

GUIDELINES
FOR
DATA COLLECTION, MONITORING AND EVALUATION PLANS
FOR
ASIA AND NEAR EAST BUREAU PROJECTS

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"Bringing together a group of people who actively engage in discussion about what a program is doing, where it is going, how it could be improved, and what information is needed to reduce uncertainty about program implementation and effects--these processes are in themselves change producing Therein lies the power of evaluation . . . in the mobilization of individual energies for action The barrier of uncertainty is attacked . . . and systematic information emerges to increase programmatic effectiveness."

Michael Quinn Patton
Utilization - Focused Evaluation, 1978

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PREFACE

For many years A.I.D. has sought ways to make evaluation useful to managers. Ideally, evaluations were to be used in project decision making and program planning. Yet many managers found that evaluations failed to provide useful, timely or relevant information for effective management.

These guidelines are a useful step toward making evaluation a genuine management tool. They were written to give managers ideas and resource materials to help them design the information systems they need to manage their projects effectively.

There are several themes to be found in the pages that follow that reflect concern for managers' information needs. These themes emphasize:

- information gathering for mission management decision making rather than for "grading" the project by A.I.D./W;
- internal data gathering and analysis rather than external evaluation;
- information gathering strategies as integral elements of project design rather than as an afterthought; and
- regular, small scale data gathering and analysis efforts for rapid feedback for managers rather than elaborate, costly and time-consuming research studies.

It is important that A.I.D. build a body of experience in this area. We should understand how data are to be used for planning purposes if we hope to assist in building rational and programmatic planning capacities among our counterparts--an essential element in the broader development process.

Additional copies of this document can be obtained from the Asia and Near East Bureau, Office of Development Planning or from the Center for Development Information and Evaluation, Office of Development Information and Utilization.

Barry Sidman
Director
Office of Development Planning
Bureau for Asia and Near East

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EXECUTIVE SUMMARY

Purpose

These guidelines were written to help managers obtain the project performance data they need for effective and informed management decision making. They are based on the principle that effective managers should have empirical data on purpose and goal achievement, as well as on input and output progress, throughout implementation to make informed decisions and to knowledgeably guide their projects. This is consistent with management approaches in other fields. In the private sector, for example, most managers insist on having profit-loss, cost-benefit and other data for decision making, and information systems are established to provide data for these purposes.

While there has always been a requirement in A.I.D. for project monitoring and evaluation plans, these guidelines represent a new emphasis. They stress the importance of collecting empirical data as part of monitoring and evaluation efforts to form an information system. The purpose of such a system is to inform management decision making and to document project effects.

Improving data availability, timeliness and usefulness for managers is especially important at this time for several reasons. First, A.I.D. is seeking management improvements by delegating greater decision making authority to field missions. With increased responsibility and accountability, many managers in the field want to know how to obtain timely, relevant and useful data to inform the decision making process.

Second, A.I.D. is also seeking to improve the project monitoring and implementation process. The availability of timely, relevant and useful data helps identify project strengths and shortcomings and in this way assists managers in quickly fine-tuning the project if needed.

Third, as part of the management improvement process, the Agency seeks improvements in evaluation quality and strengthened evaluation capabilities. The quality of evaluation reports will be greatly enhanced if empirical data are available on which to base findings and recommendations.

Contents

The specific purposes of these guidelines are:

- to identify "lessons learned" based on past experience with data collection for international development projects and to discuss ways these lessons can be applied during project design and implementation;
- to provide ideas for data collection during implementation when information systems have not been included in the design of the project. The discussion focuses on rapid, low-cost studies which may provide the kinds of information managers need;

- to explain the steps involved in setting up an information system during project design and to set forth a suggested framework for data collection plans for A.I.D. project papers; and
- to provide sample, preliminary data collection plans for projects in agricultural research, health, population, irrigation, social forestry and the private sector.

Audience

This report is written for A.I.D. project and senior managers who are concerned with effective project monitoring and implementation. It is not written for those having expertise in data collection methodologies. On the contrary, it is aimed at generalists who may have to supervise data collection activities.

Several Asia/Near East (ANE) missions have recognized the need for improved data for project decision making and have developed information systems for ANE projects. Given the movement toward the development of such systems, the ANE Bureau recognized the need for guidelines and resource materials to assist missions in this effort.*

Findings and Recommendations

This paper reviews the most recent literature on data collection for international development projects. Major findings include the following:†

1. Data Availability: Most A.I.D. projects are not designed to generate either management or impact data.

Recommendation: All ANE Bureau Development Assistance and Economic Support Fund projects should be designed to include an information system for generating useful, relevant and timely data. All project papers for such projects should contain a data collection, monitoring and evaluation plan.**

2. Information Needs: Complex surveys and quasi-experimental designs may not provide useful data for management decision making.

Recommendation: The data collection system should be designed to address the specific information needs of project managers and should include a combination of methodologies for gathering quantitative and qualitative information.

* This paper was substantially underway prior to the merger of the former Asia and Near East Bureaus. Hence, the examples and case studies focus primarily on Asia project experience. Future papers of this type will also include examples from A.I.D. development experience in the Near East.

** The term "data collection, monitoring and evaluation" is occasionally shortened in this paper to "M&E" - monitoring and evaluation.

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3. Administrative Records: Appropriately selected and designed administrative records are an effective source of regular data for observing project performance.

Recommendation: To the extent possible, project information systems should be based on the routine collection and analysis of existing administrative data.

4. Rapid, Low-Cost Studies: Recent experience with rapid, low-cost studies has shown that this approach can provide useful, timely and relevant data for decision making.

Recommendation: The data collection system should include procedures for rapid data gathering and analysis to facilitate timely feedback and informed management decision making.

CHAPTER I

RECENT EXPERIENCE WITH DATA COLLECTION FOR DEVELOPMENT PROJECTS: LESSONS LEARNED

A. INTRODUCTION: Information Gathering Strategies in A.I.D.

The theme of this chapter is the need for timely, relevant and useful project performance data to improve project decision making, implementation and evaluation -- in short, to improve project effectiveness.

Over the years, A.I.D. has tried several approaches to make project data gathering and analysis more useful to managers. In the early 1970s, A.I.D. emphasized using the logical framework--or logframe--for analyzing project performance and many evaluators then used the logframe to assess progress. However, these analyses frequently ended with an examination of inputs and outputs, with little or no mention of purpose and goal achievements. Many of these evaluations concluded that if inputs and outputs were achieved, the project could probably be called a success. This clearly was insufficient information for informed project decision making. An indicator of evaluation inadequacy in the 70s was that use of evaluations by A.I.D. managers for decision making was extremely rare.

Based on this experience, the Agency began to seek ways to provide analyses of purpose/goal achievements to managers and at the same time find out what really happened to project beneficiaries. A wide-ranging series of "impact evaluations" was initiated in 1979 in a variety of sectors. These studies were designed to examine, in a short period of time, the question, "What difference has the project made to the beneficiaries?" The studies showed that valuable lessons could be learned fairly quickly about a project's effects on people. In some cases, impact evaluations were instrumental in providing useful data to project managers that resulted in important modifications which enhanced project effectiveness.1/ In other cases, however, some of these evaluations lacked empirical data, as well as more rigorous analysis, and for this reason were less useful for management decision making.

While the impact evaluations were underway, some Agency staff advocated using more traditional methodologies for assessing performance and impact. They criticized the impact evaluations for being "quick and dirty" and argued for more rigorous methods to gather empirical data on project effectiveness and impact. In contrast to "quick and dirty", such approaches were at least "clean", they insisted, albeit "slow". Later, as discussed below, it became apparent that traditional methods were sometimes both "slow and dirty".

This brings us to where we are today. The impact evaluations sensitized Agency managers to the value of timely information. The impact evaluation critics called attention to the value of empirical data for decision making. Clearly we need to draw on both approaches--the efficiency of the impact evaluations and the empirical basis of more rigorous studies--to provide the information that managers need. Can this be done? Can we develop practical, timely, relevant and low-cost methods for gathering project performance data for management decision making?

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B. LESSONS LEARNED

The lessons presented below, based on recent experience with data collection, suggest some answers to these questions.

1. A.I.D. PROJECTS NOT DESIGNED TO GENERATE DATA. Most A.I.D. projects are not designed to generate useful, relevant and timely performance data for project decision making.

In recent years, the single most common refrain of returning A.I.D. evaluation teams has been, "There were no data". This has been an important finding of project evaluations in almost every major sector in which A.I.D. works (see the following inset). This means that many project managers do not have the kind of information they need for effective monitoring and management. Nor are there adequate data for documenting project effects and impact.

Why are there no data? A casual examination of A.I.D. project papers suggests one major reason: the absence of specific data collection plans in project papers. The project papers indicate that projects are simply not designed to generate data for decision making.

This lesson suggests that ANE Bureau projects should be designed from the start to include a simple, preliminary plan for generating useful, timely and relevant data for managing, monitoring and evaluating the project. A suggested outline for such a plan is presented in Chapter III. Ideally, a specialist should be included on the project design team, or brought in shortly after the project is designed, to develop the plan. The specialist should work closely with counterparts since many aspects of the data collection activities will have to be negotiated with counterpart implementing agencies, and counterparts' involvement and support will be critical for making the system work.

2. PROBLEMS WITH COMPLEX SURVEYS. Complex surveys and experimental designs^{2/} may not be useful for A.I.D. project decision making.

While complex studies and experimental designs may be useful in some instances, experience demonstrates that such methods are quite costly and often are not used for immediate project decision making, nor even future project design. These methods often take too long to obtain results (sometimes over five years), collect too much data,^{3/} and gather data that are irrelevant to specific decision making needs of managers.

For example, a review of the usefulness of ten complex surveys in Asia, Africa, Latin America and the Near East revealed that of the ten, five were expensive--generally between \$300,000 and \$1,500,000--and were not used in project decision making. Three were considered "low-cost"--under \$100,000--and were quite useful for decision making. The usefulness of the remaining two studies was unclear.^{4/}

CONCLUSIONS OF A.I.D. EVALUATIONS ON
DATA AVAILABILITY FOR MANAGERS

Agriculture Research

"No institution has been collecting and analyzing data to indicate the impact of new technology as specified in the project paper. Even where accomplishments to date have been the greatest, as with tobacco, data were not available."

Philippines: Impact Evaluation, Philippines Agricultural Research Loan II, p. 2 (1984).

Agriculture Extension

"Recommendation: Projects with an educational thrust should collect benchmark data on the pre-project behavior of the participants. Without this, it is not possible to make accurate assessments . . . about project achievements."

Thailand: "Agricultural Extension Outreach Project", Asia Bureau Executive Summaries FY 83, p. 31 (1983).

Social Forestry

"The almost complete lack of solid evaluation data, due to the slow implementation of monitoring and evaluation systems, makes a direct assessment of likely socioeconomic effects . . . extremely difficult."

India: Social Issues in the India National Social Forestry Project, p. 3 (1985).

Health

"The evaluation team was not able to determine program impact. Data were not available . . . which lend themselves to the analysis of change in health status contributed by the project."

Burma: Primary Health Care I, Evaluation Mid-Term Report, p. 2 (1982).

Watershed Management

"There is also a need for more conservation-oriented research, including basic research to compile and analyze data on rainfall, run-off and soil loss, and applied and on-farm research on alternative conservation measures and their effects"

Indonesia: Composite Report of the Watershed Assessment Team, Vol. I, p. 5, Ch. 1 (14 May 1983).

Irrigation

"Baseline data collection and subsequent monitoring efforts were inadequate for project needs . . . the documentation of benefits has been hampered considerably by insufficient attention to the assessment of project impact and quantification of project results. Because of the lack of baseline data, a re-evaluation of the predicted cost-benefits and internal rate of return calculations could not be done with any confidence."

Pakistan: The On-Farm Water Management Project in Pakistan, A.I.D. Impact Evaluation No. 35, p. 26 (June 1982).

PVOs

"Appropriate statistics and analysis which make the connection between project goals, methods and project outcomes are rare. Baseline information is rarely available; consequently, it is difficult to interpret statements about impact or effectiveness with (little) sense of the situation prior to the project."

An Evaluation of the Co-Financing Project of USAID/Thailand with the Private Voluntary Organizations, p. 44 (1983).

Nutrition

"A common shared information (monitoring and evaluation) system should be established based on the routine collection and use of a minimum quantity of relevant data at the point of service."

Nutrition Programs in Sri Lanka Using U.S. Food Aid, p. 137 (1982).

Similarly, a review of nine costly, long-term (five to seven years) impact studies funded by the former Asia Bureau from 1975 to 1984 revealed that seven of the nine studies either were not used or were cancelled before completion. Major reasons for cancellation included changing A.I.D. evaluation requirements and information needs, subsequent diminished commitment by A.I.D. staff to the study and unavailability of funds to support the evaluation.6/

Beyond the issues of data costs, relevancy and timeliness, there are other problems associated with complex surveys and experimental designs: they are not necessarily more definitive than other approaches, and they cannot answer many of the questions A.I.D. managers have.

Managers sometimes assume that experimental designs are more definitive than other approaches. Therefore, they frequently consider only this method when they want information. However, experimental designs do not necessarily provide more clear-cut, unequivocal answers than other methods due, in part, to the following.

