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EXECUTIVE SUMMARIES OF EVALUATIONS
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PREFACE

In keeping with AID's increased emphasis on using evaluation findings in decisionmaking, the Asia Bureau has prepared this collection of executive summaries of evaluations undertaken for the Bureau during 1981.

Over the past several years, both the AID Administrator and the Congress have emphasized the importance of using evaluation findings, especially in project design, review and approval processes.

Most recently, this concern was expressed in an AID directive (November 3, 1982) which required that issues papers prepared for project review were to provide a brief analysis of the project based upon evaluation findings. The directive also stated that project approval memoranda prepared for the Administrator are to contain similar analyses.

This volume provides both a record of Bureau evaluation accomplishments as well as concise, easily accessible information on the outcome of specific projects. It should be noted that the actual number of evaluations conducted in 1981 was, in all likelihood, somewhat higher than the number of evaluations reported in this volume, as AID/W Asia Bureau staff did not have access to all evaluations completed during the 1981 fiscal year. This problem is being corrected as missions have been requested to forward completed reports to AID/W.

It is hoped that this volume will be used as a reference both by project designers in the field and project reviewers and decisionmakers in AID/W. Copies of the evaluation reports referred to in the pages that follow can be obtained from ASIA/DP.



Larry Smucker
Director
Office of Development Planning
Asia Bureau
Agency for International Development

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EVALUATION REPORT ON THE NCDC/CLUSA OILSEEDS MANAGEMENT
OPERATIONAL PROGRAM GRANT: INDIA

Problem and Overview. The experience of Indian cooperatives in oilseed processing has generally ranged from disappointing to disastrous. Delays and work stoppages have caused plants to operate well below full capacity, which prevents them from operating profitably. Many of the original plant owners are insolvent cooperative societies and have lost their facilities to state marketing federations (MARKFEDS) when operations became financially impossible. As a result there has been a concentration of plant ownership in the hands of the MARKFEDs, which operate with little contact with oilseed growers, purchase most of their raw materials from non-cooperative sources, and provide few benefits to village-level cooperative society members.

Purpose of the Project. India's National Cooperative Development Corporation (NCDC) was established in 1963 to plan and implement country-wide programs through cooperative societies for the production, storage, processing, marketing, and sale of agricultural commodities. One of NCDC's most important activities -- considering India's heavy dependence on vegetable oils in the national diet -- is financial and technical assistance to cooperative sector oilseed processing plants. From 1965 through 1979, total NCDC investments in these facilities has been more than fifty-one million dollars.

To address the problems of cooperative oilseed processors (the major one being a lack of understanding of basic principles of plant operations), the NCDC has formulated a ten-year Oilseed Processing Sector Development Program, which is intended to provide subsidized technical, managerial, and financial assistance, including investment capital, to cooperative oilseed processors.

The Cooperative League of the U.S.A. (CLUSA) has been providing technical assistance to Indian cooperative oilseed processors since 1965. The original proposal for the present CLUSA Operational Program Grant (OPG, Grant No. 386-2127) was prepared in 1973, but because of deteriorating US-Indian relations, it was not approved until 1978. The project's purpose is to assist the NCDC in improving cooperative oilseed processing units by introducing modern management systems and techniques, and training cooperative personnel in their use. The value of the OPG is \$475,000 and the Indian government's contribution is \$282,000 in local currency.

The grant covers the services of two long-term advisors (a management specialist and a technical specialist), and short-term consultants. The project involves the development and testing of modern management systems and procedures specifically for the operation of an oilseed processing business, as well as the development and initial testing of a training program for cooperative personnel.

Purpose of the Evaluation. This is a mid-point "review" of the project's accomplishments and addresses each major component of the Oilseed Management OPG: technical assistance, counterpart contributions from the NCDC, and CLUSA/India management of the project. Although initially conceived as a joint Cooperative League-U.S. Agency for International Development evaluation, it is an

internal evaluation by CLUSA only. Fieldwork in India for this evaluation was conducted between September 14 and October 3, 1981. On a subsequent visit to India for the evaluation of other programs, this report was updated and revised.

Findings. In general, the Oilseeds Management OPG is on schedule and can be expected to be a success, although in terms of end of project status indicators, the project may not achieve its original purpose. There is evidence that operations in the five target processing plants have improved. For example, there have been reductions in solvent losses and consumption of power and fuel, improvements in cottonseed lint recovery, and increases in plant capacity.

The performance of the two long-term advisors was uneven. One was too specialized, not a good field person, and apparently did not like being in India. The other was, according to the evaluator, an excellent advisor. He was highly skilled technically and managerially and had the personality to be an effective field person.

It appears that the major problem in developing the oilseed processing sector in India may well be a classic example of inappropriate technology transfer. NCDC/CLUSA has attempted to determine why practically every plant (cooperative, public and private) is being operated so inefficiently -- one way below its potential. The design of the existing solvent extraction operation is the result of copying a twenty-five year old Belgium plant. Gradual improvements in individual equipment items and the development of newer systems may be possible under the program grant.

Recommendations.

(1) Many of the end of project status indicators, in the opinion of the evaluator, are neither useful (because "they measure activities, not results and they ignore impact") nor likely to be met. These include the completion of a training manual and adoption and use of its recommended procedures; training a specific number of Indian counterparts, general managers, and key operating personnel; and an operating formal training program. He suggests three general indicators of project success as alternatives: plant efficiency, plant profitability, and the extent that benefits have been generated for cooperative society members.

(2) Extended in-service training and short-term consultancies are preferable to long-term consultancies. In selecting candidates for future consultancies, the search should not be restricted to highly specialized individuals, and practical experience should be considered at least as important as advanced degrees. Consultants will be more effective if they are encouraged or required to do extensive field travel.

The near indispensability of the management consultant indicates that there was inadequate participation in the project by Indian counterparts. One of the reasons for this is a misunderstanding between CLUSA and NCDC from the beginning as to the latter's counterpart obligations. During the remaining time available to the management consultant, there should be maximum contact with Indian counterparts.

Nevertheless, the Grant Agreement and the management consultant's contract should be extended for an additional six months. This can be done without obligating additional funds.

EVALUATION OF THE INTEGRATED AGRICULTURAL PRODUCTION AND
MARKETING PROJECT: THE PHILIPPINES

Overview. The Integrated Agricultural Production and Marketing Project (IAPM, Project No. 492-0302) was designed to institutionalize a complex system which would increase the incomes of small farmers. The system was designed to improve technology transfer and the efficiency of the marketing system. The project was divided into four major thrusts or subprojects. These thrusts, and their stated goals, are as follows:

- ° The National Policy Thrust. The purpose of this subproject was to "strengthen overall capacity to formulate rational informed national food policies...the end-of-project situation should see a Ministry of Agriculture able to integrate better agricultural data and develop informed agricultural policies with computer support, formulate alternatives, and establish strong linkages between analysts and policy makers."
- ° The Academic Thrust. This subproject was designed to enhance development of a continuing supply of professionals to serve government, universities, agricultural institutions, small farmer cooperatives and agribusinesses. (Institutions involved in this effort include the University of the Philippines at Los Banos (UPLB) and the Central Luzon State University (CLSU)).
- ° The Technological Package Thrust. The objective of the technological package subproject was to "develop and test technological packages to integrate crop and livestock enterprises, product processing and marketing; to provide training in production post-harvest technology, by-product utilization, processing, marketing and extension education; and to construct and operate a food processing center." (CLSU is undertaking most of the work in this area.)
- ° The Extension/Outreach Thrust. This effort was expected "to achieve coordinated and profitable production, processing and marketing of priority commodities produced by small farm operators". This was to be accomplished through a number of varying mechanisms (for example, agribusiness development, cooperative marketing).

In 1979, a fifth subproject was undertaken, based on three activities previously addressed under the Extension/Outreach Thrust. These were: agribusiness development, market assistance centers, and cooperatives development. This last thrust is referred to as the Marketing/Agribusiness Thrust.

The five-year project (FY 1977 through FY 1983), is jointly funded by the U.S. Agency for International Development (USAID) and the Government of the Republic of the Philippines (GRP). Kansas State University (KSU) was engaged to assist in implementation of the project under a contract with the GRP. AID's funding obligation over the performance of the project is approximately \$11.2 million.

Purpose of the Evaluation. The study represents the second evaluation of IAPM. The first evaluation was conducted in March, 1979 by a joint team of Filipino and American consultants. At that time, project implementation had been underway only about one and one half years. The initial evaluation focused on progress and problems in organization and management activities of each of the four thrusts and in integrating and coordinating these activities. The second evaluation assesses the progress made between 1979 and the Spring of 1981 and notes what remained to be done to meet overall project objectives. In addition, the Evaluation Team examined changes needed to better utilize remaining resources and made recommendations to assist the project in meeting its objectives. The evaluation's analysis is based primarily on data obtained from pertinent project documents, site visits, and interviews with over sixty persons involved with the project's operation and management.

Findings.

(1) Major accomplishments of the National Policy Thrust have been (a) an increased appreciation by the Ministry's leadership for the value of timely and accurate economic information; and (b) improvement in the Bureau of Agricultural Economics' capability to generate reliable statistical estimates.

(2) The CLSU and UPLB achieved most of their objectives under the Academic Thrust with the development of the Agricultural Marketing major within the B.S. Agriculture program at CLSU and the introduction of the Masters in Professional Studies (MPS) in Agricultural Marketing and the Masters in Management (MM) major in agribusiness at UPLB.

(3) CLSU is evolving a system for developing, testing/verifying and disseminating technological packages for production, processing and marketing suitable for small farm producers. It is institutionalizing this technological packaging process as a University strategy. It is a process which will be replicable at other institutions with adaptation.

(4) The Extension/Outreach Thrust has developed and demonstrated an effective system for delivering extension services to farmers and rural homes. The system is serving as a model for expansion nationwide under the International Bank for Reconstruction and Development-assisted National Extension Project.

(5) Important changes in the institutional environment since the project's inception have had an impact on the project's overall strategy.

Recommendations.

(1) National Policy Thrust.

- Create a Statistical Advisory Committee to integrate the statistical support system.
- Institutionalize a national policy analysis capacity.
- Confront the challenge that regionalization will present to policy analysis capabilities.

- Initiate a comprehensive examination of the agribusiness/small farmer linkage.
- Assign high priority to enhancement of capacity at national and regional levels to analyze food policy alternatives. (Much remains to be done, well beyond what is appropriate under the IAPM project.)

(2) The Academic Thrust.

- Acknowledging that most of the objectives have been achieved, terminate project assistance as originally planned, provided: (a) all currently enrolled trainees and those being processed for Fall 1981 admission be permitted to obtain their degrees; (b) permit reprogramming of any remaining training funds for nondegree training; and (c) that universities be encouraged to utilize more fully short-term consultancies already budgeted.

(3) The Technological Packaging Thrust.

- CLSU should expand its research capacity in Tech Pack by involving other institutions doing relevant research in the region.
- CLSU should increase the involvement of the academic staff and students in the Tech Pack program.
- A feasibility study should be undertaken as a basis for determining how the Food/Feed grain processing facility should be used.

(4) The Extension/Outreach Thrust.

- Assistance under the IAPM project should be terminated upon completion of presently programmed consultancies and training programs as originally planned.

(5) The Marketing/Agribusiness Thrust.

- High priority should be given by the GRP and AID to developing an improved policy environment aimed at linking the agribusiness and market system with the small farm sector.

REVIEW OF THE PHILIPPINE COUNCIL FOR AGRICULTURE AND RESOURCES
RESEARCH: THE PHILIPPINES

Overview. The Philippine Council for Agriculture and Resources Research (PCARR) has evolved as the national research system over a period of eight years. Substantial resources have been invested by the Government of the Philippines (GOP) to develop facilities, train manpower, and activate research. The U.S. Agency for International Development (USAID) Agricultural Research Loan I has provided a major support to the development of PCARR from 1975 through 1980. The Loan provided five million dollars to finance infrastructure, research equipment, manpower training and technical assistance to help improve four of the seventeen identified research centers of the PCARR Network.

Purpose and Methodology of the Evaluation. In order to evaluate the progress of PCARR in responding to its mandate, and to assess the utilization of the USAID Loan I (No. 492-T-039) arrangements were made for the International Agricultural Development Service (IADS) to conduct: (1) an ex-post evaluation of the Loan; and (2) an assessment of the performance and corporate structure of PCARR. Specifically, the evaluation attempted to:

- Draw substantive conclusions and make recommendations to guide implementation of future projects, particularly USAID Agricultural Research Loan II; and
- Assess the research management system of the PCARR, particularly the Secretariat vis-a-vis the PCARR scientific network, and provide recommendations for the future with respect to new directions, strategies, organizational arrangements, and management procedures.

The Evaluation Team was composed of two Philippine members and six expatriate members. The analysis, undertaken in October and November of 1980, is based on information generated from pertinent documents, interviews, and project site visits.

Findings.

(1) The following observations were made in regard to the Corporate Review of the PCARR.

- Impact of PCARR on Philippine Agriculture. While some limitations in organization, policies and procedures have been identified, they were considered common for an emerging new organization. In general, the team was favorably impressed with the rate of progress and the general impact of PCARR in establishing an effective national agricultural research system for the Philippines. Some major achievements were noted as: (1) organizing a national research system, that is oriented toward national development; (2) developing a national research program for agriculture and natural resources and a network of research centers; (3) providing

a mechanism for effective utilization of research resources; (4) providing for the development of a research capability initially for ten research centers; (5) providing a climate for communications among researchers; (6) catalyzing the establishment of specific research centers; (7) providing a mechanism for tapping reservoirs of technology; and (8) providing a mechanism for the assessment of progress and regular updating of the national research program for agriculture and resources.

- ° Assessment of PCARR by National and External Agencies. The Evaluation Team found that in general National and External agencies considered the PCARR as useful. It is also interesting to note that the PCARR, in a short span of eight years, has emerged as a principal model for study by developing nations of Asia. To date, it is linked with seventeen international, regional and national research organizations throughout the world.

(2) The Team made the following observations related to the USAID Agricultural Loan I.

- ° Buildings, irrigation and water systems, staff housing and general research farm improvements provided under Loan I were badly needed and now have a potential for greatly enhancing the research output of these centers.
- ° The PCARR sometimes had difficulty coordinating and supervising the allocation of resources among physical infrastructure, equipment and manpower development and in selection and installation of equipment.
- ° The quality of research activity is spotty. Moreover, dissemination of research results is weak. The linkage of research results with off-station trials and with extension specialist preparation is weak and should be strengthened.
- ° The implementation of manpower training under the loan followed the original schedule fairly closely and is making a significant contribution to research capability in the country.
- ° The aggressive and successful manpower training program that is currently underway will require early positive action on salary and other incentives if this manpower is to be kept in productive roles in research.

Recommendations.

- (1) The Evaluation Team set forth approximately forty recommendations in regard to new directions, approaches/strategies, organizational arrangements and management procedures to enable PCARR to respond more favorably to its mandate in the future. The recommendations are directed towards the following areas: (a) the national network of research centers and stations; (b) research program planning and management; (c) manpower training and personnel management; (d) development and application of useful technology; and (e) general issues.

(2) The following recommendations were set forth regarding future loans.

- ° The centers that are supported under Loans I and II should be further strengthened and supported in future loans before adding new centers to the support program.
- ° Future loans for the PCARR network should take into account plans now underway by the Ministry of Agriculture to establish Coordinated Agricultural Research Stations in each of the twelve political regions of the Philippines.
- ° Future loans should be very sensitive to the emerging regional thrusts in order to avoid the development of technologies for which there is no absorptive capacity in the regions.
- ° The rapidly changing economic situation in the world and in the Philippines requires changes of direction in all sectors. The responsiveness of PCARR will be critical and the intimate cooperation of USAID in adjusting loan program requirements is essential.

EVALUATION OF THE FERTILIZER PROMOTION PROJECT: INDIA

Overview. The U.S. Agency for International Development (USAID) was asked by the Government of India (GOI) to assist them in "maintaining the country's current momentum of fertilizer consumption on an equitable basis." In response to this request, a USAID-financed Fertilizer Promotion Project (No. 386-0471) was initiated in 1979. The overall goal of the project is to increase agricultural output over the 1979 through 1983 period and to increase small farmer incomes. In order to reach the goal, the four-year project set forth three principal objectives:

- To increase fertilizer consumption by ten percent per year,
- To increase the growth rate of fertilizer consumption in "lagging" areas as compared to state averages, and
- To ensure the participation of small farmers in increased fertilizer consumption.

Purpose of the Evaluation. Annual evaluations of this project are required under the terms of the project agreement. This review, representing the second internal evaluation of the project, measures project performance (as based on sub-sector performance since AID fertilizer is co-mingled with other fertilizer and cannot be tracked as such) from February 1980 through June 1981. The data on which the evaluation is based is drawn from three study reviews undertaken by USAID during the summer of 1981. These include: (1) an update of overall fertilizer sub-sector performance during 1980 through 1981; (2) an analysis of fertilizer access and use by small and marginal farmers; and (3) a cost-benefit analysis of fertilizer use.

Findings.

(1) The overall fertilizer sub-sector performance has been creditable, in spite of the adverse impact of drought and fertilizer price increases. Fertilizer consumption increases over previous years (1979 through 1980 at three percent; and 1980 through 1981 at six percent) were less than the project's target of ten percent per year. Two external factors are primarily responsible for the shortfall in consumption. 1979/80 experienced one of the worst droughts in Indian history and substantially reduced the demand for fertilizer. In 1980/81 the monsoon was better but there were still some areas affected by adverse weather. Therefore, the assumption of normal weather has been met.

In addition, fertilizer prices increased about 38 percent in June 1980 which, in spite of procurement price increases for food-grains, did not maintain the assumed "current crop/fertilizer price relationship". The impact of this price increase has not been quantified but it logically would have impacted unfavorably on fertilizer consumption.

(2) The momentum of fertilizer imports, to which the USAID project was designed to contribute, has been maintained. Imports of four million material tons (MT) in 1979 through 1980 was increased to five million in 1980-1981. 222,000 MT of USAID-financed fertilizer arrived in India during January to March 1981.

(3) Meeting the project's output target of twenty-five million nutrient tons of consumption over the four-year project life will depend on meeting targets set for 1981-1982 of 6.6 million and for 1982-1983 of 7.6 million.

(4) Penetration of fertilizer into more remote areas took a major leap forward with establishment of a program to subsidize transport of fertilizer to all 5,000 block headquarters in the country. In addition, the Fertilizer Promotion Program, temporarily held in abeyance due to materials shortages, has been started in sixty-five selected districts.

(5) The special USAID analysis on fertilizer access and use by small and marginal farmers and the cost-benefit analysis establishes the fact that: (a) the operators of marginal holdings form the largest group of fertilizer users; the second largest group of fertilizer users is that of small farmers. Taken together, the small and marginal farmers constitute about 65 percent of all fertilizer users. Large farmers using fertilizer constitute about 4 percent of the fertilizer users. (b) The operators of marginal holdings use fertilizer most intensively, that is, they apply the largest quantity of fertilizer per unit of fertilized land. The rate of fertilizer use is the second highest in the case of small farmers, while it is the lowest for operators of large holdings. (c) The share of marginal farmers in total fertilizer consumption is the least, while that of the small farmers is the second lowest. Taken singly, the shares of both the small and the marginal farms are smaller than the share accruing to the large farmers, but taking the small and the marginal operators as a single group, its share in total fertilizer consumption is larger than that of the operators of large holdings. (d) Of all farm groups, the medium farmers consume the largest proportion of fertilizer; together with the semi-medium farms, their share in total fertilizer consumption is more than fifty percent.

(6) The initial Project Paper discussed two types of studies that might be useful in providing guidance to the fertilizer program. One involved the distribution system for fertilizer and its effectiveness in penetrating remote areas. The other would have analyzed the various fertilizer promotion schemes in use in the country. The Ministry of Agriculture (MOA) developed four study outlines dealing with these subjects and with fertilizer credit. USAID, utilizing a U.S. consultant, reviewed these study proposals with the MOA and decided that, due to methodological deficiencies and the lack of real need for some of the work proposed, these studies would not be pursued further.

EVALUATION OF THE AGRICULTURAL EDUCATION OUTREACH
PROJECT: THE PHILIPPINES

Overview. The Agricultural Education Outreach Project (AEOP) is a three-year project, FY 1980 through FY 1982, now being implemented at seven agricultural colleges throughout the Philippines. The participating schools are Aklan Agricultural College (AAC), Camarines Sur Agricultural College (CSAC), Central Mindanao University (CMU), Don Severino Agricultural College (DSAC), Palawan National Agricultural College (PNAC), Pampanga Agricultural College (PAC), and Western Luzon Agricultural College (WLAC). The approximate cost of the project is \$14 million, fifty-three percent of which will be provided by the Government of the Philippines (GRP). The U.S. Agency for International Development (AID) is providing a grant of \$2.5 million, plus \$4 million in PL 480 funds.

Purpose of the Project. The overall goal of the Agricultural Education Outreach Project (AEOP) is: (1) to train Philippine students within a strengthened college outreach program; and (2) to upgrade the traditional college functions of instruction, research and extension using mobile technical teams as linkages to extension communities. Specific project components include evaluating school programs, developing a quality implementing staff at each of the seven participating colleges, structuring a balanced student internship/outreach program, establishing income generating loan programs, and institutionalizing all of these within school budgets and structures. In addition, the program has provisions for the procurement and disbursement of vehicles, laboratory equipment, and library books as well as a construction component.

Purpose and Methodology of the Evaluation. This evaluation of the AEOP project is the first of two external evaluations that have been planned for the life of the project. The purpose of the review is not to measure project accomplishments or to monitor project components. Rather, it attempts to look into the processes at work after the first year of activity with a view towards assisting those involved in the project's implementation. In the course of the evaluation (undertaken in the first quarter of 1981), the Team visited each of the seven schools and talked with AEOP project managers, coordinators, and administrators. In all but one school, visits were made to outreach barangays (villages) and, where possible, interviews were conducted with students, barangay development instructors, and the barrio people themselves. Discussions also took place with the Project Manager, USAID officials, and the Project Management Office (PMO) staff in Manila. The Team also reviewed each school's work plan.

Findings.

(1) The project lacks a clear articulation of its objectives, an integration of its component parts, a sequential phasing of its activities, and a system of funds management.

(2) Project Management has suffered from a lack of leadership and from the failure of project participants to interact on a basis of shared responsibility and mutual assistance.

(3) No systematic evaluation was done at the outset of the project to determine the strengths and weaknesses of each school. AEOP staffs have tended to accommodate predetermined organizational charts and budgets rather than actual project needs. Outreach programs have tended to duplicate established programs or adjust to expectations from the PMO/USAID.

(4) Most schools have not given enough serious thought to project institutionalization. Unless the project is structured to provide for it, institutionalization will not take place at most of the schools.

Recommendations.

(1) Project officials might consider convening an implementation review to address particular weaknesses in the design of the project. The review should address the following points: (a) the formulation of a clear statement of purpose; (b) the extension of the project for another two years; (c) the contribution, or noncontribution, of specific project components to the whole; and (d) the restructuring of budget allocations and the introduction of a system of funds management detailed by the Evaluation Team.

(2) Project managers/officers have to reaffirm their commitment to implement the project along lines of responsibility agreed upon and to restructure their staffs and approaches if need be: (a) Project Implementation Officers (PIOs) on the college level have to become more directly involved in the implementation of the project; (b) the Project Management Office (PMO) has to strengthen project monitoring and evaluation giving more emphasis to qualitative reporting and impact analysis; (c) the PMO and USAID have to provide technical assistance to enable college staffs to evaluate their needs and develop quality programs of outreach. Project managers/officers have to resist temptations to view the project as their own and to act independently. They should work towards a greater communication of purposes, expectations and procedures.

(3) Using the evaluation report as a tool, each school should undertake a systematic evaluation of its needs: (a) AEOP staffs should be reduced to those directly involved in AEOP implementation; (b) AEOP staffs, with assistance from PMO/USAID, should develop programs of staff development addressed to their specific weaknesses in student internship/college outreach; (c) each school, with technical assistance, if necessary, should develop a clear, coordinated, integrated, phased strategy for Barangay Development Laboratory (BDL) development which builds on what is already present and incorporates both student internship and community impact objects.

(4) The PMO with the schools should develop immediately a phased plan for institutionalizing the core of the internship/outreach component at the colleges, including assurance of adequate budget, adjustment of curriculum and development of a long-range outreach strategy.

AGRICULTURAL DEVELOPMENT COUNCIL RESEARCH AND TRAINING NETWORK:
REPORT IN SUPPORT OF A PROJECT ON EXPANDING NON-AGRICULTURAL
USES OF IRRIGATION WATER

Problem and Overview. In the world's rural areas approximately eighty-five percent of the population does not have access to safe water and sanitation facilities, and the estimated cost of providing conventional water and sanitation is staggering -- \$60 billion for water and \$300 to \$600 billion for sewerage. Historically, economic development has often received priority over the delivery of social services; thus water delivery has tended to be designed for irrigation rather than community water supplies in rural areas. Given the immense water and sanitation needs, however, and the cost of providing them, consideration should also be given to the agricultural and domestic functions of water resources to see how they differ and where they overlap.

Multiple uses of irrigation water, although commonly observed to be significant, have not been considered in the planning, design, and operation of irrigation systems. Further, it is not clear who benefits from the different uses of irrigation water, and thus who should share the costs of system design and operation. Two important considerations are the health benefits and hazards associated with the non-agricultural uses of irrigation water.

Purpose of the Study. The U.S. Agency for International Development (USAID) commissioned three separate papers to address issues related to non-agricultural uses of irrigation water. The papers, drafted by the Agricultural Development Council, Inc. during the Spring of 1981, were to serve as a basis for an AID-sponsored seminar on "Expanding Non-Agricultural Uses of Irrigation for the Disadvantaged". The study areas, and their principal goals, are noted below.

