYPE AND COUNTRY

| TYPE OF PROJECT | HONDURAS | GUATEMALA | TANZANIA | ZAIRE | SENEGAL | THAILAND | AVG SCORE |
|----------------------|----------|-----------|----------|-------|---------|----------|-----------|
| Health Services | 5 | 5 | 4.5 | 3.5 | 4 | 5 | 4.3 |
| Development | | | 2 | 2 | | 2 | |
| | | | 1 | 0 | | | |
| Malaria | 1 | 3 | | 0 | | 5 | 2.25 |
| Water Project | 5 | 4 | 4 | | | | 4.3 |
| Water and Sanitation | 5 | | 1.5 | | | 4 | 3.5 |
| Sanitation | | 0 | | | | | 0 |
| Nutrition | 1 | 2 | | | 1 | 2 | 1.5 |
| Family Planning | 0 | 0 | 0 | | | N | 0 |
| Other | | | | | | | |
| Cancer Control | | | 4 | | | | |
| Cancer Prevention | | | 1 | | | | |
| Epid. Survey | | | | | 0 | | |
| Curriculum Develop | | | 1 | | | | |
| Average Score | 2.83 | 2.33 | 2.11 | 1.63 | 1.6 | 3.3 | 2.4 |

00590

250

TABLE 12: TYPE OF PROJECT
BY RANK ORDER OF SUSTAINABILITY SCORE

| <u>TYPE OF PROJECT</u> | <u>SUSTAINABILITY</u> |
|-----------------------------|-----------------------|
| Health Services Development | 1-2 |
| Water | 1-2 |
| Water and Sanitation | 3 |
| Malaria | 4 |
| Nutrition | 5 |
| Sanitation | 6-7 |
| Family Planning | 6-7 |

0059C

Water and sanitation programs with an average sustainability, score of "3.5," were considerably less sustained than water projects alone. Only one project concentrated solely on sanitation (Guatemala), and these activities were not sustained.

Malaria activities received an average sustainability score of "3," and ranked fourth in terms of sustained activities. Malaria activities were highly sustained in Thailand and were also sustained in Guatemala. Most often malaria projects were a high priority for both indigenous governments and beneficiaries. With the policy shift in A.I.D. away from vector control, national governments most often could not support the costly national donor-initiated programs. Some countries (e.g., Thailand, Guatemala) were more successful than others in being able to modify their approach so as to make malaria projects viable candidates for national support. However, only in Zaire were activities completely abandoned when assistance for the project ended.

Nutrition activities were never more than moderately sustained in any country included in our study. Food and nutrition projects were a minor component, and the least sustained by a wide margin (e.g., protein food development), in Thailand's portfolio. Nutrition projects in general had limited achievements during the projects and they tended to be lost soon after donor funding ceased. Nutrition research produced some useful findings but little was achieved in nutrition planning. The food fortification projects in Guatemala while effective, remain vulnerable to political changes and pressures.

Family Planning activities were not only ranked last among the projects observed, they were assigned a "0" sustainability score - - although we note that because of continuing support to the population sector we are unable to assess population project sustainability in Thailand where very substantial resources have been expended over decades in support of a program acclaimed worldwide as highly successful. However, in all other countries studied family planning projects were not sustained. In Honduras, the program was not allowed simply to die --- it was actively dismantled. In Guatemala activities ceased when funding ended; in Tanzania family planning activities were largely inactive during the project and remained so when it ended; and in Zaire activities are very limited in scope and there are no prospects for improvement.

***Analysis--Looking back at Table 11 we see there is very little variability in sustainability scores between countries for some types of projects while there is substantial variation for others. In the low variability category we have both highly sustained projects, i.e., health services development and water projects, and poorly sustained projects, i.e., nutrition and family planning. This high level of consistency (low variability) in sustainability in project type between countries suggests that the level of sustainability achieved tends to be context-free. In addition, the fact that some projects are consistently highly sustained, and others are consistently poorly sustained between countries (i.e.,

its that the nature of the

at least within the range of context variability explored in these six studies.

If, as some would argue, these findings suggest that Health Services development and water projects may provide the greatest opportunities for well sustained interventions in all countries, do the findings also suggest that family planning projects can never be sustained after donor funding ceases? And does this mean that if donors are committed to the promotion of family planning, they should plan on supporting these projects indefinitely?

We recall that we do not yet have information on the sustainability of family planning projects in Thailand, due to the fact that the U.S. has only recently terminated funding in this area. What we do know from our Thailand study, however, is that family planning projects have been phenomenally successful--and that many knowledgeable professionals feel confident that activities and benefits will prove to be sustained in the future.

If family planning is, in fact, sustained in Thailand what might this suggest in terms of factors influencing sustainability? We would propose that the most plausible hypothesis would be in terms of a threshold change in context variables. We believe that the literature in the family planning field supports this explanation.

If there is, in fact, a threshold level in one or more context variables required before we can expect to effect sustained family planning projects, what are the implications for policy makers and project managers? One interpretation might be that we simply have to plan to remain in family planning for many years in some countries. However, an alternative proposition is that we may expect to accomplish little or nothing that will be sustained in family planning in some countries unless and until they move closer to these threshold contextual levels. Therefore, other things being equal, projects in family planning should be given low priority in relation to other projects that may contribute more directly to change in the operant contextual factors.

4. FINDINGS: WHAT FACTORS INFLUENCED SUSTAINABILITY?

4.1 Introduction: The purpose of this chapter is to draw general conclusions about the relationships between each factor (independent variable) and the sustainability of project outputs and benefits, based on a comparative review of the findings of our six country studies. Findings concerning the influence of factors on sustainability, derived from an analysis of the country reports, are presented below. The summary findings are followed by discussion and analysis of each of the individual factors. The final section of this chapter analyzes the significant factors in terms of their relative influence on sustainability.