Experimental designs are intended to prove causality. A major problem in using such designs to assess development projects is that extraneous factors constantly impinge on the study setting, making it virtually impossible to hold the research design constant over a long period. As a result, the ability to attribute change to the project and make definitive statements about impact diminishes. This observation has been made by several individuals who have conducted such studies for A.I.D. One observer comments that there will always be a tradeoff between accuracy and timeliness. He opts for timeliness and recognizes "there will always be some level of indeterminacy of analysis results . . . While this indeterminacy is somewhat disturbing, our experience shows that comprehensive, full-blown studies which devote far greater resources for data-gathering and analysis also yield indeterminate results. An unambiguous result cannot be obtained through application of the rigorous experimental model".7/

Finally, experimental designs often over-emphasize the usefulness of quantitative findings, to the exclusion of qualitative ones. Quantitative data can often tell managers what has happened (i.e., production has increased, nutrition status has improved, etc.) but not why and how. Quantitative analysis cannot answer many of the questions A.I.D. managers have--questions concerning institutional performance, the implementation process, participants' behavioral change, participants' quality of life and unanticipated as well as anticipated project impacts. Methods and approaches which are exploratory and inductive are also needed to provide qualitative information and to examine these kinds of questions.

The lesson suggests that a data collection system must be designed to provide timely data to satisfy specific decision making needs of project managers rather than the long-term research interests of academics or consultants. Accordingly, A.I.D. and counterpart managers should work with an information specialist in the design stage to identify the minimum data they need most for effective project decision making. Ways to design information systems to answer managers' questions are examined in greater detail in Chapter III.

The Community-Based Family Planning Service in Thailand began work in 1974 with conventional baseline and impact surveys. However, a 1977 appraisal expressed "major reservations . . . regarding the feasibility of obtaining required data based on the designed questionnaires" and indicated that delays in processing the survey findings made them almost useless to management for policy and strategy development. Findings of many of the planned surveys had not been analyzed, and those that had been did not relate to the problems faced in the local areas.

Realizing this, the project shifted to "mini-survey" techniques in 1978. Monitoring was carried out monthly by a supervisor making house-to-house visits in a number of villages.

The supervisor focused on three questions: Who was practicing birth control? What methods were being used? And who was using supplies obtained from what sources? Those identified as not using any family planning were urged on-the-spot to see their village supply source. This method not only provided the project with an up-to-date overview, but also with results that could be acted on immediately.^{5/}

The lesson^s also suggests that an effective M&E system should probably be designed to include a combination of methods for gathering both quantitative and qualitative data. The questions managers have about their projects in large part dictate the method that should be used to obtain answers. If managers want to know "what has happened", quantitative analysis may be appropriate. If they want to know "how and why", case study methods and qualitative analysis may be more appropriate. Information on designing M&E systems which combine methods for data gathering is included in Chapter III.

3. USEFULNESS OF ADMINISTRATIVE DATA. Appropriately selected and designed administrative records are an effective source of regular data for observing project performance.

A 1982 study of six highly successful nationwide development programs found that four used simple yet carefully designed administrative records to regularly assess program progress. Simple, one-page reports submitted monthly by local officials were quickly tabulated, and the results were shown to management. For example, for a family-planning program in Indonesia, the report provided information on new acceptors, by methods and types of services provided, and on stock of supplies.

For each of the four programs, managers relied heavily on the data to track overall achievement and to flag situations in which achievements were below expectations. Field visits and cross-checks were used to minimize exaggerated claims; and field visits were used to gather additional information on an informal basis. The simplicity of the reporting programs was appropriate to the simplicity of the design of the programs; the programs all involved the mass delivery of a single service.^{8/}

The author of the study commented that "The development of a small set of key indicators which reflected the progress of the program was ~~a part of this (critical)~~ .. exercise. Though the information system appeared to be simple and limited in the types of data sought, its design called for considerable sophistication. The identification and selection of the most relevant indicators inevitably called for a great deal of skill and understanding." He summarized his findings as follows: "Successful development programs utilize monitoring processes which are simple, yet speedy in terms of feedback. Their information systems make use of both formal and informal sources."

The focused use of administrative data in the four programs differs fundamentally from the indiscriminate use of routinely collected administrative data. The key to the focused approach is active intervention by top management in the process of designing the data system, to assure that the data to be collected meet strategic information needs. In contrast, the indiscriminate approach typically involves a situation in which management does not get involved in designing the data system. Instead, management is passively flooded with masses of data that are routinely churned out by tradition-bound bureaucracies. Inasmuch as the significance of the data for project or program performance is often unclear, management tends to ignore the data in decision making.

Positive features of the focused use of administrative data include the following:

It is useful. It provides information on selected key aspects of project performance over time and thus allows managers to observe trends in project performance.

It is practical. It builds upon existing host-government structures, procedures and data.

It is responsive. Formats for some administrative records can be fine-tuned during project implementation to reflect more accurately the information needs of top management.

It is simple and inexpensive. No elaborate or expensive surveys are involved. Simplicity permits quick analysis of performance trends and rapid feedback.

It encourages institution building by using data planning, collection and analysis skills of the host country.

This lesson suggests that the M&E specialist should work with counterparts during design to: (a) identify existing data collection procedures which provide information on key performance indicators; and (b) fine-tune these procedures as appropriate so that the data accurately reflect key aspects of project performance.

4. USEFULNESS OF RAPID, LOW-COST STUDIES. Rapid, low-cost studies can provide useful and timely data for project decision-making.

Rapid, low-cost (RLC) studies are a relatively new approach in M&E systems. RLC studies emphasize the gathering of empirical data in informal ways that are low-cost, practical and timely for project decision making.^{9/}

These studies are particularly suitable for providing managers with data in a variety of situations that require quick feedback. Quick feedback is typically required in situations in which managers suddenly become aware of a problem, lack regular sources of information on the problem, and need information quickly to solve implementation problems and enhance project effectiveness. In fact, the above mentioned study of the six highly successful development projects found that one critical ingredient of success was "the use of simple information systems with fast feedback."^{10/}

Four documented examples in Asia of the use of rapid low-cost studies for project monitoring or evaluation purposes also provide evidence that this approach can quickly generate the qualitative and quantitative information that is needed for decision making.^{11/}

The four projects are:

India	CRS - Food for Work
Sri Lanka	On-Farm Water Management (Gal Oya)
Philippines	National Irrigation Association Irrigation Projects
Asia	Irrigation Project ^{12/}

An example of the usefulness of RLC studies for project decision making may be cited from the irrigation project. The question arose whether it would be desirable for an irrigation association to be changed from a single-purpose cooperative to a multi-purpose organization. An RLC study was undertaken which gathered qualitative data using a variety of approaches: record examination, group interviews and confidential interviews. The article concludes, "After an investment of less than one person-week of effort, it was possible to make a convincing case that this association was not yet an effective single-purpose organization and a transition to a multi-purpose role might cause its collapse . . . Thus, with all its weaknesses, a rapid reconnaissance identified the context of decision making in the associations, produced stronger behavioral data than had previously been available, introduced villager perspectives into a bureaucratic calculus and avoided an externally imposed and possibly destructive decision."^{13/} ✓

The value of RLC studies was also demonstrated by a 1979 review of the usefulness of a variety of data collection approaches in the design of fourteen projects in Africa, Latin America and the Middle East. Of the five RLC studies conducted, four were judged to be "critical"; that is, the project could not have been designed in their absence. The other RLC study was found to have been "important"; that is, the method provided significant insights for design. Of the remaining seven more traditional approaches, two were "critical", four were "important", two were "minimal" and one (a statistical baseline survey) was "of no use".^{14/}

This lesson suggests that managers should consider RLC approaches as a way to provide: (a) regular information over time (~~etc.~~ by conducting an RLC study annually on a preselected topic); and/or (b) ad hoc information on unanticipated implementation problems. ✓

5. NO BLUEPRINTS FOR M&E SYSTEMS. There is no perfect information system, and there are no methodological "blueprints" for developing project information systems.

There are no ready-made solutions for data-gathering which can be easily adapted from one project and applied to another.

Each system has to be developed specifically to fit the project environment-- cultural, sectoral, financial and institutional--and to provide the specific information needed in that context. This was an important conclusion of two major reviews. A review of twenty development projects in Eastern Africa stated, "the major conclusion . . . was that there are no ready-made recipes for the establishment of 'simple' M&E systems requiring 'minimum' information for 'quick' feedback to project management and/or other agencies responsible for planning future projects".15/

This lesson reminds us that even within each project, the information system is bound to change as implementation proceeds; thus, an evolutionary approach in the development of the information system is the desired one.16/ Information needs change as the project environment, capabilities of implementing agencies, methods of service delivery, impediments to project success and beneficiary needs change during project implementation. New information needs arise which may have to be addressed through ad hoc RLC studies. An effective information system must change and adapt to provide genuinely needed information. The chart on p. shows how information systems can be designed to respond to changing information requirements.

All information systems will have imperfections, flaws and deficiencies. No one system will provide all the data that managers think they need for informed decision making. Yet, too much time spent conceptualizing and planning a "perfect" system may result in an overly ambitious and totally unmanageable effort that is of no use to anyone. Simplicity, feasibility, timeliness and relevance must be the guiding principles. We have always lived with imperfect information and must continue to do so. Nevertheless, we must quickly get on with our efforts to improve the information available to us. Stated more eloquently: "Life cannot wait until the sciences have explained the universe scientifically; we cannot put off living until we are ready".17/

CHAPTER I FOOTNOTES

- 1/ The Senegal Sine Saloum Rural Health Care Impact Evaluation, for example, resulted in several important corrective actions taken by the Government of Senegal and USAID. These included the appointment of new personnel, review of the project by the National Assembly and subsequent project redesign. The data presented by the evaluation team for the Colombia Rural Roads Impact Evaluation were so convincing that the Colombian counterpart agency was able to convince the IDB to fund a follow-on project.
- 2/ An experimental research design is a study which uses the logic of the science experiment in investigating social phenomena. The essential feature of true experiments is the random assignment of treatments to targets, and the random withholding of treatment from targets, constituting respectively an experimental and a control group. The "treatment"--a development project--is added for the experimental group only. After a certain period of time, the researcher investigates whether the predicted changes occurred in the experimental group. If the predicted changes occurred in the experimental group only, the researcher's confidence that the development project caused or is linked to the changes is increased. The most elaborate true experiments are longitudinal studies consisting of a series of periodic observations over a period of years of the experimental and control groups. For further discussion see Manager's Guide to Data Collection, prepared for A.I.D. by Practical Concepts, Inc., November 1979, pp. 26-33, and Rossi, Peter H. and Howard E. Freeman, Evaluation: A Systematic Approach, Sage Publications, Beverly Hills, 1985, pp. 210-211..
- 3/ This is an extremely common problem. Field experience shows that much more data are collected than are analyzed. See a review of twenty development projects in Managing Information for Rural Development: Lessons from Eastern Africa, World Bank, March 1980, pp. 25-28. See also, Monitoring Rural Development in East Asia, World Bank 1980, p. 10.
- 4/ Memorandum from Larry Cooley and Bruce Mazzie to Annette Binnendijk and Ray Solem, "Use of Sample Survey Methodology for Project Evaluation", June 1983. See also Monitoring Rural Development in East Asia, World Bank, 1983, p. 14.
- 5/ Burintratikal, S. and M.C. Samaniego. "A Community-Based Family Planning Service (CBFPS) in Thailand", in P.H. Coombs, ed. Meeting the Basic Needs of the Rural Poor, Pergamon Press: New York, 1980, pp. 195-288.
- 6/ Michael J. Hartz, "Lessons Learned in Evaluating A.I.D. Development Project Impacts", Paper presented at the American Statistical Association Meetings, Toronto, Canada, August 1983, U.S. Dept. of Commerce, Bureau of the Census.

7/ William D. Drake and John D. Nystuen, The Implementation of a Planning, Monitoring and Evaluation System for PL 480 Title II Food for Work Program in India, June 1984, p. 49. See also Evaluation of the Provincial Water Project in the Philippines, Final Report, International Statistical Programs Center, U.S. Dept. of Commerce, Bureau of Census, June 1984.

The Philippines study suggests reasons why the quality of the original research design deteriorates over time.

- It is extremely difficult, if not impossible, to "match" experimental and control groups in non-laboratory settings.
- The manner in which the development project is administered changes during the period of implementation. This compromises the original design. Changes in implementation occur as new knowledge is gained, for example, or budgetary constraints arise.
- The experimental and control groups are exposed to different exogenous factors during implementation thus violating a principal assumption of such studies; i.e., that groups are the "same" except for the "treatment"--the development intervention--received by one group.

8/ Samuel Paul, Managing Development Programs: The Lessons of Success, Westview Press, Boulder, Colorado, 1982, pp. 208-211. The four programs were the National Dairy Development Program of India, the Philippine Rice Development Program, Kenya's Smallholder Tea Development Program and the Indonesia Population Program. For the other two programs--China's Barefoot Doctor Program and Mexico's Rural Education Program--the author was unable to obtain thorough information on the monitoring systems. He speculated that the two programs relied heavily on relatively informal methods of monitoring. The author uses the term "program" to refer to development efforts that aim at the nationwide distribution of a service, in contrast to "projects", which typically aim at smaller regions.

9/ Rapid, low-cost studies are defined and discussed in greater detail in Chapters II and III. Annex IV contains a bibliography on rapid, low-cost studies.

10/ Paul, p. 229.