° Non-Agricultural Uses of Irrigation Systems: Household Water Supplies. This paper examines the extent to which irrigation systems can be used as a source of household supplies and the implications this use has for designing irrigation systems.

° Non-Agricultural Uses of Irrigation Systems: Past Experience and Implications for Planning and Design. The potential improvements in family-oriented water services that could be provided by formalizing non-agricultural uses of irrigation water are the focus of this subproject. Different kinds of water users within irrigation systems (for example, those living at the head and tail of an irrigation canal), the marginal cost of making water available for non-agricultural uses, and the consequences of those uses -- on health, agricultural production, and the environment -- are examined.

° Expanding Non-Agricultural Uses of Irrigation for the Disadvantaged: Health Aspects. This paper identifies the adverse health effects that are associated with agricultural irrigation systems, discusses how such effects can be prevented, and highlights the constraints that irrigation water contaminated by pesticides has for domestic water use.

The methodology followed for the three studies was principally the same: preparation of a comprehensive review of the scientific and technical literature in the given study area and interviews with knowledgeable professionals.

Findings.

(1) Household Water Supplies. The study stated that the range of professional opinion and organizational experience is too varied to make definitive conclusions about feasibility and desirability of designing irrigation systems to provide household water supplies. However, four main categories of issues emerge from the literature dealing with the feasibility of dual-purpose systems: (a) engineering considerations; (b) investment costs, (c) administrative and organizational arrangements, and (d) convenience and health benefits.

(2) Past Experience and Implications for Planning and Design. Some common problems which must be dealt with if non-agricultural uses of irrigation systems are to be planned include: (a) developing design alternatives for the utilization of irrigation systems for such purposes; (b) developing an information base on the cost effectiveness of designing such systems which would include sociocultural practices of different groups and detailed field and engineering data for benefit and cost evaluation; (c) developing standards for water use in incremental steps given the resources available and the purpose to which the water is being applied; and (d) studying the need and desirability of water laws to ensure access to irrigation water for non-agricultural purposes.

(3) Health Aspects. The study concludes that emphasis should be focused on ways to reduce or avoid the contamination of irrigation water with pesticides and fertilizers, or the treatment of such water to remove pesticides. Little attention is given to other health issues involved in the domestic use of irrigation water, infectious diseases, and other organic and inorganic contaminants of water. This decision is based on the following five factors: (a) relatively little is known about the health problems and risks presented to people who use pesticide-contaminated water; with a paucity of such data, the most ethical public health position is a conservative one; (b) pesticide (and fertilizer) use is on the rise in LDCs; (c) the same may be said for deforestation and soil erosion problems, which contribute to pesticide and fertilizer runoff into surface waters; (d) much more information is available in the literature on methods to control or treat water-related infectious diseases than on health problems caused by pesticides in the environment, especially water; and (e) except in some local regions, the potential health problems to arise from the presence of other organic and inorganic chemicals are probably slight.

Recommendations.

(1) Household Water Supplies.

- Greater recognition should be given to the fact that in many countries people draw water directly from irrigation canals to serve their household requirements because this is the most convenient or preferable source.
- Innovative approaches to the problem of poor maintenance and operation of household water systems must be investigated.
- Greater understanding of water use patterns and perceptions of health and hygiene are necessary for appropriate and effective health education and promotion efforts.
- Water user associations in dual purpose water systems need to be researched and documented.
- Donor institutions must become more sensitized to the fact that there are noneconomic benefits such as improved health which elude quantification.

(2) Past Experience and Implementation for Planning and Design.

- A thorough in-country investigation should be made of the present non-agricultural uses of the existing irrigation systems. Several countries should be selected for the initial study.
- A methodology should be developed and tested for rapid and complete assessment of a community's needs that could be met by an irrigation system. It should particularly focus on the factors that relate to hygiene and health, identify factors that concern health goals, and evaluate the present water supply sources.
- A pilot project should be implemented to test different ways of facilitating the use of irrigation systems for non-agricultural purposes.

(3) Health Aspects.

- Dual purpose irrigation systems should be designed to incorporate the following concepts: groundwater is preferred over a surface water source, as contamination problems should be less; if surface water is used it should be piped; any dual irrigation system design chosen must be socially and politically acceptable; and any design chosen must be financially sustainable by consumer/community funds.
- The careful choice of site for a dual purpose water system is the best way to mitigate the problem of pesticide contamination of drinking/irrigation water.
- There is no satisfactory treatment system available to economically remove pesticide residues from irrigation or drinking water in rural areas of LDCs, other than the natural treatment derived from deep groundwater (i.e., percolation), or infiltration galleries.
- Because of the complex series of interactions between pesticides, the environment and human health, and the difficulty in obtaining good health risk estimates, it is best to take a preventive approach to pesticide residue management.

EVALUATION REPORT FOR LAM NAM OON INTEGRATED
RURAL DEVELOPMENT PROJECT: THAILAND

Problem and Overview. In most countries, policies for irrigation development evolve through three stages. First, focus is given to the capture and conveyance of water; secondly, concern centers on plant-water-soil relationships and water utilization; and thirdly, emphasis is given to on-farm improvements. In keeping with stage one, the Royal Thai Government's Irrigation Department (RID) has been heavily involved in the design and construction of works to capture and deliver water to command areas. However, this earlier focus is now in question as the Government becomes more concerned with water distribution at the farm level in order to increase agricultural production.

This change of focus is particularly evident in northeast Thailand where a series of droughts have influenced irrigation policy. The Royal Thai Government (RTG) has stressed the importance of evaluating irrigation projects in this area of the country in terms of agricultural growth, equity in income distribution, employment generation and infrastructure to provide small farmers with higher levels of living. The Lam Nam Oon Integrated Rural Development Project, initiated in 1977 by the RTG and the U.S. Agency for International Development (USAID), is designed to meet a number of objectives beyond the provision of on-farm irrigation and increased agricultural production.

Purpose of the Project. The major purpose of the Lam Nam Oon Integrated Rural Development Project is to improve the quality of life of the families residing in this region of northeast Thailand. In addition to research, extension, inputs and agriculture marketing activities to support the objectives of increased agricultural production, not mentioning the provision of on-farm irrigation, the project also addresses community development, health and family planning services, and adult education. The bilateral project is being conducted over a five-year period (FY 1978 through FY 1983) at a projected cost of approximately \$44 million, with USAID providing \$4.6 million of the total project expense.

Purpose and Methodology of the Evaluation. Since there had been no previous examinations or reviews of the Lam Nam Oon project, the mid-term evaluation's principal purpose was to review project activities as of the summer of 1979 and to provide recommendations for future project work. The evaluation was undertaken by a Team composed of a team leader, three economists, an irrigation agronomist, an engineer and a management specialist. The group attempted to compile data for the record on cumulative actual accomplishment through FY 1980 compared with original objectives. Extensive interviews were conducted throughout the period of evaluation. The Team also made numerous visits to the project site.

Findings.

(1) Positive Aspects of the Project. The Evaluation Team found that the integrated approach to project implementation has worked quite well in some respects. Various departments of the RTG cooperate to a degree not found in

their informal activities outside the project area. Moreover, the incentive of price support for groundnuts has resulted in the production of this crop by over 2,000 farmers during its first year of operation in Lam Nam Oon. In addition, the majority of the farmers who had access to reliable irrigation did cultivate at least part of their land during the dry season.

(2) Negative Aspects of the Project. The study indicated that the project is beset by a number of major problems, the most critical of which are economic and physical, with both categories influenced by managerial difficulties. The fundamental economic problem is that the project will not be able to produce sufficient return on investment to cover the cost. There are two crucial problems related to the physical development of the irrigation system. First, the concrete-lined canals and related structures have deteriorated to such an extent that if operations and maintenance of the system does not improve, the system will be unable to deliver at the necessary levels to an expanded number of farmers. Such deterioration is due to faulty design, inadequate construction, and lack of adequate resources for proper routine maintenance, or failure to utilize the resources effectively. Second, a large-scale land clearing and leveling technique is being employed which is at once both extremely costly and potentially damaging to the thin topsoils of the area. Alternative techniques are available which could resolve both the cost and topsoil problems, but the RTG continues to plan further use of the land leveling technique, although not for the entire project area.

The above economic and physical problems are largely the result of managerial problems. Evidence of this fact was noted by the Evaluation Team when all RTG senior officials interviewed acknowledged that they had been generally aware of the major problems for some time. Nevertheless, the problems have not been adequately addressed despite the fact that the Lam Nam Oon Project is not the only large-scale irrigation project in the Northeast, and the others reportedly suffer many of the same problems. The review highlights two major reasons for nonaction on the part of senior managers. These include: (1) management information systems do not provide the type of information required in a consistent, timely manner; and (2) organizational and managerial arrangements established for the Project have either not been followed or have been ineffective.

Recommendations. The Evaluation Team makes a large number of recommendations designed to correct various problems or weaknesses of the project. Some of the recommendations considered fundamental to project success are outlined below:

(1) The operation and maintenance budget should be increased to finance the routine maintenance required to prevent further deterioration of the canal system. Management of the project's operation and maintenance (O&M) section should be strengthened and project procedures for use of O&M funds reviewed. Funds should also be allocated to rehabilitate the system.

(2) The modified ditch and dike model developed for the project -- called the Lam Nam Oon Model -- should be subjected to careful operations research for two or three years.

(3) During the testing of the model, further expansion of the irrigation system should be restricted to ditch and dike methods and the use of land leveling and consolidation methods should be deferred.

(4) Applied research on dry and wet season crops suitable for project area soils should be expanded. Such research should include on-farm water management and use.

(5) Project management should be reorganized to provide for clearer lines of authority, more systematic information flow and closer management attention. This could include the assignment of one person to work within the Irrigation Department to assist the Project Director, and the formation of an interagency project implementation working group.

(6) The national coordinating committee should be reactivated to meet regularly to review project progress and to provide guidance to the operating units.

MID-TERM EVALUATION REPORT ON THE ON-FARM WATER
MANAGEMENT RESEARCH PROJECT: SRI LANKA

Problem and Overview. An analysis of water supplies in Sri Lanka indicates that the demand for water far exceeds that available for irrigational purposes. This situation is worsened due to the fact that a substantial amount of water is lost through drainage, especially where paddy is grown on the Red Brown Earths (which generally are found in higher areas of sloped land and tend to be relatively porous). Moreover, farms on these soils are commonly at or near the heads of irrigation channels and thus have easy access to the needed water. Since these soils absorb water at a very high rate, the farmers tend to over-irrigate their crops rather than putting in the extra work necessary to devise more efficient watering techniques. As a result, farmers at the tail end of these field channels suffer from a common lack of water.

Several solutions have been suggested to deal with this particular water distribution problem. One is strict and enforced rotation of water among field channel users. Another is to construct a more effective water conveyance system. Either of these approaches are expensive and the former concept could cause conflicts between farms at the two ends of a particular water channel. A third approach is to rely on a farmer's self interest by trying to convince those located on the porous soils to grow upland crops, which require less water and have the potential to provide greater economic return than paddy.

Purpose of the Project. The Mahaweli On-Farm Water Management Project (No. 383-0042) is a component of the Mahaweli Basin Development Program (MBDP), the largest development program in Sri Lanka, costing \$81.2 million, of which the Agency for International Development (AID) contributes \$6 million and other donors contribute \$37.2 million. On-Farm Water Management is a five-year research and demonstration pilot project directed towards providing methods and irrigation techniques applicable to MBDP in addition to developing and rehabilitating older irrigation systems still in use. The project is Sri Lanka's first effort to address water management problems where they initially occur -- in the farmers' fields.

The Mahaweli On-Farm Water Management project was initiated by the Land Use Division of the Irrigation Department and by the Mahaweli Development Board of Sri Lanka in late 1977. USAID's \$800,000 grant, which covers seventy-five percent of the project's costs, supports consulting, supplies and other services. Short- and long-term consultants, to assist project planning and implementation, were provided by the Chemonics International Consulting Division of Chemonics Industries.

The project's purpose was: "...development of methodologies regarding land preparation, farm and field layout, and field channel design and operation which will result in increased production per unit of water and can be utilized in new irrigation developments and rehabilitation of old ones".

(2) Short-term expatriate advisors with backgrounds in hydrology, irrigation engineering and extension should be brought in to help the program if adequate advisors cannot be obtained from within the country.

(3) Two additional researchers on permanent appointments should be assigned to the project. One should be given responsibility for obtaining and analyzing data on irrigation and drainage trials, land leveling and soil preparation studies and water measurement determinations. The other would oversee crop-soil water management studies on the research farms.

(4) To allow the project staff adequate time to plan for the planting season, initial planning meetings should be held at least sixty days prior to the proposed planting date.

IMPACT EVALUATION OF BONE-BONE IRRIGATION SYSTEM IN
LUWU, SOUTH SULAWESI, INDONESIA

Problem and Overview. One of the priorities of the Indonesian Government (GOI) during its second five-year development plan is to intensify rural development efforts in certain underdeveloped areas of the country. Luwu Kabupaten (district) in South Sulawesi, one of Indonesia's one hundred designated growth centers, is such an area. It has a subsistence agriculture, is poor, and is sparsely populated. Even before World War II, Luwu was identified as a transmigration area and as such has been affected by the approach that combines transmigration with projects to construct and rehabilitate irrigation systems on the Outer Islands.

Purpose of the Project. The Luwu Area and Transmigration Development Project (No. 497-0244) consists of a package of agricultural development activities including: road rehabilitation, rehabilitation and expansion of the Bone-Bone Irrigation System, establishment of four farm service centers, and short-term training and foreign technical assistance to the semi-autonomous project management authority. The overall purpose of the project is to raise small farmer income through improved productivity. The total value of the Luwu project is estimated to be fifty million dollars. The Agency for International Development's (AID) contribution is a fifteen million dollar loan. The project agreement between GOI and USAID was signed in 1976 and the final input delivery is scheduled for 1983.

The Bone-Bone Irrigation System is one of ten systems within the Luwu project area (total project area is 100,000 hectares; Bone-Bone irrigable area is 3,000 hectares). The physical rehabilitation of the system involves repair and improvement of all physical structures, including the diversion dam, and land clearing to permit extension of the system to serve its potential command area. The estimated cost for rehabilitation and extension of Bone-Bone is estimated at approximately \$2.7 million, of which AID provides a little over \$1.3 million.

Purpose and Methodology of the Evaluation. The objective of the evaluation was to measure the impact of the improved Bone-Bone Irrigation System on agricultural production, employment, and income. The evaluation -- undertaken by an Indonesian institution, the University of Hasanuddin -- used two kinds of comparisons: the "before and after" approach (change over time); and the "with and without" approach (one village in the project area compared to one outside the project area). The data needed to determine the impact of the system on agricultural production, income and employment were obtained by constructing for each sample farm a partial farm budget. These partial budgets provided all the necessary data on productivity, income and employment.

It is important to note that the effect of the system on the socioeconomic infrastructure of the region was not addressed in the evaluation. This important concern was left for a follow-on survey.

Findings. On the basis of comparisons made during the course of the evaluation, the following observations were made:

(1) By providing water to the small farmers, the Bone-Bone Irrigation System has increased the average rice production per hectare. As a result, most farmers are now able to have double cropping of rice during the year.

(2) Through increases in production and productivity, the project has also succeeded in increasing farm income and household income.

(3) The increased use of human and animal labor, along with such items as chemical fertilizers, has caused farm costs to increase faster than gross farm income.

(4) There are no significant differences in farm size distribution between irrigated and non-irrigated farms.

(5) The distributional impact of irrigation on farm income is quite substantial -- among the seventy-seven percent of farmers who had an income of less than Rp 200,000 per year, fifty-four percent moved to a higher income level.

In summary, the evaluation indicates that the Bone-Bone Irrigation System is well on its way to attaining its goal of increasing the well-being of the rural people in the Kecamatan Bone-Bone. Its implementation has increased the productivity of land, income, employment, per capita consumption and the marketable surpluses of their product.

Recommendations. Three primary recommendations were made as a result of the evaluation.

(1) The Bone-Bone Irrigation System should be extended to an adjacent village through the construction of tertiary and quaternary canals.

(2) Measures should be taken to coordinate planting schedules, reduce seasonal labor shortages, adopt selective mechanization, reduce post harvest losses, and subsidize the costs of chemical inputs.

(3) A water users organization should be formed in order to improve water management.

REVIEW OF GUJARAT MEDIUM IRRIGATION PROJECT: INDIA

Overview. The Gujarat Medium Irrigation Program is a five-year commitment, designed to provide financial support to thirty-one of Gujarat's Medium Irrigation Projects (MIP). A project loan agreement (Loan No. 386-0464) was executed between the U.S. Agency for International Development (AID) and the Government of India (GOI) on August 26, 1978 to provide financial support of \$30 million. At the same time, the GOI entered into an agreement with the World Bank to provide \$85 million for the project. The project assistance completion date for both agreements is June 1983. Expected project outputs are outlined below:

- Construction of thirteen new and twenty improved MIPs covering 149,000 hectares of irrigated land.
- Establishment of a network of river gauging stations.
- Development of agricultural plans and establishment of demonstration plots within each MIP.
- Preparation of baseline socioeconomic studies for each MIP.
- Establishment of a program to carryout water loss measurements in several of the MIPs.

The responsibility for monitoring the project's progress rests with the Government of Gujarat State (GOG) on the one hand, and USAID and the World Bank on the other. Following a mid-term evaluation of the project, undertaken in December 1980, monitoring activities by all three parties were increased to enhance the potential for achieving the project's purpose.

Purpose and Methodology of the Evaluation. The purpose of the annual review was to identify the actions taken by the GOG on the recommendations made in AID's Mid-Term Status Report to improve project implementation. In addition, a review was made of project achievements compared to planned targets. The discrepancies were analyzed to determine the reason for shortfalls. The review of the project was jointly conducted with World Bank officials during October 1981. The basic data for the review was collected from GOG Irrigation Department's Project Planning and Monitoring (PPM) Cell and analyzed with their assistance.

Findings.

(1) Since the Mid-Term Status Review the GOG has: (a) significantly improved the staffing and budget position of the MIP; (b) taken action to improve the quality of canal and water-course construction; (c) planned a series of workshops on "Irrigation Systems Network Planning and Design"; and (d) improved its rate of subproject approval. However, efforts made by the GOG to coordinate its Departments of Irrigation and Agriculture are not sufficient to eliminate certain project implementation problems. For example, the lack of coordination between these two Departments continue to hamper timely implementation of required agricultural development plans and the setting up of a demonstration plot in each subproject. In addition, there is little evidence to show that farmers are ready to accept the water when it becomes available.

(2) Physical (construction) progress has improved since the Mid-Term Status Review; however, it is still considered far behind schedule. At the time of the evaluation, for example, 22 out of 23 subprojects were lagging significantly behind the planned levels of construction. The mean percent of achievements lagged the projected target by approximately 30 percent for the dam; 10 to 40 percent for the canals; and the distribution system was yet to be started in all but one subproject.

(3) Financial allocations had also improved yet, like the project's physical status, they were still behind schedule.

(4) Staffing is considered a project constraint, although, as noted above, the GOG is giving much of its attention to this important area. An analysis of staffing positions shows that GOG has sanctioned 75 percent of the subdivisions and 80 percent of the field staff positions recommended for the 1981-82 fiscal year. Of the sanctioned subdivisions, 92 percent are actually in place and 72 percent of the field staff are actually in place. The major shortfall is in the field supervisory positions. However, if GOG could completely fill all currently sanctioned posts with staff the overall staffing position would be reasonably good.

(5) If project objectives are to be met, the Evaluation Team suggests that the project completion date be extended for one additional year -- through June 1984.

Recommendations.

(1) The GOG must continue to give high priority to project staffing. There is a significant shortfall in the placement of field supervisory (junior engineers and overseers) personnel. Vacant positions need to be urgently filled and additional positions sanctioned to match the projected requirements. Action is needed to assure that sufficient subdivisions are assigned to the distribution system to synchronize canal construction activities with the headworks. This would also enable utilization of stockpiled materials from the preceding years and qualify their costs for reimbursement.

(2) Selection of contractors for canals and distribution networks is lagging far behind schedule. Action by GOG is needed to reduce the subproject selection and approval time and thus improve the project's implementation rate.

(3) Implementation of the upgraded canal and watercourse lining specifications must be enforced by GOG in order to improve the construction quality.

(4) The GOG should continue the training workshops for the field officers in "Irrigation System Network Planning and Design" and "quality control in construction" until all the field staff have been trained.

(5) Implementation of agricultural development plans and setting up of a demonstration plot in each of the MIPs has not made any headway. Since this aspect of the program is vital to optimize agricultural production, cooperation between Irrigation and Agriculture Departments is necessary. The GOG urgently needs to set up a coordination group between the Departments of Irrigation and Agriculture to assure that the agricultural development plans are developed and demonstration plots established.

(6) The World Bank is a major donor and has the lead responsibility for monitoring the project. The Bank is now taking a more active role in project monitoring and attempting to see that the identified constraints to project implementation and quality are removed. As such, AID should reduce its monitoring input and concentrate the limited available resources on its other projects. AID should only join the Bank personnel for their periodic reviews of the project.

AN EVALUATION OF THE REAL PROPERTY TAX
ADMINISTRATION PROJECT: THE PHILIPPINES

Problem and Overview. The Real Property Tax Administration project (RPTA) is a direct successor of the Local Development project (LDP), which provided technical assistance to the Philippine Government's (GOP) Provincial Development Assistance Program. LDP assistance was in the form of comprehensive planning, fiscal resource development, infrastructure planning, and engineering. During the implementation of LDP, it was found that a major obstacle to local development was a shortage of locally generated funds, and that local budgets were dependent on direct subsidies from the national government. An analysis of alternatives for generating revenue for local governments indicated that the real property tax not only had the most potential for generating additional funds but also was the least likely to place undue financial burden on the rural or urban poor.

Purpose of the Project. RPTA (Project No. 492-0298) provides a ten million dollar loan with initial obligation in FY 1978 and final obligation scheduled for FY 1981. The GOP contribution is \$5.26 million. The goal of the project is to provide a strong financial capability to local governments to deliver goods and services to the low income and rural poor families. The purpose is to generate additional revenue by increasing collection of property taxes in municipalities, provinces, and cities and improve the condition of existing property tax records and collections.

RPTA's long-run strategy is to provide technical assistance and equipment for tax mapping, record management, assessment, and collections. The short-run strategy is to have municipalities not scheduled for tax mapping validate their assessment records and then enforce existing tax collection procedures to increase real property tax revenues quickly. RPTA aims to accomplish the four phases in 576 municipalities (one-third of all municipalities in the country) and fifty-six cities by the end of 1982. The project incorporates several incentives for encouraging provincial and municipal participation (seed money, tax mapping commodities, technical training and assistance, and grants).

Purpose and Methodology of the Evaluation. The evaluation analyzes that part of RPTA that is implemented through the Ministry of Local Government and Community Development (MLGCD) and funded by the Agency for International Development (AID). (The Ministry of Finance also has a RPTA project.) The evaluation includes an examination of the broader program goal, as well as a detailed analysis of the relative success of the tax mapping, assessment, record keeping, and collection components. It also assesses whether these components are sustainable. Data were collected in nineteen municipalities in three provinces on the number of parcels (taxable and exempt), assessed value of property (taxable and exempt), collectables, collections and collection efficiency. Time series data were collected for both tax mapped and non-tax mapped municipalities.

Each tax mapped municipality was matched with a non-tax mapped municipality with similar socio-demographic and economic characteristics. Municipalities undergoing land reform were distinguished from those which were not. In addition, structured interviews were conducted with the principals involved in program design and implementation as well as with other analysts of the real property tax.

Findings. A total of 147 local governments have been tax mapped and their property tax records updated; tax mapping is in progress for an additional 143 local governments; a tax mapping manual has been prepared; an improved tax collection procedure has been developed; a final draft of a collection manual has been completed; and training seminars and on-the-job training sessions have been conducted. In a sample of nineteen municipalities the number of taxable parcels increased by more than ten percent in eleven, decreased in six, and remained essentially unchanged in two. Assessed value data are available for fourteen municipalities. After tax mapping, assessed value increased in eleven municipalities, decreased in two and remained unchanged in one. Collection efficiency increased in eleven of the nineteen municipalities after tax mapping, while it decreased in eight of the nineteen. From these results, it appears that tax mapping may not lead to increased assessed value, collectibles and collection efficiency in every municipality, and underscores the importance of enacting a vigorous property tax collection program if collection efficiency is to be increased.

Collection efficiency is higher in tax mapped municipalities than in non-tax mapped municipalities in only eight of eighteen cases. Average collection efficiency is 61.8 percent in the tax mapped municipalities, compared to 57.2 in non-tax mapped municipalities. These data also underscore importance of implementing a vigorous collection program if collection efficiency is to be increased.

The evaluation also noted that: (a) project implementation is behind its over-optimistic schedule; (b) the costs of increasing property tax collections were underestimated and their benefits were not as obvious to local government officials as they were to the project designers; (c) seed money is too little to act as a real incentive for local governments to participate in RPTA; (d) there are no good criteria for selecting the 576 municipalities which should be selected to be part of the project; (e) commodity distribution has been unduly delayed; (f) project information has not been effectively presented to local government officials; (g) the parallel RPTA project under the Ministry of Finance has not developed as well as expected with this RPTA; (h) the three day lecture/seminar is a less effective training format than on-site training, and technical assistance; and (i) the expectation of tax mapping 576 municipalities may not be achievable.

In addition, the team noted that their concern is over the long-term viability of the project at the local level. Long-range sustainability will depend on the support and encouragement from the Ministry of Finance to provincial officials, the continued high quality of the assessment scheme, and avoiding the exclusiveness of private contractors in tax mapping.