Table 13, "Factors Influencing Sustainability, by Country," shows the factors that were found to be associated with project sustainability in each of the individual country studies included in the CDIE study. The last column of the table shows the percentage of the countries in which each factor was found to be associated with sustainability. We defined factors as significant if they were associated with sustainability in at least 3 out of the 6 countries, i.e., at least 50% of the time.

INSERT TABLE 13

While this is an appropriate methodology for determining significance for most factors, this methodology was insufficient for fully assessing significance for two contextual variables--the economic context and the political context. For these two factors there was insufficient variability within the single country studies to test for association.

In addition, although every evaluation team called attention to their inability to analyze the effects of the economic and political factors in the single country studies in the same manner as other factors, all teams did not handle the issue in like fashion. In some cases, the evaluators simply noted that no test was possible because of the lack of variability-- and they did not incorporate judgments about the effects of the factors into their summary analyses (Honduras, Guatemala). In other cases the evaluators noted that the factor was likely to have had a similar effect on all projects-- and they did incorporate statements about that effect into their conclusions (e.g., Tanzania, Zaire).

Because of the inconsistent handling of these two variables by evaluators across countries we have supplemented the analyses of the country studies about their effects. In the following section we propose cross country and regional analysis to explore the relationship of economic and political factors to sustainability (Section 4.2).

TABLE 13: FACTORS INFLUENCING SUSTAINABILITY, BY COUNTRY STUDIED¹

| FACTORS HYPOTHESIZED TO INFLUENCE SUSTAINABILITY | FACTOR INFLUENCED SUSTAINABILITY | | | | | | TOTAL NO. COUNTRIES FACTORS INFLUENCED SUSTAINABILITY | 2 COUNTRIES WHICH FACTORS INFLUENCED SUSTAINABILITY | FACTOR INFLUENCED SUSTAINABILITY 50% OR MORE COUNTRIES |
|--|----------------------------------|-----------|-----------------|-------|---------|---------------|---|---|--|
| | CENTRAL AMERICA HONDURAS | GUATEMALA | AFRICA TANZANIA | ZAIRE | SENEGAL | ASIA THAILAND | | | |
| CONTEXTUAL FACTORS | | | | | | | | | |
| NATURAL DISASTER | | | | | | | 0 | 0 | |
| POLITICAL CONTEXT ² | X | X | X | X | X | X | | 1.00 | X |
| BILATERAL RELATIONS | | | | | | | 0 | 0 | |
| SOCIO-CULTURAL CONTEXT | | X | | | | | 1 | .17 | |
| ECONOMIC CONTEXT ² | X | X | X | X | X | X | | 1.00 | X |
| PRIVATE SECTOR/PVO | | | | | | | 0 | 0 | |
| IMPLEM INSTIT | | X | | X | X | X | 4 | .67 | X |
| OTHER DEMORS | X | | X | | | | 2 | .34 | |
| NATIONAL COMMITMENT | X | X | | | X | X | 4 | .67 | X |
| PROJECT CHARACTERISTICS | | | | | | | | | |
| PROJ NEGOTIATION PROCESS | X | X | | X | | X | 4 | .67 | X |
| INSTIT ORGAN MANAGEMENT | X | X | X | X | X | X | 6 | 1.00 | X |
| FINANCING | | X | X | X | X | X | 5 | .83 | X |
| PROJECT CONTENT | | X | X | X | X | X | 5 | .83 | X |
| COMMUNITY PARTIC | | | | X | X | X | 3 | .50 | X |
| PROJECT EFFECT | X | X | X | X | X | X | 6 | 1.00 | X |

1. Factors were defined as significant if they were associated with sustainability in 50% or more of the country cases.
2. Findings concerning the influence of this factor were based on cross-regional analysis as well as analyses of the individual country reports.

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Our final list of significant factors affecting sustainability, therefore, includes the economic and political context factors. This final group of significant factors is presented in summary form in Table 14 below, and the factors are discussed individually in subsequent sections.

Table 14: Significant Factors Associated with Sustainability

| Contextual Factors | Project Characteristic Factors |
|---------------------|--------------------------------|
| Economic | Effectiveness |
| Political | Project Integration |
| Institutional | Financing |
| National Commitment | Training |
| | Negotiation process |
| | Community Participation |

4.2 Contextual Factors Influencing Sustainability

As discussed above, the economic and political contexts did not provide much variation within countries and therefore within-country analysis was difficult. However, the powerful effect of context on sustainability came through strongly in the cross-regional comparative analysis. Section 3 revealed significant differences in the sustainability of projects in Asia, Central America and Africa--with average regional sustainability scores of 4, 2.5 and 1.6 respectively.

The regional variation in sustainability, and particularly the general marginality of project sustainability in Africa raised the question of which context factors contributed to the differences among the three regions. Our analysis suggested that two major factors may contribute to a generally less favorable environment for sustainability, particularly in Africa: economic deterioration and weak governmental institutions.

Two other context factors were significantly related to sustainability. Both the strength of the implementing institution and national commitment were related to sustainability in four of the six countries studied.

4.2.1. Economic Context: Along with the political context we scored the economic context as having more influence on sustainability than other contextual factors (Table 13). In addition to the country report findings we note the significant correlation between level of sustainability and level of development across regions.

The overall record of economic development in Thailand is well established as one of the most impressive among the countries that have received sustained assistance from the U.S. Per capita income has risen from \$100 when the U.S. economic assistance program began to about \$1000 today. Thailand has developed from a country largely agricultural, with limited institutional or human capital endowment, limited economic infrastructure and extensive poverty, to a country that sees itself becoming the next newly industrialized Asian country.

While the economies of Central America were not particularly strong, nevertheless, they have been more favorable than those of Africa. Central America experienced a relative boom economy in the 1950s and 1960s, and even in the economic decline of the 1970s and 1980s has been at a higher economic level than the African countries. The economic difficulties that African countries have been facing since the 1970s are staggering. Drought, secular trends of declining commodity prices, the two oil price shocks, the debt crisis and wars have consistently sapped the once growing economies.