11/ William Drake, "An Emerging Monitoring and Evaluation System for P.L. 480 Title II Food for Work Programs in India", Community Systems Foundation, August 1983, and personal communication from the author; "Action Research into Farmer Participation in Irrigation System Management: A Sri Lanka Experiment", E. Van der Veld, Cornell University, 1981; Romana P. de los Reyes, "Process Documentation: Social Science Research in a Learning Process Approach to Program Development", Paper prepared for the Social Development Management Network Meeting, New York, 1983; George Honadle, "Rapid Reconnaissance for Development Administration: Mapping and Moulding Organizational Landscapes", in World Development, Vol. 10, No. 8, 1982.

- 12/ Honadle discusses rapid low-cost studies used in irrigation projects but does not name the specific country. The two irrigation projects in Sri Lanka and the Philippines used both rapid low-cost studies and other more traditional methods to produce management information.
- 13/ Honadle, p. 643.
- 14/ Information for Decision Making in Rural Development, Vol. II, 1979, p. 174.
- 15/ Managing Information for Rural Development: Lessons Learned from Eastern Africa, p. 26. See also, Information for Decision Making in Rural Development, Vol. I, p. 55.
- 16/ See for example, William Drake, "An Emerging Monitoring and Evaluation System for PL 480 Title II Food for Work Programs in India", p. 19. See also Roy I. Miller and David Sahn, "Built-In Evaluation Systems for Food Programs--Why and How?" Prepared for the Workshop on Evaluating the Impact of Food Programs, Massachusetts Institute of Technology, Cambridge, Massachusetts, September 1981, p. 23. The majority of the documents cited in this section emphasize this point.
- 17/ Quoted in Honadle, p. 633.

CHAPTER II

GUIDELINES FOR IMPROVED PROJECT MONITORING AND IMPACT ASSESSMENT: DATA COLLECTION DURING IMPLEMENTATION

A. INTRODUCTION

To date, most A.I.D. projects have not included monitoring and evaluation as an integral project component during their initial design, yet managers of such projects may want to obtain data on progress and performance. What should they do? The purpose of this chapter is to outline steps that managers can take during implementation, in the absence of an M&E system, to obtain useful, timely and relevant data.

In the absence of an M&E system, there are two approaches managers can take. If the project is relatively young, and A.I.D. anticipates extended support in that particular sector, the manager may wish to call in M&E specialists to assist in developing an M&E system, to the extent that it is feasible, after implementation is underway.^{1/} A major obstacle, however, is that counterpart agencies may not see the need for such systems or may lack appropriate data collection and analysis skills. Managers may then have to weigh the advantages of having a more comprehensive system against having the staff time "lost" negotiating it and/or implementing it with untrained field personnel.

In many cases, it will not be feasible to develop a comprehensive M&E system after implementation begins. Yet it is still possible to obtain progress and performance data on key management and impact questions.

In this situation, a useful approach is to turn to specialists who are knowledgeable about rapid, low-cost (RLC) methods. RLC methods are probably the most useful data gathering approach for projects lacking an M&E system.

B. WHAT ARE RAPID, LOW-COST STUDIES?

Rapid, low-cost studies are an approach to data gathering that emphasizes low-cost, and quick analysis of quantitative and/or qualitative data. This approach is guided by two principles: (1) "optimal ignorance", or the art of knowing what is not worth knowing; and (2) "proportionate accuracy", or the avoidance of unnecessary precision.^{2/} A consensus seems to be emerging that a high degree of data accuracy is unnecessary for project decision making. For example, project managers at a workshop on East Asian projects' M&E systems concluded that "data on the progress and achievements of rural development projects did not have to be highly accurate. Some felt that an 80 percent and higher accuracy level was acceptable and useful for decision making".^{3/} Another feature of RLC studies is the use of proxy indicators; i.e., village prosperity might be measured by observing the quality of roof and floor material, availability of bicycles and/or motorbikes, electricity, and potable water in the village rather than attempting to measure household income, a more costly and time consuming approach.

What are the positive features of RLC Studies?

- Rapid Feedback/Low Costs. RLC studies are completed in a week to a few months which permits quick feedback to the manager and lower costs.
- Information on Project Trends. Due to their low costs, RLC studies can be undertaken at regular intervals throughout the project life and in this way provide to managers information on performance trends on a regular basis. These types of studies are especially useful for shedding light on a project's effect on beneficiaries during implementation.
- Information for Management Problem Solving. Since RLC studies can be mobilized and completed quickly, they can be used to provide managers with information on an ad hoc basis as unforeseen problems and uncertainties arise during implementation. The chart on pp _____ shows how RLC methods can be used when unforeseen questions arise during implementation.
- Replicability. Since sophisticated techniques are not required, local social scientists can be trained relatively quickly. Thus, RLC studies contribute to local capacity building since they can be replicated by local individuals and institutions.

Why are RLC studies completed more quickly than studies using more traditional methods?

RLC studies are completed quickly because the scope of the study is more limited. The number of sites visited, the sample size,^{4/} the variables examined and the questions asked are minimized to facilitate quick analysis. And although RLC studies are completed quickly, a degree of rigor can be obtained through:

- purposive sampling (interviewing individuals who meet certain criteria; i.e., farmers who own less than two hectares, women who are active in agriculture, etc., rather than using more time-consuming, random sampling techniques);
- gathering of empirical data (using techniques identified below and elaborated in Annex II);
- the use of comparison groups (i.e., interviewing participant and non-participant farmers in a project); and
- tabulation of the data (quantitative analysis) or aggregation of the data into analytic categories (qualitative analysis).

C. DATA GATHERING TECHNIQUES

The most common data gathering techniques used in conducting rapid, low-cost studies are: key informants, group interviews, guided interviews, observation, informal surveys and rapid, non-random sample surveys. These techniques are described in greater detail in Annex II.

D. RAPID, LOW-COST STUDIES TO ANSWER MANAGERS' QUESTIONS

RLC studies can be conducted: (a) on a planned, regular basis (e.g., quarterly, biannually, annually) to provide the manager with information on project trends and thus to generate the data necessary for subsequent impact evaluation; or (b) on an ad hoc basis, when managers need additional information to deal with uncertainties and unexpected problems in implementation.

In this section, we will discuss some common information needs of managers and the kinds of rapid, low-cost studies that may be useful for answering their questions. Examples given will be taken from actual RLC studies prepared and planned for development projects in Asia. See the inset on page 7. Common questions managers have include: ✓

- Questions triggered by analysis of administrative data;
- Questions concerning behavioral changes in and/or benefits for project participants;
- Questions concerning sub-project effectiveness;
- Questions concerning the implementation process; or
- Questions concerning project effects on beneficiaries during the project implementation period.

The purpose is not to identify each and every possible information need that managers have, but simply to give the reader a rough idea of the various types of questions managers have and the ways in which a rapid, low-cost study may answer those questions.

1. SITUATION 1: QUESTIONS TRIGGERED BY ANALYSIS OF ADMINISTRATIVE DATA

Ideally, analysis of administrative data will regularly provide the manager with comprehensive information on actual inputs and outputs vs. those planned. This information in itself can "trigger" questions that a manager will want answered. The manager may wish to investigate these questions quickly in order to make appropriate implementation decisions for the remainder of the project. In this case, a rapid, low-cost study which collects quantitative data may be the most useful. The inset below shows the kinds of questions managers (of hypothetical roads or water projects) may have as a result of analysis of administrative data.

<u>PLANNED OUTPUTS:</u>	<u>ANALYSIS OF ADMINISTRATIVE DATA REVEALS THAT:</u>	<u>MANAGER'S QUESTION IS:</u>
RURAL ROADS PROJECT		
10 Roads completed each year during a 5 year project.	After 1st year, all 10 roads have been completed on schedule.	Are the roads having a sufficient socio-economic effect to justify proceeding further with road construction according to original schedule?
POTABLE WATER PROJECT		
100 potable water systems installed and functioning.	All 100 systems have been installed; only 50 are functioning.	Why are only 50% of the systems functioning as planned?

(a) Answering the Manager's Question--Rural Roads Project

The manager of the Rural Roads project needs to know if the completed roads are having a sufficient socio-economic effect to justify proceeding further with road construction according to the original schedule. To answer this question, he or she might contract for the kind of study undertaken in Nepal in 1983.5/ For this study, USAID/Nepal hired a Nepali economist to study the socio-economic impact of the Western Hills Road.

(1) Methodology. This was a rapid, low-cost study which gathered quantitative data. The study was conducted in four phases and the entire effort was completed in approximately one month. Phase I consisted of a review of related documents and preparation of questionnaires to be used in interviews. Phase II (10 days) consisted of collecting the data in the project area. Thirty-six interviews in three districts in Far Western Nepal were conducted. The sample was stratified according to distance of residence from the Western Hills Road:

<u>Distance</u>	<u>Respondents</u>
0-1 km	16
2-5 km	15
6-18 km	<u>5</u>
TOTAL	36

45

----- In Phase III (9 days), the data from the questionnaires were tabulated and analyzed in Kathmandu. In Phase IV, the information was systematically put together in the form of a draft report.

(2) Major Findings. The majority of all respondents replied that, after completion of the road, they:

- changed their farming practices over the past few years (60-88 percent);
- increased production due to the increased availability of improved varieties (86-100 percent); and
- increased household income (about 80 percent).

However, it would appear that the road had an even greater impact on improving access to services.

- Approximately 40 percent of respondents closest to the road reported practicing family planning; 0 percent of those farthest from the road reported practicing family planning;
- Between 70-80 percent of those living closest to the road reported sending girls to school; 25 percent of those farthest from the road reported sending girls to school.

(3) Comment. While this kind of assessment cannot provide statistically accurate estimates of the group studied, it provides sufficient interim information on the socio-economic impact of the road to answer the manager's question posed above.

(b) Answering the Manager's Question--Potable Water Project

The manager of a hypothetical potable water project needs some answers fast. Analysis of administrative data has revealed that although 100 percent of the water systems planned to be installed have been completed, only 50 percent are functioning. The manager needs to know why. A study similar to one undertaken in Thailand in 1979 ^{6/} could help answer this question.

(1) Methodology. This study was undertaken over a five-week period by a geographer, a medical anthropologist from the United States and a sanitarian from the Thai Ministry of Public Health. Of 212 completed potable water systems, a random sample of 52 systems was selected and stratified by province. Sample selection was modified to eliminate those systems that did not cluster geographically for daily visits. Fifty-two systems serving 133 communities with a total population of 170,000 persons were evaluated. A standardized questionnaire was administered at each of the sites. Quantitative and qualitative data were gathered. Respondents usually included the system operator, the village chief, village leaders and other villagers.

(2) Major Findings. This study of the Potable Water Project in rural Thailand gathered the kind of information that might help to answer the hypothetical manager's question posed above. Based on the interviews conducted, the study found that the major reasons for system breakdown included the following:

- Community Participation. "Underestimation by project planners of the importance of community participation and management . . .".
- Equipment. "The A.I.D. furnished Onan engines proved to be a disaster. They broke down and spare parts were difficult to obtain . . .".
- Maintenance. "Failure to include an adequate maintenance component in the project design resulted in . . . inferior performance . . .".

The study also found -- quite unexpectedly -- that the major impact of the project appeared to be economic. Out of 56 responses, "more gardening and farming" was mentioned 21 times as the most important benefit of the water system.

(3) Comment. With this information, gathered and analyzed quickly in five weeks, the manager could begin to take those steps needed to increase project effectiveness: develop a maintenance component, purchase different commodities and increase emphasis on community planning and participation. The unexpected findings on economic impact might prompt the manager to investigate further how the project could include activities or link up with other projects to further assist villagers using the water for gardening and farming.

2. SITUATION 2: QUESTIONS CONCERNING BEHAVIORAL CHANGES IN AND/OR BENEFITS FOR PROJECT PARTICIPANTS

For many projects, success is contingent upon behavioral changes on the part of participants. For these projects, an effective manager will want to know whether the anticipated behavioral changes are, in fact, occurring and whether project benefits are being distributed equitably as anticipated. The manager of a social forestry project may have such questions. For example, analysis of administrative data may indicate that specific outputs are in place, but the manager may wonder whether the behavioral changes and benefits associated with these outputs are occurring. The inset below shows three specific outputs associated with a hypothetical social forestry project, the anticipated behavioral change associated with the output and the manager's questions.