Recommendations.

(1) To increase the effectiveness of the present phase of RPTA, tax mapping should be targeted on a smaller number of local governments, perhaps chosen on the basis of population, ease of mapping, regional location, and degree of interest on the part of local government officials. In addition, with fewer municipalities in the program, the grant and seed money could be increased so that it would be a real incentive for local governments to participate in RPTA. Given the new targeting, training sessions could be reoriented to on-site technical assistance rather than the present large seminars and lectures.

(2) For a more effective Phase II, a new institutional structure is required. The redundancies and conflicts that characterized the relationship between the Ministry of Finance and MLGCD now outweigh the benefits of "creative tension" and need to be resolved. An interagency committee should be formed to decide how to create a relationship between the two ministries that will facilitate tax mapping and collection improvement. Other appropriate ministries and government agencies should be considered for their potential contributions to RPTA. By 1982, the new institutional arrangement for Phase II should be worked out to ensure a smooth transition from Phase I.

JOINT EVALUATION REPORT ON THE EMPLOYMENT GUARANTEE
SCHEME OF MAHARASHTRA: INDIA*

Problem and Overview. In India's Maharashtra State, there is significant regional disparity in the distribution of industry. According to the State's Fifth Five-Year Plan (1974-1979), "the economy of Maharashtra presents a picture of extreme contrasts. Technological dualism characterises the economy which in the industrial complex of Bombay-Thane-Pune in the West is highly capital intensive, technologically advanced and highly productive, while outside this industrial belt traditionalism, tribalism and low yields and productivity continue to prevail." Nearly sixty-two percent of the rural population lived below the average level of consumption per person per month for the rural areas.

There have been several programs during the last decade to relieve problems of unemployment and underemployment in the rural areas. The Employment Guarantee Scheme (EGS) grew out of three consecutive years of scarcity (1971-1974) that resulted from drought. The EGS was launched in 1972, but was not implemented until 1974. It was funded by increased state taxes on items that tended to be used by higher income persons. The aim of the EGS is to provide gainful and productive employment in approved jobs to all unskilled persons in the rural areas who need work but are unable to find it on their own, and who are prepared to do any kind of manual labor. A fundamental premise of the scheme was that public works should result in the production of durable community assets and that wages paid to the workers should be linked both with quality and quantity of work output. Public works undertaken through the EGS include minor irrigation works, soil conservation and land development works, road works, and forestation.

Purpose and Methodology of the Evaluation. This evaluation was conducted jointly by the Programme Evaluation Organization and the Government of Maharashtra. It concentrates on three areas: planning of rural works, organization and administration of the project, and the response of labor to the project. The study's objectives were threefold: first, to provide a description of the methods used for reaching project objectives and an assessment of their effectiveness; secondly, to analyze which other factors contributed to project success; and thirdly, to make recommendations for improving the project.

In all, 155 villages, 244 public works projects and 3,404 beneficiary households were selected for study. The sample was biased in favor of target groups consisting of landless agricultural laborers and small cultivators.

* This evaluation was funded by the Agency for International Development but rather by the Government of India Programme Evaluation Organization and the Government of Maharashtra.

Findings.

(1) Planning. In many cases the blueprints for public works projects indicated that the projects were too large to allow for effective planning.

(2) Implementation delays. According to implementing agencies, the most important factors accounting for delays in implementation were: (a) uncertain supplies of continuous labor; (b) late compensation for the land served as the project site; (c) ban on payment of land compensation from EGS funds; (d) predominance of female workers at the site; and (e) shortages of necessary equipment.

(3) Women's participation. Females exceeded males in the labor force by fifty-seven percent in fifty-two out of eighty-seven selected projects. They tended to concentrate in major and medium irrigation, minor irrigation tanks, and flood control projects. Female participation was comparatively less in construction of percolation tanks and roads. There were no female workers in forest projects. There was some evidence that women were excluded from some kinds of projects.

(4) Need for complementary investment. In an overwhelming number of cases, the finished project did not produce the optimum benefits for the community because complementary investments such as wells, land leveling, and fertilizer were absent. In other words, other agencies were not assigned specific follow-up responsibilities, such as extension and credit supply, that would have complemented the physical construction. This resulted in a suboptimal use of the projects.

(5) Maintenance. Nearly twenty-five percent of the completed projects were poorly maintained. It was feared by several implementing agencies that in the course of time the physical condition of the works would deteriorate because of a lack of maintenance.

(6) Impact on employment. EGS tended to provide more seasonal than non-seasonal employment, which meant that the poorest people in the rural areas (i.e., the target group of landless agricultural laborers who were available throughout the year and who sought non-seasonal employment) received a lower share of EGS work than people such as cultivators who were available seasonally and were slightly better off.

(7) Impediments to participation. Landless laborers were very concerned with daily payment of wages and frequently could not participate in EGS because they could not afford to wait for the wages to be paid (one to two weeks after the work), even though the wages were economically attractive. Delayed wage payment was less important to cultivators, who were better off economically and could afford to wait.

(8) Level of EGS wages. The average wages earned on EGS projects were eighteen percent higher than on other similar jobs; fifty-three participating households said that better wages were a primary incentive for their participation in the EGS.

(9) Expenditure of increased income. Marginal income earned by households participating in EGS was spent mostly for food and clothing. In the same locations, nonparticipating households tended to spend marginal income on education and entertainment. There is evidence that EGS-derived income was also used to increase agricultural production and to repay debts.

(10) Beneficiaries of asset creation. Of those user households who benefited from the productive assets created by EGS works, ninety-one percent belonged to the category of cultivators and only seven percent were agricultural laborers. Benefits of EGS assets had gone largely to medium and large farmers. The small and marginal farmers constituted only twenty-one percent of user households.

(11) Increase in agricultural production. Nearly seventy-eight percent of the user households reported an increase in agricultural production of twenty-five percent.

(12) Impact on caste barriers. Since all rural workers worked together on a project regardless of caste or religious affiliation, one consequence of this program was the breakdown of certain caste barriers.

AN ANALYSIS OF THE PRE-MAHAWELI SITUATION IN
H-4 AND H-5 AREAS IN KALA-OYA BASIN: SRI LANKA

Problem and Overview. The master plan for the Mahaweli Ganga Development (MGD) project is to develop 900,000 acres of land, grouped under fourteen irrigation systems, which are designated A to M. The Kala Oya Basin, with a potential command area of 71,000 acres, is Irrigation System H and is divided into twelve subdivisions from H-1 to H-12. This study covers H-4 and H-5, with a total area of 40,300 acres, and is based on a sample representing seven percent of the households.

Purpose and Methodology of the Study. The Mahaweli Development Board, on the recommendation of the World Bank, commissioned the Agrarian Research and Training Institute (ARTI) to conduct an in-depth benchmark study of H-4 and H-5 areas of MGD. The study presents a baseline assessment of the agronomic, economic, and social conditions in the area immediately before the beginning of the Mahaweli project and includes information on existing farm practices, the characteristics of the labor force, the institutional support and infrastructure facilities for farming, and the social organization and structures in selected villages.

Findings. The assessment's general findings are highlighted below:

(1) Population. The population within the study area is currently estimated at 45,000. Around five percent of heads of households are recent migrants. The population is distinctly young, with two-thirds of household members being under twenty-five years old and forty percent being under fourteen. One of the more important implications of this pattern is that migrant labor has a key role to play in the future agricultural development of this area.

(2) Housing. General housing conditions in the area are poor, with only a fifth of the dwellings being permanent. Sanitary arrangements are unsatisfactory, with only thirty percent of households having lavatories (of which more than seventy-five percent are pit lavatories). Ninety-five percent of the households use well water for drinking, but only one-third of them have their own wells. A little over eighty percent of the households are accessible by road and are within one mile of a bus route.

(3) Hospital Care. The average bed strength of rural hospitals in the area (2.6 beds per 100 people) is lower than the district (3.5) and national (3.0) averages. Nearly all households are within five miles of a dispensary or hospital.

(4) Employment. There is very little occupational differentiation in the area. Nearly eighty percent of the labor force is employed primarily in agriculture as small-scale operators, share-croppers, or agricultural laborers. Employment in the public sector (about six percent of the workforce) is the second largest source of income.

Non-farm employment is extremely low because of the absence of any organized industries in the area. Furthermore, the overemphasis on monocropping in the lowlands and the lack of raw materials have retarded development of off-farm employment opportunities. The implementation of the Mahaweli project is expected to broaden the agricultural production base by diversifying crops and integrating the production of crops, livestock, and fisheries.

(5) Income. The average annual gross income per farm during the year was about Rs. 5,200 per family, or Rs. 880 per capita per year. Nearly half the households had incomes of Rs. 3,000 or less. Nearly two-thirds of farm income is derived from agricultural production. The income from hiring labor accounts for about thirteen percent of total income. The farm economy is centered on paddy in the lowlands: sixty-six percent of the agricultural income is from paddy, and the use of high yielding varieties is widespread. Chena cultivation generates nearly thirty percent of the gross income, making it second only to paddy in importance.

(6) Land Distribution. Slightly over sixty percent of the households do not possess their own agricultural holdings, which is significant in a region of small holdings dominated by peasants. The high ratio of households without owned land is partly a reflection of the inflow of landless migrant labor, population increases in the traditional villages, and unavailability of freehold lands. Under the proposed land alienation scheme, around ten percent of the existing households in the area would have their owned land reduced by one-half. This dramatizes the importance of examining the effects of the project on land distribution.

(7) Community Structure. The dominant community type in the study area is the purana, or traditional closed village. Until the 1940s, purana villages survived without much change; however, they are now beginning to open up for several reasons. These include the influx of outsiders, the introduction of a market economy, the rapid growth of population, and the penetration of national political institutions including partisan politics, local institutions that are linked to the center, and large-scale social development projects.

Many of the purana villagers are ambivalent about the planned development project since they are concerned about the survival of the social system that provides them with security and identity. The uncertain feelings of the villagers can be dealt with in several ways, including work by competent extension agents, radio broadcasts of dialogues between villagers and project officers, and other informational activities.

(8) Rural Institutions. A number of rural institutions function at the local level in support of farming activities in the study area. The village cooperatives are the main suppliers of farm inputs and act as the agents of the Paddy Marketing Board for the purchase of paddy. Two banks provide credit through their local offices. The extension service of the Department of Agriculture handles farmer education and the Department of Agrarian Services provides administrative and other support services for village-level farmer organizations, maintains minor irrigation works, and distributes fertilizer. In general, agriculture is more subsistence than commercial, and farmers do not readily rely on institutional sources for services.

EVALUATION OF THE VILLAGE DEVELOPMENT
PROJECT: NEPAL
(1954-1962)

Overview. The idea of "rural development" is relatively new in Nepal. Popular demands for government-sponsored development programs did not exist earlier, especially in the rural areas, despite a two percent literacy rate and an average yearly per capita income of forty dollars.

The changes in Nepal's political scene from 1950 to 1955 were accompanied by a rising social and political consciousness throughout the country. At the same time, various village development movements were being attempted in other countries (for example, communes in China, kibbutzim in Israel, and the community development movement in India). It was in this context that Nepal's commitment to rural development began in the form of the Village Development Project (VDP). Begun in 1953, initially with U.S. assistance and later with support from India and the Ford Foundation, the VDP was the first national rural development program and one of a very few foreign-supported development programs in Nepal at the time. It became an important part of the First Five Year Plan (1956-1961) and was implemented in twenty-five of Nepal's seventy-five administrative districts. When Nepal's Government was dissolved in 1960, the VDP lost momentum. India withdrew its support in 1962 and the United States followed. The VDP was subsequently restructured and renamed the Panchayat Development Program. The present Integrated Panchayat Development Programs are descendants of the VDP.

Purpose of the Project. The VDP began as a bilateral arrangement between the Government of Nepal and the U.S. Operations Mission (USOM). USOM provided a chief advisor who had broad authority at the policy level and several field advisors who were influential in formulating and implementing project activities. The VDP was a multi-sectoral project with multiple objectives. Its long range goal was to raise the standard of living of the rural poor by creating infrastructure (such as roads, irrigation facilities, agriculture and health posts, and schools), providing services and trained personnel at the local level, encouraging local industries, and promoting participatory local institutions.

Purpose and Methodology of the Evaluation. The purpose of the evaluation was to assess the U.S.-assisted VDP during the period 1954 to 1962. A list of questions about the project guided the evaluators, and the answers were to be used for formulating and implementing similar projects in the future. The evaluation concentrated on thirteen of the twenty-five administrative districts in which the project was implemented during its eight years. In each of the thirteen districts, twenty persons were interviewed who were familiar with the VDP. In addition, interviews were conducted with others who worked directly with the project. Information was acquired that dealt with village characteristics, project implementation, the impact of VDP on the villages, and the training given to people under the VDP.

The evaluation was conducted by a Nepali consulting firm. Consequently, much of the evaluation focuses on Nepali concerns rather than the U.S. role in the VDP.

Findings.

(1) When villagers were convinced that their efforts would benefit themselves and their communities, the project was able to motivate them and to mobilize local resources for needed project activities; getting traditional village leaders involved in the support of these activities was important. Thus, the success of the VDP was often due to efforts of the Village Development workers with the villagers and their leaders.

(2) The VDP established and improved channels of communication among villagers and between villagers and the government. Often a raised social consciousness and sense of identity occurred in the villages where VDP was implemented.

(3) The study affected its personnel. The smooth transition in 1962 from the VDP project to the Panchayat Development Program can be attributed to the quality and motivation of the administrative and technical staff at all levels.

(4) Because the VDP was decentralized, frequent changes in the central government were not as disruptive to the program as they might have been otherwise.

(5) In addition to the intangible benefits, more tangible outputs including trails and bridges, vegetable farms, wells, canals, and potable water supplies were produced. In general, the greatest successes were in the areas of agriculture, education, and health services.

(6) Outcomes of the VDP were not uniform. The development project had greater impact in the hill regions than in the Terai, and in the East than in the West. It also seemed to provide greater benefits for the privileged and not enough emphasis on helping the truly disadvantaged. The comprehensiveness of the VDP's design resulted in scattered and often superficial implementation. Nor was there sufficient coordination between departments and agencies as such a comprehensive design required.

(7) The seemingly ad hoc nature of many VDP activities was also reflected in the absence of an institutionalized system of monitoring and evaluation. No baseline study had been done before the VDP began. Information on village needs came from local officials, not from the general populace. Finally, there was no feedback or any way for the project to correct itself when changes or unexpected situations occurred.

In sum, the evaluation praises VDP as a turning point in the relationship of the government to the rural people. The project's successes, although limited in many respects (often for reasons external to the program), and the popular enthusiasm for the government's new role as provider of goods and services contributed to the feelings of rising expectations among villagers. The evaluation's emphasis on the discontinuity between promise and performance indicates that this is one of the most important lessons to be learned from the Village Development Project.

Recommendations.

(1) The VDP would have been more effective if it had reached the poorer rather than privileged villagers and if it had continued long enough to be self-sustaining.

(2) Better communication and coordination between different levels of administration is needed to avoid project delays.

(3) Training programs need to be made longer and courses of study more comprehensive in order to train effectively the types of personnel needed for such a multipurpose program.

(4) An institutionalized monitoring and evaluation system and baseline survey would have enabled project officers and government officials to make periodic assessments of project progress as well as to set forth "lessons learned" for future policy makers and program designers.

THE MODEL BANJAR PROJECT: HEALTH, EDUCATION AND ECONOMIC
CONDITIONS IN EASTERN BALI, 1979

Problem and Overview. The steady growth of Bali's population has put increasing pressure on its natural resource base and on the ability of the farmland to support the island's inhabitants. In spite of an effective family planning program, it is estimated that the population will grow to four million over the next twenty years. Previous population growth has resulted in a decline in the average family's farm holding from one hectare in 1900 to around .3 hectares today.

One of the most economically depressed areas in Bali is the eastern regency of Karangasem, which has less irrigated land and more dry and rocky seacoast and mountain area than virtually any other area on the island. Moreover, in 1963 Mount Agung erupted devastating villages and farmland and eventually caused widespread famine in the surrounding area. While much progress has been made since the eruption, the people of Karangasem continue to face severe economic, health, and educational problems.

Purpose of the Project. Foster Parents Plan International (FPP) began operations in Bali in 1972 and in Karangasem in 1973. The Model Banjar Project (MBP) -- named after the traditional Balinis community or "hamlet," the banjar -- is an effort by FPP to evaluate and improve its child, family and community development planning and programming in eastern Bali (including the regency of Karangasem). MBP is being conducted over a five-year period, from January 1979 through December 1984, and includes three phases. Phase I involves collecting baseline information in order to establish pre-program conditions and localized needs in both program and non-program communities. During Phase II the FPP would actually be initiated along with a series of community development programs oriented towards improving the physical quality of life in the study area. The final phase of the project would involve the collection of data in order to evaluate the impact of the Model Banjar Project. Some of the funding for Phase I, conducted between January 1979 and December 1979, was provided by the Agency for International Development (AID) through a grant (No. 78-9).

Purpose and Approach of the Study Evaluation. The purpose of the study evaluation is to present the findings and recommendations resulting from the first phase of the Model Banjar Project. As previously noted, it was during this phase that a wide range of survey and indepth interview data was collected to assess the physical quality of life (PQL; as measured by a variety of public health, education, and economic variables) in selected villages that had requested FPP assistance.

The material presented in the evaluation document is based on an analysis of 100 variables pertaining to 1,216 families in nineteen hamlets. Hamlets selected for study were of two types: those that represented the major socioeconomic and ecological patterns in areas where the FPP already operated, and those that were not currently served by FPP but were likely sites for

future FPP operations. In addition, four kinds of banjar were studied -- each representing a different community type. These were: (1) central -- township, (2) mountain -- dryland farming, (3) lowland -- wet rice farming, and (4) coastal -- fishing/dryland farming.

Observations and Recommendations. In general, the communities in eastern Bali are experiencing important social and economic changes involving their transition from rather isolated, primarily subsistence peasant villages to communities increasingly affected by and tied to a larger national economy. An improved physical quality of life appears to be contingent upon adjusting to such changes. Based on the information gathered during the initial phase of the study, the Evaluation Team stresses the necessity of both government and nongovernment assistance during this period of change to help low income groups progress. In the absence of such assistance, the evaluation notes, family health, income, nutrition, and other PQL variables could decline. It is thought, based on the analysis to date, that the Foster Parent Plan, through the MBP, can play an important role during this period of change by providing communities with material resources and skilled planners who can assist community members develop a means of dealing with problems of poor public health, inadequate educational opportunities, and marginally productive economic resources.

The analysis also indicates that health, education, and economic conditions were generally better in those communities located close to administrative and trading centers. Given this finding, the evaluation emphasized the importance of giving priority during Phase II of the project to the more remote areas that have the greatest need for outside assistance. Another area suggested for future FPP concentration is the training of community development program coordinators who would help communities identify their needs and secure assistance from the Indonesian government or the FPP. Sectoral or programmatic areas outlined for FPP involvement during Phase II of the MBP program were: irrigated and non-irrigated agriculture, animal husbandry, fishing, small industry, skilled trades, public health, and education. Some specific project areas are also identified by the Evaluation Team.

The study states that there is a strong network of traditional communal organizations in Bali that are ideal for the administration of projects to raise living conditions. This is an important asset considering that the area has significant and underdeveloped resources, such as field offices of national bureaucracies, as well as skilled traditional and private sector individuals.

THE VILLAGE FISHPOND DEVELOPMENT PROJECT: THAILAND

Problem and Overview. An estimated eighty percent of northeast Thailand's rural population do not have access to dependable water supplies throughout the dry season, extending from about November through May. Thus, for some 16,000 villagers, adequate water is available only during the rainy season or as available from small, local water impoundments. Insufficient water has resulted in a low input and low return on rainfed agriculture, based mainly on single cropping of the local glutinous rice varieties. In addition, the remoteness of most of the rural population from large reservoirs and dependable, year-round rivers limits the production of fish, a traditional and important protein source in Thailand.

To address this problem, Thailand's Department of Fisheries (DOF) has provided assistance for the development of village fishponds, and for fish production and multi-purpose pond management systems in the needy rural areas. The Village Fishpond Development Project (VFP, No. 493-0303), a two-year pilot program (October 1979 through December 1981), is a further attempt to develop pond construction methods, fish production techniques and multiple-use management systems that can be replicated in villages throughout the Northeast. The project has been assisted by the U.S. Agency for International Development through a grant of \$442,000. Host country counterpart funding is approximately \$287,000.

Purpose and Methodology of the Project. The Village Fishpond Development Project is financing the construction of fourteen village fishponds in twelve provinces representing a cross-section of northeast Thailand. The overall goal of AID's bilateral project is to improve the nutrition status and quality of life of the villagers in these rural communities. The major planned outputs of the project include: the establishment by DOF of village ponds, construction by the villagers of nursery ponds for fingerling (small fish less than a year old) production, and development of integrated pond management systems.

The project puts particular emphasis on the critical link between the government and the villagers -- the Department of Fisheries Site Teams -- as the means to transfer knowledge about fish raising methods, fingerling production and multiple-uses of the ponds. At each location, a village committee, assisted by a Site Team, is the primary action group for management and maintenance of the pond. The principal objective is to assist the village committees to become self-reliant in deriving the maximum social and economic benefits from the pond. To this end, the project provides for special training of the Site Teams as well as training of the village committee members in all aspects of pond management.

Purpose of the Evaluation. At about the same time the Project Agreement for VFP I was being signed (September 1979), a project identification document was presented for a follow-on project. Clearly the implication all along has been that the initial VFP program was a prelude to a Village Fishpond Development Project II. This understanding on the part of the Thai Government and USAID officials underscores the importance of the VFP-I as a pilot demonstration model which could provide experience and data necessary to design and implement a phase two project.

It is important to note, however, that the VFP II project (proposed as a five-year effort) has not moved beyond the project planning stage. Thus, one of the main objectives of the study evaluation, undertaken in the summer of 1981, was to set forth some clear recommendations regarding a possible follow-on project to VFP-I.

Findings. In comparing the VFP targets and accomplishments at the time of the evaluation, six months prior to the completion of the project, the evaluation team found that in broad economic and social terms the VFP was having less impact than was anticipated. This was due, in part, to inaccurate project design and the absence of strong management. Welfare of the villagers, as indicated by increased incomes from greater production and sale of fish, garden and orchard crops, livestock and surplus rice had not improved significantly as a result of the project. Fish production levels were below those projected for the project. This situation could have been substantially improved, the Evaluation Team believed, if the project had provided more adequate pond design and construction methods, better management, and introduction of improved fish production techniques at the village level.

The social impact of the project was considered mixed at the time of the evaluation. In some villages a very positive feeling had developed regarding the pond. In these cases, the people perceived the pond as their own and took an active interest in its management for fish production and multiple uses. As a result, a significant impact of the pond on village life could be predicted. In other project villages, however, such a positive attitude did not appear to be developing, and neither the planned social nor economic benefits of the project were being fully realized.

However, in spite of the problems encountered in the implementation of the project at the time of the evaluation, the Team stated that both human and natural resources appeared to exist in the villages for an effective village fishpond development effort. Lessons learned could serve as guidance in designing and implementing a follow-on project. For example, the VFP had shown the critical need for a workable project design and a structured project management system from DOF headquarters to the field level if a project of this type is to be successful.

Recommendations. The suggestions outlined below, while being mainly directed toward VFP-I, were considered relevant to the planning and implementation of a follow-on project.

(1) Pond Site Selection, Design and Construction. Pond site selection and development activities should be more effectively managed by the concerned agencies, as well as the village committees. If possible, the construction of nursery ponds should be included by the DOF in the construction contract so that the ponds could be effectively constructed and the useful life of each pond would be extended. In addition, the private sector companies should be carefully selected by DOF to assist in all aspects of the construction as the capability of DOF in construction is not adequate.

(2) Fish Production Technology. DOF and USAID should design projects of this type to be extensive, low-management fish production systems. Moreover, the concept of the village fishpond should be expanded to view the function of the main pond as a facility to produce food, fish and fingerlings to back-stop the nursery pond operation. Moreover, the DOF should: (a) develop standards for the construction of ponds that take into consideration the requirements for fish production; (b) establish teams of pond construction specialists to design and monitor pond construction activities; (c) resurvey all fourteen VFP sites to evaluate the feasibility and cost for renovation or modification of the ponds; (d) reduce stocking rates in all village ponds relative to inputs available; (e) formulate methods and mechanisms for expanding the use of inorganic fertilizer where DOF desires to achieve higher fish production levels; (f) examine its organizational and management structure in order to determine if improvements can be made in its capability to provide an adequate level of support for the VFP and any follow-on project; and (g) establish a project reporting system. Moreover, USAID and DOF should utilize remaining project funds to establish demonstration sites at three other villages, and should transport village representatives from other VFP villages to observe the results.

(3) Management and Economic Considerations. The DOF should properly train Site Teams and ensure they are available to make visits to the VFP villages. In addition, the DOF and USAID should strengthen their management teamwork to avoid project delays.

(4) Social Considerations. The project should be planned in full consultation with the villagers themselves. Moreover, the DOF Project Manager should ensure that the village fishpond committee is selected with regard to the required fishpond management activities.

(5) Recommendations Related to USAID Assistance. Assistance of the VFP-I project should be allowed to end at the scheduled completion date, December 1981. During the last six months of the project, DOF and AID should collaborate to prepare a suitable follow-on fisheries development program. If an agreement can be reached, a joint Thai/U.S. team should work together for up to three months to prepare a detailed Project Paper (specific suggestions for such a paper are included in the evaluation report). In addition, agreement should be reached on the proper use of unexpended project funds.