This general low level of economic capability makes Africa more vulnerable. In Africa, partly because of the weakness of governmental revenues, a long history of cost-recovery mechanisms (largely fee-for-service or fee-for-drugs) has allowed health activities to continue through funding from the beneficiaries themselves. Even in Tanzania, where a strong socialist philosophy impeded almost all forms of cost recovery from beneficiaries in government health facilities, we found some instances of revenue collection. Studies show that Zaire is in the forefront of countries which place the major burden for health financing on the beneficiaries. However, the ability of these countries to collect high and continuing resources from individuals in poor and declining economies has been challenged. Many believe the limits of beneficiary payments have been reached in Zaire, at least until national economic conditions improve. And in other countries, e.g., Tanzania, the small amount of resources generated from beneficiaries has been insufficient to improve the sustainability activities or benefits to any significant extent or for any significant period of time.

4.2.2. Political Context:

Table 12 shows the political context to be highly related to sustainability. Corresponding to regional variation in sustainability, we also found substantial differences between regions in the levels of development in political infrastructure.

In Thailand, the relative degree of political stability, especially since 1979, has contributed to the steady and sizeable momentum achieved in health sector development. A major shift has been accomplished in the allocation of public sector health resources, with district level budgets and facilities growing faster than provincial or Bangkok. Governmental institutions have well established administrative routines, adequate budgetary resources and highly skilled officials.

Governmental infrastructure in Central America is not as well established as in Asia, but it is far more developed than Africa. In Africa, governmental institutions tend to be limited in their management, technical and budgetary capacities. Some basic governmental services have not yet reached many geographic regions within the countries. Even in the socialist states which have an enlarged public sector, the capacity of the government to collect even minimal revenues is sporadic at best. Only with extreme difficulty can these revenues be channeled to social programs. Moreover, the lack of basic governmental infrastructure even weakens attempts to strengthen the private sector in Africa. In Zaire, the government is so weak and corruption so institutionalized that the state often undermines the efforts of non-governmental institutions. In the other countries, with more active and somewhat more responsible states, the governmental capacity to provide minimal policy guidelines, planning, supervision and some basic public health services (immunizations, water) nevertheless remains extremely weak.

4.2.3. Strength of the Implementing Institution: The third context variable found related to sustainability was the strength of the institution that implemented the project. In both Africa and Central America case studies, projects that were implemented by weak, fragmented institutions with competing objectives, poor leadership, low skill levels and unresponsive bureaucratic centralization were less likely to be sustained. In Guatemala and Zaire, there was almost universal recognition of the administrative weakness and fragmentation of the Ministry of Health, where even subunits are themselves fragmented by project activity. Foreign donors may

inadvertently contribute to this fragmentation by requiring that their project be implemented by a separate unit within the Ministry and by imposing separate reporting, budgetary and administrative routines.

The Thailand study also stressed the importance of a strong implementing institution for sustainability. In Thailand, the Ministry of Public Health is recognized as among the best administered among Thai ministries and compared with ministries of health generally in developing countries. Thailand has experienced decades of institutional strengthening in health. A large share of the senior medical and public health community in Thailand, the group that has shaped the policies, and administered the institutions and programs covered in the Thailand study, obtained much of their higher professional education and training in the U.S., mainly under USAID and Rockefeller Foundation financing. These senior individuals have (as a matter of Ministry of Public Health policy) circulated among the leading decision-making and administrative positions of the ministry, rather than staying with the first area of responsibility for which the advanced participant training may have been tailored. Health was the first ministry to initiate integrated ministerial planning.

The Thailand study cited repeated instances in which the capacity of the Ministry of Public Health influenced project sustainability, particularly through their ability to adapt program approaches. For example, in water and sanitation, the Ministry of Public Health strategy in collaboration with USAID to install privies and shallow wells before providing extensive health education to the villagers or encouraging community participation proved unsuccessful. Having learned this lesson, the Ministry of Public Health emphasized community participation in the later Village Health and Sanitation project. Although maintenance and repair of USAID-provided handpumps proved nearly impossible, the MOPH eventually adapted this pump to the environment and was able to produce it locally. Similarly, although the USAID-provided engines supplied under the Potable Water Project were a dismal failure -- they broke down and spare parts were difficult to obtain, the Ministry of Public Health was able to replace them with Japanese or British engines. In the malaria eradication program, the Ministry of Public Health anticipated that changes would be required when USAID funding ended. In view of the termination of USAID assistance in 1971 and the shift from an eradication to a control strategy, the Ministry of Public Health adopted a "Six Year Plan of Action for Malaria Control Operations" (1971-1976). In this plan program activities were modified to suit the new financial and technical situations.

However, although there is continuing support for the relationship between a strong implementing institution and sustainability, it is clear that this factor is not a necessary condition for sustainability. In Senegal and Tanzania, as well as some cases in Central America, projects implemented by weak or stressed Ministries of Health were also sustained. On the other hand, although projects were sustained they were frequently not very effective.

4.2.4. National commitment: The fourth and last context variable found related to sustainability was national commitment to project goals which was associated with sustainability in four out of six countries. This factor was found to be important in both Central America and Asia, but was not as clearly related in Africa.

In Guatemala it was clear that national commitment to project goals, defined as consensus among important decision makers and interest groups in the health sector that the goals and objectives of a project were a national priority, was crucial to project sustainability. Most projects that were sustained had high levels of national commitment, i.e., the water and sanitation projects, the Roosevelt Hospital construction project and the malaria projects. The only project that was significantly sustained without major national commitment was the rural health technician project. And clearly, this project has been compromised by conflict among influential interest groups about its priority. The family planning programs in Guatemala have been seriously impeded by the conflict generated by opposition groups.