RAPID, LOW-COST STUDIES CONDUCTED
FOR A.I.D., 1980-1985

<u>Managers' Questions</u>	<u>Possible Data Collection Approach</u>	<u>Example</u>
Questions Triggered by Analysis of Administrative Data	Rapid, Low-Cost Study: Quantitative Data, Structured Interviews	<u>The Socio-economic Impact of Roads In Nepal, Tek Inapa, USAID/Nepal, 1983</u>
	Rapid, Low-Cost Study: Quantitative and Qualitative Data, Structured Interviews	<u>The Potable Water Project in Rural Thailand, A.I.D. Impact Evaluation Report No. 3, D. Dworkin and B. Pillsbury, May, 1980</u>
Questions Concerning Behavioral Changes In and/or Benefits for Project Participants	Rapid, Low-Cost Study: Qualitative Data, Group Interviews	<u>Madhya Pradesh Social Forestry Project Mid-term Evaluation, T. Arndt, S. Pharr, A.I.D. November, 1983</u>
	Rapid, Low-Cost Study: Qualitative Data Structured, Unstructured and Key Informant Interviews	<u>Case Studies of Lohgarh Gram Panchayat and Salva: Gram Panchayat, USAID/India, 1983</u>
Questions Concerning Sub-Project Effectiveness	Rapid, Low-Cost Study: Quantitative and Qualitative Data, Structured Interviews	<u>The Implementation of a Planning, Monitoring and Evaluation System for PL 480 Title II Food for Work Programs in India, W. Drake and J. Nystuen, June, 1984</u>
Questions Concerning the Project Implementation Process	Rapid, Low-Cost Study: Qualitative Data, Participant Observation	<u>Organizing Farmers for Irrigation Management: The Buni-Laio Experience, Jeanne, Illo and M.A. Elena, C. Javier, Research and Service Center, Ateneo de Naga, Philippines</u>
Questions Concerning Project Effects on Beneficiaries During the Entire Implementation Period	Rapid, Low-Cost Study: Qualitative Data, Unstructured Interviews	<u>The Accelerated Mahaweli Programme (AMP) and Dry Zone Development, Report No. 4, Thayer Scudder and Kapila Wimalacharma Institute for Development Anthropology, Nov. 1983</u>

Outputs	Assumed Behavioral Change	Manager's Questions
Village Social Forestry Programs established; trees planted on woodlots Planted on woodlot	Villagers will understand stand program objectives; villagers will participate in selecting the kinds of species most suited to their needs.	Do villagers understand the program objectives? Are they selecting the species they need?
Woodlot Management Plans agreed to by village councils	Village councils participate in preparation of plans; plans not produced solely by Forestry Department	Have village councils actually participated in preparation of the management plan or have they merely accepted a plan produced by the Forestry Department?
Plans for equitable distribution of fuelwood are prepared by village councils	Village councils implement equitable Distribution Plans	Have the distribution plans been implemented by the village councils and is woodlot production equitably distributed?

(a) Answering the Manager's Questions--Social Forestry Project

To answer these questions, a rapid, low-cost study might be undertaken to collect qualitative data soon after, say 10 percent of the outputs are in place. Two such studies have been completed for the Madhya Pradesh Social Forestry project in India. These are, "Social Forestry in Madhya Pradesh: Case Studies of Lohgarh Gram Panchayat and Salvai Gram Panchayat" and Section IV. A. of the Madhya Pradesh Social Forestry Project Mid-Term Evaluation, entitled, "The Plantation Program: Community Management and Participation".

(1) Methodology and Findings - Social Forestry in Madhya Pradesh: Case Studies of Lohgarh Gram Panchayat and Salvai Gram Panchayat. To answer these questions, an informal survey/case study method was used. USAID/New Delhi contracted with a local research organization to examine issues of community management and benefit distribution. A team of seven Indian researchers spent approximately six weeks in five villages. They interviewed key informants, Panchayat officials, villagers involved in the social forestry project and forestry department officials. A staff person in the mission noted that the research method used was best described as "investigative reporting". The entire case study was completed in eight weeks. The total cost was \$5,000.00. The report included numerous quotations from those interviewed to provide a more comprehensive understanding of participants' perceptions to managers. The study found that:

- the primary initiative for the social forestry program came from the Social Forestry Department;
- no management plans were developed and the rights and obligations of the village councils were not discussed;
- the selection of trees was made by forest officials on technical considerations with no consultations with villagers; and
- the distribution of the grass produced was not done in any organized or equitable way; many villagers remained unaware of its availability.

(2) Methodology and Findings - "Community Management Issues: Popular Support and Participation" in Madhya Pradesh Social Forestry Project Mid-term Evaluation. This study provides another example of a rapid, low-cost study which gathered qualitative data to answer the kinds of questions posed above. To assess issues of community management, popular support and participation, the social scientist on the evaluation team conducted group interviews in two participant and two control villages over a 2-3 day period. In this case, group interviews ran from 30-45 minutes. The groups were composed of poorer villagers. Separate sessions (with 5-30 persons participating in each) were held in each village with landless villagers, marginal farmers (under 2 hectares) and women (from families with under two hectares). A total of some 60 persons took part in the meetings. In a few days, the group interviews revealed:

- in participant villages, the level of knowledge about the program and tree planting was quite high; in the comparison villages, comparable knowledge was lacking and tree planting was virtually an unknown idea;
- skepticism about equitable distribution of fodder and firewood was quite high; the landless had not been informed of the potential benefits;
- there was uniform agreement that someone outside the village council would have to supervise distribution if the poor were to get any benefits; and
- of four possible methods of distribution of fuelwood and fodder, the poor villagers overwhelmingly favored "PLAN D", whereby village families were allowed to manage, protect and gather wood from designated trees. The village council was least involved in this potential distribution plan.

(3) Comment. Studies like these, undertaken in a very short period of time at low-cost, could tell a manager that, in most respects, behavior is not changing as anticipated. Having this information early on in the life of a project could help the manager make the decisions needed to refine the project and enhance effectiveness. For example, the manager could request that a training component for foresters be included in the project to educate Forestry Department staff about the community management aspects of the project. At the same time, he or she could also request ongoing studies of various "model" distribution plans to determine which would be the most equitable.

3. SITUATION 3: QUESTIONS CONCERNING SUB-PROJECT EFFECTIVENESS

(a) Answering the Manager's Questions--Rural Infrastructure Project

A manager may be responsible for implementing a complex rural infrastructure project involving road construction, small-scale irrigation systems, schools, and/or low-cost housing. He/she may desire information on sub-project benefits and costs, overall sub-project effectiveness and factors facilitating or hindering sub-project implementation. This might tell the manager which types of sub-projects are the most effective under what conditions. The manager and counterpart implementing agencies could then use this kind of information to improve the annual planning, implementation and evaluation processes.

Under these circumstances, the manager might want to initiate the kind of rapid low-cost studies that have been undertaken by Catholic Relief Services (CRS) with the former Asia Bureau's support for the India Food for Work (FFW) Program. This approach includes procedures for a specific number of RLC studies conducted annually which gather both quantitative and qualitative data.

(1) Methodology. Managers of this program had several major questions. Are the sub-projects:

- generating employment opportunities?
- cost-beneficial?
- improving the quality of life for the most disadvantaged?

FFW managers believed that regular answers to these questions -- including both quantitative and qualitative information -- would assist them and their counterparts in the overall implementation process. With assistance from two consultants, the FFW managers have designed a system -- involving between 12 and 60 beneficiary interviews annually -- to provide rapid analysis of these questions and feedback to field staff annually.

The number of interviews conducted depends upon information needs in each zone and resources available. Two different interview forms have been prepared depending upon the type of project being studied: the Beneficiary Income Improvement Analysis form (BI) (used when the primary sub-project benefits can be measured in economic terms for land-leveling, irrigation, tank construction or social forestry projects), and the Asset Effectiveness Analysis form (AE) (for projects which yield benefits not readily amenable to quantification). Finally, case studies of specific projects will also be undertaken. These will be more in-depth investigations of certain aspects of more or less successful projects. The major purpose will be to examine: (a) those factors which seem to enhance or impede implementation; and (b) unanticipated or secondary effects of the project. A minimum of one and a maximum of two case studies will be undertaken in each zone initially.

(2) Comment. The system designers are aware that there are certain limitations in the analysis of income or benefit/cost information. Climatic variation, changes in market price or faulty farmer recall could heavily influence reported net gains. They believe, however, that a heavier investment of time or resources will not yield more definitive answers.

The cost of establishing and testing this system (three TDYs by two consultants over an 18-month period) was approximately \$56,000. Between 1985 - 1990, the FFW program level will be approximately \$30 million. Thus, the cost of setting up this system is approximately 1/5 of 1 percent of total program costs. The cost of undertaking each BI or AE analysis has been estimated to be \$46.00. This includes:

- staff travel to the field;
- the interview;
- completing the analysis;
- entry of the data into a lap computer at the zonal level;
- processing time on the computer;
- verification of the accuracy of results by the computer;
- analysis comparing the completed study to other studies in the zone; and
- situation analysis -- going beyond benefit-cost and analyzing non-economic indicators as well.7/

4. SITUATION 4: QUESTIONS CONCERNING THE PROJECT IMPLEMENTATION PROCESS

(a) Answering the Manager's Questions--Irrigation Project

Many managers want regular information on project implementation effectiveness, especially if the process is new or innovative. In a case like this, managers may wish to conduct rapid, low-cost studies similar to those undertaken for the Philippines assisted in funding these studies from October, 1981 through March, 1982.

→ Buhi Rinconada,
Buhi Lalo
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(1) Methodology. For many years, the National Irrigation Administration (NIA) tested various ways to increase farmer participation in irrigation. These attempts did not produce the desired results. In December, 1980, the NIA decided to use the A.I.U.-funded Rinconada/Buhi-Lalo project as a site for testing a new participatory approach which involved hiring and training 15 Community Organizers (COs). The COs were to help farmers develop irrigators' organizations and to assist farmers in working with NIA's technical staff in planning and constructing the canals.

42'

Recognizing the significance of this new participatory approach, if successful, and its potential for broader application in NIA, top NIA officials wanted to fully understand the process of field-level activities. In December, 1980, therefore, the NIA commissioned the Research and Service Center (RSC) of the Ateneo de Naga to document the participatory approach in the development of national irrigation systems. Using participant observation techniques, the research team prepared monthly documentation reports. In all, 15 monthly reports on the Upper Lalo zones and another 15 on the Lower Lalo zones were submitted to NIA.

Participant observation techniques require that the researcher observe and record the tasks and responses of project participants during both formal and informal activities. The researchers, therefore, resided in the project areas. They were present during project activities like meetings, discussion sessions held by farmer leaders and NIA-farmer negotiations. The researchers also conducted unstructured interviews with project participants on issues or problems which emerged during the documentation period. In Upper Lalo, for example, the research focused on the following project tasks: (1) securing farmers' participation in the review of designs of field facilities; (2) involving farmers in the construction survey and in right-of-way negotiations; (3) engaging farmers in construction; and (4) developing farmers' organizations.

Each report aimed to: (1) reveal the process by which irrigators' organizations were developed in the area; (2) specify the ways in which farmers were involved in planning their respective canals; and (3) derive lessons which could help NIA identify the operational requirements for implementing the participatory approach in national irrigation system development.

(2) Major Findings. Among many other items, the research identified: (a) the positive benefits; and (b) some of the organizational and implementation requirements of the participatory approach. Some of the positive benefits were:

- the number and total length of ditches were kept to a minimum; this reduced costs and minimized the loss of farm area to ditches;
- farmers' intimate knowledge of the topography of their farms helped fit the ditch designs to the terrain; thus, when the system began operations, all ditches functioned as anticipated which, the engineers noted, is rarely the case in non-participatory projects;
- farmers erased only one of the 68 constructed channels, a marked improvement over non-participatory projects, where farmers erased the great majority of new channels built by NIA; and
- there was only one construction delay due to a right-of-way problem, again a marked improvement over the non-participatory approach.

The research also revealed the new costs and constraints of implementing the participatory approach compared to traditional approaches:

- community organizers have to be hired and trained; organizing costs amounted to approximately ~~to~~ 113 pesos per hectare;
- time had to be allowed for farmers to propose revisions;
- construction schedules had to be kept flexible to adapt to farmers' readiness to participate in construction;
- NIA had to train farmers; and
- farmers wanted project management and technical staff to come to meetings, posing an additional demand on their time.

(3) Comment. These studies were extremely useful in identifying the benefits and constraints of the participatory approach for top NIA managers. NIA management subsequently used the information to develop and implement this approach in other irrigation systems: it is now used in 26 national irrigation systems covering an area of about 23,000 hectares.

A.I.D. managers who desire a more detailed understanding of the implementation process might consider using rapid, low-cost studies based on participant observation techniques. (This approach is considered "rapid" because, although the researchers were in the field for many months, reports were generated on a monthly basis.) This approach might also be helpful to managers of other types of projects in which beneficiary participation is particularly important for project success: agriculture research, especially for those projects having a farming systems focus, social forestry, appropriate technologies and/or watershed management. This approach might also be useful for understanding the implementation process in those projects having a women's component.

5. SITUATION 5: QUESTIONS CONCERNING PROJECT EFFECTS ON BENEFICIARIES OVER THE PROJECT IMPLEMENTATION PERIOD

Some managers know they will have questions concerning a project's effects on beneficiaries over the entire implementation period. For example, they may be responsible for a project designed to provide infrastructure and social, economic and educational services to new settlers. While they may not want quantitative production or benefit-cost data, they may desire regular, qualitative information on beneficiaries' quality of life. In a case like this, a manager may wish to initiate a series of studies similar to those undertaken for the A.I.D.-assisted Mahaweli Basin project in Sri Lanka.

(1) Methodology. The Accelerated Mahaweli Programme is one of the largest irrigation projects currently under construction. Its purpose is to increase production by provision of irrigation infrastructure and to provide social, economic, health and educational services to new settlers in the project area. The program's managers wanted information on an annual basis on the effects of the project on beneficiaries' quality of life. Were the services being provided to the settlers as originally planned? Was the combination of irrigation infrastructure and services contributing to development in the region? To answer these questions, a rapid, low-cost study to gather qualitative data has been undertaken every year between 1979 and 1985 (with the exception of 1982). The appraisal has been undertaken by the same two-person team. The team is composed of an expatriate anthropologist and a Sri Lankan who has expertise in settlement projects.

This study is based on repeated interviews with a small number (31) of settler households over an extended time period. Although the households have not been randomly selected, they are representative of the major categories of settlers.