EVALUATION OF THE PROVINCIAL AREA DEVELOPMENT PROGRAM: INDONESIA

Problem and Overview. Provincial and lower level governments in Indonesia face a number of problems in their social and economic rural development that suggest a need for improving their capability for planning, project identification, implementation, management and evaluation. Improved local level capability is needed to address important yet diverse problems in more innovative and effective ways. Also needed are more effective administrative arrangements and government linkages for facilitating and monitoring development projects and activities which are aimed at improving incomes of the rural poor.

Purpose and Methodology of the Project. The Provincial Area Development Program (PDP), sponsored by the Government of Indonesia (GOI) along with a host of foreign donors (including the Agency for International Development), seeks to improve the well being of Indonesia's rural poor. The first set of programs (PDP I), initiated in FY 1977 in Central Java and Aceh, are oriented towards assisting and improving integrated area and rural development planning and staff management capability of provincial planning boards (Bappeda), districts (Kabupaten), and other provincial agencies in: (1) identifying problems in existing organizations, infrastructure, programs and activities; (2) planning, executing, managing and monitoring measures, activities and projects to overcome the identified problems; (3) evaluating the results to make improvements; and (4) providing examples of successful integrated rural and area developmental processes and activities that can be followed elsewhere in the province and throughout Indonesia.

Following PDP I's first two years of successful operation, the program was broadened to include six additional provinces. This second program phase, begun in FY 1979, is known as PDP II. Moreover, at present, the Agency for International Development in Jakarta (USAID/Jakarta) is proposing that a third phase be added to the program. This third phase -- PDP III -- would expand ongoing work by yet another six provinces and would provide sufficient funding to continue work under all three phases for a ten-year period.

Given the overriding objectives of the PDP noted above, the basic approach to the design of individual programs initiated under PDP I and II has been to:

- ° Identify the socioeconomic and administrative conditions within participating provinces;
- ° Select a typical geographical region composed of a limited number of contiguous kabupaten within the province;
- ° Study in more depth the socioeconomic and administrative conditions within the pilot area, concentrating on the constraints on raising the incomes of the rural poor;
- ° Review systematically all local government programs, activities and functions which are, or could be, targeted on assisting the rural poor to improve their economic situation;

- ° Identify a limited number of interrelated intervention points where outside assistance could result in significant local government project management improvements and in the program goals being achieved;
- ° Describe and analyze these local activities and functions in enough detail to determine the types and magnitude of assistance which would result in the sought after program improvements; and
- ° Design a broad and necessarily preliminary implementation plan for each of the provincial "thrusts" identified for improvement.

Purpose of the Evaluation. The purpose of the evaluation was to: ascertain achievements to date of PDP I and II and to identify strengths and shortcomings in meeting project purposes; make recommendations regarding implementation of PDP I and II during the remaining period of project life; and make recommendations regarding the nature, timing, and magnitude of possible AID-funded expansion.

Findings.

(1) AID accomplishments. The Agency for International Development's participation in PDP design, implementation, training and subproject financing has helped build a base for further accomplishment and potential for sustainable impact on both GOI institutions and targeted beneficiaries. Initial design work and follow-up assistance has strengthened acceptance of the program and related USAID assistance within GOI. Technical assistance has been satisfactory. Basic skills training for lower level employees such as motivators, village level credit staffs and villagers themselves has had a significant impact.

(2) Government Support and Institutional Development. The Government of Indonesia has demonstrated a genuine commitment to the program and its purposes. This is shown through unique organization patterns and streamlined procedures for planning and implementation developed for each PDP province and the delegation of responsibilities to local government agencies. However, PDP decentralization takes place through the use of specially selected and funded PDP personnel not yet fully integrated into existing governmental structures. The strengthening of existing institutional structures and the creation of new ones is still dependent upon USAID inputs with no assurance that funding will be absorbed by GOI budget processes after the life of PDP.

(3) Impact on the Rural Poor. Subproject strategies vary considerably by province and in character and cost per beneficiary. No analysis of subproject inputs or the productivity and cost-effectiveness of these varying approaches is likely until capabilities, concern and procedures for evaluation are established.

Fragmentary evidence indicates that some subprojects have improved the productivity of beneficiaries and that improvements in production have positively affected incomes, either directly, through employment effects or through enhanced self confidence and self determination. The sustainability of higher

levels of beneficiary productivity and income resulting from PDP subprojects varies according to the type of project, a factor that has not been well incorporated into planning. It is evident, however, that whether projects are based on high, medium, or low per capita input, the more carefully studied, thoroughly planned and intensively monitored subprojects and those which require least behavioral alteration by participants tend to achieve more economic impact potential and sustainability.

Recommendations.

(1) A four-year extension of existing projects to provide continued support should occur immediately. USAID technical assistance should be at present levels the first two years with a reduction in the last two as local capacity increases. Training inputs should be continued following a comprehensive assessment of the impact of current PDP training. Reduced subproject loan funding should be made available on a matching basis with GOI. USAID funds should be advanced periodically based on broad assessments of previous performance and GOI plan for the forthcoming year.

(2) Extension of PDP to new provinces should be based on measurable impact in present areas rather than experimentation. While planning for extension should begin now, its approval should be contingent on: (a) specific and agreed criteria for province and target area selection; (b) evidence of greater learning from experience of the PDP I and II experiments, for which improvement in internal evaluation is a prerequisite; and (c) evidence of systems improvements sufficient to establish that the additional resources can be managed effectively.

PROVINCIAL DEVELOPMENT ASSISTANCE PROGRAM -- FINAL EVALUATION REPORT:
THE PHILIPPINES

Overview. The U.S. Agency for International Development (USAID) provided long-term support to the Government of the Philippines' Provincial Development Assistance Project (PDAP, Project No. 492-0256). The project, initiated in FY 1973, was essentially completed by December 1978 with residual activities continuing through June 1980. The plan was that after 1978, the Rural Roads, Rural Service Centers, Barangay Water and Real Property Tax Administration projects would extend the concepts developed under the Local Development Project. Continuation of PDAP functions was to have been integrated into the regular Ministry of Local Government and Community Development operations.

The overall purpose of PDAP was to strengthen provincial government capability in the areas of: (1) overall administration, planning and coordination; (2) financial management; and (3) infrastructure. At the same time, the project emphasized the importance of strengthening the national-level capability to carry on sustained assistance to local government. Through these two objectives, the project hoped to establish a strong local capability to deliver public and private services to the low income and rural poor families, throughout the Philippines, thus improving their perceived quality of life.

Purpose and Methodology of the Evaluation. The complex USAID project was evaluated at various stages over the seven-year life of the project. The final external evaluation was designed to assess end-of-project status. The evaluation was conducted under a centrally funded Project on Managing Decentralization at the Institute of International Studies, University of California, Berkeley, California. Senior Filipino consultants and members of the Philippines Government (GOP) served on the evaluation team.

The evaluation was conducted in two stages. In January 1980, the team concentrated its efforts on the operations of PDAP's central office in Manila. From March 28 through April 20, 1980, the team spent most of their time in the provinces. All told, team members visited twelve provinces. A final evaluation report was issued in August 1980; a formal presentation of findings was made in Manila on October 28, 1980.

Findings. The Evaluation Team concluded that as a direct result of the Program:

- ° PDAP provinces were rapidly becoming effective systems of governance and administration, quite capable of developing their projects, their own management systems, and their own agendas.
- ° Strong provincial executive offices, possessed of administrative and conflict-resolving capacities, were emerging.
- ° Provincial coordinators and development staffs had become vital actors, serving as executive staff, planning offices, and coordinating agents.

- Provincial governments now possessed the technical, administrative and political means necessary for the management of their jurisdictions and the implementation of national development projects. Weaknesses in this regard were more a function of scarce resources and national ministerial fiat than of organization and administration.

It is important to note that the above mentioned accomplishments were achieved despite many project errors, shortcomings, and uncertainties. Yet, the Evaluation Team did not feel that such problems obscured the successes of PDAP. Specific recommendations set forth by the team to improve future projects are outlined below.

Recommendations.

- (1) Development assistance projects whose objective is to strengthen localities so that they can on their own identify, initiate, and implement development programs must contain provision for a phased withdrawal of the project control agency.
- (2) External assistance should be provided in the form of tangible resources which can be directly deployed under the authority of the locality.
- (3) Fixed amount reimbursement systems (FAR), as used by USAID/Manila, provide rigorous but non-threatening forms of fiscal and quality control which enhances programs designed to strengthen local capacity.
- (4) Programs which seek to establish staff capacity at the local level of government must include procedures for promoting such staffs in the local governmental system.
- (5) Lead agencies administering local staff development programs may create systems of dual accountability which subvert project purpose.
- (6) Premature routinization displaces experimental efforts when agencies designed to test pilot projects assume line functions.
- (7) In designing development projects, careful analysis of the utility of the required managerial and planning techniques must be assigned high priority. Such techniques often conceal an inherent bias which can lead to consequences that are neither targeted nor desirable. They may even subvert project goals.
- (8) Projects intended to build planning capacity at the level of local government must guard against overloading the structure of local administration with requirements that are at best marginal.
- (9) The repertoire of a local development project should contain both bounded and unbounded planning strategies.

BICOL INTEGRATED AREA DEVELOPMENT III (RINCONADA/BUHI-LALO)
SUMMARY ASSESSMENT REPORT: THE PHILIPPINES

Problem and Overview. Since 1974, the Agency for International Development (USAID) has been assisting the Government of the Philippines (GOP) to increase agricultural production and the income of the rural poor through a wide variety of programs (for example, rural electrification, provincial development assistance, rural roads). One aspect of this assistance has been in support of the Bicol River Basin Development Program (BRBDP) in Southern Luzon. This particular area is characterized by abundant natural resources on the one hand and by serious rural poverty on the other. To date, USAID has obligated \$28.4 million, through five separate loan projects and two grant technical assistance projects, to BRBDP.

Purpose of the Project. The Bicol Integrated Area Development (BIAD) III project (No. 492-0289) for Rinconada/Buhi-Lalo is one component of the overall Basin Development program. Its estimated budget is \$9.3 million, of which \$5 million (or fifty-four percent) is an AID loan. The initial obligation was made in FY 1979, and the project is to be completed in FY 1985. BIAD III pursues the project goal of improving the socioeconomic situation and quality of life of the rural poor who reside in the project area and focuses directly on: increasing agricultural production and productivity per hectare, increasing productive employment opportunities, increasing farmer participation in development activities affecting them, and reversing the deterioration of upland watershed areas.

The loan agreement provides for: (1) constructing major water-regulation facilities in the Lake Buhi area; (2) rehabilitating and constructing irrigation facilities in the Lake Lalo area; (3) supporting organization training; extension, and applied research; and (4) continuing pilot projects in upland development in the Lake Buhi watershed. The National Irrigation Administration (NIA), which is the Philippine Government's lead agency for overall project management, has designated BIAD III a pilot project for extending the participatory approach found in many communal irrigation systems. In other words, this project has dramatically increased the number of farmers involved in project design and implementation. Thus, the primary emphasis of the project is not just to build an irrigation system, but rather, to experiment with an approach for developing a management structure for long-term operation and maintenance (U&M).

Purpose and Methodology of the Evaluation. The purpose of the evaluation, which the authors prefer to call an "assessment", was to identify issues -- areas of primary concern -- connected with the project rather than to make recommendations for solving specific problems. Because only eight days were available for gathering pertinent data, writing a first draft of the report, and presenting it to the project manager and senior project staff, the Assessment Team relied on a "rapid reconnaissance approach."

Findings.

(1) The major issues associated with the project are: organizational structure and dynamics (horizontal integration, coordination, and decentralization); managing expanded participation of irrigators; information systems; institutionalization of important roles and functions; transportation and access; rights of way; and budgets.

(2) Some progress has been made in regard to forming comprehensive irrigators' associations: farmers have been encouraged to organize informally at the farm ditch and rotation area levels and are eventually supposed to be organized on a wider basis.

(3) The project reportedly has been successful in encouraging women and tenants to participate in meetings and some decision making (for example, in planning for construction and location of tertiary farm ditches).

(4) The construction of the physical infrastructure, as of June 1981, was still at an early stage.

(5) Beneficiary participation is not an end in itself but rather an effective means to the end of appropriate design, operation and maintenance and sustainability of the irrigation system.

Recommendations.

(1) The two primary components of the project -- physical infrastructure development and farmer organization development -- must be interdependent; successful implementation of either component rests on successful completion of the other.

(2) The project management office has demonstrated a high level of sophistication in analyzing and resolving problems. However, horizontal relations between the office and the government's line agencies could be improved.

(3) The project is on target in terms of developing infrastructure and encouraging participation of beneficiaries, but needs to do more integrating across sectors and further decentralize authority.

(4) Participation of private construction companies should be kept to a minimum because of inadequate performance and to allow for more farmer participation.

JOINT EVALUATION OF THE THAILAND SERICULTURE/SETTLEMENTS PROJECT

Problem and Overview. The rearing of silkworms has been done in Thailand for hundreds of years and is still done in the villages of the Northeast much the same as several generations ago. The resulting silk fiber, however, is irregular and is usually only about one-third the length of that produced by silkworms grown in Japan, for example. As a result, modern sericulture techniques -- using hybrid silkworms suitable for the tropical climate of the northeast region -- have been promoted and developed in recent years with the objective of improving Thailand's silkworm production, along with increasing the annual income of the silkworm farmer.

In this regard, an agreement was signed between the Royal Thai Government (RTG) and the U.S. Agency for International Development (USAID) in September 1976 for the initiation of the Thailand Sericulture/Settlements Project. A major thrust of this joint effort is to assist Northeast farmers understand and adapt the more modern sericulture techniques. The implementation of the project is jointly divided between Thailand's Public Welfare Department (PWD) and the Bank of Agriculture and Agricultural Cooperatives (BAAC). PWD is the implementing agency for the extension aspects of recruiting, training and counseling silk producers. BAAC provides the credit through local branch banks to project participants.

Purpose of the Project. The goal and purpose of the bilateral Sericulture/Settlements Project (No. 493-0271), to be completed over a five-year period, is to increase the annual net cash income of 1,500 families in ten settlements in northeast Thailand through the establishment of modern sericulture technologies in these settlements. (The number of project settlements was increased from ten to thirteen settlements in 1980.) The original plan stipulated that: (1) sericulture extension workers operating under PWD will be primarily concerned with silkworm rearing technology; and (2) extension agents under Department of Agricultural Extension would assist participating farmers with their individual mulberry plantations (mulberries provide the needed food supply for the worms). However, it is important to note that the project, at the time of the evaluation, had not yet requested such assistance.

Purpose and Methodology of the Evaluation. The study evaluation, undertaken in the first quarter of 1981, was directed towards identifying whether the project has achieved its stated goal and purpose and, if not, to indicate specific conclusions and recommendations directed towards: project managers and specific implementing agencies to be used in implementing the project; and providing information to be used by the RTG, USAID, and project managers to resolve the problems to achieve the project objectives.

The Evaluation Team -- composed of a Team Leader, an agricultural economist, an anthropologist, and a silkworm rearing expert -- reviewed data relevant to the project's economic and social analysis, and made eighteen separate field visits to five settlements. Discussions were held with settlers, settlement project staff and representatives of the different agencies of the RTG and USAID staff.

Findings. At the design stage, the Project called for many plans from the implementing agencies concerned. These included a cooperative development plan, plans for silkworm egg production, training of farmers, supervisors and extension workers, and plans for credit to the cooperatives and participating farmers. However, most of these plans were not realistic. The Evaluation Team also found that: (a) project planners were overly optimistic in their expectations with respect to availability of staff, coordination between agencies, capacity to train supervisors and extension agents, and other important inputs; (b) effective coordination among the implementing agencies was absent; (c) project personnel lacked experience in the improved silk rearing business due to inadequate training and staffing; (d) credit recovery from settlers in the Project has dropped in the past year; and (e) social and political constraints were ignored in project implementation.

The Evaluation Team also observed that many of the project tasks proved more difficult to accomplish than expected. Such problems have led to a three-year delay in project implementation. Consequently, the project will be unable to achieve its purpose and goal within the specified five-year period. It can hope to achieve such objectives, the Team believes, if corrective measures are implemented and the period for project completion is extended.

It is also noted that investment in the project has resulted in the establishment of a very basic infrastructure. Some farmers, the evaluation observes, have taken the first critical step required to move from traditional farming to the management of modern inputs.

Recommendations. The Team emphasizes the need for more effective planning and implementation to ensure the necessary input supplies and provision of technical expertise and appropriate training including the recruitment of more qualified participants. Recommendations specifically relate to:

- Improved training of supervisors and extensions workers,
- Improved organization and management for better coordination,
- Assured credit availability for able settlers,
- Technical problems in silkworm rearing,
- Socioeconomics, and
- Further studies on silkworm eggs and sericulture marketing and management.

The study also recommends that the Thailand Sericulture/Settlements Project be extended for an additional three years provided that a satisfactory schedule for implementing the Team's suggested recommendations is worked out within three months following the evaluation.

KLATEN AREA SURVEYS -- REPORT ON COSTS, USES, AFFORDABILITY, AND
QUALITY OF SERVICE OF ELECTRICITY: INDONESIA

Overview. The Rural Electrification I Project (No. 497-0267) was begun in FY 1977 by the U.S. Agency for International Development (USAID) and is projected to end in FY 1982. The initial budget called for a USAID loan of \$42 million and a grant of \$6 million. The borrower is the Government of the Republic of Indonesia (GOI). The recipient agencies are the National Power Company (PLN), the Peoples Bank of Indonesia (BRI) and the Directorate General of Cooperatives (DGC). The total GOI direct contribution was estimated to be \$22.7 million.

Goal and Purpose of the Project. The overall goal of the Rural Electrification Project is to improve the standard of living and increase productivity of the rural population in the project areas. The major purpose of the project is to demonstrate that electricity can be provided to the rural areas of Indonesia at a price which the majority of the people can afford through systems which are technically sound and financially viable. Other objectives include: demonstrating that the introduction of electricity to the selected areas will bring about a significant increase in production and improve the quality of life of the rural poor; and training a sufficient cadre of Indonesian experts in all phases of rural electrification to manage and expand their rural electric systems.

Through the project it is estimated that 600 villages in Indonesia will eventually be electrified. Approximately 400 of these villages are in Central Java and will be served from the existing PLN power grid, while approximately 200 villages in the Outer Island districts of Central Lampung, East Lombok, and Luwu will be served by member owned and managed electric cooperatives under the DGC.

A combined population of over two million people exists in these 600 villages. The villages are mostly small and rural and totally without electrification except for a few private generators. The Rural Electrification I Project was designed to introduce electric power to these rural areas of Indonesia for household, commercial and public uses. It is intended that this power be provided at an affordable price and be available to a majority of area residents. During the project, ten separate electric distribution systems will be constructed and put into operation -- seven by the PLN and three by the DGC.

Purpose and Methodology of the Evaluation. Two surveys and one set of village inquiries were conducted in November 1980 in the Klaten Kabupaten of Central Java in order to analyze the effects of electrification on households and businesses sixteen months after service had been installed. The evaluators, composed of a team from the U.S. Bureau of the Census (BuCen) and the PLN and the DGC, designed and conducted a stratified sample survey of 338 electrified and 192 nonelectrified households from a total of approximately 2,700 households in four study villages -- three electrified under the Project and one nearby nonelectrified village. In addition, the Team designed and conducted a survey of all commercial establishments in the three electrified villages concerning use of electricity in village public facilities.

Findings. Survey results indicate that: (a) most of the household and businesses reported they are willing to pay for electricity, and indeed, most are subscribing; (b) the level of service appears to be acceptable and reliable; (c) it would be profitable to continue to investigate potential effects of electrification on productivity and possibly on employment, although employment has not yet changed significantly; and (d) the major effect on the average inhabitant is better lighting in the households which has increased the use of security lighting but has not affected other uses of lighting in the home. In regard to the Project meeting its goals, the Team believed that it was still too early to make conclusive statements. However, they noted that the study does show that the vast majority of households in the Klaten study villages can afford electricity at current prices. Moreover, there is some indication from commercial and home businesses that electricity could have an impact on production in the future, and in fact, is already having an effect on production in the Klaten study villages.

Recommendations.

(1) Data obtained from the nonelectrified village (one of four villages included in the initial survey effort) should be studied further in order to evaluate its overall impact on survey results.

(2) The interrelationships between income and the cost and consumption of electricity should be further studied. The data collected in this effort could be used to construct a model that would predict the level of electrical consumption in villages targeted for future electrical service. The available survey data provide information on: (a) how much households are willing to spend for electricity; (b) how much electricity is consumed at current prices; and (c) the distribution of household income in the sample villages. The relationship between consumption and income have been shown to be significant in a positive direction (i.e., more income, more consumption). These relationships could be used in conjunction with information on the expected cost of electricity (in terms of cost per KWH) and household income in other villages to estimate expected demand in these villages.

Similarly, the survey data may also be used to estimate the impact of changes in the cost of electricity on demand and consumption. The relationship between household income and electrical use at current costs could be built into a model that would allow planners to estimate how changes in the rates for electric service would affect consumption.

(3) The nature of the substitution of energy sources, electricity and kerosene in particular, should also be pursued. Further analysis along these lines could include investigating the cost of electricity relative to kerosene on a "unit of energy output" basis. (This is especially critical in light of the large subsidies that the GOI spends to reduce the cost of kerosene for consumers.)

(4) Further data collection may also be a valuable supplement to the data collected in the Klaten area surveys. Such additional data would allow the data gathered during the evaluation to be used as part of a "time series" study to monitor the study variables in greater depth. For example, further changes in ownership and use of appliances can be expected as more households and businesses pay off their connection fees and are able to take fuller advantage of the electricity.

STRENGTHENING THE FISCAL PERFORMANCE OF PHILIPPINE LOCAL GOVERNMENTS:
ANALYSIS AND RECOMMENDATIONS

Problem and Overview. A major objective of Philippine government policy is to strengthen the financial capabilities of local governments and to decentralize the provision of public services. Yet the local government sector expenditures in the Philippines have been declining in relative importance. Total local government expenditures fell from eighteen percent of Central Government expenditures in 1969 to eleven percent by 1979; those financed from own revenue sources fell from nine to seven percent of Central Government expenditures over this same period. Also, there was no growth in real per capita local government spending.

In investigating the causes of this trend, it appears that local government expenditures in the Philippines have not grown due to a number of factors. These include:

- ° Claims on Central Government resources which may have temporarily had higher priority than the need to strengthen local government finances;
- ° The fact that the Central Government has not gone far enough in supporting its own initiatives for increasing local government taxing and spending; and
- ° Management and administrative shortcomings and conservative fiscal management of local governments which have held back innovation and growth.

Purpose of the Evaluation. In 1980 the U.S. Agency for International Development (USAID) initiated a study directed towards identifying policy measures that might strengthen the fiscal performance of Philippine local governments. The study's principal objectives were to: (1) increase revenue mobilization; (2) increase capital project activity; (3) improve local government participation in expenditure delivery and decisionmaking; and (4) improve the management efficiency of local affairs. This analysis of fiscal performance and behavior, undertaken by a team from the Maxwell School, Syracuse University, is based largely on a sample of four Philippine provinces.

Findings and Recommendations. The assessment of local government finances led to a suggested program of reform and new initiatives in five areas: financial management and budgeting, local taxation, the Allotment programs, the use of public enterprises, and the use of credit financing. A complete overhaul of the Allotment system, including a full distribution of entitlements to local governments, and the creation of a more effective vehicle for local government credit financing, is noted as the key to a successful reform. Specific reform measures outlined in the study are highlighted below. The expected effect of the suggested programs are also noted.

(1) Techniques and practices of the primary Central agencies involved in aspects of local government financial affairs should be re-examined periodically to insure that the review processes are not at odds with each other or with overall Central government objectives. The local fiscal management function is overseen by at least four different arms of the Central Government. Different Ministries have different priorities which lead to conflicts in the directives and requirements given to local governments. In order to

increase revenue generation and improve expenditure and managerial efficiency, the Evaluation Team recommends the creation of a review office to deal with interministerial conflicts concerning local government finance.

(2) Eliminate the practice of supplemental budgets. The elimination of supplemental budgets and the general improvement of local budgeting practices will call for training of local budget officers, a more rigorous budget approval process at the Central Government level, and a new set of instructions regarding local government budget preparation and execution. Such a reform, however, is expected to increase efficiency in local government expenditures.

(3) Require capital budgets of larger local governments. This program would be expected to improve fiscal planning.

(4) Eliminate fractional assessment in real property taxation. The current practice of assessing certain higher valued improvements at a higher rate than land imposes a tax penalty in some property investments. This practice is at odds with the government objective of promoting the mobilization of local resources for capital investments. Moreover, while fractional assessment may be viewed as a method of enhancing the equity of the property tax, it is not an especially effective means of doing so. This suggested program should remove property tax disincentive to real property investments.

(5) Instigate a program of phased reassessment of property values -- over, for example, a three year period. In this manner the taxpayer would realize that tax liabilities would be increasing during the next three years but in no single year would the entire increment be felt. This suggested action should have a beneficial effect upon property taxpayer compliance.

(6) Sending tax collectors to the barangay can help reduce compliance costs and is a recommended strategy. More use of barangay level campaigns designed to show residents the direct benefits they might gain from compliance with legal statutes, and more use of the barangay captains in the campaigns and in the collection process is also suggested.

(7) Resolving the problems of accurately measuring the cost of enterprise activities is an essential first step in rationalizing the role of public markets in the system of local government finance. The study notes that the existing accounting system falls short in two important respects. The first problem arises because of special circumstances of small governments -- the levels of market activity are such as to require heavy work efforts on market days and very little work effort at other times. The second accounting problem has to do with the measurement of capital costs. In response to these areas of concern, the study recommends that the Central Government move to adopt a standard practice in accounting for the annual capital costs of local government market facilities. This reform would be expected to increase efficiency in local government operations.