In Honduras national commitment to the goals and objectives of a project were essential to the sustainability of its outputs and benefits; however, it was not sufficient. Most of the U.S.-funded projects were designed to achieve goals and objectives that were high priorities for the Ministry of Health at the time of the project and subsequently. Two of the three cases of low sustainability (Maternal and Child Health/Family Planning and Nutrition Planning) were projects that Honduras considered of low priority or openly rejected. However, one case, the malaria eradication project, suggests that sustained government commitment does not guarantee project sustainability.

In Thailand, too, in most cases U.S involvement was in areas where the Ministry of Public Health already had a strong policy or program commitment. In those cases where official policy and operational programs did not already exist, USAID assistance was requested to contribute in specific ways to a larger exploratory effort conceived and implemented by the government.

Long before USAID rural water and environmental sanitation projects, the Kingdom had already promulgated the first sanitation laws in 1897. Similarly, USAID provided financial support for an ORT program already underway by the Communicable Disease control Department. In particular, this activity supplemented those of the National Control of Diarrhea Disease Programs begun by the Ministry of Public Health in 1979.

In medical education, the Thai government had already begun a medical education program through the establishment of the first two medical schools before USAID assistance was requested. The RTG sought U.S. assistance to improve selected departments, e.g., preventive medicine and medical technology. The idea of creating a third medical school originated with the RTG as did the choice of Chiang Mai for the first regional location of an institution of higher education. The Thai government approached USAID to participate in the foundation and initial development of the Chiang Mai school.

The Thailand evaluation team noted that some USAID assisted projects in rural health, water and sanitation in the 1960s were motivated by concerns for political insurgency in the Northeast region. Although this influenced the geographic scope of project activities, the RTG generally did not accept interventions that were inconsistent with current health policies and strategies. For example, in spite of USAID preference to distribute sanitation technologies for free to accelerate government presence in insurgency areas, the Ministry of Public Health required the usual strategy of community participation.

In primary health care the Lampang/DEIDS project complemented a series of other pilot projects (Saraphi, Phitsanulok) which eventually led to the development of the PHC policy and implementation strategy. In 1979, the Health For All Charter was approved by both the Cabinet and the Parliament. After 1979, training programs for village health volunteers and communicators were launched and required funding from the central government which, at the time, the government did not have. Under the Rural Primary Health Care Expansion project, USAID provided substantial funds to enable accelerated implementation of the policy.

4.3 Project Characteristic Factors Influencing Sustainability

Of the project characteristic factors examined by CDIE researchers, six were associated with sustainability. Two of the six characteristics, perceived project effectiveness and

integrated projects, were found to be associated with sustainability in all six countries. Community participation was related in the Africa and Asia cases only. The three remaining project characteristic factors -- financing, training and the negotiation process, were associated with sustainability in most of the countries.

4.3.1. Perceived project effectiveness: Project effectiveness, or a reputation for effectiveness, was important for sustainability in all countries. Sometimes this reputation was backed by objective evidence, but it was the reputation for effectiveness that was important for sustainability. It was reputation that figured in the decisions of health officials, providers and beneficiaries, irrespective of scientific evidence. Nevertheless, in most cases some relatively hard evidence of impact was available and a clear consensus was easily established. This evidence was typically in the form of outputs produced -- field reports of numbers of health workers trained, numbers of facilities built or in operation, numbers of consultations or other services delivered.

For example, in Honduras, the least effective projects were the Nutrition Planning project and the Maternal and Child Health/Family Planning project. These projects were also the least sustainable. The most sustainable projects were the auxiliary nurse training component of the Integrated Rural Health/Family Planning project and the Rural Water and Sanitation (water pump and latrine) project, both under Honduras' Rural Penetration Program, and the SANAA rural water projects--all projects that were perceived as effective during the life of the projects.

In Zaire, both sustained projects--the Maternal and Child Health and the Community Health and Integrated Development projects--were perceived during the life of the project and after as effectively delivering services and achieving the established goals. On the other hand, the unsustained Health System Development project was never fully implemented and was generally perceived as a failure. Similarly, although the malaria component of the Endemic Disease Control project demonstrated the ineffectiveness of the vector control approach, it was never able to demonstrate the effectiveness of alternative strategies and it was not sustained.

In Tanzania, also, the sustained projects 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. On the other hand, the Tanzanian evaluation team felt that the concept of constituency development might be more appropriate than project effectiveness as a determining factor

for sustainability. Constituency development is a concept that combines project effectiveness and demand creation, among providers as well as beneficiaries, and it requires a strong base of political or personal support for project activities among constitutencies who have influence over decisions to continue project activities--sometimes within the government, among health providers or among direct beneficiaries. Examples?

4.3.2. Project Integration: In all six countries researchers found that projects that were designed and implemented as vertically-run separate hierarchies were less sustained than were those that were integrated into the existing institutional hierarchies.

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. A second aspect of vertical programs is that they tend also to be privileged -- they receive salary subsidies and more materials than equivalent services in the national agencies.

Donors frequently promote vertical implementing units because it allows them to focus resources and activities on the goals of the project and does not require compromises with other interests. Project designers often believe that projects thus organized are more likely to be effective. However, vertical projects are vulnerable. They have not built up a wide net of administrators who have some interest in continuing the implementation of the project. Integrated programs create many institutional actors who have developed routines which in some sense depend on the continuation of project activities. These actors may continue project activities with their own resources or may help lobby for additional national resources to cover the loss of donor funding. Furthermore, vertical projects often rely heavily on foreign funding during the life of the project, making it harder to gain national funding when the foreign sources cease. They tend to generate institutional jealousies and turf-fighting that makes them even more vulnerable and less likely to attract national resources when their external sources cease.

Most U.S.-supported projects in Guatemala were vertical programs. The unsustainable family planning projects in the Ministry of Health were run as separate privileged units within

clinics and were administered by a separate hierarchy within the Division of Maternal and Child Health.

The project to train Maternal and Child Health Aides in Tanzania is an example of a well integrated project. It was integrated into the normal programs of the Maternal and Child Health Division of the Ministry, and was fully integrated into ministry activities from the center to the periphery of the health system. Another example was the A.I.D. training and water projects that were implemented as an integral part of the Honduran Rural Penetration Program.