This approach provides qualitative information within a few weeks after completion of the field work. "And unlike most conventional surveys", the authors note, "it is longitudinal following the fortunes and misfortunes of the same households over an extended time period. As a result, we obtain quite accurate cumulative histories of a number of households, with the quality of our data improving with each successive interview. And since these histories are remarkably similar from one area to another, we believe that they are a valuable means for providing timely and updated information for policymakers which would not otherwise be available. Where this information relates to potential problems, or newly emerged problems, our (approach) serves the function of an "early warning system".

The authors also believe that this approach provides data sufficiently accurate for planning purposes. One way they test the accuracy of their findings is by cross-checking study results with results of other recently completed, more traditional field surveys. They have cross-checked results with a World Bank-financed survey and with a survey completed under the A.I.D.-assisted Water Management Synthesis II project. Broad areas of agreement increase the authors' confidence in the accuracy of the findings.

The entire cost of these RLC studies conducted over a five-year period has been \$100,000 to date. Life of project A.I.D. funding for the Mahaweli Basin I and II projects comes to \$120 million. Therefore, the cost of the studies represents less than 1/10 of 1 percent of A.I.D. funding for this program.

(a) Answering the Managers' Questions--Resettlement Project

These studies have provided considerable information which could answer a manager's questions concerning beneficiaries' quality of life. The studies found:

- that while the authors reported in 1981 that dynamic growth had begun in System H, by 1983 this early promise seemed to be slipping away;

- that there was an increasing trend toward subsistence rather than economic growth;
- there was increasing stratification, with the more successful farmers leasing in land and less successful farmers leasing out part of their holdings due to insufficient capital;
- settler organizations were increasingly dominated by authorities from the Mahaweli implementing agencies rather than by the settler themselves;
- between 1981 and 1983, a major shift in settler family attitudes had occurred with settlers growing increasingly cynical due to the poor quality and inconsistent delivery of services;
- the rate of development appeared to have slowed down as measured by the inability of many settlers to improve their housing or purchase tractors; and
- the reasons for the slowdown included: inadequate water supplies in 1982 and 1983; credit problems; reduction in off-farm employment; and increased illness.

(2) Comment. With this kind of information available regularly, before the project comes to an end, an effective manager could take steps to modify the downward trends in beneficiaries' quality of life. Possibly a component for studying and mobilizing off-farm employment could be added; a special team of irrigation engineers could be set up to improve water availability; and health facilities could be established.

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CHAPTER II FOOTNOTES

- 1/ In Nepal, for example, A.I.D. managers prepared data collection plans for two projects after implementation was underway. Two specialists subsequently assisted USAID/Nepal in further refining these plans. See, "Monitoring and Impact Assessment Systems for the Rapti and RCU Projects", Alexander Kornis and Douglas Smith, Report to USAID/Nepal, June 1985.
- 2/ Robert Chambers, "Rapid Rural Appraisal: Rationale and Repertoire", Public Administration and Development, Vol. 1, p. 99, 1981.
- 3/ Deboeck and Kinsey, Managing Information for Rural Development, p. 27.
- 4/ A 1986 study points out, "Despite stubbornly-held myths, sampling does not have to be complicated, time-consuming or expensive. The facts are that samples:
 - (a) do not have to ^{be} large to meet the inferential requirements;
 - (b) do not depend on the size of the population and do not, therefore, require coverage of a certain percentage of the population; and
 - (c) can be drawn from as narrowly defined a group as desired by project managers and do not have to be drawn from an area's entire population."For further discussion, see Project Monitoring and Evaluation in Agriculture (draft), ___ Casley and Krishna Kumar, 1986.
- 5/ The Socio-economic Impact of Roads in Nepal, Tek Thapa, USAID/Nepal, 1983.
- 6/ D. Dworkin and B. Pillsbury, The Potable Water Project in Rural Thailand, A.I.D. Impact Evaluation Report No. 3, May 1980.
- 7/ The implementation of a Planning, Monitoring and Evaluation System for PL 480 Title II Food for Work Programs in India, William D. Drake and John D. Nystuen, June 1984, p. 49.

CHAPTER III

GUIDELINES FOR PREPARING DATA COLLECTION, MONITORING AND EVALUATION PLANS DURING PROJECT DESIGN

A. INTRODUCTION

✓ In view of the lessons of Chapter, I, what can A.I.D. do in a more systematic way to ensure that: (a) A.I.D. projects generate performance data to inform decision making and to document impact; and (b) when appropriate, A.I.D. projects assist in building counterpart capacity in data gathering and analysis to improve project planning and implementation?

This chapter discusses steps that should be taken during project design to ensure that A.I.D. projects generate the data that managers need. It sets forth a step-by-step approach, based in part on the lessons learned, for designing a project information system. 1/

There are several advantages to having an M&E system as an integral element of project design. First, feasibility of M&E can be used as a key criterion of acceptable design. That is, if the resulting M&E system is overly complex, this may be an immediate indicator of problematic design: projects that cannot be efficiently monitored and evaluated, probably cannot be efficiently implemented either. Second, planning for monitoring and evaluation at the outset permits M&E to be financed throughout the project (time is not wasted looking for funds and contractors for special studies), and in many cases, only one M&E contract may have to be negotiated when implementation begins. Third, an element of trust is built up over time between the M&E staff and the project staff; thus, findings become credible and negative findings are more likely to be accepted and addressed. As a result, there is a greater tendency to use and build on evaluative information.

Some may argue that host countries have little interest in data collection and will not want the additional burden of collecting data added to their already overworked staff. However, in most instances, host countries are already engaged in the burdensome task of collecting mounds of useless data that go unanalyzed and unused. Scarce human resources and expensive material (paper, pens, pencils, calculators) are wasted in this process. Transforming this effort into a useful process is an important element of capacity building.

Furthermore, experience shows that as host countries see how information systems are critical for planning purposes, they themselves begin to contribute to the support of these systems and take appropriate steps to improve them. Extremely useful information systems have been established in the Indonesia and Thai family planning programs, for example, and the systems have been a critical element of program success. While the information systems were, in part, earlier supported by A.I.D., the systems are now primarily host government supported elements of successful national programs.

The ANE Bureau has some experience with developing M&E systems during project design. For example, the IBRD/A.I.D. National Social Forestry Project for India was designed to include a very comprehensive M&E system. During design:

- Numerous items were negotiated with the G.O.I. and agreed to, including the type of ~~and~~ data to be collected, the frequency of data collection, the administrative focus and staffing of the M&E unit, and data collection formats and procedures for feedback;
- The project paper contains convenants on monitoring and evaluation with respect to frequency of data collection, transmitting the information to USAID, and training of the M&E staff;
- The project will include long and short-term technical assistance for monitoring and evaluation;
- A handbook describing the data collection, monitoring and evaluation system was developed during design. M&E units will use the handbook to guide data collection activities; and
- G.O.I. Forestry Department staff will participate in special evaluation training and will then staff state-level M&E units.

While this M&E system may eventually be modified as implementation proceeds, the design process is illustrative of the kinds of tasks that must be undertaken to build an integral M&E system into a project. The remainder of this chapter describes the steps that should be taken during project design to develop an M&E system.

B. A STEP-BY-STEP APPROACH FOR DESIGNING A PROJECT INFORMATION SYSTEM

A first step that should be taken by mission staff is to designate an individual to be responsible for developing the M&E system in the ways set forth in these guidelines. This person can be a member of the design team or mission staff who works with the design team. There may be cases in which it would be useful to employ special expertise. In most cases, this individual should have experience with alternative data collection methods--informal surveys, case studies, content analysis of administrative records or related non-traditional methods.

The specialist's* primary task is to: (a) develop an M&E system which is an integral component of the project--a component fully negotiated with the host government and adequately funded; and (b) prepare the data collection, monitoring and evaluation plan for the project paper.

* In the remainder of this paper, the term "specialist" refers to whomever is assigned the responsibility of developing the M&E system.

What should the M&E system be designed to do? Ideally an M&E system should be created as part of the project's administrative structure. The major functions of the system should include:

- regular analyses of administrative data on select indicators of project progress and performance;
- planned or ad hoc studies on key management or impact questions; and
- procedures for timely feedback of both types of information to managers.

The M&E specialist will work with A.I.D. and counterpart staff to design such a system. The steps the specialist will have to take are as follows:

1. Identify the Users
2. Clarify Project Goals, Purposes, Inputs and Outputs
3. Identify the Managers' Questions
4. Identify Key Indicators and Administrative Data to Answer Managers' Questions
5. Select Other Appropriate Methods to Answer Managers' Questions
6. Clarify Counterpart Support and Involvement
7. Develop Feedback Procedures
8. Develop the Budget
9. Other Tasks

These steps are discussed in greater detail below.

1. IDENTIFY THE USERS. An effective information system cannot serve everyone connected with the project. Therefore, the specialist's job will be to identify the priority users and their information needs. The key information users for most A.I.D.-assisted projects would probably be:

- counterpart field staff who need to know regularly "how they are doing";
- counterpart administrative and planning staff who need program data for planning purposes; and
- A.I.D. project and program officers and senior management in the missions who need progress and performance data for implementation decisions.



The involvement of this group from design through implementation in defining information needs is critical! In the absence of users' involvement, the task of defining information needs is oftentimes left to the "experts". "This is frequently the beginning of the end; the information specialist designs the system in a vacuum and it ends up being irrelevant from the standpoint ... of the users".^{2/} For example, for an M&E system established in a Southeast Asian country, managers asked the experts to tell them what information they needed. As a result, data on over 1,000 variables were collected, far more than could ever be analyzed or used.

2. CLARIFY PROJECT GOALS, PURPOSES, INPUTS AND OUTPUTS. One of the main advantages of a monitoring and evaluation system is that it allows for a continual analysis of trends toward achievement of goals and purposes (as well as inputs and outputs) over time. The point is not to see goal or purpose achievement at any one point in time but instead to observe trends to ensure that reasonable movement in the proper direction is taking place. To do this you must know very specifically what you expect to see move; i.e., what exactly should be changing. Observing movement, regardless of how you choose to measure it, becomes an impossible task if the goal and purpose statements are vague or confusing.

Thus, the M&E specialist should confer with A.I.D. and counterpart staff to ensure that the goal(s) and purpose(s) are well-defined and offer ideas for clarification if they are not. The following points should be kept in mind:

(a) Goals and Purposes Should be Stated as Results, not as Activities

For example, the prominent feature of many family planning projects is "dissemination of contraceptives". This, however, is the prime activity which should contribute to the result of "averting births" or "reducing fertility rates". For agricultural projects, "training agricultural extension agents" is the activity leading to the result of "increasing agriculture production" or "increasing farmer income".

A helpful procedure in developing goal and purpose statements that are stated as results is to write a statement describing the problem which the project will address. Then, invert the problem statement into a new statement that presents a solution. For example:

- Problem Statement: Population growth will outrun domestically produced cereal grain supply in a few years.
- Inversion: Increase domestic production of cereal grains to meet the needs of growing local population.

(b) Goals and Purposes Should be Stated as Explicitly as Possible

Goal and purpose statements should be explicit with respect to what is to change, magnitude of change, benchmarks or target dates for change and target area or audience which will experience change. For example, a vaguely written goal/purpose statement such as:

- Increase agriculture productivity.

Can be transformed a into more explicit statement:

- Increase domestic production of rice from _____ metric tons in 1982 to _____ metric tons in 1986 in the northwestern province.

Granted, such specificity is an ideal and will not be possible for every project. Nevertheless, the specialist should attempt to be as specific as possible concerning the four areas identified above.

3. IDENTIFY THE MANAGERS' QUESTIONS. To help managers identify their questions, the evaluation specialist should meet with as many of them as possible to discuss their information needs. This is perhaps one of the most difficult tasks of all. First, it is usually impossible to meet with all the intended "users". Second, helping identify the information managers' needs is often a very trying experience. While most people have some model of assessment they use to make decisions, it is often implicit and based on intuitive processes that are difficult to articulate.

There are some things, however, that the specialist can do to help managers articulate their information needs. The first is simply to talk with them about their role in the project. What specifically do they do day-to-day or week-to-week which relates to the project? What are they responsible for? How do their decisions affect the project? What do they hope to see gained by the project? What are their concerns? What do they find most interesting in the project? What are the areas of the project about which they have uncertainties?

All these questions serve two purposes. First, they help the managers focus on their project role, responsibilities and functions. Second, by understanding managers' roles, the evaluation specialist is better equipped to help the managers articulate the decisions and actions to be taken throughout the life of the project and identify the information needed for those decisions.

In helping managers identify their priority questions, the specialist may find there is considerable overlap among questions. This will help pare down the number of questions to be investigated over the life of the project.

Most managers' questions will usually fall into two major categories concerning output, purpose and goal achievement. First, most managers will want to know what is happening. For example,

- Inputs/Outputs: Are inputs and outputs falling into place or being achieved as planned?
- Purpose: To what extent is the project purpose being achieved? Are inputs/outputs contributing to purpose achievement? What are the short-term effects on beneficiaries? What has been the incidence of benefits? What have been the project trends with respect to institution building and/or service delivery?

- Goal: To what extent will the project goals be achieved? What has been the impact of the project?

Second, for each of these categories many managers may also want to know "why and how"? They may want to know why and how output, purpose or goal achievement is or is not occurring as planned. The insets on the following pages show some common questions that managers have.

The following may be useful to ask in guiding the selection of priority questions. (1) What are the major areas of uncertainty about inputs and outputs and the likelihood of purpose/goal achievement? (2) What are the major decisions which might have to be made during implementation for which information is needed for informed decision making?