In addition to the above program reforms, the study suggested some areas for further investigation. These include: analyzing the financial performance of local governments from a nationwide sample; working out the implications of specific reforms; and determining data needs for tracking and monitoring local government finances and intergovernmental relations.

RURAL PRIMARY HEALTH CARE: THE NARANGWAL (INDIA) PROJECT

Problem and Overview. The Narangwal project in the Punjab of northern India included 19 villages having a population of approximately 35,000. The project area has experienced rapid socioeconomic development since the early 1960s, and there is much physical evidence of progress. A study conducted in districts near the project area found, however, that the most commonly reported health problems were respiratory ailments, infectious and parasitic illnesses, and digestive problems. An existing government Primary Health Center serves approximately 80,000 people with curative care and such outreach activities as smallpox immunization, malaria control, and family planning.

Villagers tend to seek out the services of traditional medical practitioners much more frequently than those of the Primary Health Center in spite of the greater cost of the traditional services. The Narangwal Population Project was the last in a series of research projects conducted by the Rural Health Research Center, which had been located at Narangwal since 1961. The project was affiliated with Ludhiana Christian Medical College, and received technical support from Johns Hopkins University.

The Narangwal project goal was to see whether and to what extent particular kinds of health measures would promote greater and more effective practice of family planning. It had two major objectives: (1) to test hypotheses about the effects of combined health and family planning services on family planning attitudes, acceptance, and practice; and (2) based on the findings, design a model of combined health and family planning services that eventually could be applied widely.

U.S. Assistance. Earlier studies and smaller projects were expanded in 1969 to embrace many aspects of the complex relationship between family planning and mother and child health services. AID support worth approximately \$2.11 million was provided from 1969-1974 under project number 298-15-590-019-53. In addition, WHO provided \$50,000 per year, and there was support from the Government of India, private sources, and PL 480. The Narangwal project was centrally funded and the Asia bureau and the Office of Population (as opposed to the mission) had full monitoring responsibility. The contractor was Johns Hopkins University's School of Hygiene and Public Health and the implementing agency was the Indian Council of Medical Research in New Delhi. External political factors (the Bangladesh war, deteriorating US-Indian relations, and the proximity of Narangwal to the Pakistan border) caused the project to be abruptly terminated in 1974.

Effectiveness. In general, Narangwal's comprehensive cost package was much higher than the cost of the government's primary health centers in 1969, but Narangwal provided much more thorough coverage. Because of the project's early termination, it was not extended into other regions of India as planned. Many members of its large staff later worked in other government-sponsored primary health care projects throughout India, however. Narangwal helped

to establish a tradition of health services research in India in both the government and medical schools. The training manual developed for Narangwal's family health workers was later published in India and is now widely used. The project had the following additional impacts:

(1) Nutritional Impact. Children receiving health and nutritional services were heavier and taller.

(2) Morbidity Reduction. Total illness was reduced by 20 percent, or 22 days per year, for children receiving health care.

(3) Mortality Reduction. Children between 1 and 3 years of age in the group receiving food supplements and infectious disease control had less than half the mortality rate observed in control villages.

(4) Fertility Reduction. The percent of couples using family planning methods increased by an average of 47 percent. A general 5 percent decline per year in fertility occurred in Narangwal's service villages compared with 1 percent per year in other Punjab villages.

Lessons Learned.

(1) Central to the concept of primary health care is the full participation of local communities at every stage of the project.

(2) All types of traditional medical practitioners should be active participants in primary health care projects. In addition, modern medical practitioners should become familiar with local ethno-medical beliefs and practices.

(3) For primary health care activities to continue beyond the life of the project, it is important to establish institutional affiliation with a national ministry of health or other government agency. In addition, national health systems should be decentralized, and more medical authority should be delegated to health workers at the periphery of the health care system.

(4) Communities are more interested in curative than preventative health care. Thus for a project to be successful, the community must be able to see positive and rapid changes, which may be brought about by short-term activities, especially at the beginning of a project.

(5) A number of areas require additional research:

- a) Villagers' perceptions of projects.
- b) The factors influencing community participation in various settings.
- c) In-depth study of village-level health workers' activities.

REPORT OF THE BASIC HEALTH SERVICES PROJECT
EVALUATION TEAM: PAKISTAN

Problem and Overview. The health care system in Pakistan has reflected a pattern not unusual for developing countries. Historically, urban needs have been served before rural needs, health manpower development has focused chiefly on producing doctors, operating budgets for public health have been skimpy, and curative services have been stressed over preventive and community health services. Estimates during the time this project was designed were that modern health services extended to only fifteen percent of the total population and to perhaps as little as five percent of the rural population. A Planning Commission study of proportional deaths due to different diseases indicated that in rural areas two-thirds of all deaths are due to infective and parasitic diseases, exclusive of malaria which accounts for over ten percent of the rural total. Other major killers are tuberculosis, birth-injury and complications of pregnancy.

Purpose and Goal of the Project. The goal of the Basic Health Services Project (No. 391-4150) was to improve the health of rural people in Pakistan in two stages over a period of eight years (1977 to 1985) at a total cost of \$34.8 million. The U.S. Agency for International Development (USAID) provided a grant of \$1.5 million for technical advisory services (which included \$80,000 for a baseline survey and project evaluation) and a loan of six million dollars, which was later increased to seven million dollars. The World Health Organization contributed \$480,000, and the Government of Pakistan (GOP) supplied the rest of the project's funding.

The University of Hawaii was retained, by means of a host-country contract, to provide four long-term advisors. (The World Health Organization was to provide a management advisor and a public health specialist at the start of the project, but they were so delayed that an additional advisor from Hawaii was recruited as a replacement.)

The project's strategy was to organize a three-tiered system of medical care, based on the MEDEX model developed by the MEDEX team at the University of Hawaii and elsewhere, emphasizing preventative and promotive care with maximum outreach. At the base are to be community health workers, a new class of paramedics recruited from the villages they serve. In the middle tier are Basic Health Units, staffed by medical technicians who are expected to be able to handle about ninety percent of a doctor's routine caseload. At the top are Rural Health Centers, which are staffed by physicians and auxiliary personnel and serve as referral points for patients. The three components combine to form Integrated Rural Health Complexes. The project was to develop a training program for the medical technicians who staff the middle level of the system. In addition, manuals for training community workers were to be developed, Basic Health Units and Rural Health Centers constructed, and community health workers recruited, trained, and deployed.

Purpose and Methodology of the Evaluation. This was a terminal evaluation whose purpose was to assess the progress of the Basic Health Services Project and the appropriateness of its approach for rural medical care, and to make recommendations for future health sector support. Because few of the accomplishments of the project lend themselves to quantification, the review methods were limited to observation, discussion and the reading of pertinent documents. Discussions were held with officials of the GOP's Ministry of Health (including the National Basic Health Services Cell, which directed the project from the GOP side), provincial officials of the Department of Health, and technical advisors from the University of Hawaii, USAID, and the World Health Organization. Visits were made to Rural Health Centers, Basic Health Units, and three of the developing Integrated Rural Health Complexes in the Punjab.

Findings. At the time of this evaluation, 224 Rural Health Centers and 400 Basic Health Units had been constructed. Twenty schools for training medical technicians had been established throughout Pakistan's four provinces, and a series of six manuals for these paramedics had been developed and printed. More than 600 recruits, of which 189 were women, had begun training, and 200 had completed the course. A manual for the medical technicians to use in training village-based community health workers had also been developed, and limited baseline surveys in six villages had been conducted.

Unfortunately, however, the planned Integrated Rural Health Complexes were not functioning and most of the Rural Health Centers and Basic Health Units were merely empty buildings. The trained medical technicians had not assumed their new roles, and no community health workers had been trained. Likewise, other planned objectives had not been attained. Management training had not been provided for government personnel, field operations manuals had not been compiled, operational research had not been undertaken, and health education materials had not been developed.

It is difficult to determine the extent to which these shortcomings were due to design and implementation weaknesses intrinsic to the project or to external events that frustrated project implementation. Shortly after the project began, initial delays were caused by the transition from the Bhutto Government to that of General Zia-ul-Haq. More devastating for the Basic Health Services project was the U.S. Government's invoking in 1979 of section 669 of the Foreign Assistance Act, a nuclear non-proliferation amendment that led to a drastic cutback in USAID activities in Pakistan. As a result, targets were reduced and unrealistic short-term objectives were set. Finally the attack and burning of the U.S. Embassy by Pakistanis later in 1979 caused the quick departure of University of Hawaii personnel for a period of three months. This led to a disruption of project activities and, because the GOP was not informed of the departure, contributed to the poor relations among the parties concerned with this project.

One of the important internal factors that accounted for some of the project's difficulties was the rigid application of the MEDEX model for primary health care delivery. The project has generally used a top-down approach that has failed to adequately take into consideration local sociocultural factors and has not communicated in any substantive way with its intended beneficiaries in the rural areas.

Recommendations. In spite of the internal and external problems it has encountered, this project has laid a fragile groundwork for future activities in primary health care delivery in Pakistan. The basic institutional structure in national and provincial health offices has been established and government personnel at both levels are said to have become generally convinced of the value of primary health care. Without continued USAID assistance the limited progress made to date will be lost. It is therefore recommended that a follow-on project be initiated that will: (1) begin operating a number of the Integrated Rural Health Complexes; and (2) completely staff and operate the existing Basic Health Units.

THE THIRD ANNUAL EVALUATION OF THE ANTI-MALARIA
CAMPAIGN: SRI LANKA

Problem and Overview. Malaria has been a serious problem in Sri Lanka for centuries. The first formal malaria control program began in 1946 using DDT. By 1963, when only seventeen cases were detected, the program appeared to have successfully eradicated the disease. Towards the end of the 1960s, however, malaria reappeared primarily because of mosquito resistance to DDT. Other contributing factors derived from a greatly reduced effectiveness of the country's malaria service. By 1975, the resurgence of malaria reached epidemic proportions with over 400,000 reported cases (the actual number of cases was estimated at more than 1 million).

Approximately eighty-five percent of Sri Lankans live in malarious areas. There is a high incidence of the disease in the country's Dry Zone, where major resettlement and agricultural development projects are underway.

Purpose and Goal of the Project. The U.S. Agency for International Development's (USAID) loan agreement for the Malaria Control Project (No. 383-0043) was signed in 1978 for \$12 million to assist the Government of Sri Lanka (GSL) in procuring required supplies (mainly insecticides), equipment (safety equipment, nozzle tips), and training. An additional \$4 million was obligated in 1979 for additional training, support to malaria control activities in certain settlement areas, and rehabilitation of the Malaria Training Centre in Colombo. The life of the project is FY 1978 to FY 1984.

The purpose of the project is "to bring malaria under control" by reducing incidence to acceptable levels (defined as not more than 1,000 cases per million people) and controlling P. falciparum since it causes high mortality in non-immune populations, especially infants and children. The overall project goal is "to reduce morbidity and mortality from endemic diseases through the establishment of a responsive, effective and efficient nationwide health service." The principal USAID contribution to this project has been in the form of commodities, most of which are supplies of malathion. In addition, some funds have been set aside for approximately fifteen man-months of training, primarily for medical officers and public health inspectors. Also AID separately funds the services of an AID malaria expert who, though his assigned area is the Asia region, devotes a significant amount of his time to assisting Sri Lanka's program.

Other donors to this project include the World Health Organization (WHO) and the governments of the Netherlands and the United Kingdom (UK). WHO has assigned three malaria experts to this project and the UK provided a year's service of an experienced Transport Officer. The GSL is to provide fifty-nine percent of the estimated total project cost of \$54.3 million.

Purpose and Methodology of the Evaluation. Annual evaluations of this project are required under the terms of the project agreement. This assessment, representing the third evaluation of this project, is considered crucial in that 1982 is the end of the intensified control program and a new control

program has to be designed for the 1982 through 1986 time period. This evaluation was therefore planned with the following objectives: (1) to review implementation of the second annual evaluation's recommendations; (2) to review both the progress of programs implemented during 1980 and present status of the malaria situation; and (3) to review the nature and extent of any problems and constraints affecting the program.

After briefings by senior staff of the Anti-Malaria Campaign (the Sri Lankan term for this project), the evaluation team visited regional and sub-regional offices to check operations, administration, entomological activities, and epidemiological status. The field trips consumed one week of the total seventeen days that were devoted to the evaluation.

Findings. The following observations were noted by the evaluation team:

(1) The general decline in malaria incidence and presence of P.falci-parum observed during the first two years of the project did not seem to continue during 1979 and 1980. Apart from difficulties in maintaining adequate spray coverage, the team believed that an inadequate case detection system -- due to a shortage of trained personnel -- was responsible for this trend.

(2) In general, the evaluation team was impressed with the work done by the entomological services despite the constraints they faced.

(3) There was considerable variation in the quality and effectiveness of malathion spraying. Shortcomings included wasted malathion, poorly maintained equipment, lapses in safety procedures for handling malathion and malathion cartons, and ineffective distribution of spare parts for sprayers in the field.

(4) In general, the collection and analysis of blood smears were satisfactory.

(5) Anti-malaria work in Sri Lanka during 1980 received considerable assistance through a variety of community and self-help activities. Instances were observed of drug distribution and treatment being carried out by villagers with the supervision and supply assistance of trained staff. This increase in community involvement was thought to contribute significantly to the project goal of "establishing a responsive, effective and efficient nation-wide health service."

Recommendations. The evaluation team made a number of general recommendations involving applied research, staffing, supervision, management, community participation, training, safety precautions, logistics, mining activities, and future assessments of the program. Specific suggestions outlined by the team are noted below:

(1) Case detection can be improved by activating all health institutions in the receptive and vulnerable areas and involving more medical personnel in anti-malaria activities.

(2) Chemotherapy has been very important in reducing the parasite load in the community, as well as relieving suffering, and can be more effective by insuring the availability and improving the administration of drugs.

(3) Planning for the next phase of the program (1982-1986) can be more effective by improving the stratification of malarial areas to permit more defined program strategies.

(4) The entomological staff should be consolidated into mobile units in order to increase their efficiency and to improve supervision.

MID-TERM EVALUATION OF THE THAILAND RURAL PRIMARY
HEALTH CARE EXPANSION PROJECT

Problem and Overview. The prevailing health problems in Thailand are common to many developing countries. These include: rapid population growth; high infant and maternal mortality rates; a high accident rate; a high frequency of parasitic, vector-borne, and other infectious diseases, many of which are directly related to inadequate environmental sanitation; and various nutritional deficiencies. Recently, the delivery of government health services to villages and townships has been severely hampered. The too few health facilities are poorly located, there are not enough appropriately trained personnel, and competition from the "unofficial" private sector (traditional healers, injectionists, and druggists) is strong. All of these problems are worse in rural areas far from municipalities.

Purpose of the Project. The Rural Primary Health Care Expansion Project (PHC, Project No. 493-0291), funded by a three-year (FY 1979-FY 1981) loan of \$5.5 million, is a discrete but integrated component of the larger multi-donor National Family Planning Program. This larger project includes the construction and renovation of several health service and housing facilities, expanded information, education and communication programs (IEC), broad research and evaluation activities, and increased long-term and short-term training activities for existing and new categories of health workers. The primary purpose of the PHC is to make primary health care services more accessible to the rural population in twenty target provinces by developing manpower training programs, improving management and supervisory skills, and improving the health program evaluation and research capabilities of Thailand's Ministry of Public Health (MOPH) and provincial staff.

Purpose and Methodology of the Evaluation. The purposes of the evaluation were to assess project progress, note specific areas deserving further examination, contribute ideas to help strengthen the current program, and identify possible alternative strategies to strengthen project ends. Analysis is based on data generated from a detailed review of the literature, a Ministry of Public Health/Agency for International Development (AID) briefing with a World Bank evaluation team that was studying the National Family Planning Program, and field visits. Since the team spent only three weeks in Thailand, they were able to visit only five of the twenty project provinces.

Findings. Short-term training is on schedule for village health volunteers, village health workers, township trainers, midwives, health assistants, chiefs of planning, and chiefs of promotion, but not for nurse practitioners, supervisors, and management personnel. The level and quality of the training seem quite good, considering the magnitude of the project.

Progress in evaluation and research has been slow for a variety of reasons, but the Health Planning Division has begun to address the task of designing a strategy to expand evaluation and research during the remainder of the project. Since the effectiveness of this project will ultimately be measured in terms of declining growth in population and reduced maternal and infant mortality rates, the evaluation system should produce relevant status reports. Data that indicate the extent of health service coverage and other outputs are not currently available, however, which makes mid-term evaluation of the project's progress difficult. Conditions observed in the field indicate that the PHC system is working reasonably well, although staff have had trouble distributing resources and do not fully understand how their primary health care activities can resolve certain health and development problems.

Recommendations.

(1) Short-term Training. In addition to basic training, the project should provide refresher courses on curative care; information, education, and communication; appropriate use of medication, especially new drugs; and community development. Performance evaluations should be made to determine the effectiveness of the training activities. Career development opportunities should be improved for health assistants.

(2) Management and Supervision. Since many people in supervisory and management positions do not have formal training in those areas, practical problem-solving sessions should be incorporated into team management and supervisory training programs, especially those for provincial and district managers and township supervisors. Data management and information flow should be emphasized to ensure that data are used in central and local management decisionmaking.

(3) Evaluation and Research. Emphasis should be placed on hiring additional research staff, better designed studies for practical research, integration of research findings with practical decisions and strengthening of the monitoring and evaluation system.

(4) Future Project Development. Planned primary health care activities should be continued in general and the development of primary health care as part of a community's overall development and improvement should be encouraged. High priority areas for future special attention are child malnutrition, drug supply and distribution, and health information systems.

THE LAMPANG HEALTH DEVELOPMENT PROJECT: THAILAND

Problem and Overview. A general description of the health situation in many LDCs would include the following: (1) most modern medical personnel are concentrated in the urban areas; (2) the majority of the rural population lack access to such modern medical services; and (3) the rural population still relies on traditional and poorly trained (in the modern sense) health practitioners. This is the situation that exists in the Lampang Province of Northern Thailand, which is predominantly rural and agricultural. There the most prevalent health problems are diarrhea, respiratory illnesses, digestive problems, fever, and malnutrition in children. Infant mortality is approximately fifty to seventy per 1,000. There is a wide variety of health care facilities and personnel ranging from government institutions to traditional practitioners. In 1973 there were three physicians, nine nurses, ten midwives, and five sanitarians per 100,000 persons.

Purpose and Methodology of the Project. The Lampang Health Development Project (LHDP) was the only sub-project ever to be implemented of an interregional, Agency for International Development (AID) sponsored Development and Evaluation of Integrated Delivery Systems (DEIDS) program. DEIDS was proposed in 1971 by AID's Office of Health as a low-cost integrated health, family planning, and nutrition program that was to have been implemented in several countries. In 1974 an agreement on the "DEIDS Project" was signed between the Thai Government (RTG) and the American Public Health Association (APHA). The entire Lampang Province was chosen as the site to develop, demonstrate, and evaluate a large-scale health delivery system. APHA was contracted to administer the program and the School of Public Health at the University of Hawaii was subcontracted to provide technical assistance. The Thai implementing agency was the Ministry of Public Health.

The project's goal was to improve the health status of the target population by expanding health care coverage to at least two-thirds of the rural people and to establish integrated provincial health services. A central part of the program is the delivery of family planning services.

The project aims to: reorganize the provincial health services structure, create a cadre of paraphysicians, train locally recruited community health workers, and encourage the involvement of the community and private sector. The paraphysicians are expected to extend health services into rural areas of the provinces and reduce the workloads of physicians in the provincial hospital. Their training is based on the MEDEX (physician extender) program developed at the University of Hawaii. Health Post Volunteers (HPVs) are supervised by the paraphysicians and provide curative care, refer serious cases to the sub-district health center, support community health programs, give advice about family planning, distribute pills and condoms, and supervise Health Communicators (HCs). The HCs are chosen by the village health committees to promote the activities of the HPVs and sub-district health centers. Traditional Birth Attendants, who are usually elderly, illiterate women, promote maternal and child health and family planning.

Findings. Preliminary and incomplete information indicates that:

- There has been a great increase in the use of government health facilities, especially by women and children;
- There has been some improvement in the nutrition of poor infants and household sanitation;
- About two-thirds of the HPVs are working up to expectations; and
- There has been a significant rise in the use of contraceptives among young married women, but it is not clear how this compares to the national rate.

A major problem with the Lampang project has been the cumbersome administrative arrangements among AID/Washington, APHA, the University of Hawaii, and the RTG. (USAID/Thailand was not very involved during the early and middle stages of implementation.) In spite of this, LHDP has been successful in its institutional development: it restructured the province's health care delivery system. In addition, the Lampang project has directly influenced Thailand's Rural Primary Health Care Expansion Project, which is now being implemented in twenty provinces even before definitive reports of Lampang's impact and effectiveness had been analyzed.

As is true for similar projects, the costs of implementing Lampang have been substantial. This means that the project may be difficult to sustain beyond the termination of external funding. It should also be mentioned that because of the provinces' large population, the paraprofessionals and village workers have not always received adequate support and supervision.

Issues and Recommendations. The project brought forth the following issues and recommendations:

(1) Substantial funding for supplies, transport, and manpower help create an esprit de corps among project staff but also may make the project difficult to sustain or replicate when external support is ended.

(2) Constant supervision of peripheral workers is essential for this kind of project.

(3) Care must be taken not to overload village-based personnel with tasks.

(4) Attention needs to be given to career development for the newly created positions.

(5) Relations between modern physicians and LHDP personnel could be better; it may be necessary to educate the physicians about the project's purpose and strategy.

(6) For primary health care activities to be continued beyond the life of a particular project, there should be institutional affiliation with the country's Ministry of Health. Also if the project is to be implemented on a country-wide basis, there should be decentralization of the national health systems.

MALARIA CONTROL PROJECT -- TERMINAL EVALUATION: PAKISTAN

Overview. Approximately seventy-five percent of Pakistan's eighty-two million people are at risk of malaria. The Malaria Control Project (MCP, Project No. 391-0424) is the most recent of a series of Agency for International Development (AID) investments that began in 1963 to assist Pakistan in malaria control. Between 1963 and 1970 AID provided over twenty-eight million dollars in grants and loans for this assistance. Malaria incidence in Pakistan dropped from an estimated seven million cases in 1961 to 9,500 cases in 1967, at which point the government of Pakistan (GOP) decreased its budgetary support to malaria presuming that the crisis was past. AID's malaria control assistance to Pakistan terminated in 1970. Subsequently a variety of administrative, operational, and technical problems contributed to a resurgence in malaria and a rise in the number of cases to an estimated ten million in 1974.

Purpose of the Project. At the request of the GOP, AID planned new assistance to cope with this resurgence. The Project Loan Agreement for the MCP was signed in 1975. The project's purpose was to reduce, within five years, the incidence of malaria to a level where the disease was no longer a major factor in Pakistan's overall health situation (defined by a rate of only 500 cases per one million people) and could be prevented by minor public outlays. MCP's activities began on a country-wide basis in 1976 and involved: residual insecticide spraying of dwellings in rural areas, and surveillance and use of anti-malaria drugs.

The 1975 agreement provided twenty million dollars to assist the GOP in procuring required supplies and equipment (mainly insecticides and spraying equipment). An additional four million dollars was obligated, on a reimbursement basis, in 1978, for malaria control activities. A rupee grant of \$18.8 million equivalent was also provided under P.L. 480, Section 104(f) to meet approximately fifty-five percent of the local costs of the project over five years. The GOP, the World Health Organization (WHO), the U.N. Children's Fund, and the government of Japan have provided staff and funding contributions and worked together with USAID during the project period.

Purpose and Methodology of the Evaluation. The terminal evaluation was the fourth "external review" to be conducted by a team of GOP, WHO, and AID malaria specialists. Its purpose was: (a) to assess the current status of the MCP with particular reference to the process of integrating it with Pakistan's Basic Health Services (also supported by AID through a separate concurrent project); (b) to evaluate the results of spraying; and (c) to discuss future needs in view of AID project termination and to develop guidelines for the future of the GOP's malaria program. This 1981 external review combined an in-depth program review of the annual progress of the project with a terminal evaluation covering the period of 1976-1980. This latter task was facilitated by a study of the external review reports prepared between 1976 to 1979 and by studying GOP documents used in meeting the conditions precedent of the AID loan. Special attention was also given to the assignment reports, field observations, and studies made by WHO during the period under review.

Findings. There has been a dramatic reduction in malaria incidence to a total of 12,304 reported cases in 1979. A reduction in slides-positive rates from 14.9 percent in 1973 (epidemic period) to 0.45 percent in 1979 has been accomplished. The goal of obtaining a case rate of 500 per million people has been fully achieved during the project period.

However, malaria control in Pakistan is a tenuous situation. Unless appropriate support is given to the ongoing control program, the positive progress made to date can rapidly regress with extremely serious consequences. The instability of the present epidemiological situation is indicated by a combination of the following factors: an apparent slight rise in overall case incidence during 1980; a high P. falciparum ratio which shows an apparent tendency to increase in some districts; as yet incomplete implementation of urban malaria control; high population mobility in some areas, including movements of refugees; disturbance of operational routine during the necessary period of the malaria control program and the basic health services; and traditional and social factors which appear at the present time to exclude segments of the female population from the case detection and treatment processes.

Recommendations. It will be necessary for the government of Pakistan to consider malaria control as a long-term health program that will require staff, materials, and financial support for many years to come in order to maintain the gains in health improvement that have now been made at a high cost in both manpower and money. Resources must be adequate at both the federal and provincial levels. It is recommended that integration of the MCP with the Basic Health Services should be pursued.