At first glance, Thailand might appear to be an exception. In Thailand, the MOPH created new implementing bodies for USAID assisted programs in malaria, water and sanitation, training, population and primary health care. However, they recognized the need to sustain the institutional support required by individual projects. Eventually these project implementing bodies became technical divisions within the MOPH, except for malaria which still operates as a vertical program.

In fact, Thailand provides the premier example of an integrated system. The MOPH leadership, a significant number of whom received training from USAID funding, developed an institutional setting conducive to aggressive development and implementation of health care and population policies. In 1973, the Ministry of Public Health shifted its organizational structure from a vertical to a horizontal program orientation (with the exception of malaria). In addition, the MOPH sought to develop its management capacity. Around the same time, the MOPH first began using the advanced and systematic health planning technique called "Project System Analysis". Later, the WHO sponsored activities in "Country Health Programming" which eventually evolved into a broader, more comprehensive and flexible technique known as "The managerial Process for National Health Development." This process has improved coordination between planning, budgeting and program implementation. It has also promoted dialogue between the MOPH, other health-related agencies, community and non-government leaders.

4.3.3. Financing: When donor funding stops there are two potential sources of national funds for continuing project activities: 1) the governmental budgets at various levels; and 2) cost-recovery mechanisms that require payments from beneficiaries. Most often, but not always, project sustainability seems to be dependent, in part, on whether one or both of these sources of funding have been developed during the life of the project. We found financing factors to be significant for sustainability in five of the six countries studied.

In Thailand the MOPH has made substantial financial contributions to each activity supported by USAID. USAID has seldom paid salary costs or other normal operating costs. This situation appeared to facilitate Thailand's ability to absorb additional costs when USAID funding ceased. For example, in the first malaria eradication project all program staff and permanent employees had been paid by the government throughout the project. When USAID funding was terminated in 1971 most program components were sustained. After 1971 following the withdrawal of USAID assistance, the level of inputs fell temporarily but then climbed to about 60% of its peak level from 1976 onwards. This lower level of funding seems not to have reduced the effectiveness of the program.

Similarly, in family planning, during the Third, Fourth and Fifth Five Year Plans, the donor share of total family planning expenditures was 68%, 64% and 27%, respectively. With only limited donor funds available in the Sixth Five-Year Plan, the RTG budget now accounts for most of the family planning expenditures, supplemented by some clinical fees.

Thailand has been particularly successful in obtaining non-governmental support following cessation of donor funding. The Chiang Mai Medical School sought and received substantial amounts of money from local communities, individuals, and alumni organizations. Even the Chiang Mai and Illinois Medical Schools have sustained their relationship over the 19 years since the end of the Illinois contract, funded by a combination of sources other than USAID.

At the same time, the MOPH has had substantial success in providing budgetary support to replace USAID assistance in primary health care. All training for village health volunteers and communicators is now financed by the MOPH. It is notable that even during the periods of regulated zero-growth budget (1984-1986), the MOPH continued to provide substantial support to PHC.

In the Central American cases government funding was the only source of funding, since few of the projects that were reviewed had cost-recovery mechanisms. In Guatemala a malaria project clearly demonstrated the importance of increasing national financial responsibility, although it was not programmed into the original agreements. Bureaucratic and contractual errors during project implementation had led to a one year suspension of A.I.D.'s contribution and forced the government to begin absorbing larger segments of malaria costs. This ad hoc national assumption of costs during the life of the project probably contributed to the willingness and capacity of the

government to absorb the program and subsequently expand it. With the exception of Thailand, this was the only malaria project that was sustained in the six countries.

In Africa, projects were sometimes sustained mainly with fee-for-service payments from beneficiaries or drug revolving fund revenues, although usually some form of government budget would at least supply salaries for health workers. In Zaire, where the government's role in providing health care is very limited, fee-for-service financing has generally provided at least half the recurrent cost budget for most health care services. Those projects which utilized these sources were more likely to be sustained than projects -- such as a pilot malaria project--which depended entirely on donor funding. In Senegal, the Bakel Primary Health Care project not only developed these sources, but also drew on remittances sent home by migrant workers to maintain and upgrade the village level health facilities that had been constructed by the A.I.D. project.

Although some analyses have focused almost exclusively on the financing element, the C.D.I.E. studies showed clearly that while financing is almost always important for sustainability, it is only part of the problem--and in a few instances was not a factor in sustainability. The financing variables were important in most, but not all of the countries we examined. In Honduras, some projects which had significant levels of national funding during the life of the project, were not sustained, and some projects that were funded solely by A.I.D. during the life of the project were continued by national funding after A.I.D. funding terminated. Financing is important for sustainability, but it is not the sole determinant.

4.3.4. Training: In most of the countries studied, we found that projects with strong training components tended to be sustained and those without training tended not to be sustained. These training components included both professional training, often at overseas institutions, and in-country professional and para-professional training for community-level health workers and short courses in family planning for auxiliary nurses.

In Zaire, we found that the projects that had training components tended to be sustained while those that did not were not sustained. This was also true in And, in Guatemala, we found that the training programs that had a strong probability of relevant employment opportunities were most likely to be sustained and to contribute to the sustainability of the rest of the project. Professional training programs in the 1940s and 1950s for malaria, water and sanitation, and health services provided long-term professional and managerial leadership which maintained project activities.

Investment in training provides several elements that might reinforce sustainability. Training produces human resources who, if they continue to serve in positions where they can use their skills, generally continue to perform the activities and provide the benefits that they did during the life of the project. In addition, the trainers themselves tend also to continue to train others. Costs to the governments of continuing in-country training tend to be limited. Once the curriculum is designed the main recurrent costs of training generally involve salaries for teachers and travel and per-diem for students. Finally, both the trainers and the students can form a constituency to demand continuation of the activity.