The design process of an M&E system for an A.I.D. agricultural project in the Caribbean included a very useful approach for identifying managers' questions. Project managers from the three organizations which would be involved in the project--A.I.D., the implementing agency and the local university--attended a two-day workshop during the design phase. The purpose of the workshop, conducted by the design team M&E specialist, was to identify managers' priority questions. Apparently the managers identified useful and relevant questions for data collection.^{3/} This approach may be more useful than simply having the specialist interview individual managers. A workshop provides a forum for debate and facilitates the building of a consensus on key management and impact questions. This is not possible in one-on-one interviews with numerous managers.

4. IDENTIFY KEY INDICATORS AND ADMINISTRATIVE DATA TO ANSWER MANAGERS' QUESTIONS.

Many host country implementing agencies collect an abundance of data through administrative records. Some of these records may contain valuable information on indicators of progress and performance. However, many are simply routine reports which often "pay little attention to project implementation and negligible attention to evaluation of impact, tending ritually to record statistics of trivial planning value",^{4/} -- statistics on finance management and attainment of physical targets, for example.

Regular analysis of administrative data is particularly valuable when managers want information on trends or changes in a specific condition or phenomenon over the life of the project. Many--but not all--managers' questions about project implementation progress and performance can be answered by observing a specific indicator over time. An indicator is a measure of a problem or condition.^{5/} For the purposes of understanding the progress of a development project, it is most helpful to have information on the indicator available throughout project implementation. This is sometimes referred to as time-series data. Appropriately selected and analyzed time-series data reflect changes in project conditions and assist managers in understanding progress and performance trends. Some common indicators are shown at the inset on ~~the next~~ page, 9

MANAGERS' QUESTIONS

"WHAT IS HAPPENING"?

INPUT/OUTPUT LEVEL QUESTIONS

Agriculture - Administrative records show that new technological packages have been produced; are the new technological packages being adopted by farmers?

Health - Administrative records show that health clinics have been built and staffed; are health services (nutrition, education, ORT, immunization) being used?

Irrigation - Administrative records show that the irrigation canals have been built; are irrigation systems efficiently providing the volume and rate of water required by farmers?

Social Forestry - Administrative records show that woodlots have been established and have received seed; are seedlings surviving and are woodlots producing fuelwood?

PURPOSE LEVEL QUESTIONS

Agriculture - Are the technological packages contributing to higher yields and incomes?

Health - Are health and nutrition related behaviors (knowledge of ORT, use of growth monitoring) of beneficiaries changing as anticipated?

Irrigation - Are the irrigation systems distributing water equitably to farmers?

Social Forestry - Do the poor have access to the fuelwood produced for home use or for market?

GOAL LEVEL QUESTIONS

Agriculture - To what extent have production and yield increased and quality of life improved in the project area?

Health - To what extent have infant/child nutrition status and morbidity improved?

Irrigation - To what extent have production and yield increased and quality of life improved for small farmers?

Social Forestry - Has access to woodlot production increased employment and quality of life for the poor?

MANAGERS' QUESTIONS

"WHY AND HOW"?

INPUT/OUTPUT LEVEL QUESTIONS

Agriculture - Why are some farmers adopting the new technological packages and some not?

Health - What factors are responsible for low utilization of health services?

Irrigation - Why are some farmers not receiving the required rate and volume of water?

Social Forestry - Why are seedlings in some villages surviving and in other villages not surviving?

PURPOSE LEVEL QUESTIONS

Agriculture - Why are incomes and yields higher for some participants and not for others?

Health - Why are nutrition and health behaviors changing for some participants and not for others?

Irrigation - What factors are responsible for equitable distribution of water in some villages? Can these factors be replicated in villages where water distribution is less equitable?

Social Forestry - What factors prevent the poor from having greater access to the fuelwood being produced on village woodlots?

GOAL LEVEL QUESTIONS

Agriculture - What factors were most responsible for production and yield increases?

Health - What factors have prevented greater improvements in nutrition status and morbidity?

Irrigation - Why has production increased more in some project areas than others? What are the major factors contributing to improvements in quality of life?

Social Forestry - What factors have impeded greater improvements in employment and quality of life for the poor?

The specialist's first task, then, is to identify a select number of critical indicators of progress and performance which address managers' priority questions. Second, the specialist must examine existing administrative data to determine if they adequately provide the needed information on these indicators. If not, the specialist will have to work with counterparts to modify the data and formats for data collection.

Ideally, more focused, limited and useful administrative data will be the result. Some administrative data can be analyzed and used on the spot by field staff. These data will also be forwarded to the M&E unit for further analysis, and the results will be fed back to the previously identified users.

COMMON INDICATORS OF PROJECT PROGRESS
AND PERFORMANCE

<u>SECTOR</u>	<u>ILLUSTRATIVE INDICATORS</u>
Health	morbidity, mortality and service utilization rates
Agriculture	technology adoption and agricultural yield
Population	contraceptive prevalence and fertility rates
Nutrition	children's weight gain
Irrigation	timeliness and volume of water distribution and agricultural yield
Institution Building	manpower development, staffing patterns and turnover rates
Roads	transportation costs, and access to social, agricultural and health services ^{6/}

To develop appropriate indicators, it is useful to examine each question managers have and think about the "pieces of information" that could help provide the answer. The "pieces of information" are the indicators. For instance, to answer the question:

- To what extent has progress been made in providing more reliable water service?

Think of what a "reliable water service" would look like--fewer breakdowns, quicker service when breakdowns occur, increase in the number of days that the water schemes are functioning, more frequent water quality tests and more dependable water quality. This grouping is easily turned into the following list of indicators:

- (a) total number of breakdowns during a six-month period;
- (b) average number of days of each breakdown;
- (c) average number of days that schemes function without a breakdown during a six-month period;
- (d) average number of water quality tests conducted per scheme during a six-month period; and
- (e) percent of tests conducted that indicates acceptable water quality.

In addition to identifying indicators and determining the usefulness of existing administrative data and data formats, the specialist will have to work out:

- procedures for and frequency of data collection (which agency staff should fill out the forms, how frequently should they send them to the M&E unit?);
- locus of responsibility and procedures for feedback of analytical results to managers and the planning unit (i.e., a monthly report, a biannual presentation of analysis results by M&E staff, an annual conference or workshop).

The inset which follows shows some formats for maintaining administrative records which were developed during negotiations with the Government of India for the A.I.D./IBRD India National Social Forestry Project. Forestry Department staff will fill out these forms to report on progress. The formats will then be sent to the State M&E units. The M&E units will aggregate and analyze the data on an annual basis and send the results back to the users.

5. SELECT OTHER APPROPRIATE METHODS TO ANSWER MANAGERS' QUESTIONS. Mission and counterpart staff may decide that certain priority questions require more intensive investigation over the life of the project. They will then have to select appropriate methods for answering these questions.

It is at this point that managers and the specialist should consider how quantitative and qualitative methods might best be combined to provide information for management decision making. The chart on pages ~~6-7~~ should be studied carefully. It is a hypothetical example of an ideal project data gathering strategy. It shows how various data gathering approaches--analysis of administrative data, small-scale surveys, rapid appraisals and case studies--can be combined to give managers the information they need.

This chart also shows how the results of planned data collection efforts (e.g., annual small-scale surveys) can sometimes trigger unanticipated questions. The chart shows how these questions can then be answered quickly by using rapid, low-cost methods.

To better understand how methods and approaches can be combined to answer managers' questions, it may be helpful first to review various methods and approaches and the circumstances under which they might be selected.

(a) Methods of Data Collection

The major data collection methods are the following:

Census and Sample Surveys: The difference between a census and sample survey is that while in the former a complete enumeration is taken of all the units in a population, the latter is based on a randomly drawn representative sample which enables us to generalize about the whole population. Sample surveys are therefore more economical than censuses.

Well designed and efficiently administered sample surveys can provide rich, quantitative data on a variety of subjects of paramount interest to a project. They can help us to identify the characteristics of the target populations or its subgroups and their needs and requirements. Moreover, they can provide data about the effectiveness of the intervention and assess its overall effects.

The usefulness of surveys does not necessarily depend on a large sample size or the coverage of numerous variables. In fact, small sample surveys based on a modest sample and having a few variables can often be as effective and useful as the larger ones.

Participant Observation: As the name itself suggests, in participant observation the researcher(s) stays in the field and directly observes the phenomenon under study. He or she lives and participates like other members of the group or organization and tries to experience reality as they do. In addition, the observer conducts formal and informal interviews and gathers secondary data. The participant observation method provides deep insights which might be otherwise overlooked. One advantage of this method is that the findings and conclusions are empirically grounded. Although participant observation is usually a time-consuming method, it can be designed to generate useful interim information.

Case Studies: Case studies are designed to provide an in-depth analysis of select phenomena by tracing events over a period of time. Thus, a case study enables us to look at a particular event, organization or intervention in its broad historical context. Various types of data collection strategies--use of records and documents, formal and informal interviews and direct observation--are used in case studies. Case studies are useful for examining delivery systems or the institutions built under the auspices of an intervention. Often a single case study cannot serve a useful purpose. The ideal course is to conduct a series of related or comparative case studies for categorizing experiences and drawing relevant generalizations.

Rapid, Low-Cost Approaches: This broad category includes the range of data gathering techniques described in detail in Annex I, which can generate needed quantitative or qualitative information with a modest investment of human resources and within a relatively short time span. For practical purposes, they can be conceived of as methods which provide the data and information within one to six weeks with a staff of one to three professionals.

Secondary Methods: Secondary methods use existing data (e.g., census data, clinic records, etc.) that were collected for other purposes as the basis for new analyses. Secondary methods can be used whether the original data were collected with survey or case study methods. If information needs can be met with secondary methods, this will nearly always be less expensive and quicker than collecting primary data.

(b) Choosing Appropriate Methods to Answer Managers' Questions

What criteria should be applied to select the methods that are most appropriate for answering managers' questions?

Experience shows that, in most cases, regular analysis of administrative data, small-scale surveys, case studies and rapid low-cost methods (rather than large-scale surveys or censuses) are the data gathering and analysis approaches that will be most useful and efficient for A.I.D. and counterpart managers because:

- For the majority of A.I.D. managers, a high degree of precision is relatively unimportant, while rapid feedback is very important.
- In many cases, A.I.D. managers have questions in areas which are not amenable to precise quantitative measurement and analysis; i.e., questions concerning institutional performance, quality of life, the implementation process, behavioral change and/or effects on beneficiaries.
- A.I.D. and especially counterparts usually do not have adequate financial or human resources to support high cost analysis.
- Without extensive training, it is unlikely that counterparts can replicate the sophisticated analytical techniques required for large surveys and censuses once A.I.D. assistance has terminated.

For all these reasons then, it is recommended that in most cases A.I.D. managers use small-scale surveys or administrative record analysis if they want to know "what is happening". If they want to know "why and how", case studies and rapid low-cost studies would probably be most appropriate. The specialist will work with A.I.D. and counterparts to determine which methods are most appropriate for answering managers' priority questions and how these methods can be combined to provide needed information.

COMBINING DATA GATHERING METHODS TO ANSWER
MANAGERS' QUESTIONS

Hypothetical Agriculture Research and Production Project

This chart presents a suggested data gathering, monitoring and evaluation strategy for a hypothetical Agriculture Research and Production Project.

Year 1 - Data Gathering Approaches

1. Administrative Records Submitted on

of production oriented experiments and trials;
of improved varieties produced;
of technological practices produced.

Results and Feedback- Analysis by M&E unit shows all outputs (above) produced as planned.

2. Small-Scale Sample Survey on Production - Is conducted on farms of 25 farmers in each of four districts, to gather data on yield, production and level of use of new technology.

Results and Feedback - Baseline quantitative data on yield, production and level of use of new technology is provided to managers.

3. Informal Survey on Quality of Life - To gather quantitative and qualitative data on quality of life, an informal survey using observation techniques and a checklist for interviews is conducted in two villages in each of four participant districts and two villages in two non-participant districts. Field work and analysis completed in eight weeks.

Results and Feedback - Analysis provides qualitative and quantitative data on prosperity indicators; i.e., housing quality, availability of potable water and electricity, use of bicycles and motorbikes, and food consumption habits.

Year 2 of Project

1. Administrative records on same indicators as Year 1 are submitted regularly.
Analysis by M&E unit shows all outputs produced as planned.

2. Small-Scale Sample Survey on Production Repeated - Additional question is added: Are farmers adopting the improved varieties and new technologies?

Results and Feedback - For 50 percent of farmers, quantitative data show yields, production and adoption have increased; for the other 50 percent, no increase. Decision is made to undertake a rapid, low-cost (RLC) study using key informant and group interviews.

Rapid, Low Cost Study - One anthropologist and one agronomist spend six weeks in villages where there is no production increase gathering qualitative and quantitative data.

Results and Feedback - Analysis reveals extension extremely weak in these villages. Information is not getting to farmers. Analysis also shows 25 percent are oilseed farmers. The technological packages are not relevant to their needs. Participation of farmers in planning the research is weak.

Action - Managers work with Extension Department to ensure these villages receive needed information. Managers develop strategies to increase farmer participation in research planning.

Year 3 of Project

Administrative Records Submitted - Records show only 50 percent of trainees have returned to agricultural research stations as planned. Need to undertake small-scale survey to investigate why.

Small-Scale Survey - Two organizational development specialists spend one month conducting key informant interviews.