Specific areas of importance recommended for the continued success of the Pakistan Malaria Control Program include:

(1) That the Government of Pakistan form an ad hoc committee for the purpose of drawing up and coordinating plans of action that would lead to improved sanitation and the elimination of mosquito breeding sites.

(2) That close cooperation be maintained by the Ministers of Health, Education and Public Information in the propagation of health education material on malaria prevention.

(3) That the Director of Malaria Control assemble Federal and Provincial MCP officers at a seminar workshop for the purpose of creating a Manual of Malaria Control. Moreover, the Director of Malaria Control should invite urban malaria control chiefs to participate in a seminar for the exchange of ideas and plan improving the process regarding entomological monitoring and malaria case detection.

(4) That the Federal Directorate of Malaria Control be augmented by the addition of a number of staff personnel (e.g., sanitary engineer, epidemiologist, entomologist).

(5) That the Annual Parasite Incidence statistic be used instead of the Slide Positivity Rate (SPR) for the assessment of malaria endemicity and that improved methods of data analysis be designed for implementation at the district level which will provide SPR data on males and females separately and by age group.

(6) That measures be taken to assure the adequate administration of presumptive treatment for malaria at the time that the blood slides are taken.

(7) That a network of responsible lookouts in urban and rural communities be established for the purpose of identifying unusual increases in mosquito density.

(8) That the insecticides malathion and fenitrothion be applied in two spray cycles in those areas where two peak transmission seasons occur with a two to four month interval between peaks.

(9) That refugees who have served with the Afghanistan Malaria Control Program be sought out and recruited to aid in the PCP.

(10) Due to the high resistance levels shown by the vector species to DDT and BHC at the present time, they should not be used for general operational purposes.

MALARIA CONTROL PROGRAM -- EVALUATION SUMMARY: INDIA

Problem and Overview. Approximately ninety-five percent of India's population are at risk of malaria. During the period of 1976 to 1977, a massive epidemic swept India with the number of malaria cases estimated at between ten to fifteen million actual cases per year. By 1978, the number of malaria cases were still being reported as over four million in spite of major increases in national financial and resource inputs. The Malaria Control Project (MCP, Project No. 386-0455) is one of the U.S. Agency for International Development's (USAID) most recent investments to assist India in malaria control.

Purpose of the Project. At the request of the Government of India (GOI), USAID agreed to provide financing for the National Malaria Eradication Program (NMEP). The Project Loan Agreement for the MCP was signed in August 1978. The goal of the project was to reduce, within five years, the incidence of malaria to a level where the disease was no longer considered a major threat to the health of India's people (defined by a rate of 2,000 cases per one million people per year). The 1978 agreement provided twenty-eight million dollars to assist the GOI in obtaining the needed supplies and equipment (insecticides -- mainly malathion and DDT -- and spraying equipment). An additional ten million dollars was obligated in 1979 for anti-malaria activities (education and training activities, for example).

Purpose and Methodology of the Evaluation. The evaluation, undertaken in October 1981, represents the second "external review" to be conducted for the Malaria Control Project. The purpose of the evaluation was to review the project's accomplishments up to the time of September 1981 and to provide recommendations for future work. The evaluation's analysis is based primarily on data obtained from: (1) NMEP annual evaluation and operational reports, which provide in great detail the progress of malaria control work in India's various states and federal territories; and (2) field trips and conferences held during the operational years of 1980 and 1981, including specific details on field activities in Indian states where U.S.-supplied malathion was used.

Findings.

(1) Plan of Operations for the Project. The Modified Plan of Operations (MPO) has been approved by GOI, Central Government, as a policy guide for State's Malaria Control efforts. Since health is a state responsibility in India, adherence to the MPO has varied with the individual state.

(2) Training of Personnel. General malaria control training has continued for training medical officers, entomologists and other technical personnel. In training aspects of concern to AID, there has been a large amount of training carried out in the program on safe malathion handling and application. Due to this intensive training and field monitoring, no serious cases of malathion intoxication occurred in the 1980 and 1981 spray programs in those areas using the insecticide (Gujarat and Maharashtra States).

(3) Community Support for the Project. The GOI has involved school teachers in the process of malaria drug distribution and in notification of health workers of detected malaria cases. In addition, Drug Distribution Centers (DDC) have been opened in tribal areas. Educational films have been produced and distributed throughout target areas, and All-India radio and T.V. has assisted in providing special broadcasts on malaria.

(4) Spraying Operations. Spraying operations have been carried out, but the areas protected in some states (Gujarat, for example) have been reduced from the MPO recommended design. In some areas, spray operations were late in starting in 1980 due to logistical and management difficulties in moving U.S. loan source commodities from Indian ports to field areas. As a result of these changes in the planned program, the incidence of malaria did not respond as expected.

(5) Effectiveness of Laboratories. General consensus of thirteen assessment teams which reviewed the NMEP is that the laboratory services had adequate standards and were operating in a satisfactory manner.

(6) Community Health Programs. The GOI has been very successful in the development of volunteer collaborators on malaria control through its Community Health Volunteer program, including the establishment of 365,000 Drug Distribution Centers (DDC) and Fever Treatment Depots (FTD).

(7) Equipment. The equipment provided through the project was limited to twenty-two for generators. These units are used in Urban Malaria Control programs or health emergencies. Adequate spray pumps were available for the field operations.

(8) Incidence Level of Malaria. The overall malaria situation in India did improve from the 1979 level of 3.0 million cases to an estimated 2.3 million cases (provisional) in 1980. Of the eleven states provided U.S.-loan DDT in their program, seven states reported an improvement in malaria incidence from 1979 to 1980. Yet, it is important to note that it is difficult to assess the epidemiological impact of the AID insecticide inputs since: (a) these inputs are only a portion of the total insecticide used by the NMEP; and (b) most of the material was used in only one operational year which is not sufficient to observe accurate trends. However, one might state that where malathion was applied on time, there was a reduction of malaria.

(9) Environmental Awareness. The project has increased environmental awareness of GOI/NMEP officials at both State and Central levels to human and ecological effects of mass applications of insecticides. It appears that research in alternative malaria control methodology has in part been stimulated by the project's emphasis on environmental protection.

Recommendations.

(1) USAID should consider longer lead times for project development and implementation especially when assisting a major GOI activity. Moreover, AID offices should take into account the practical difficulties for GOI officers

to produce AID reports within a short time-frame given other demands on their time. Thus, it is suggested that AID's project assistance procedures and requirements for Host Government be simplified in order to ensure effective project implementation and evaluation.

(2) Management of AID's input to the MCP would have been more effective if they had a staff person available on a continuous basis to provide technical expertise. The Evaluation Team noted that a major share of the commodity control difficulties of the project are due to the lack of a proper management system.

(3) AID should expand its attention to include in its projects the importance of inter-sectoral cooperation between malaria activities and other offices of Government -- for example, irrigation, public works, health services -- as well as give more encouragement to Host Governments to follow similar planning in its programs.

THAILAND'S POPULATION PLANNING PROJECT, 1979-1981:
REPORT OF A JOINT THAI-U.S. ASSESSMENT

Overview. Prior to designing a family planning project for FY 1982, the Royal Thai Government (RTG) and the U.S. Agency for International Development (USAID) agreed to conduct a brief assessment of USAID's contributions to the National Family Planning Program (NFPP) between 1979 and 1981 (the date of the last program evaluation was July 1979). During this three-year period, USAID obligated approximately \$7 million to five NFPP components: (1) the Expanded Sterilization Program; (2) contraceptive services; (3) training and supervision; (4) Information, Education and Communication (IE&C) in the fifteen "lagging provinces"; and (5) research and evaluation. USAID contributions, while substantial, constitute only a portion of the inputs to the NFPP and, for administrative reasons, are known as the "Population Planning Project".

Purpose and Methodology of the Assessment. The assessment's principal purpose was to determine the effect of USAID's contributions on the NFPP. Thus, the assessment had to view the USAID-financed project in the broader context of the overall program -- its inputs, activities, outputs and impact on fertility. Specific objectives were to:

- Update the findings of the most recent evaluation (July 1979) with respect to each of the major AID supported components. The update should assess qualitative as well as quantitative performance.
- Determine the extent to which the NFPP has achieved its stated objectives regarding service delivery, contraceptive use and fertility reduction.
- Determine the role of USAID in helping the NFPP achieve these objectives.
- Update information regarding financial contributions to the NFPP from the RTG, USAID/Washington, and other donors and lenders.

The assessment was conducted by an independent, multi-disciplinary Thai-U.S. Team over a two week period (May 19 - June 1, 1981). The Team reviewed available documents and statistics, and made field visits to selected provincial and district hospitals, district and tambon health centers, and midwifery centers. Due to time limitations, only three provinces were visited.

Findings.

(1) The rate of population growth has continued to decline, from 2.0-2.3 at the end of 1978 to under 2.0 at mid-1981. The principal cause of this decline has been a drop in fertility. The major causes of fertility decline have been increases in induced abortion and particularly, contraception. The most popular contraceptives are the pill and female sterilization, which together account for almost seventy percent of the contraception being used.

(2) The Population Planning Project has had a positive impact. The NFPP has exceeded its targets in every region. The number of new NFPP acceptors has increased from 225,000 in 1970 to 1.1 million in 1980. All indications are that NFPP has contributed significantly to the decline of fertility in Thailand.

(3) Between 1979 and 1981 the three largest contributions to the NFPP have been the RTG itself (\$8 million), USAID (\$6.9 million) and the United Nations Family Planning Association (UNFPA, \$5.1 million), which provided grants; and the Canadian International Development Agency (CIDA, \$5.6 million), which provided a loan.

(4) Sterilization for females is up, but down for males. Moreover, the NFPP has successfully demonstrated that paramedical personnel can perform sterilizations, but paramedicals are still not widely used for this function.

(5) In regard to contraception, it was found that the use of DMPA (Injectable depo-provera) is increasing, pill usage is levelling off, and IUD usage is declining.

(6) Training continues to be a major component of the family planning program. However, follow-up and evaluation of training has not been undertaken. Thus, there is little information available on the utility of the training and the application of the skills learned.

(7) IE&E activities have been intensified in the fifteen "lagging provinces" with low family achievement records. This exercise is considered crucial to achievement of program targets.

(8) More research and evaluation studies are needed, although work is underway in certain areas.

(9) Although the RTG receives financial assistance from a variety of donors for the NFPP, USAID's contributions have been significant in helping the RTG to develop a program that is oriented toward communities rather than clinics, relies on paramedical personnel rather than physicians, aggressively promotes and provides sterilization not just pills, and is beginning to focus on applied rather than academic research.

Recommendations. The Evaluation Team made numerous recommendations in regard to sterilization, contraception, training, IE&C and research and evaluation activities. A few in each area are highlighted below.

Sterilization

- Further research should be undertaken to develop techniques to counter the fears men have of vasectomy.
- Vasectomy targets should be set individually for provinces.
- Paramedicals should be trained to perform sterilizations and placed in facilities where they will be able to undertake these operations.
- More emphasis should be placed on motivation and referral for interval sterilization.

Contraception

- Provide DMPA and IUDs at all health and midwifery centers and mobile units.
- Provide medical professionals with adequate technical information about side effects of the various contraceptives being dispensed.
- Ensure an adequate supply of oral contraceptives at all outlets.

Training

- Undertake an external evaluation of the impact of training.
- Consider training government officials who work with villagers in family planning.
- Coordinate training activities with the Training Division of the Under-Secretary of Health.

Information, Education and Communication

- Continue to coordinate IE&C with private sector agencies.
- Continue support of IE&C activities with more emphasis on evaluating their effectiveness on "hard to reach" groups.
- Place more emphasis on interpersonal communications with individual and small group counseling.

Research and Evaluation

- Operational research and programmatic evaluation are very much needed and should be undertaken.
- Studies are needed to find ways to improve efficiency, management, service delivery, and quality of services.

EVALUATION OF THE FAMILY PLANNING AND MATERNAL CHILD HEALTH
PROJECT'S PANCHAYAT BASED HEALTH WORKERS: NEPAL

Overview. Family planning and maternal child health care services were first made officially available in Nepal in 1968 with the establishment of the Nepal Family Planning and Maternal Child Health Board. The purpose of this Board was to reduce the crude birth rate and to provide maternal and child health services in an organized manner throughout the country. The Family Planning and Maternal Child Health Project (FP/MCH), under the direction of the FP/MCH Board, has since been providing family planning services, education, research and training, as well as the usual maternal and child welfare services.

The services provided under the project were first administered via clinics situated throughout the Kingdom of Nepal. However, in the early 1970s it became evident that the existing system was not sufficient to educate people living in the remote villages. It was decided, therefore, to test the feasibility of delivering these services through mobile workers, on a house-to-house basis. The results of a series of pilot programs, over an approximate six-year period, indicated that the performance of panchayat (village)-based health workers was superior to that of clinic-based aides. As a result, there has been a shift away from the static, clinic-based system of service delivery and today the FP/MCH Project employs almost 1,200 panchayat-based health workers (PBHWs). These workers are providing family planning and maternal and child health services on a door-to-door basis, thus attempting to meet the major objective of the FP/MCH project -- that is to provide basic MCH information and services to the rural population and to act as motivators for family planning. The U.S. Agency for International Development (USAID) has been providing financial support for the FP/MCH Project since 1978.

Purpose of the Project. The \$10 million project was instituted with the purpose of overcoming cultural and structural barriers which could not be easily bypassed by static delivery systems. Hence, the panchayat health workers were important in: (1) testing the feasibility of delivering the services through mobile workers on a house to house basis; (2) providing basic MCH information and services to the rural population; and (3) acting catalyts for family planning.

Purpose and Methodology of the Evaluation. The purpose of the evaluation as stated was "...to gather information regarding the performance of the Project's Panchayat Based Health Workers, analyze the results and provide the USAID/Nepal with an assessment of the program's performance to date, its operational effectiveness and the impact of PBHWs against the Government of Nepal's stated objective to provide basic MCH information and services and to act as motivators for family planning." The evaluation, undertaken between May and September, 1981, was carried out by an all-Nepali consulting firm. The focus of the Evaluation Team's efforts were on two main aspects of the program -- the operational support system and the performance of PBHWs.

The bulk of the data on which the evaluation is based was obtained through structured questionnaires administered to various primary sources: District Family Planning Officers, Intermediate Supervisors, PBHWs and residents of the communities served by them. PBHW records were examined. In addition, informal interviews were held with officials from USAID, FP/MCH, and other departments concerned with the Project.

Findings. In general, the survey found an operational infrastructure that was strong in most respects and that the majority of PBHWs were working well. Several problems were isolated -- particularly in the system of supervision, in supplies and the recruitment of PBHWs -- which were preventing the program from achieving its full potential and effectiveness. Specific results of the survey are noted below.

(1) Interviews with District Family Planning Officers revealed several problems in the selection and recruitment of PBHWs. Less than half of the Officers interviewed were able to describe the criteria by which PBHWs are chosen (i.e., they should be local residents of the panchayat to which they are assigned, literate, and preferably female). Moreover, in recent years, the number of trained PBHWs has fallen short of the target set by the Project due to difficulties in recruiting sufficient numbers of workers.

(2) Although PBHWs are trained, during a seven week period of time, by a well-qualified team of instructors, the evaluation found that teaching content is left to the discretion of the instructors. In addition, the job description of PBHWs lacks specific guidelines as to the range of duties expected from such persons and the level of knowledge of family planning and health care that workers are required to have. As a result, the relationship between the training curriculum and job description is vague. More importantly, many PBHWs have trouble applying knowledge gained during the training course to the village situation. The survey indicated that a majority of PBHWs would like some form of refresher or in-service training.

(3) Although the PBHWs appeared to have a good understanding of their overall mission, they lacked specific knowledge in regard to birth control methods they were dispensing. For example, only about half of the PBHWs polled in the survey reported telling new pill acceptors to take one pill each day. And, less than one-third said they gave their clients instructions about what to do should they forget to take the pill.

(4) While survey data indicated that the PBHWs are visiting families approximately once a month -- as they are supposed to -- certain data gathered shows that their household coverage is not as extensive as it should be.

(5) The majority of community respondents visited by the PBHWs said such visits were usually "very regular" or "regular" and the majority of them found the advice and medicines and contraceptives useful. Yet, a total of twenty-two percent of respondents who had received contraceptive pills from the PBHWs said they were not useful. Thus, it appears that in some cases, PBHWs may be giving pills to women who do not wish to take them.

(6) In general, the chain of command and supervision system between PBHWs, Intermediate Supervisors, the Family Planning Officers, and the FP/MCH Central Office appeared to be working well.

(7) Record-keeping appeared to be a problem in many cases. The survey found that only twenty-eight percent of the sample had an up to date and complete Ward Register. Also, a number of PBHWs said they were experiencing difficulties in completing reports and pill acceptor cards.

(8) A major problem that surfaced was a lack of necessary supplies. There appeared to be a shortage of many items (i.e., pills, condoms). Moreover, in certain instances supplies on hand were in poor condition.

Recommendations.

(1) The responsibility for recruiting PBHWs should be transferred to the panchayat. PBHW vacancies should be widely publicized in the panchayat and new workers elected by a majority of panchayat members.

(2) A new operational manual for PBHWs should be developed, preferably through the use of field trials.

(3) More emphasis in the training programs should be on the proper instructions to be given to new pill acceptors.

(4) Some form of refresher training should be given to PBHWs and Intermediate Supervisors, either annually or once every two years. Moreover, the training of the Intermediate Supervisors should include instructions on record keeping, so that, where necessary, they can advise PBHWs on how to improve the quality of their records and reports.

(5) Since it appears impossible for PBHWs to visit all eligible couples in the panchayat each month, they should be instructed to visit all pill acceptors every month and other families at least once in every two months. In addition, to ensure that PBHWs visit all wards of the panchayat, the community should be encouraged to take part in the supervision of workers.

(6) Supervisors should operate on a rotating basis in order to help correct mistakes made by colleagues and also to prevent Intermediate Supervisors from signing the PBHWs diary for several months in advance.

(7) PBHWs should receive at least all the basic supplies they require for their work. The Evaluation Team also recommends that the range of medicines presently available be increased to enable them to provide a broader range of basic health care. And in all cases, supervisors should be instructed to deliver supplies from the District Office to their PBHWs.

(8) A small cell should be formed within the Service Division of FP/MCH who would be responsible for coordinating all aspects of the PBHW program.

SUMMARY EVALUATION OF TWO HEALTH AND FAMILY PLANNING PROJECTS: NEPAL

Problem and Overview. Nepal has one of the highest infant mortality rates in Asia, 152 per thousand. Although malaria, smallpox, and cholera are currently under control, diarrhea, dysentery, respiratory diseases, and measles continue to be the principal causes of high morbidity and mortality. Two USAID/N projects in health and family planning/maternal and child health: Integrated Health Services Project (367-0126) and Family Planning Project (367-0096), were designed to assist HMG in developing viable health and family planning service delivery systems.

Between 1976-1979, AID's total funding level of \$2.7 million for the HMG integrated community health project was an essential component in providing health services through the designated number of health posts. In regards to the Family Planning Project, the funding was \$10 million between 1967-79.

Purpose of the Project. Although the two projects are inter-related, there exists two different sets of objectives. For instance, the Integrated Community Health Services project was designed to allocate effectively the preventive and curative services through the distributional mechanism of Health Posts (533 as of 1979). Each Health Post would be staffed depending on the state of development, geographic area and population served. In addition, a health post committee, composed of representatives from the panchayats, was established to ensure the efficiency and increased community participation. As for the Family Planning/Maternal and Child Health Project, the objectives were designed to address the following problems: (1) strengthen the existing program by upgrading the skills and performance of program personnel; (2) develop through small-scale experiments a set of service delivery modules with a demonstrated capacity to recruit and retain a relatively high % of target couples; and (3) to increase community awareness of modest family planning methods.

Purpose and Methodology of the Evaluation. Since the Population/Family Planning project (PFP) and the Integrated Health Services project (IHS) were nearing completion, both culminating in FY 1979, USAID/N believed it useful to commission a summary evaluation. The review was to cover policy, management, and logistical concerns. Because the PFP project had been operational since FY 1967, the Evaluation Team was asked to concentrate on the last five- to six-year period. The goal of the study was to determine the basic lessons that can be applied to continuing efforts in health and population and family planning in Nepal. The Team's principal objective was to identify those areas where USAID/N assistance could strengthen the Nepali Government's efforts to improve the effectiveness of health and family planning services delivery, and related activities in the overall field of population. The Team did not evaluate the health, family planning, and population programs of the HMG but reviewed these programs to determine whether USAID/N, or another donor, could better assist HMG in improving operations.

The evaluation was carried out during February and March of 1980. The Team made field visits in Nepal, held interviews in Katmandu and in the field, and extensively reviewed the literature. A final evaluation report was published by the American Public Health Association (APHA) in July 1980.

Findings.

(1) For the most part the goals of the two USAID/N financed projects had been met at the time of the evaluation.

(2) There is a demographic crisis in Nepal. The growth rate, 2.6 percent annually, is at the highest point in Nepal's history and is still climbing. Marginal land is being farmed and yields are dropping. Economic growth, approximately three percent annually, is barely holding its own. By any standard, the health situation is poor: life expectancy short, infant mortality high, and malnutrition widespread.

(3) In the last ten to fifteen years, Nepal has developed a national policy to control population growth. The country also is determined to provide minimal basic health services to all through an integrated delivery system.

(4) Given the socio-political and cultural environment, development work is difficult and takes longer in Nepal than in most other developing countries.

(5) The health and family planning service delivery systems provide inadequate coverage and the quality of the services could be improved. However, the systems are expanding and reaching a steadily increasing proportion of the population. The number of family planning acceptors continues to rise. The demographic impact of the family planning program is minimal. The health status of the population has not improved significantly, according to the data gathered during the evaluation. Yet, these situations may reflect inadequate reporting, inadequate supplies, and inadequate management and staff skills and training.

(6) HMG is contributing substantial financial support to health and family planning programs. However, fewer funds than are required have been provided. The national expansion of health and family planning services to meet the country's requirements will place an almost intolerable financial burden on Nepal.

(7) The supply of contraceptives, except injectables, for the family planning program is more than adequate, but there is a continuing and chronic shortage of medicines for the health delivery and Maternal Child Health Care (MCH) systems.

(8) USAID/N, as well as other donors, have provided strong technical assistance to HMG health and family planning agencies. However, the service networks are technically weak and poorly managed, hampering efficient and effective service delivery. USAID/N health and family planning staff are effective, but appear to be too small to adequately supervise the contract teams or to monitor program surveillance.

(9) The USAID/N program to train and develop service and management staff has been instrumental in developing staff capability for the health and family planning service delivery programs. However, both the number of staff trained and the number of skills acquired are inadequate and do not meet the program's requirements.

(10) Innovative, non-government service delivery modes (for example, AID/W-financed Commercial Retail Sales Project -- a contraceptive distribution program) have made a unique contribution to the Nepal family planning program.

(11) Although the Nepal Government has adopted a national policy to control population growth, it does not, the Evaluation Team believes, fully recognize the serious consequences of rapid increases in population.

Recommendations.

(1) USAID/N should continue to provide support to HMG's health and family planning/population activities, and should coordinate its assistance with other donors.

(2) Population concerns should be addressed in all USAID/N-supported development projects.

(3) USAID/N should continue to encourage the HMG to establish the Population Commission (POPCOM) as a fully operational agency. Support should also be continued in regard to HMG's efforts in health and family planning through the technical/administrative structures.

(4) More funding should be provided by USAID/N, along with technical assistance, to support Nepal's health, family planning, and population programs. Such support should continue for another ten to fifteen years.

(5) The HMG should be encouraged to increase health and family planning service availability, to improve the quality of the service delivered, to strengthen family planning motivation, to include more women in the service delivery system, and to increase its effort to retain family planning acceptors.

(6) USAID/N should try to ensure that increased local currency support will be available for health and family planning service programs, and should encourage other donors to do the same.

(7) More medicines should be made available to the programs.

(8) More technical assistance to help correct service delivery systems should be contracted for by USAID/N.

(9) USAID/N should continue to support participant training for health and family planning staff development.

(10) The HMG should be encouraged to allow non-government groups to enter the health and family planning service delivery fields.

U.S. ASSISTANCE TO THE FAMILY PLANNING AND
POPULATION PROGRAM IN BANGLADESH: 1972-1980

Problem and Overview. Bangladesh faces a demographic crisis of greater magnitude than nearly any other country today. It is one of the world's poorest yet most populous nations with 90 million people crowded into an area only the size of Wisconsin. Among this largely malnourished and illiterate population, 90 percent is rural, 50 percent of rural dwellers are landless, and landlessness is increasing. Demand for labor has risen by only 1.2 percent per annum in recent years while the population has been growing at 2.8 percent. Under Bangladesh's president Ziaur Rahman, and with assistance of AID and other foreign donors, commitment to lowering fertility has been strong. Nevertheless, investments have as yet failed to have the desired impact in lowering the growth rate. Despite indications of desire of individual Bangladeshis to limit their family size, the government's family planning program has been relatively ineffective use of less than 13 percent. Yet, unless rapid population growth can be brought under control all other development efforts to benefit Bangladesh's very poor majority will have been in vain.

U.S. Assistance. Since 1972 U.S. population assistance to Bangladesh has totaled some \$48 million in the form of relief and rehabilitation funds, two bilateral projects, and intermediary projects centrally-funded by AID/Washington. The stated purpose of AID's bilateral project of FY 1973-75 was "to help the BDG (Bangladesh government) make available basic contraceptives to as many eligible couples as possible and to institutionalize family planning delivery services on a national basis." Its longer-range goal was expressed as "(1) to slow population growth by reducing fertility rates to replacement level with low birth and death rates in 30 years, or as soon thereafter as possible, and (2) to reduce the annual population growth rate from an estimated 3 percent to 2.8 percent over the (BDG's) five-year plan period ending June 1978." The stated purpose of the bilateral project of FY 1976-80 has been "to develop a functioning national institutional structure providing family planning services and population/family planning information and education on a continuing basis to the people of Bangladesh." This project had a less specific goal, namely, "to reduce the rate of natural population growth as a critical factor in social and economic development."