The Thailand study attributed a good deal of the success and sustainability of U.S. assisted health projects and the health sector generally to training. They state:

While this study focuses on specific programs and projects assisted by USAID, it is important to understand the American role in the broad context of the development of the generation of Thai health leadership that has presided over these near four decades of institutional development and health status change. A large share of the senior medical and public health community in Thailand, the group that has shaped the policies and administered the institutions and programs described herein, obtained much of their higher professional education and training in the U.S., mainly under USAID and Rockefeller foundation financing. They have continued to maintain professional relations with their American counterparts, especially with the individual university schools of medicine and public health where they obtained their training. The long-run impact of this training goes well beyond the contribution the training made as a component of the specific projects under which their U.S. experience was originally financed. This is true especially for the most senior individuals who have (as a matter of MOPH policy) circulated among the leading decision-making and administrative positions of the ministry, rather than staying with the first area of responsibility for which the advanced participant training may have been tailored. The benefits achieved by the USAID-assisted projects, and the commitment and ability to sustain (and adapt) the institutions and programs over a long period of time, must be attributed to a considerable extent to the role and capability of this professional generation.

The Thai study team concluded their report with the recommendation that Thai expertise be utilized for international technical assistance, particularly in the Indochina countries after international relations have normalized. They believed that Thailand's institutional capabilities could be important sources of expertise for bilateral donors and international organizations planning new assistance programs in these countries.

4.3.5. Mutually Respectful Negotiation Process: Projects that were viewed by national officials as imposed by A.I.D. were less likely to be sustained than projects that were designed and approved in a mutually respectful negotiating process involving give-and-take between A.I.D. and the government. Table 13 shows that the project negotiation process was an important factor in four of the six countries studied.

The imposition of early family planning projects in both Honduras and Guatemala represent examples of how not to provide for sustainable projects. Basically, the project plans were simply presented to the governments. A.I.D. bypassed national institutional structures and did not initiate a process of compromise and consensus-building among national bureaucratic interests. In Honduras, some of those officials who had been by-passed became major opponents, even when they themselves were committed to the activity in concept. The project did not simply "die" when U.S. funding ceased; it was actively dismantled. (Also e.g., Zaire?--Vehicles, etc., distributed)

On the other hand, projects which had been designed with national participation to fit into existing plans, programs and institutional structures were more likely to be sustained. In Zaire, the successfully sustained maternal and child health centers and clinics run by the Salvation Army were both initiated by and negotiated with full participation of those who were responsible for implementing the projects. A.I.D. support for training of auxiliary nurses and rural water supplies in the Honduras Rural Penetration Program were projects that involved respectful negotiation between A.I.D. and Honduran counterparts. They tailored the projects to fit the already defined national program.

There was considerable variation across countries and regions in terms of their ability to resist the imposition of projects. Africa was most vulnerable in this regard. In Senegal, for example, there was not even an established formal health policy to help guide project identification and adaptation. The lack of an internal planning capability, as well as lack of local human and financial resources, contributed to the tendency to accept whatever programs donors were promoting.

In contrast, in Thailand USAID involvement has been in areas where the MOPH has a strong policy or program commitment. Some USAID-assisted projects in rural health, water and sanitation in the 1960s were motivated by concerns for political

insurgency in the Northeast region. Although this influenced the geographic scope of project activities, the RTG generally did not accept interventions which were inconsistent with current health policies and strategies. For example, in spite of USAID preference to distribute sanitation technologies for free to accelerate government presence in insurgency areas, the MOPH required the usual strategy of community participation.

After decades of assistance experience, why do donors fail to respect the basic principle of collaboration which is consistent with A.I.D. policy and the advice of experts for implementing effective projects, regardless of their potential for sustainability? The two most frequent explanations seem to be A.I.D. officials who are overzealous advocates for particular projects (either because of personal or professional convictions, or, probably more frequently, because they are responding to the Agency incentive structure --directives from internal management or external constituents, e.g., congress), and those who are faced with pressure from deadlines for project approval and obligation objectives.

4.3.6. Community Participation: In spite of the interest expressed in this variable in the literature on primary health care, initial analyses of the Central America and Africa cases did not show a clear relationship between community participation and sustainability. Projects which had community participation were no more likely to be sustained than those which did not have community participation.

Further analysis of our Africa and Central America studies suggests, however, that it is likely that source of financing for continuing project activities is related to community participation. In countries where the national budget provided the funding for sustaining project activities, the demand of the beneficiaries was less important than in countries where cost-recovery mechanisms were a major form of funding for project activities. Where cost-recovery mechanisms were a major form of funding for project activities, community participation appears to be related to the willingness of the beneficiaries to pay for services.

In Central America, where activities were continued with national budgetary sources, the decision-makers often could ignore the demands of the poor rural beneficiaries who had little power in the national political system. However, in Zaire and Senegal, and for two projects in Tanzania, where beneficiaries were expected to assume some of the recurrent costs through fees for some services or through drug revolving funds, the demands and the financial input of the community may make the marginal difference necessary to continue project activities. Community participation is often a crucial part of the project mechanisms designed for cost-recovery.

Both in Zaire and Senegal, projects which had successful community participation around cost recovery mechanisms were the ones which were sustained and those which had no community participation were not sustained. In some cases, it was only those communities which had established effective cost-recovery and community participation that project activities continued.

The Thailand study, on the other hand, also suggested significant links between sustainability and community participation. They note that the initial belief among public health experts was that the simple presence of health care technologies would stimulate use of these technologies. This, in fact, was not the case. As shown in a number of Thai cases, no significant health improvements or behavior changes resulted solely from the provision of the health infrastructure. When health education components and community participation aspects were added to the programs, appropriate changes in health behavior occurred more rapidly. The Ministry of Public Health responded to the low rate of acceptance of health care services in the Phitsanulok and Saraphi PHC pilot projects by developing strategies for greater village participation including the village health volunteer and village health communicator. Similarly, volunteers are used for malaria and sanitation programs. Volunteer mothers have been included in nutrition programs. Although this network of volunteers may have some shortcomings, the basic approach of village self-help has contributed greatly toward wider use of health care services and improvements in health behavior.