Results and Feedback - Analysis of qualitative data shows that Agricultural Department has not provided salary increases and other benefits as planned. Trainees have accepted employment at other institutions.

Action - Managers work with Agricultural Department to ensure that salary and benefits are increased during next year as originally planned.

2. Small-Scale Survey on Production Repeated

Results and Feedback - Analysis shows that most farmers have increased production and yields. However, farmers feel that income has not increased as rapidly as planned. Managers need to know why. An informal survey is undertaken to answer these questions.

Informal Survey - One agricultural economist spends six weeks interviewing farmers and gathering qualitative data to determine why farmers feel income has not increased.

Results and Feedback - Analysis of qualitative data shows that marketing arrangements are not adequate. There is need for a better road to get produce over the mountains to the market.

Action - Managers contact Transportation Department to point out transportation needs in the area. A.I.D. considers road construction project in the area.

3. Informal Survey on Quality of Life Repeated

Informal survey on quality of life is undertaken in same villages as undertaken in year one of project. Field work and analysis is completed in eight weeks.

Results and Feedback - In villages where farmers have highest rates of adoption, quality of life has improved. There is a higher percentage of improved housing quality, greater number of potable water installations, increased use of electricity, increased number of bicycles and motorbikes and increased consumption of meat and fresh vegetables. This is not the case in participant villages where adoption is low. In these villages and in non-participant villages, prosperity indicators have not changed in three years.

Action - This information reconfirms the need to ensure that extension workers work with villages which are not adopting. Project managers contact Extension Department.

During project design, the use of traditional methods--large-scale, multi-round surveys and/or censuses--can be considered. There may be some conditions under which use of these methods might be appropriate; e.g.,

- a high degree of precision is required;
- there is a dearth of statistical sectoral data and analytical capabilities and A.I.D. anticipates extended support for that sector; and/or
- A.I.D. will be testing alternative approaches or technologies through the project and statistically accurate information is required.

These conditions, however, are not usually applicable in the context of most A.I.D. projects.

6. CLARIFY COUNTERPART SUPPORT AND INVOLVEMENT. The effectiveness of the information system will, in large measure, be dependent upon counterpart involvement and support. This means that A.I.D., in the design stage, must reach agreement with counterpart agencies concerning the extent of their involvement. The M&E specialist will have to work with A.I.D. and counterparts to reach agreement on which particular counterpart agencies will be involved, as well as:

- the number, type and level of field staff who will be designated by the counterpart agency to fill out the necessary forms for gathering administrative data and forwarding them to the M&E unit;
- the number, type and level of supervisory staff for these procedures (to ensure accuracy, completeness, and timeliness); and

- whether counterpart agencies will permit the designated staff to participate in A.I.D.-supported short-term training (workshops, seminars) to increase the effectiveness of their participation in the information system.

As part of these negotiations, the specialist will also have to work with A.I.D. and counterparts to identify the institutional locus and responsibilities of the M&E unit(s).

Creating the M&E unit provides an opportunity for developing host country planning and analytical capabilities. An important part of the development process is building the institutional capabilities of our counterparts to measure, understand and react in a programmatic way to socio-economic change. This in itself is an important goal. Thus, this step is a significant one in the process of developing the M&E system.

There are two main items that will have to be negotiated. First, where will the M&E unit(s) be located institutionally? While in previous years general opinion was that M&E units should be located in an external institution to avoid bias, the consensus now is that the unit's potential contribution to decision making and feedback, as well as its long-term sustainability, will be greater if the unit is created as an integral part of project operations. This suggests that the unit(s) should be located in the counterpart implementing agency.

Second, the specialist, working with counterparts, will have to identify the major functions of the M&E unit ~~and how~~ and how it should be staffed (number, level and type of disciplines). The need for long and short-term technical assistance for this unit should also be determined and included as part of the project design and implementation plan.

7. DEVELOP FEEDBACK PROCEDURES. In the study of the six highly successful development projects, "timely feedback" was found to be a critical element of project success. Feedback facilitated improved performance by providing managers/districts with regular information on their performance vis-a-vis others.7/

The development of a feedback mechanism is what distinguishes an effective information system from pure research. In developing the overall information system, the specialist, A.I.D. and counterparts must give considerable thought to how this mechanism will work. It is the link which transforms evaluative studies into an information system for improving performance.

However, feedback fails in many M&E units not because feedback mechanisms are absent. In many situations, although the feedback mechanism exists, the feedback itself is useless. This is because many M&E units lack analytical capabilities for interpreting key data, for summing up critical findings in the context of goals and purposes and for identifying action-oriented recommendations. Effective feedback, then, requires relatively sophisticated analytical capabilities which can turn raw data into action-oriented reports for management.

Given that limited capability for well-focused interpretation and analysis is a major management shortcoming in many developing (and developed) countries, perhaps the key task of an expatriate advisor and designated counterparts should be the preparation of periodic reports which document progress and performance (based on analytical results) as they relate to broader goals and purposes. Thoughtful, analytical reports would create a powerful demand for data throughout the life of the project and would enhance data use for decision making.

In addition to designating expatriate and counterpart staff who are specifically responsible for ensuring meaningful feedback, other steps to enhance feedback might include:

- establishing a Project Planning Committee to meet at regular intervals--composed of key members of the Planning Unit and the M&E unit--to review feedback reports and their implications for project management;
- ensuring that "timeliness and quality of feedback" is evaluated routinely as part of annual project assessments and management reviews;
- including in project covenants an outline of procedures for reporting analysis results to counterparts and A.I.D.

8. DEVELOP THE BUDGET. The specialist should develop an overall dollar amount for the total cost of the data collection, monitoring and evaluation system, as well as a budget which specifies the cost of various component activities. As a general rule, it has been estimated that the overall cost of an information system should run between 0.5 percent and 2 to 3 percent of total project costs depending upon the significance of the project and the need for either low or high cost options for data gathering, processing and analysis.^{8/}

A detailed budget which identifies both A.I.D. and counterpart funds or resources should be included in the project paper. Specific budget line items are identified in Annex I, Issues Checklist for Preparing Project Paper Data Collection Plans.

Care should be taken to ensure an adequate distribution of resources between data collection efforts, on the one hand, and data processing and analysis procedures on the other. In the past, the resources needed for data processing were usually considerably underestimated. The usual result was that reams of data were collected, but minimal amounts were analyzed because the staff and financial requirements for analysis had been grossly underestimated.

9. OTHER TASKS. Mission staff may want to consider having the specialist undertake additional tasks. Many of these tasks can and should be completed before implementation begins. These tasks might include:

- drafting a handbook or guidelines manual describing the M&E system for the project;

- drafting scopes of work for long and short-term technical assistance for the M&E unit;
- setting out an Action Plan for the M&E unit for the first year of the project;
- developing all formats for collection of administrative data in collaboration with counterparts; and, most importantly,
- developing a schedule for reporting to the users the results of key analyses.

CHAPTER III FOOTNOTES

- 1/ Annex I provides an issues checklist, based on the discussion in this Chapter, that should be used in preparing project paper data collection plans.
- 2/ Information for Decision Making, Vol. I, p. 62.
- 3/ As it turned out, the data generated by the M&E system were critical for the future of the project. The data showed that extension workers were having a positive effect in project areas. Based on this information, the project was extended.
- 4/ Chambers, Managing Rural Development, p. 128 quoted in Morse and Gow, Implementating Rural Development Projects: Lessons from A.I.D. and the World Bank Experience (Westview Press, Boulder, 1985) p. 189.
- 5/ Evaluation: A Systematic Approach, Peter H. Rossi and Howard E. Freeman, Sage Publications, 1982.
- 6/ Annex IV contains a bibliography on evaluation methodologies categorized by sector. Many of these references discuss specific indicators or proxy indicators.
- 7/ Paul, p. 211.
- 8/ Managing Information for Rural Development: Lessons Learned from Eastern Africa, World Bank, March 1980.

ANNEX I

ISSUES CHECKLIST FOR PREPARING PROJECT PAPER DATA COLLECTION PLANS

All AWE BUREAU Development Assistance and Economic Support Fund projects ✓
~~Every major project which represents a core activity of a mission's CDSS strategy~~ should include a data collection, monitoring and evaluation system. The project paper should include a data collection plan which explains how the information system has been designed to be an integral element of the project and its implementation. Therefore, the project paper plan should emphasize:

Data for Decision Making - The plan should clearly identify the type of data that will be gathered and analyzed for decision making and impact assessment;

Host-Country Support - The plan should identify the components of the information system which will be supported by the host country (i.e., counterpart agency staff for gathering select administrative data, staff for the M&E unit); and

A.I.D. Support - The plan should identify the components of the M&E system which will be supported by A.I.D. (training in data collection and analysis methods, actual data collection and analysis, long and short-term technical assistance for the M&E system).

An issues checklist for project paper data collection plans is outlined below.

1. THE USERS OF THE INFORMATION - This section should specify:
 - the users of the information (counterpart field and planning staff, A.I.D. staff); and
 - users' organizational affiliation.
2. INSTITUTIONAL LOCUS - This section should specify:
 - whether an M&E unit will be created or enhanced as a part of the project;
 - in which agency the M&E unit will be located;
 - the number and type of staff for the M&E unit.
3. PROJECT GOAL, PURPOSE AND OUTPUT QUESTIONS, INDICATORS AND METHODOLOGIES - This section should reference the logframe and the section of the project paper which discusses purposes, goals, inputs and outputs.

This section should identify:

- managers' priority output, purpose and goal questions (specifying high, medium and low priority questions may help ensure that only genuinely needed information is collected);

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- the select, key indicators which will be used to answer managers' questions;
 - the data collection methodology which will be used to provide information on these indicators and the procedures for doing so. If the methodology will be "administrative record analysis", the plan should indicate whether new formats for administrative data will have to be designed and how these will be developed.
4. SPECIAL STUDIES - For questions which require more intensive investigation over the life of project, this section should specify:
- the types of studies and combination of methods that will be used for gathering and analyzing data to answer managers' questions;
 - the type of data that will be gathered;
 - how frequently these studies will be conducted and by whom (M&E unit or local firms, universities or research institutions).
5. COUNTERPART SUPPORT AND INVOLVEMENT - This section should identify:
- the counterpart implementing agencies which will be involved in data collection; and
 - the nature and level of their involvement (provision of staff to prepare administrative data, or for the M&E unit, approximate numbers, type, etc.).
6. FEEDBACK PROCEDURES - This section should specify:
- the specific procedures which will be used to generate feedback (e.g., quarterly or annual reports, biannual workshops, etc.).
7. DEVELOP THE BUDGET - This section should identify specific budget line items to support the M&E system or it should reference the overall project budget which includes this information. Budget line items might include:

A.I.D.

- long-term technical assistance (e.g., resident M&E advisor--24 months);
- short-term technical assistance (short-term consultancies to advise on or participate in specific data collection and analysis efforts);
- training in data collection and methodologies: long-term (university training); short-term (seminars, workshops, conferences);
- commodities: calculators, computers if appropriate; and
- funds for data processing, if appropriate.

HOST COUNTRY

- counterpart agency field staff to fill out administrative data forms: for example, 100 field staff;
- counterpart agency supervisors: for example, ten supervisors;
- office space for M&E units: for example, three district M&E units, one central unit; and
- staff for M&E units: for example, 4 Ph.D.s, 8 M.A.s.

8. EVALUATION SCHEDULE - This section should specify:

- the points in the project life at which external evaluations will be conducted;
- the purpose of these evaluations; and
- approximately, the type of empirical data, generated by the M&E system, which will be available for review by the evaluation teams.

Formats for hypothetical M&E plans for Project Papers are included in Annex III.

ANNEX II

DATA GATHERING TECHNIQUES

The most common data gathering techniques used in conducting rapid, low-cost studies are: key informants, group interviews, guided interviews, observation, informal surveys and rapid, non-random sample surveys. These techniques are described in greater detail below.^{1/}

1. KEY INFORMANTS - With the key informant method, the researcher seeks the desired information from a few persons in a community or organization, who by virtue of their position and role, are knowledgeable about the phenomenon under study. Key informants are usually those who are better off, better educated and more powerful--the village headman, local school teachers, and the head of the local women's organization. While there are dangers of bias (which can be offset by talking to the disadvantaged and less powerful members of the community), these individuals can provide valuable insights. This technique can be very useful, for example, in obtaining information concerning:

- anticipated and unanticipated project effects; or
- village-level constraints to effective implementation.

2. GROUP INTERVIEWS - This is a social science technique in which a small group of persons is brought together for an extended discussion cued by a series of questions or discussion topics put forward by the investigator. This technique is also referred to as "focus groups". The discussions usually run from 30 minutes to 1 hour. A degree of rigor is imposed by conducting group interviews with project participants as well as non-participants. One advantage of group interviews is that there is a tendency for mutual checking. That is, if one group member misrepresents certain topics, the rest of the group usually speaks up to correct any false impressions. A disadvantage is that sometimes a few individuals or special interests may dominate the discussion. The group interview technique can be useful, for example, in obtaining information concerning:

- participants' perceptions of project benefits and equity;
- the degree to which certain project components are working out as planned; or
- village participation in and understanding of the project.

^{1/} This section draws, in part, on two sources: "Shortcut Methods for Information Gathering for Rural Development Projects," Robert Chambers, Paper for World Bank Agricultural Sector Symposium, January, 1980 and Evaluation Sourcebook for Private and Voluntary Organizations, edited by Daniel Santo Pietro, American Council of Voluntary Agencies for Foreign Service, Inc. 1983.