Purpose of the Present Evaluation. Despite several internal evaluations and evaluative studies focused on specific components of the program, no comprehensive, external evaluation had been undertaken as of 1980 when plans were being made for three additional years of AID support at a cost of about \$65 million. This evaluation was therefore scheduled with the following purposes: (1) to assess AID's performance to date in helping to reduce fertility in Bangladesh, (2) to make recommendations for improved effectiveness in proposed new family planning and population activities in Bangladesh, and (3) to make recommendations for improved effectiveness of AID family planning assistance elsewhere. The evaluation was timed so that its findings and recommendations would be available prior to the review and finalization of USAID/Dacca's new project paper.

AID Accomplishments. AID has been the principal donor of contraceptive supplies and of family planning training for Bangladeshis, which began under the first bilateral project and without which the BDG would not have been able to begin nationwide delivery of family planning services. At the same time, through its centrally-funded intermediary organizations, AID succeeded in launching an experimental community-based distribution project, research on the effectiveness of various contraceptives under Bangladeshi conditions, and a commercial contraceptive sales network that has made pills and condoms readily available throughout the country. Under the second project, AID has continued to be the major provider of contraceptive supplies while providing for the nationwide introduction of voluntary sterilization services and the launching of additional private-sector community-based distribution projects. Also during this time, USAID/Dacca initiated an operations research program and an innovative project to give Bangladesh's family planning field supervisors practical training in Indonesia.

Effectiveness. AID has been an effective supporter of the Bangladesh program even while it has been only partially successful in meeting its stated project objectives. A "national institutional structure providing family planning services and population/family planning information and education on a continuing basis" has been established, but it has yet to begin to function effectively. Fieldworkers are not well trained nor highly motivated. Organizational issues stemming from the latest attempt to integrate the family planning and health systems will have to be resolved and fieldworker training and supervision vastly improved before either AID's project goals or those of the BDG will be met. Numerous private voluntary organizations, several supported by AID, have proven much more effective although among smaller target populations. AID is praised by Bangladeshis and other donors for USAID/Dacca's competent and cooperative population officers, provision of contraceptives, medical kits, and participant training opportunities, and the ability to rapidly make available high-quality short-term consultants. USAID/Dacca and AID/Washington's Office of Population have played crucial complementary roles in providing this support. AID is faulted for providing only the Norinyl brand of oral contraceptives and for impeding Bangladesh's attempts to meet the active demand for menstrual regulation services which often serve as a means of introducing more effective contraception.

Major Recommendations for Immediate Consideration.

(1) The USAID/Dacca plan to revise its portfolio to give population planning first priority should be vigorously supported by AID/Washington.

(2) In order to effectively implement the greatly expanded measures proposed for its new project, organizational and staffing changes should be made within USAID/Dacca. Ideally, an Office of Population Planning should be established headed by an assistant mission director. Alternatively, the present Population, Health, and Women's Division should become a Population Division and undertake only activities that directly support the mission priority on reducing population growth.

(3) Conditions precedent or covenants for the project agreement for the proposed new project should include specification of minimal criteria for the BDG sterilization surveillance agreement. Additional conditions or covenants are also suggested.

REPORT ON THE FIRST EVALUATION OF PANAY UNIFIED
SERVICES FOR HEALTH (PUSH) PROJECT: THE PHILIPPINES

Problem and Overview. Although the island of Panay is a food exporting area, malnutrition is a serious problem. Eighty-five percent of the children between the ages of zero and six are malnourished. The island also suffers from a very high tuberculosis rate (284/100,000) and pneumonia rate (225/100,000) making these two diseases the number one and two causes, respectively, of morbidity and mortality. In addition, poor water supplies and sanitation facilities have made gastroenteritis and parasitism the number three and four causes, respectively, of morbidity and an undocumented secondary cause in the mortality statistics. Health and nutrition problems of the island are further complicated by the high birth rate thus increasing the burden on meager family incomes. The Panay Unified Services for Health (PUSH) is an attempt of the Philippine Government to demonstrate an effective delivery system for primary health care services, particularly aimed at depressed barangays (villages) as yet not reached by conventional health care systems.

Purpose and Goal of the Project. The goal of PUSH is to improve the health status of the residents of 600 depressed barangays in Panay. The purpose of the project is to strengthen the regional health care system by delivering integrated services to the barangay level. In achieving this project purpose, the following outputs were planned:

- Training, equipping and deploying barangay health workers;
- Constructing environmental sanitation facilities;
- Organizing village drugstores;
- Supplying and equipping rural health units and Provincial Health Laboratories; and
- Establishing nutrition outreach services and family planning supply points and services.

Funding from the Agency for International Development (AID) is for five years and consists of a loan of \$5.4 million and a grant of \$0.316 million. The Philippine Government counterpart amounts to three million dollars. Close to sixty percent of the financial inputs were designed to support the construction of household water, and toilet and drainage facilities.

Purpose and Methodology of the Evaluation. The purpose of the evaluation was to measure inputs and outputs against planned targets and to assess the manner in which inputs were provided and outputs were generated. In assessing implementation, the evaluation tried to identify the conditions that affected the pace of project implementation to determine whether or not implementation schedules were realistic and/or whether they need to be revised for further activities. By examining the validity of implementation assumptions the evaluation sought to identify important deficiencies in effectiveness and efficiency. Personal interviews, site visitations and records review were the principal methods used.

Findings. The Barangay Health Workers (BHW), whose ability to perform assigned functions is considered the most critical indicator of the effectiveness of the project implementation systems and procedures, were rated by the evaluation team as having performed satisfactorily on the whole. While the general findings do not warrant a drastic redesign of the implementation strategy, certain weaknesses were noted, which, if corrected, can improve both the pace and quality of project implementation. The major findings of the evaluation include the following:

(1) The participation of the Ministry of Health in the project was not as strong as envisioned. This was conceivably due to a lack of proprietary interest in the project and resulted in such problems as poor participation in the BHW recruitment and selection process, weak supervision of BHW activities and nonconformity with the prescribed reporting system.

(2) The BHWs were found to be concentrating most of their efforts in the implementation of the environmental sanitation component of the project, at the expense of the delivery of health, nutrition and family planning services. This occurred because BHW basic training had concentrated on the Environmental Sanitation Infrastructure (ESI): knowledge and skills in health, nutrition, and family planning were found to be deficient. Although the project design called for the retraining of BHWs every six months, no such retraining had been initiated at the time of the evaluation.

(3) Municipal and provincial level support to BHW operations were identified to be weak. BHW claims of poor administrative support were mainly in the form of delayed salaries and slow delivery of materials for ESI projects. The evaluation team found that this was due to the strict adherence by provincial and municipal treasurers to the Government of Philippine's accounting and auditing procedures, and that the administration of PUSH project funds was considered an extra burden over and above their regular duties. Unlike other vertical programs, the project does not pay honoraria to treasurers and auditors. There was no evidence, however, that poor administrative support affected the morale of BHWs.

(4) Coordination of interagency activities at the regional, provincial and municipal levels needed to be strengthened. While participation at the regional level was evident through regular attendance at executive committee meetings, such was not reflected at the field operations level.

(5) BHWs claimed that participation of barangay residents in the implementation of barangay activities was difficult to achieve. They admitted the lack of the necessary psychological and emotional priming to interact with the village people. Additionally, construction materials for ESI projects are usually delivered when the people are busy on their farms, thus posing difficulties in enlisting participant labor.

Recommendations. Recommendations outlined by the team are detailed below:

(1) A retraining course addressing the identified knowledge and skills deficiencies of BHWs ought to be immediately designed and implemented. The basic training should also be restructured to effect a balance between ESI and health, nutrition and family planning services.

(2) The project staff ought to formulate a plan for further strengthening the understanding by provincial and municipal level implementors of the project concept and goals. This can be in the form of orientation sessions or participation in BHW training activities.

(3) The project should initiate a dialogue with the Regional Treasurer to explore mechanisms that will facilitate payment of BHW salaries and the procurement and delivery of ESI construction commodities.

(4) To enable the project to enlist more active participation of barangay residents in community projects, community mobilization capabilities of BHWs need to be reinforced. Likewise, the project must allow greater flexibility in the scheduling of ESI projects' implementation, starting them when there is slack demand for farm labor.

(5) A deeper involvement in project operations by Ministry of Health (MOH) personnel, particularly among Rural Health Unit physicians and Provincial Health Officers, is needed. As these people are known to operate on the basis of higher office directives, it is believed that the designation of a PUSH project coordinator at the Regional Health Office and of a MOH central office representative to the Project Executive Committee can produce positive results.

REPORT ON ALTERNATIVE NUTRITION/HEALTH INTERVENTION
EFFECTS AND COST-EFFECTIVENESS: THE PHILIPPINES

Problems and Overview. A better understanding of the relative effects of alternative nutrition and health interventions and their costs is urgently needed. To date, the development of U.S. Agency for International Development (AID) projects and programs designed to reduce infant and preschool morbidity and mortality has not, for the most part, been based on impact and cost-effectiveness data. This AID-funded study, conducted between 1975 and 1979, by the Nutrition Center of the Philippines, the National Nutrition Council of the Philippines, the University of Santo Tomas, and the Virginia Polytechnic Institute and State University, is an important contribution to the nutrition literature and has implications for AID nutrition policy.

Purpose and Methodology of the Evaluation. Although many studies have made attempts to estimate the benefits of nutrition and health interventions, few have concentrated on the cost-effectiveness of nutrition and health delivery systems. This fact led to the design and implementation of the study.

The purpose of this research was to assess the cost-effectiveness of four major health and nutrition interventions, including all of their possible combinations, along with a control group. The primary interventions studied include: (1) nutrition and health education for the mother, (2) supplementary food for the child, (3) sanitation, and (4) immunizations. The interventions, combinations of interventions, and the control -- totalling nine interventions overall -- were randomly allocated to eighteen rural villages in the Philippines with each intervention administered in two different villages for replication.

The research design included monthly administration of interventions in each household and bimonthly collection of anthropometric and morbidity-mortality data on infants and the family. This data was used to measure intervention impacts. (Impact was measured by assessing children's growth. The indicator selected was a child's percent of standard body weight for his age.) There were three phases of data analysis and data collection. They were the: (a) baseline stage, where extensive data were collected on the subject infant and the family (prior to the beginning of interventions at age five months); (b) intervention data analysis (age five months through age seventeen months); and (c) follow-up data analysis (quarterly collection of data for a twelve month period following termination of interventions). Data on 544 subjects were gathered over the study's three-year period.

A nutrition and health education component was common to all interventions undertaken at the experimental villages. The supplementary food intervention consisted of a food packet, Nutripak, that was developed for the Philippine Nutrition Program. The sanitation intervention consisted of providing a safe drinking water supply for the subject and introducing water-sealed toilets in the target households when they did not already exist. In addition, for

the sanitation intervention, more detailed instructions were given on the importance of maintaining cleanliness in and around the home than were provided through the education intervention that was administered to all experimental groups. The immunization intervention consisted of PPD, BOG, DPT₁, DPT₂, DPT₃, and measles, as well as additional instruction for the mother concerning disease prevention and treatment.

Findings. Although many factors affect a child's growth and health, the results of this assessment indicate that certain socioeconomic variables play an extremely important role, especially in regard to a child's growth rate. Some of the most important of these variables suggest long-term solutions to the problem of improving the children's nutrition status. For example, the analysis suggests that the level of a the mother's education is an extremely important variable in predicting a child's nutritional status.

In general, the study found that:

- ° Low-cost nutrition interventions do exist which are effective over the long-term;
- ° Such interventions are not necessarily dependent on the provision of supplemental food commodities; and
- ° The effectiveness of various interventions depends greatly on the age of the infant or preschooler being studied.

More specific results of the alternative interventions analyzed are as follows:

(1) Supplementary Feeding. Supplementary feeding resulted in the highest weight gain during the intervention period for infants younger than fifteen months, but the effects diminished sharply during the follow-up period when food supplements were no longer given. Supplementary feeding had the greatest impact on higher status families. This suggests that the low-income families used the food as a substitute for food normally given the youngsters whereas the higher income families used it as a supplement to what was normally given. Supplementary feeding with education was not cost-effective because of relatively low weight gains and high costs.

(2) Education with Immunization. This intervention seemed to have little or no effect until approximately fifteen months and then invariably seemed to result in a higher body-weight-for-age than any other of the interventions. The results were even more dramatic in the lower socioeconomic families. Immunization always surfaced as one of the best interventions and it was most cost-effective for the age group from about thirteen to twenty months.

(3) Education. The education intervention had a significant effect, particularly when reinforced. Moreover it was quite cost-effective, leading all other interventions until about age thirteen months. The effect tended to diminish during the follow-up period, and was more significant among families with lower socioeconomic status.

(4) Sanitation. The effects of sanitation were difficult to evaluate; in fact, the sanitation intervention correlated with weight loss at certain ages. Yet from age twenty months on, education with sanitation was most cost-effective.

It is important to note that the study analyzed the cost-effectiveness of the interventions, but pointed out that the interventions may have had effects other than weight gain in the children, such as improved child care from the mother. The overall results may thus be understated, since only one dependant variable (weight gain) was tested. In order to be cost-effective, supplementary feeding must yield very high weight gains. Moreover, different combinations of interventions had different effects at different ages, as well as different cost-effectiveness ratios. Thus, it is necessary to specify the age of the children when trying to argue that one intervention or combination of interventions is "best."

IMPACT OF AGE/WEIGHT CHARTS MAINTAINED IN THE HOME AND NUTRITION EDUCATION
ON NUTRITIONAL STATUS OF INFANTS AND PRE-SCHOOL CHILDREN: THAILAND

Problem and Overview. Thailand is a food-exporting nation as well as the second largest rice exporter in the world. Nevertheless, a sampling of 250,000 infants and pre-school children undertaken in February, 1980 indicated that fifty-seven percent of those weighed were malnourished. (The age/weight measurements used in the survey had been adjusted for Thailand.) It is interesting to note that eastern and central Thailand had lower malnutrition rates than the North and Northeast, but in no region was the situation considered acceptable. Moreover, malnutrition exacerbates other health problems -- for example diarrhea and dehydration -- particularly in rural areas.

In recent years, the Thai Government, through its Ministry of Public Health, has initiated a number of programs directed towards infant and pre-school malnutrition. These include: supplemental feeding programs, child nutrition centers, nutrition education for mothers, distribution of iodized salts in goitre-endemic areas, promotion of breast feeding, training in nutrition for village health volunteers (VHV) and village health communicators (VHC), and limited nutrition surveillance. A comparison of 1977 malnutrition data with 1980 age/weight data indicates, however, that little progress has been made in regard to improving the nutritional status of Thailand's young children.

Purpose and Methodology of the Study. The purpose of the six-month study was twofold: first, to explore the reasons behind the lack of effectiveness of preventive nutritional interventions already initiated by the Thai Government; and secondly, to suggest methods for addressing the continuing problems of malnutrition. In particular, the study examined whether:

- ° The services of village health volunteers and village health communicators could be used to effect measurable changes in nutritional status in rural communities.
- ° Village health volunteers and village health communicators could maintain a program of nutrition surveillance utilizing growth charts (age/weight) which are maintained in the home.
- ° Significant changes in nutritional status can be accomplished in remote rural villages without utilizing supplemental foods supplied from an outside source.
- ° Nutrition education and increased nutritional awareness will serve to reduce the incidence of malnutrition in remote rural villages.
- ° Nutritional status of young children will improve in villages where the parents are motivated to use the growth chart to record the weight of children together with nutrition education to promote feeding more food to infants and pre-school children.

The study was conducted under the supervision of the Nutrition Division of Thailand's Ministry of Public Health. The Nutrition Division worked in cooperation with Provincial Public Health Offices in Maha Sarakham and Suphan Duri. A grant of \$6,250 from the Agency for International Development (USAID/Thailand) provided the funding for the project. Seven villages were selected for study: two control and five experimental. The operational field research was scheduled for the period October, 1980 through March, 1981 with monthly weighings being done in all experimental areas and one weighing at the beginning of the study and one weighing at the end of the study in control areas. All of the parents of participating children received growth charts in the experimental areas and none were distributed in the control areas. It is also important to note that no supplemental foods were made available to any of the villages during the course of the study.

Findings. At the end of the six-month period, the control areas showed a five percent increase in infants and children with a normal nutrition status; however, ten experimental areas had a fifteen percent increase in this category. The most significant improvements occurred in areas where there were infants with second and third degree malnutrition and no change in third degree -- that is children with body weights seventy-five percent and less below normal weight for their height. In control areas there was a twenty percent decrease in second degree malnutrition and no change in third degree. In experimental areas, second degree malnutrition was reduced by forty-four percent and third degree was eliminated in the six-month period.

Based on the results from the operational research, the following conclusions were set forth:

(1) Nutritional surveillance and nutrition education can be conducted by Village Health Volunteers and Village Health Communicators.

(2) Nutritional surveillance by parents is an effective tool in identifying nutritional problems and seems to lead to changes in feeding habits -- particularly in the short term.

(3) Significant changes in nutritional status can be effected without the introduction of supplementary food from an outside source in remote rural areas.

(4) Nutrition education, particularly when coupled with nutrition surveillance, is an important component in changing nutritional status in rural areas.

(5) The way service is delivered is a critical factor in predicting the effectiveness of an intervention.

Recommendations.

(1) Extending experimental research for six months so that seasonal variations could be identified.

(2) Conducting research on dietary practices in families with normal weight children.

(3) Undertaking research to determine what parents did once they found that their children were malnourished.

(4) Conducting nutritional surveillance on a district wide level in order to factor out possible bias in village selection and to test the feasibility of launching a broader effort.

(5) Making available simple curative care at the home of the village health communicator, and conducting a deworming program to maximize the impact of the nutritional intervention.

(6) Coordinating the various sections of the Provincial Health Office to maximize the impact on nutrition.

ASSESSMENT OF THE EDUCATIONAL AND HEALTH IMPACTS OF
THE MID DAY MEAL PROGRAM: INDIA

Problem and Overview. Since independence, India has made remarkable progress toward the achievement of universal primary school education. At the time of independence, less than half the children of primary school age were enrolled in school. By the mid 1970s, the proportion had risen to over eighty percent. Several states -- such as Assam, Kerala, Manipur, and Meghalaya -- had already achieved universal primary school enrollment. Yet, despite this progress, major problems remain. The enrollment rate of girls continues to lag substantially behind that of boys. Moreover, the enrollment rates among scheduled castes and tribes continue to be significantly less than those of more economically and socially advantaged groups.

In order to achieve this objective of universal primary education, the Government of India (GOI) has focused its attention on overcoming the economic, social, and attitudinal barriers preventing an increase in the enrollment of girls and children from scheduled castes and tribes. The Mid Day Meal Program initiated in the 1960s is one of several programs designed to increase such enrollment. Other programs address teacher training, curriculum, learning materials and educational cost and financing.

Purpose of the Evaluation. The purpose of this review of the Mid Day Meal Program is twofold: first, to find out how the program has benefitted children of primary school age; and secondly, to determine what options in terms of further evaluation research might be conducted to isolate and measure the impacts of the program more definitively. Conducted in 1981, the evaluation was undertaken at the request of the U.S. Agency for International Development (USAID) and the GOI.

In order to evaluate the impact of the Program, the assumptions upon which the Program is based were examined. These include:

- The Mid Day Meal program increases significantly the school enrollment or participation rate of children from disadvantaged communities.
- The Mid Day Meal program increases significantly the school attendance rate of children from disadvantaged communities.
- The Mid Day Meal program reduces significantly the dropout and repetition rates of children from disadvantaged communities.
- The Mid Day Meal program increases significantly the academic performance or learning ability of children from disadvantaged communities.
- The Mid Day Meal program increases significantly the nutritional and health status of children from disadvantaged communities.
- The Mid Day Meal program enhances the efficiency and cost-effectiveness of primary education.

Since the evaluation was to examine the quantitative impacts of the Program, the review relied heavily on five quantitative studies of the Program undertaken between 1969 and the late 1970s.

Findings.

(1) Assumption #1: The Program Increases the School Enrollment Rate. The review found that no previous quantitative study had analyzed the relationship between the Program and school enrollment rates. This oversight results from the sample designs used in each of the studies. By focusing on children who are already enrolled in school it is virtually impossible to ascertain how the school enrollment rate is affected by such a program. Thus, the evaluation was unable to draw any conclusions regarding this Program assumption.

(2) Assumption #2: The Program Increases the School Attendance Rate. All of the five studies examined had analyzed the impact of the Program on school attendance. In reviewing the findings of these past studies, the current review noted that the evidence from the five studies lend little support for a strong relationship between increasing school attendance and the presence of the school feeding program.

(3) Assumption #3: The Program Reduces the Drop-out and Repetition Rates. Since three of the five studies failed to analyze the drop-out rate, and there were methodological problems in the two which did, the reviewer indicated that there is insufficient information to make any reasonable judgement about the feeding program's impact on the probability a child will continue in school and advance to the next higher grade level.

(4) Assumption #4: The Program Improves Academic Performance. The relationship between the Mid Day Feeding Program and academic performance was explored in two of the five studies. In general, there was no significant difference between children in schools with the feeding program and those without it. In one study, differences in final examination failure rates were compared. Again, no significant difference between the two types of schools was found.

(5) Assumption #5: The Program Improves Health Status. The connection between improved health status and the school feeding program is a relationship most often studied. Out of the five studies reviewed by the evaluator, only one study did not explore this relationship. Health status was evaluated in these studies by anthropometric measures such as weight, height, chest circumference, upper arm circumference, skinfold at the biceps, and skinfold at the subscapula. In general, these studies found little relationship between participation in the feeding program and these anthropometric measures. Yet, the evaluator states that this finding is not surprising since it is not clear whether such measurements are appropriate for determining health status. The review notes that while such measures are good predictors of mortality among infants and very young children, they are not good predictors of mortality among children of primary school age. A better measurement, the reviewer suggests, is the frequency of occurrence of diseases and sicknesses.

(6) Assumption #6: The Program Enhances Efficiency and Cost-Effectiveness. The review found that evidence on the feeding program's impacts on measures of school efficiency such as improved attendance, reduced attrition, and better academic performance is meager and inconclusive. At best, it suggests that the Program has had a minimal impact on its principal objectives, which if compared to the costs of the Program, represents an extremely ineffective and inefficient use of scarce resources.

Recommendations. The lack of rigorous systematic evaluations of the school feeding program make it difficult to draw any meaningful conclusions about the Program's impact. Thus, the evaluator notes, it would seem reasonable to propose a large-scale evaluation to fill this void. However, the assessment highlights the importance of remembering that the data to adequately identify the impacts are, for the most part, unavailable. Moreover, the feeding program is expensive relative to India's per student investment in primary education.

With these caveats in mind, the review suggests that USAID and the GOI consider three evaluation options. These are: (1) a retrospective analysis of district level or block level educational data to examine how school enrollment rates have changed over the last two decades as a result of the feeding program and changes in educational and economic conditions; (2) a longitudinal analysis of the recently started feeding program in Maharashtra; and (3) a cross-sectional analysis of the Program in three states.

EVALUATION OF WOMEN IN FOOD FOR WORK PROJECTS: BANGLADESH

Overview. Food for Work Projects (FFW) have been in existence in Bangladesh since 1975. These projects, sponsored by the World Food Program and by the U.S. Agency for International Development (USAID), distribute wheat to workers who participate in the construction of roads, embankments, canals and tanks. While women have participated in FFW projects since the first 1975-1976 work season, their participation has been limited.

In late 1979, however, there was an increase in interest focused on the issue of women in FFW projects in particular, and in women's affairs in Bangladesh in general. An Advisory Committee on women's participation in FFW was convened. This committee made a number of recommendations including the idea that a different wage rate be established for women workers. Because of difficulties in making separate payments to women workers on the same worksites as men, this differential wage rate was implemented by providing separate work projects for women. Separate work projects for women have been approved by the Ministry of Relief and Rehabilitation of the Government of Bangladesh for four work seasons. They are monitored by the World Food Program and by CARE, which monitors USAID FFW.

While the differential wage rate appears to have been beneficial, reports from the field have been fairly negative regarding the actual implementation of these women's projects. Problems of implementation have been attributed to such factors as the physical difficulties of earthmoving work, the reluctance of rural women to accept employment which involves public exposure, and the lack of interest on the part of local officials in women's projects.

Purpose and Methodology of the Evaluation. Since there had never been a comprehensive evaluation of the participation of women in separate FFW women's projects nor an evaluation of women in USAID funded, CARE monitored FFW projects, a study was commissioned in 1981 by USAID to evaluate and explore the entire issue of women's participation in Food for Work. The evaluation had three basic goals: (1) to gather more information about the women currently employed on FFW projects and the quality of life for these women and their families; (2) to study the current conditions at women's FFW projects and the problems associated with the implementation of such projects; and (3) to assess potential employment activities in addition to earthmoving for women participants in FFW. During the implementation of the evaluation, the Evaluation Team developed a fourth goal -- to contribute to the process of conducting research and evaluation in Bangladesh.