The Ministry of Public Health has encouraged the use of community financing to support several health activities, such as drug revolving funds and sanitation funds. Although the sustainability of these funds may be threatened by poor management or insufficient capital, the underlying principle of community participation seems to have been effective in changing health behavior and accelerating the coverage of shallow wells, latrines and other appropriate technologies. It should also be mentioned that donations by individuals and communities was an important source of funding for the Chiang Mai Medical School.

In sum, notwithstanding the Thailand study assertions, we concluded that community participation alone did not seem to have much effect on sustainability. Community participation can take a great variety of forms. In general it has strengthened programs and made them more effective, but its generation and maintenance also require program efforts and resources. Indeed, it appears that participation itself may be more difficult to sustain than other project outputs. We often

hear how important it is to involve the community in its health care. That is a value that is important in and of itself; however, it may not be necessary for effective or sustained projects except in its relationship to other factors such as cost recovery, and acceptability of services.

4.4 Comparisons Among Factors Influencing Sustainability

Having identified the significant factors that influenced sustainability we ranked these factors in terms of their relative degree of influence. Box 4 below presents a list of the significant factors, shows their ranked order of influence and identifies whether each factor is a project characteristic factor or a context factor.

INSERT BOX 4

Analyzing our data and presenting it as we have in Box 4 advances our understanding of sustainability in two important ways. First, we believe it represents the first attempt to rank factors in terms of their influence on sustainability. This is significant. Many studies, most of which are theoretically based rather than empirically based, suggest a large number of factors that may influence sustainability. There is an undeniable aura of plausibility in these discussions. However, most often the practitioner is left with the sense that almost everything is important for sustainability. The analysis does not readily translate into an actionable agenda. Quite the contrary, it may lead practitioners to deny their ability to exercise any control over sustainability and hence accept no responsibility for unsustainable activities or benefits.

The second way in which Box 4 advances our understanding is in the attention it calls to the importance of both project characteristic factors and context factors. It appears that even within the most inhospitable contexts, project officials can make inroads toward sustainability. Some of the factors that rank highest in order of influence are also the ones that are most malleable to decisions made by project officials. This finding, too, should be empowering to the practitioner.

The construction of Table 13 and Box 4 provide needed correction for these earlier conclusions. They function as analytical devices allowing us to aggregate our findings across regions and countries and factors. This refocuses our

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BOX 4: SIGNIFICANT FACTORS* INFLUENCING SUSTAINABILITY,
RANK ORDER OF INFLUENCE** AND TYPE OF FACTOR

| SIGNIFICANT FACTORS | ORDER OF INFLUENCE | TYPE OF FACTOR |
|---|--------------------|------------------------|
| Project Effectiveness | 1-4 | Project Characteristic |
| Institutional Organization and Management | 1-4 | Project Characteristic |
| Economic Context | 1-4 | Context Factor |
| Political Context | 1-4 | Context Factor |
| Financing | 5-6 | Project Characteristic |
| Project Content | 5-6 | Project Characteristic |
| Project Negotiation Process | 7-8 | Project Characteristic |
| Implementing Institution | 7-8 | Context Factor |
| National Commitment | 9 | Context Factor |
| Community Participation | 10 | Project Characteristic |

*Significant factors are those factors that influenced sustainability in 50% or more of countries studied.

** Influence is defined in terms of the percentage of countries in which factors influenced sustainability (See table 12). Order of influence is expressed as an interval, rather than a point, to reflect equivalent rankings among factors.

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attention on the importance of project characteristic variables, and allows us to put into perspective the relative importance of the individual factors and the type of factors (i.e., contextual factors vis a vis project characteristic factors).

LESSONS LEARNED: GUIDELINES FOR THE DESIGN OF MORE SUSTAINABLE PROJECTS

Tentative guidelines suggested by the CDIE study, and selected findings on which the guidelines were founded, include:

o In much of Africa today, A.I.D. should support long term efforts to address both the economic and institutional contexts of health projects in order to develop a strong infrastructure which will facilitate sustainability of project activities and benefits in the long run.

In general, the CDIE synthesis of the sustainability studies found that the weakness of the economy and the governmental institutions in the African context were likely to have resulted in fewer clearly sustained projects and projects sustained at lower levels of effectiveness than in the other regions studied. Lessons from Central America and Thailand may be pertinent today in Africa.

In CENTRAL AMERICA during the 1940s and 1950s, the U.S. supported long-term technical assistance and provided long-term funding through Inter-American Cooperative Services Units. These units provided the basis for the institutionalization of the Ministries of Health at a time when Central America was emerging from its stagnant and weak economies, and just beginning to develop government institutions for public services.

THAILAND received sustained support from the U.S. while it developed economically and politically, and built a strong Ministry of Health over the past several decades. A large share of the senior medical and health community in Thailand, the group that has shaped the policies and administered the institutions and programs during this time, obtained much of their higher professional education and training in the U.S., mainly under USAID and Rockefeller Foundation financing. Some institutions, e.g., the Chiang Mai and Illinois Medical Schools have maintained their relationship for several decades.

It may be that in the weak economic and institutional contexts in Africa today, a commitment to long-term support and technical assistance is necessary before the basis for truly sustained activities is established.

o Integrate the project organization into established administrative structures. Avoid vertical projects.

A central choice for project design is whether to integrate the project activities into the established administrative organization of the implementing institution or to create a separate vertical unit with its own hierarchy, staff, and goals. It is often felt that only through a vertical organization can foreign assistance be efficiently utilized and rapidly achieve project goals. However, the risks of this strategy are great since a vertical organization may lack a viable institutional constituency to continue the activities after the funding stops. Indeed, vertical units, often generate institutional jealousies and turf fighting which create an opposition constituency. The vertical implementing unit also risks having no established budgetary support.

The project to train Maternal and Child Health Aides in TANZANIA is an example of a well integrated project. It was integrated into the normal programs of the Maternal and Child Health Division of the Ministry, and was fully integrated into ministry activities from the center to the periphery of the health system.

Of our project cases in HONDURAS, the A.I.D. training and water projects that were implemented as an integral part of the Honduran Rural Penetration Program were among the most sustained. These programs worked through the Ministry administration, using the established authority structure, including the Director General, the normative divisions, down through the regional, area, and local officials.

o Design effective projects and assure that they are perceived as such.

The CDIE study found that, in almost all cases, projects which were viewed by important officials or interest groups as being particularly effective in achieving their goals and objectives were more likely to be sustained than projects which were unable to demonstrate effectiveness. In most cases this reputation for effectiveness was backed by objective evidence, but it was the reputation for effectiveness that was important for sustainability. It was reputation that would figure in the decisions of health officials, providers and beneficiaries regardless of whether this reputation was backed by objective evidence.

Examples

o 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.

When donor funding stops there are two potential sources of national funds for continuing project activities: 1) the governmental budgets at various levels; and 2) cost-recovery mechanisms that require payments from beneficiaries. Most often, but not always, project sustainability seems to be dependent, in part, on whether one or both of these sources of funding have been developed during the life of the project.

In GUATEMALA a malaria project clearly demonstrated the importance of increasing national financial responsibility. Bureaucratic and contractual errors during project implementation inadvertently led to a one year suspension of A.I.D.'s contribution and forced the government to begin absorbing larger segments of malaria costs. This ad hoc national assumption of costs during the life of the project contributed to the willingness and capacity of the government to absorb the program and subsequently expand it after A.I.D. funding ended.

In ZAIRE, where the government's role in providing health care is very limited, fee-for-service financing has generally provided at least half the recurrent cost budget for most health care services. Those projects which utilized these sources were more likely to be sustained than projects -- such as a pilot malaria project--which depended entirely on donor funding. In SENEGAL, the Bakel Primary Health Care project not only developed these sources, but also drew on remittances sent home by migrant workers to maintain and upgrade the village level health facilities that had been constructed by the A.I.D. project.

o Negotiate the project design within a mutually respectful process of give and take. Be sure that the project is not perceived as imposed by A.I.D..

Projects perceived to be imposed by donors are not likely to have sufficient commitment by national officials for them to continue project activities after the donor withdraws. By contrast, those projects that involve active and meaningful participation by the implementors are likely to produce a project that not only is more responsive to nationally defined needs, objectives, and capabilities but also to be in areas where there is strong national policy or program commitment. Rather than a model project developed by AID, it appears

usefull to have a mutually respectful process of project design (or redesign) that involves give and take by both sides.

The imposition of early family planning projects in both HONDURAS and GUATEMALA represent examples of how not to provide for sustainable projects. Basically, the project plans were simply presented to the governments. A.I.D. bypassed national institutional structures and did not initiate a process of compromise and consensus-building among national bureaucratic interests. In HONDURAS, some of those officials who had been by-passed became major opponents, even when they themselves were committed to the activity in concept. The project did not simply "die" when U.S. funding ceased; it was aggressively dismantled even before U.S. funding terminated.

In THAILAND, USAID involvement has been in areas where the MOPH has a strong policy or program commitment. Some USAID-assisted projects in rural health, water and sanitation in the 1960s were motivated by concern for political insurgency in the Northeast region. Although this influenced the geographic scope of project activities, the RTG generally did not accept interventions which were inconsistent with current health policies and strategies. For example, in spite of USAID preference to distribute sanitation technologies for free to accelerate government presence in insurgency areas, the MOPH required the usual strategy of community participation.

o Include a strong technical training component.

Investment in technical training has several elements that might reinforce sustainability. Training produces human resources who, if they continue to serve in positions where they can use their skills, generally continue to perform the activities and provide the benefits that they did during the life of the project. In addition, the trainers themselves tend also to continue to provide their services to train other human resources. Costs to the government of continuing the training tend to be limited. Once the curriculum is designed, the main recurrent costs of training generally involve salaries for teachers and travel and per-diem for students. Finally, both the trainers and the students can form a constituency to demand continuation of the activity.

In ZAIRE, we found that the projects that had training components tended to be sustained while those that did not were not sustained. In GUATEMALA, we found that the training programs that had a strong probability of relevant employment opportunities were most likely to be sustained and to contribute to the sustainability of the rest of the project. Professional training programs in the 1940s and 1950s for malaria, water and sanitation, and health services provided long-term professional and managerial leadership which maintained project activities.

o At least in the context of weak governmental institutions, or when changes in health attitudes or behaviors are important for health improvement, assure significant community participation to encourage cost-recovery and acceptability of services.

In Africa and Asia, community participation appeared to be related to sustainability. This variable was seen as potentially important because participants might become a constituency which could demand continuation of services. In Central America, where most of the activities had to be continued by national budgetary sources, the decision-makers often could ignore the demands of the poor rural beneficiaries who had little power in the national political system. However, in two of the three countries studied in Africa, where many projects expect beneficiaries to assume some of the costs through fees for some services or through drug revolving funds for village pharmacies, the demands and the financial input of the community may make the marginal difference necessary to continue project activities. Community participation is often a crucial part of the project mechanisms designed for cost-recovery. The Thailand study, on the other hand, suggested that acceptability may also be related to community participation.

Both in ZAIRE and SENEGAL, projects which had successful community participation around cost recovery mechanisms were the ones which were sustained and those which had no community participation were not sustained. In some cases, it was only those communities which had established effective cost-recovery and community participation that project activities continued.

In THAILAND, the initial belief among public health experts was that the simple presence of health care technologies would stimulate use of these technologies. This, in fact, was not the case. When health education components and community participation aspects were added to the programs, appropriate changes in health behavior occurred more rapidly.