A research methodology using a structured, fixed-choice interview form, medium sized sample, and computer data processing was chosen for the project. The interview form was developed through four Bangla versions which were pre-tested with a total of fifty-one women. In total, 355 women were interviewed by the Evaluation Team. These women were working at eleven earthmoving projects, two cottage industry work centers and one reforestation project. (Although the study was supposed to focus exclusively on women working in CARE FFW projects, the Team decided to also study women working at several other types of projects for comparative purposes -- for example, a reforestation project funded by the Rangpur Dinajpur Rehabilitation Service (RDRS).)

Findings.

(1) Less than ten percent of the women in FFW are literate. Women working at the project are very poor, their families are the rural landless, and they encounter frequent food scarcity. They work in FFW projects because they need food and they use most of their wheat earnings for their own household consumption. The overwhelming evidence from this study is that women's FFW projects are reaching the current target group -- extremely poor women who need employment to feed themselves and their families.

(2) Currently married women working on FFW projects have a relatively high rate of contraceptive use of over twenty-six percent.

(3) Sixty percent of the women are currently not married, and over fifty percent of the women workers are the highest income earners in their families. Women's FFW projects are an important source of earnings for women who are supporting their families without a male head of household.

(4) Since very few of the women understand the payment formula, there is an underpayment rate of at least ten percent.

(5) Interviewing project officials proved to be extremely difficult. In many cases their responses were inconsistent and evasive, and their estimates of worker attendance were considerably inflated.

(6) Women involved in FFW, especially those doing seasonal earthmoving work, seek a variety of other forms of employment. The most common source of employment is cleaning and other outdoor field work. Over fifty percent of the women interviewed reported doing this type of work, which is similar to earthmoving in that it involves public exposure outside the confines of the household. Adhering to the traditional norms of behavior is a luxury for these women which economic pressures do not allow.

(7) Other income generated activities include poultry and livestock raising, vegetable gardening, cottage industries and handicrafts. However, one barrier to successful income generating projects in Bangladesh has been women's lack of access to the marketplace, which currently is dominated by men. Preliminary data indicates that women might be interested in markets specifically designed for women's use.

Recommendations.

(1) Income generating projects such as gardening, poultry and livestock raising, cottage industries and the like are not recommended as potential Food for Work projects. Projects such as these have an important role in relief programs for particularly disadvantaged groups such as refugees and minorities. In general, however, income generating projects should be designed to encourage self-sufficiency in the participants. The introduction of a wheat payment in these projects may reduce the motivation to achieve self-sufficiency.

(2) Reforestation, village sanitation and earthmoving projects are recommended as future activities for FFW programs. Women workers are interested in year-round, non-seasonal employment in these types of projects. There is evidence that projects of this nature would have little difficulty attracting women workers if the payment rate were adequate and equitable.

PL 480 TITLE II: A STUDY OF THE IMPACT OF
A FOOD ASSISTANCE PROGRAM IN THE PHILIPPINES

The Problem: Malnutrition in the Philippines. Although malnutrition in the Philippines has decreased in the last few decades, it remains a serious problem requiring sustained attention and resources. The relatively high prevalence of malnutrition affecting pre-school children is a useful indicator of the problem. As of 1978, only one-third of children under six years were normal. Among one year olds, 38 percent were moderately or severely malnourished and only 20 percent were normal.

U.S. Assistance. The PL 480 program was initiated in 1954 to assist the Philippine government (GOP) in combatting malnutrition. Under Title II, four major sub-programs have been established, each with distinct objectives and each implemented by separate GOP and U.S. private voluntary agencies. These programs are: (1) Maternal and Child Health (MCH); (2) Day Care; (3) School Feeding; and (4) Food for Work (FFW). Together, the MCH, Day Care, and School Feeding programs constitute approximately 98.5 percent of the total number of Title II beneficiaries. Three other programs -- Other Child Feeding, Adult Feeding, and Snack Food -- serve the remaining beneficiaries. The Title II program is implemented by the Cooperative for American Relief Everywhere (CARE) and by Catholic Relief Services (CRS). The CRS MCH program is the largest program by beneficiary level. From 1975 to 1977, beneficiaries averaged about 11 million per year and U.S. government (USG) costs averaged \$17.1 million -- 73 percent of total program costs. From 1978 to 1980, beneficiaries averaged about 21 million and USG costs \$26.3 million, about 58 percent of total costs. The proportion of USG costs has been declining regularly since 1976 and was scheduled at 45 percent for FY 81.

Evaluation Purpose and Methodology. The purpose of the evaluation was: (1) to assess the nutritional impact of the Title II program on beneficiaries; (2) to determine cost-effectiveness of the components of the Title II program; (3) to compare actual impact with the stated (and implied) goals of the GOP, USG, and the voluntary agencies; and (4) to produce information which could assist in enhancing the effectiveness of the Title II program. Findings and conclusions presented here are based upon site visits, interviews, and analyses of primary weight-for-age data collected and analyzed by the team for each of the three major programs.

AID Effectiveness. MCH and Day Care are effective in combatting the highest priority malnutrition problem in the Philippines. Thus, U.S. assistance to these programs represents a sound use of AID resources. By contrast, School Feeding addresses a lower priority malnutrition problem and does so less effectively than the MCH and Day Care programs. As a consequence, U.S. assistance to this program represents a less effective AID investment.

Reaching the Most Nutritionally Vulnerable. MCH and Day Care are reaching the most nutritionally vulnerable age group -- children under six years -- a group which has been correctly identified by the GOP as the highest priority age group for all nutrition programs. School Feeding, on the other hand, is reaching a less nutritionally at-risk group -- school children 7 to 14 years -- a group correctly designated by the GOP as a lower priority.

Targeting to the Moderately and Severely Malnourished. MCH and Day Care are reaching very high percentages of moderately and severely malnourished children within the 0 to 6 age group. By comparison, the School Feeding program is reaching substantially lower percentages of moderately and severely malnourished children than MCH and Day Care.

Nutritional Impact. MCH and Day Care beneficiaries appear to have experienced considerable weight gain -- the commonly used indicator of nutritional impact. The amount of weight gained by MCH and Day Care participants compares extremely favorably with the best known results achieved in other supplementary feeding programs worldwide. Weight gain by School Feeding participants, even relying on the most favorable data available, is marginal at best. The nutritional impact of the U.S.-assisted School Feeding program does not vary substantially from the impact of the GOP-supported school feeding programs which use local foods and resources.

Cost-Effectiveness. MCH is the most cost-effective program, with the costs of the rural Day Care program only slightly higher. The School Feeding program is least cost-effective.

Factors Linked to Nutritional Impact. Participants having the lowest nutritional status show the most improvement. An important finding, therefore, is not merely that MCH and Day Care are effective, but that there is a differential effectiveness which favors the most malnourished. The same program investment yields a greater return -- higher nutritional impact -- when focused on the most malnourished.

Food for Work. The Food for Work program appears to have provided positive and equitable community benefits but does not appear to make a substantial or sustained contribution to the material well-being of individual participant households. Greater amounts of commodities on a more regular basis would be needed to result in a measurable contribution to household income.

Recommended Priorities for Future Investment.

(1) The MCH and Day Care programs should be accorded the highest priority by AID as long as the Title II program exists in the Philippines. No reductions should be made in MCH and Day Care in the absence of all other possible reductions in the other Philippine Title II programs.

(2) The School Feeding program should be phased over to the GOP. While the program continues it should be accorded third priority but on the conditions that: (1) all normal children are estimated from the program; and (2) the plan to target the program to the moderately and severely malnourished is implemented immediately.

(3) The Food for Work program should be accorded fourth priority for immediate purposes but gradually phased out.

(4) Other Child Feeding and Adult Feeding, lacking integrated developmental objectives, should be accorded fifth priority but on strictly humanitarian grounds.

(5) The Snack Food program, serving children who are not malnourished and who are economically better-off, should be accorded lowest priority, the program's revenue-generating potential notwithstanding.

AN EVALUATION OF THE MANPOWER DEVELOPMENT TRAINING PROGRAM: NEPAL

Problem and Overview. Nepal suffers from a pattern that is common in many developing countries: a critical shortage of technical manpower on the one hand, and a surplus of liberal arts graduates on the other. The country lacks an effective core of sectoral planners, administrators, and managers. This problem is especially important in light of the effort to decentralize administration and the proliferation of development projects country wide. Uncoordinated and ineffective implementation of programs and projects, highly educated people who are unemployed, and a general shortage of trained personnel to carry out the government's policies are traced to poor or nonexistent manpower policy.

Purpose of the Project. The agreement for the Manpower Development Training project (MDT, Project No. 367-0224) was signed in FY 1974 to assist the Government of Nepal (HMG) to improve its capability to implement development objectives. The final input delivery was originally scheduled for FY 1978, but the project was extended to FY 1981 and increased from \$478,000 to \$622,000 to allow for the training of a few more participants. The project was administered in Nepal through the Human Resources Division of the National Planning Commission (NPC). The project purposes were: (1) to upgrade the skills and knowledge of persons serving in management positions important to development, or expected to serve in such posts, in Nepal's public, semi-public, and private institutions; (2) to meet shortages of trained manpower in fields essential to successful development administration; and (3) to create within HMG the capacity to play an increasingly more responsible role in planning and administering a major training program. Outputs of the project include training of middle and upper level personnel abroad and in-country, and surveys of training needs with annual training plans based on these surveys.

Purpose of the Evaluation. The purpose of the evaluation was to assess the project's progress towards developing a cadre of competent managers and administrators in public and private institutions and in improving Nepali capacity to meet management training needs of development. The evaluation was done by an all-Nepali consulting firm.

The team's evaluation strategy was to interview a random sample of eighty persons (trainees and their supervisors) to gather information about: (1) the training program from the points of view of participants and their supervisors; and (2) the observation tours that were conducted to acquaint appropriate Nepali officials with manpower training facilities in other countries. Unfortunately, it was not possible to interview all eighty individuals, primarily because of the frequent transfer of supervisors to other positions.

Findings. The MDT project rested on an assumption that trainees would be assigned to positions where they would be used effectively after they were trained. In this regard, forty-seven percent of those interviewed were promoted after their training and twenty-eight percent were transferred to

new positions with increased responsibilities. A second key assumption was that the skills and knowledge imparted during the training would be useful under Nepali conditions. A large majority of the trainees said that the training was relevant to their jobs and that it helped their job performance and efficiency. In addition, approximately half of the trainees reported that their relationships with their supervisors had improved and their responsibilities had increased after the training. However, most of the interviewed supervisors did not think that the training their subordinates received from MDT was relevant to the needs of Nepali administration, although most found their subordinates better workers and their agencies more effective after the training.

Most of the trainees did not clearly perceive themselves to be change agents after their training, but they did report performing activities that were innovative. This is important because trainees were expected to introduce modern administrative and managerial practices to their organizations.

The NPC has improved considerably in carrying out its task of increased responsibility for planning and administering the various aspects of the training program; however, over half of the participants felt that there could still be improvement in planning and follow-up.

Recommendations.

(1) In future manpower programs, more care needs to be given to determining the needs of the agencies whose employees are to be trained as well as the needs of the prospective trainees.

(2) A reconnaissance should be made of training facilities in Asia that would be suitable for needs of Nepali participants.

(3) Prospective trainees should be selected on the basis of their agency's needs rather than the background and previous educational attainments of the applicants.

(4) Supervisors should be more closely involved in selecting trainees and recommending types of training for them. Senior staff especially should be informed about the training program and its objectives.

(5) A special committee should be formed (composed of representatives of the Administrative Management Department, Public Service Commission, and Tribhuvan University) to undertake and monitor the above activities.

AN EVALUATION OF THE RADIO EDUCATION TEACHER TRAINING
PROJECT: NEPAL

Problem and Overview. The U.S. Agency for International Development in Nepal (USAID/N) has for many years been working with the Government of Nepal (HMG) to use education more effectively in development. HMG has consolidated its efforts into the National Education System Plan, whose objectives are: (1) to meet manpower requirements for national development; (2) to extend educational opportunities; and (3) to increase educational relevance to development problems. Of the three objectives, perhaps the most difficult is extending educational opportunities to remote rural and mountainous areas using formal educational methods.

In 1977, approximately 12,000 out of 20,000 primary school teachers in rural Nepal had not received any teacher training and HMG could afford to train only about 800 of them using traditional means. Nepal's geography makes standard forms of land and air transportation and communication between large sections of the country virtually impossible. Further, other forms of communication that are standard for many countries, such as television, radio, and telephones are either nonexistent or limited to a small group of relatively advantaged people. For these reasons, USAID/N cooperated with other donors in a 1974 feasibility study concerning the possible use of radio for in-service training of teachers, agricultural officers, and other government officials stationed in remote areas.

The study concluded that radio can be a powerful educational tool in Nepal for both in-school and out-of-school populations if it is carefully developed. The study recommended, among other things, beginning a project in teacher training using radio-transmitted course materials. Also resulting from this study were a project assisted by the British Council to develop classroom instruction via radio and another by UNICEF that contributed approximately 500 radios to schools to allow them to receive educational broadcasts.

Purpose of the Project. The agreement for the Radio Education Teacher Training project (RETT, Project No. 367-0123) was signed in FY 1977, and provided for a USAID grant of \$3.286 million (out of a total project value of \$4.173). In 1978 a contract was signed with Southern Illinois University (SIU) for the provision of a five-member contract team. As contractor, they would be responsible for project implementation and providing technical assistance for training local staff members.

The project purpose is to create the capacity to provide economical in-service teacher training to at least 2,500 primary school teachers annually through broadcasts, brief residence instruction, and text/workbooks at a per teacher cost well below the present cost. In addition the project is supposed to test the feasibility of this method of teacher training and to create a cost-effective mechanism for helping untrained teachers meet certification standards.

Project management is the responsibility of an HMG policy committee chaired by the Minister of Education. Other project components are commodities (\$1.6 million for studio equipment, curriculum materials, vehicles, radios, and miscellaneous supplies) and capital construction (a building to house the recording studio and project office).

Purpose and Methodology of the Evaluation. The evaluation is an examination of the project from its inception through November 1980 and addresses questions raised in an earlier audit report about the viability of the project, as well as concerns of USAID and HMG. The team is composed of persons from HMG's Ministry of Education, SIU, USAID/Washington, and USAID/N. An issues paper was circulated to the team before the evaluation began.

Findings. The evaluation team noted that districts to be included in the Pilot Year Program had been selected and radios had been distributed to them. Training was completed by an electronics instructor and a consulting radio engineer. Scripts and self-instruction manuals were prepared for forty-five units of instruction. Training in the United States and in third countries had begun. Moreover, construction of the building had started. In general, the team observed, the project appeared to be impressing untrained teachers with its usefulness since they realized it contributes to their chances for professional advancement. Most importantly, the evaluation concluded that HMG is sufficiently committed to the project. HMG's contributions will reach 21.3 percent of total project costs as opposed to the Project Paper's required fourteen percent.

The evaluation also noted that current project emphasis is on institutionalization, that is, creating a core staff of writers and producers who can produce, test, and revise the training materials continuously and with a high level of quality.

Research studies conducted during the period of 1979 through 1980 provide evidence of the potential effectiveness of the project. The evaluation team observed that teachers could learn from a recorded cassette program, and that the project did not provide Nepali speakers with an unfair advantage over non-Nepali speakers. In addition, pre and post tests of 117 teachers enrolled in the pilot training showed significant gains in scores as a result of formal instruction using the radio and self-instruction materials.

Despite the significant progress that has been made, especially recently, there have been serious delays that have caused the project to be considerably behind schedule. These include delays in selecting a contractor, appointing adequate HMG support staff to the project, making decisions concerning the hardware for the project, defining administrative responsibility, and over-optimistic estimates in the project paper about the amount of time necessary for project implementation. In this regard, the team emphasized that coordination and institutionalization need to be stressed before and after a coordinating body is dissolved. Moreover, they noted, even though a project may be technically sound, administrative aspects may prevent its timely implementation.

Recommendations. The numerous delays have had an important cumulative effect: it is no longer possible for the project to achieve its objectives within the current project life. For example 300 broadcast units are required (350 if grades four and five are included, which is likely) for effective training by

radio and only forty-five have been completed. SIU has determined that producing the additional 255 units is not possible within the planned time period. At most, fifty-five additional units can be expected by the scheduled project completion date, and that would not allow adequate training of local project writers and producers.

The most important recommendations of the evaluation team are: (1) to extend the project by fifteen months at an additional cost of \$600,000; and (2) to extend SIU's contract by fifteen months. Extension is recommended because the delays were beyond the control of the contractor and because the rate of progress during six months preceding the evaluation indicates that the project is now on track.

EVALUATION OF THE EDUCATION SKILLS TRAINING PROGRAM: NEPAL

Problem and Overview. Nepal's National Education System Plan (NESP) was based on the assumption that a major constraint to accelerating national development is a scarcity of managerial talent, especially in rural areas. Thus, the NESP supported education in the rural areas in general, as well as the needs of rural students in particular. Teacher training programs, internships, and refresher courses were part of this program.

The NESP had a large scope of activities -- reorganizing administration, restructuring and overhauling education curricula, reinforcing campus supervision, and planning the location of educational institutions. There is evidence that the rapid expansion of NESP's activities resulted in its over-extension. For example, rates of students dropping out of school prematurely or repeating grades are still at unsatisfactory levels. In many cases, the NESP's problems had been traced to the personnel who administered it -- they were not sufficiently trained to develop policies relevant to the problems of educational development.

Purpose of the Project. The Agency for International Development's (AID) Education Skills Training project (EST, No. 367-0124) was a five-year grant project involving the training of Nepalis in special fields of education needed to support the NESP. The project purpose was:

to increase the ability of the National Education Committee, Ministry of Education, and supporting structures to manage a cost-effective education system, with special reference to improved planning and financing procedures, improved methods for identifying and testing innovative and cheaper alternatives for expanding educational opportunities, and a more rational system for testing and evaluation of students and the education system.

EST's initial obligation was made in FY 1976 and the final obligation in FY 1979. The grant initially was for \$508,000 but was increased to \$777,000.

The project had three components: academic training in the U.S., short-term training in Nepal, and third country observation tours to Asian educational facilities and institutions to expose Nepali educators to educational planning systems and other innovative approaches. The University of Connecticut was contracted to handle the U.S. training and to provide short-term consultancies in Nepal.

Purpose and Methodology of the Evaluation. The purpose of this evaluation was to examine the overall impact of the EST project on the performance of target personnel and institutions. The focus was on the relevance of the academic training and observation tours to the needs of Nepali participants and the applicability of learned skills to Nepali conditions, effectiveness of the selection criteria used to identify candidates for training, and the quality

of the orientation programs for candidates prior to their departure. The evaluation strategy called for three interview schedules -- for training participants, tour participants, and supervisors -- to be administered to a sample of twenty persons: ten participants and ten supervisors. Numerous job transfers, especially among supervisors, forced a change in this design, and the final sample was composed of sixteen participants and three supervisors. This evaluation was done by an all-Nepali consulting firm as part of an innovative attempt by USAID to encourage and support a local capability in evaluation. Thus the evaluation focuses on Nepali concerns rather than on the role of the United States in EST.

Findings. The effectiveness of certain facets of the EST were difficult to determine because of the inconclusive and contradictory responses of many of the people interviewed. This was viewed, by the evaluation team, as being symptomatic of the serious breach in the information sharing process. The evaluation was critical of the selection process used to identify participants. Individuals were selected on the basis of their degrees, diplomas, and seniority instead of the quality of their job performance.

Moreover, instead of designing the academic training to meet the needs of the participants, the participants were made to fit requirements of the academic courses. This was most noticeable in the case of short-term training, when many participants were abruptly enrolled during the middle of a course. These trainees had just enough time to adjust to their new environment before they were sent home without a degree or a useful skill. As a result, many participants did not make the expected changes in their jobs or in their relationships with their supervisors. The long-term trainees were, at a minimum, able to take complete courses at the end of which they received a degree.

Major Recommendations. A chain of political events set off by student unrest led ultimately to general chaos in the education sector and the virtual dismantling of NESP. Without knowing how the Government of Nepal plans to deal with education under the new conditions, it is not possible to make specific recommendations about EST. The only general recommendation made is not to assign returned trainees to irrelevant positions where their skills and expertise would be wasted. These people should be given work that will allow them to use and sharpen their skills so that when the time comes to rehabilitate education, the trained personnel can be put to good use.

SUMMARY REPORT OF A REVIEW OF UNITED STATES DEVELOPMENT
ASSISTANCE TO PAKISTAN -- 1952-1980

Overview. The U.S. Agency for International Development (AID) commissioned a review of United States development assistance to Pakistan from 1952 to 1980. The purpose of the study, A Review of United States Development Assistance to Pakistan: 1952-1980, was to extract from the experience of past programs relevant lessons for the future.

Project Scope and Methodology. The study assesses AID's experience in Pakistan since 1952 and focuses on the general areas of macroeconomics, agriculture, population, health and nutrition, and public administration. The document does not attempt to analyze any specific programs but rather emphasizes those factors in the AID experience which could be useful for the formulation of future U.S. aid policies in Pakistan.

The study was conducted in several distinct phases. Phase I involved the collection of data available in Washington, D.C., and the preparation of interview guides and other material for use in Pakistan. Phase II consisted of the Study Team's field trip to Pakistan to gather onsite information and impressions. And the final project stage, Phase III, involved the writing of the study document.

U.S. Assistance. From a modest beginning in 1951, the U.S. bilateral assistance program to Pakistan grew to annual commitments approaching \$400 million in the early 1960s and a cumulative commitment of approximately five billion dollars through 1980. The early program focused on technical assistance and disaster relief, but increasingly shifted to capital assistance, particularly after 1958. Of total U.S. bilateral aid commitments, nineteen percent was project aid, thirty-seven percent was program aid, and the remainder, over two billion dollars, consisted of P.L. 480 concessional sales whose macro impact was similar to that of program aid. Of the project aid, thirty-eight percent was allocated to agriculture, thirty-four percent to infrastructure with the bulk of the remainder in health and sanitation (eleven percent), public administration (four percent), and education (two percent). Except for some fertilizer and other agricultural input financing, the vast majority of the program aid was used to import raw materials, spare parts, and capital to run the industrial sector.

Findings. A number of important lessons about the relationship between aid and development can be gleaned from the United States/Pakistan assistance experience.

(1) The bilateral program was interrupted for political reasons at least three times during the period 1965 to 1978. Furthermore, the rapid growth in assistance between 1960 and 1965 was followed by an equally rapid

decline after 1965. In each instance, this lack of stability in U.S. aid commitments worked to wholly or partially negate the developmental impact of the resource transfer. Similarly, the cessation of new commitments in 1978 can be expected to severely limit the impact of the resource transfers associated with the U.S. program between 1973 and 1978.

(2) Erratic fluctuations in aid commitments make it difficult for the managers of development to plan successfully.

(3) Aid practitioners as well as critics have been enamored of the concept of policy leverage. Those who favor macro approaches to aid allocations are fond of arguing that nothing is more important than the adoption of correct macroeconomic policies, while the critics contend that the donor "conditioning system" represents an unwarranted intrusion in the domestic decision making processes. The Pakistan experience suggests that much of the argument has been overdrawn on both sides.

(4) Leverage discussions are often debates over the most productive form of aid giving. The Pakistan experience suggests that the more generalized aid is subject to a number of important problems. First, generalized aid forms tend to be both quick-disbursing and less tied to specific activities, so that they are subject to greater manipulation by both donor and recipient. Second, commodity aid offered in support of policy changes seems to generate less lasting impacts than project aid. Project aid, on the other hand, offers a number of advantages. First, not only has it produced more lasting results in the Pakistan context, but whenever the U.S. terminated aid to Pakistan it tended to complete projects already underway, thus minimizing at least the immediate economic impact of resource reductions. Second, a donor can maintain support to micro projects where progress can be achieved despite a bleak macro picture.

(5) A number of problems with project aid in Pakistan have been noted by Government of Pakistan officials. These officials contend that: (a) not only has project aid been slow disbursing, but projects have tended to require a greater share of local currency funding from Pakistan's development budget; (b) the shift in donor preference from commodity aid to project aid has created a certain fragmentation in donor assistance and development planning; and (c) donor technical requirements for projects often exceed GOP capabilities and significantly increase project costs, thus reducing the benefit cost ratios of donor-funded projects.

(6) Pakistan's failure to "take-off" and the disappointing performance in the economy since 1965 seems largely due to the failure of the Government of Pakistan and the donor community to pay adequate attention to the social, political and economic inequities underlying the surface stability of the Ayub Government.

Recommendations. The suggestions noted below were put forth as perhaps useful if a resumption of aid to Pakistan is contemplated or decided upon.

(1) Any program of economic assistance offered to Pakistan should carry with it a commitment to see it through to completion.

(2) Probably the most effective method of foreign aid assistance would be for a consortium to work with the Government of Pakistan in developing long-term assistance strategies to which both Pakistan and the donor community would commit themselves. But if this is not a workable strategy, closer coordination and integration of donor efforts is imperative in order to help focus the development process, eliminate duplication of planning and resources, facilitate assessment of needs and availabilities, strengthen the review process, and increase the effectiveness of the foreign assistance effort in general.

(3) Pakistan's current situation and its development needs present an opportunity for testing a flexible two-tiered approach to assistance. The first tier would be in the form of sustained long-term assistance for carefully selected projects, or assistance to help meet urgent requirements which bear importantly on the development process. The second tier would consist of additional resources made available when conditions warrant and as the need arises.

(4) Pakistan's problems are both urgent and acute. Pakistan, conscious of past failures to cope with the population problem, has devised a new three-year plan, integrating population planning with broad social sector objectives. This depends, in part, for its successful implementation on a heavy input of foreign assistance. It is a program consistent with the current development priorities of Pakistan and the U.S. and one for which the U.S. aid could be considered.

(5) Further economic assistance offered by the U.S. to Pakistan should be sufficient to encourage and generate meaningful progress toward economic development, not merely serve as "maintenance" aid.