3. GUIDED INTERVIEWS - To conduct guided interviews, there is no formal questionnaire but rather a checklist of questions which the interviewer uses as a flexible guide. Not all points are raised in all interviews, but a composite picture usually emerges after a number of such interviews have been conducted. The use of a check list has been found to be an effective tool for quickly diagnosing farming problems and opportunities. It is a valuable technique for investigators with professional training but who lack extensive field experience. A drawback of this technique is the difficulty in organizing the data generated from these discussions. The guided interview can be useful, for example, in obtaining information concerning:

- farmer perceptions, problems and/or ~~and~~ use of HYV packages; ✓
- families' use and acceptance of family planning methods;
- family use of health services; or
- village/household acceptance and use of potable water installations.

4. OBSERVATION - Observation as a tool for increasing one's knowledge is fundamental to the investigation of almost any phenomenon. Observation involves viewing project results or activities. It can be obtrusive (everyone knows why the evaluator is there) or unobtrusive (people are not told the real purpose of the visit). For evaluative purposes, it must be done in a systematic way to answer specific questions. Evaluators need to agree on time and focus. How much time is adequate to spend at a site, and what will be observed? Observation is useful for gaining insight into behavior. If you want information on the sanitation practices of villagers, it may be more useful to observe (unobtrusively) whether soap is available in washing areas than to ask them directly. A variation of this approach is called "participant observation". Observers participate in project activities and write up regular reports on their perception of events. The advantages of observation are that it is easy to do, requires minimal preparation and it is useful in identifying unintended, as well as intended project outcomes. A disadvantage is that the analysis depends heavily on the perceptiveness of observers and will be influenced by their own biases. These deficiencies may be partly compensated for by carefully selecting a balanced team of observers.

Observation can be useful, for example, in obtaining information concerning:

- the nature and effectiveness of the implementation process;
- villager participation in project activities; or
- farmer contributions to operation and maintenance.

5. INFORMAL SURVEYS 2/ - Both quantitative and qualitative data can be gathered through informal surveys incorporating innovative features. There are two principal types of informal surveys.

The first type is based on the use of proxy indicators. This means the researcher, to assess quality of life, for example, may gather information on household roof and floor materials and quality rather than attempting to gather precise household income data. By using innovative indicators, the investigator tries to get a general idea of the situation without undertaking comprehensive surveys that directly measure standard indicators. This approach is quite new and its usefulness remains to be tested.

Another promising approach, which has already proven useful in farming systems research,^{3/} can be termed "informal, multi-disciplinary surveys". In such surveys, a multi-disciplinary team comprised of agronomists, economists, anthropologists, etc., spends a week or two in the project area interviewing farmers and community leaders. Team members compare notes, exchange ideas and write up their report.

For farming systems projects, for example, this type of survey has been used to orient the research program but it can be used to identify on-farm changes that have taken place. This approach contributes to a broad-based, yet integrated perspective. Mutual checking by all disciplines encourages accuracy.

6. RAPID NON-RANDOM SAMPLE SURVEYS - Rapid, non-random sample surveys are distinguished from random sample surveys in two ways. First, the number of variables covered is kept to a minimum. Only a few questions are asked and an interview can usually be completed within 5-10 minutes. Second, the norm of random sampling is abandoned in favor of a purposive sample which is deliberately kept small. These two major differences facilitate rapid analysis. Since the number of variables is limited, and the sample size is small, the data can be quickly manually tabulated.

One distinctive advantage of these surveys is that they can generate quantitative data which can be statistically manipulated. Only sampling error cannot be estimated for them. Moreover, because of their smaller size, non-sampling errors remain low which enhances the validity of findings. Non-random sample surveys are otherwise conducted like other surveys.

2/ The discussion of informal surveys and rapid, non-random sample surveys is taken from "Rapid, Low-Cost Data Collection Methods for Project Design, Monitoring and Evaluation: Outline of a Proposal," Krishna Kumar, A.I.D., Center for Development Information and Evaluation, July, 1985.

3/ Dr. Peter Hildebrand has developed and used this approach at the Instituto de Ciencia Tecnologia Agricola, (ICTA) in Guatemala. See "Summary of the Sondeo Methodology used by ICTA," prepared for the Workshop on Rapid Rural Appraisal, 26-27 October, Institute of Development Studies, University of Sussex, 1979.

Rapid, non-random sample surveys can be useful, for example, in providing information concerning:

- agricultural production and/or adoption of new technologies;
- use of and/or access to health services; or
- irrigation systems operation and maintenance.

ANNEX III

SAMPLE DATA COLLECTION PLANS FOR PROJECT PAPERS

DATA COLLECTION, MONITORING AND EVALUATION PLAN

BURMA

AGRICULTURE RESEARCH AND DEVELOPMENT PROJECT (492-0012)

INTRODUCTION: As stated in the project paper, "Little has been written on rural society in Burma and how the development process affects rural people. Farm family profiles do not exist. Accurate production, income, savings and consumption data are difficult to obtain". To implement this project effectively, data on these and other topics are essential for project decision-making. Therefore, this project: (a) supports the development and staffing of a data collection, monitoring and evaluation unit within the Agriculture Research Institute (ARI); and (b) includes a preliminary framework (below) for a data collection, monitoring and evaluation plan.

I. USERS OF THE INFORMATION: The major information users will be the Project Management Committee, researchers and the Planning Unit at ARI, extension agents and farmers. These groups, working with the long and short-term consultants, will develop a comprehensive data collection, monitoring and evaluation plan for the project during the first year of project implementation.

II. INSTITUTIONAL LOCUS: One objective of this project is to develop the capacity of the data collection, monitoring and evaluation unit in ARI to plan and implement project data collection and analysis. This unit will be staffed by two agricultural economists and two anthropologists, who will be receiving training under the project between years 1-3. During this time, it will be the responsibility of the project team leader to oversee data collection and analysis. By the fourth year, with continued short-term technical assistance, the four staff members will begin to plan, implement and supervise the data collection and analysis for this project.

III. PROJECT GOAL, PURPOSE AND OUTPUT QUESTIONS, INDICATORS AND METHODOLOGIES: The data collection unit will examine the following questions during implementation. Indicators and methods are identified below.

A. PROJECT GOAL: The goal of this project is to increase agricultural productivity by increasing per acre yields of maize, oilseeds and other crops.

- Goal Level Question: Using farm households as the unit of analysis, to what extent is per acre yield in maize, oilseeds and other crops increasing in the four agro-climatic zones?
- Indicators: Per acre yields in maize, oilseeds and other crops.

- Data Collection Methodology: Examination of administrative records. Data on per acre yields are most likely maintained in the Agriculture Ministry's administrative records. If not, procedures for collecting this information will be developed. ARI's monitoring and evaluation unit will be responsible for analyzing these data, preparing an annual report and sending this report to the users identified in Section I.

B. PROJECT PURPOSE: The purpose of the project is to strengthen the capability of the Agriculture Research Institute to plan, organize and carry out production-oriented research in maize, oilseeds and other selected crops.

- Purpose Level Question: To what extent has the capacity of ARI to plan, organize and carry out production-oriented research in maize, oilseeds and other selected crops been strengthened as a result of this project?
- Indicators: Numbers of trained staff (and staff trained in maize and oilseeds research); development of and adherence to manpower plans; degrees attained by researchers; relevance of research to agricultural needs; linkages to international centers; and turnover rates.
- Data Collection Methodology: Examination of ARI's administrative records and interviews with staff members. Data on purpose level indicators are not currently a part of existing administrative records. To gather data on these indicators, one of the long-term consultants will be responsible for supervising this process during the early years of the project until the monitoring and evaluation unit is fully staffed and capable of taking on this work. In the early years this consultant will also be responsible for ensuring that this information is summarized and prepared as an annual report on the institutional development of ARI.

C. OUTPUTS: The outputs to achieve these objectives involve, among others, increasing the number of research oriented experiments and trials and the development of specific agronomic practices suitable for each of the four different agro-climatic zones in which these crops are grown.

- Output Level Questions: What specific agronomic practices suitable for increased production of maize, oilseeds and other crops grown in each of the four different agro-climatic zones have been developed under this project? To what extent have these practices been adopted by farmers in the four zones? What factors facilitate and/or hinder adoption of these practices in the four zones?

- Indicators: Number/type of specific agronomic practices developed by each research station annually; percentage of target farmers adopting these practices annually.
- Data Collection Methodology: To gather data on the types of agronomic practices and technological packages developed at each research station, the adoption rate by farmers and factors facilitating or hindering adoption, rapid, low-cost studies of approximately 50-100 farmers in each zone will be undertaken annually starting in the third or fourth year of the project. Fifty to one hundred farmers in each zone who have not adopted these technologies will also be interviewed. These studies will be undertaken by the data collection, monitoring and evaluation unit, assisted by short-term technical assistance under the project. The results will be provided to the Planning Unit.

IV. SPECIAL STUDIES:

A. INFORMAL SURVEY ON VILLAGE PROSPERITY: An informal survey will be undertaken annually of three villages in each zone in which the majority of farmers have adopted the new technologies and three villages in which the majority of farmers have not. The purpose will not be to gather precise income data but rather to conduct an informal survey of village prosperity. An anthropologist and a sociologist will spend eight weeks in the field to gather data and write their report. The data gathering techniques will be largely observation and guided interviews. The researchers will examine indicators of village prosperity such as quality of housing and clothing; availability of electricity and potable water; availability of bicycles and motorbikes; and food consumption habits.

B. SPECIAL STUDY OF THE EXTENSION SYSTEM: This project does not include assistance for the further development of the extension system. Nevertheless, an effective extension system is of singular importance for the project. For this reason, special small-scale studies of the effectiveness of the extension system in the four zones will be conducted in the first and third year of the project. Rapid, low-cost methods will be used to assess whether or not the extension service is delivering appropriate, relevant and timely information and technology to farmers in each of the four zones. Indicators might include: number of extension agents in each zone; number of extension agents per x number of farmers; lag time between availability of technology on the research stations and dissemination to farmers; type and relevance of information conveyed to farmers; or use of the information by farmers.

V. FEEDBACK: At first, the long-term, technical-assistance consultants will be responsible for preparing an annual report which interprets the results of data analyses in light of the project's purposes and goals. Once the data collection, monitoring and evaluation unit is developed and fully staffed, these tasks will fall to staff members. The results of all data analyses will be regularly fed back to the planning unit so that project modifications can be made in a timely way.

VI. BUDGET: Approximately 2 percent of the \$17 million designated for this project has been set aside for data collection, analysis and short-term technical assistance. This total - \$340 thousand - will be provided by AID and the Agricultural Ministry of Burma as follows:

A. AGRICULTURAL MINISTRY OF BURMA:

1. Staff:

- ten extension agents in each of the four zones to gather administrative data.
- one staff member at ARI to gather data on institutional development.
- three agricultural economists and two anthropologists from ARI.

2. Office Space:

- Space for M&E unit at ARI.

B. AID

1. 48 months of long-term technical assistance to the M&E unit.
2. 24 months of short-term, technical assistance to expedite procedural formulation and rapid, low-cost studies.
3. Hand calculators for data tabulation.

VII. EVALUATION SCHEDULE: The evaluation schedule and budget are set forth in the project paper. The results of the data collection and analysis on the questions of: (a) increase in per acre yield; (b) institutional growth of ARI; (c) development of new technological packages and farmer adoption rates; (d) effectiveness of the extension service; and (e) village prosperity will be available to provide an empirical basis for the findings and recommendations of the mid-term and final impact evaluations.

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DATA COLLECTION, MONITORING AND EVALUATION PLAN

INDIA

MAHARASHTRA SOCIAL FORESTRY PROJECT (386-C478)

I. USERS OF THE INFORMATION: The users of the information will be the Planning, Monitoring and Evaluation Unit in the Maharashtra Horticulture and Social Forestry Department (H&SFD), the Regional Joint Directors of Social Forestry, the State Level Committee on Social Forestry, the Information and Technology Unit and USAID.

II. INSTITUTIONAL LOCUS: The institutional locus of data collection and analysis is the H&SFD Planning, Monitoring and Evaluation (PM&E) Unit in Maharashtra, and the Information and Technology (IT) Unit in New Delhi. It will be the responsibility of the H&SFD PM&E Unit to supervise the data collection effort and ensure that all records and forms are filled out accurately and completely. The IT Unit will assist the PM&E Unit in preparing any needed forms and in training data collectors. The IT Unit will also be responsible for undertaking special studies, discussed later in the plan.

III. PROJECT GOAL, PURPOSE, OUTPUT QUESTIONS, INDICATORS AND DATA COLLECTION METHODOLOGIES: The H&SFD PM&E Unit and the IT Unit will examine the following questions during implementation of the project. Goals and purposes, as well as indicators and methods, are identified below.

A. Project Goal: The goals of this project are: (1) to increase the supply of firewood, fodder, fruit and building materials in rural areas; (2) to reduce the rate of deforestation; and (3) to increase rural employment.

- Goal-Level Questions: (1) Using the village as the unit of analysis, has the supply of firewood, fodder and building materials increased in rural areas? (2) To what extent has the rate of deforestation decreased in rural areas?
- Indicators: (1) the level of production of firewood, fodder, fruit and building materials in rural villages; and (2) the rate of deforestation in rural villages.
- Data Collection Methodology: Data on goal level indicators are not currently a part of existing administrative records. These data will be provided to H&SFD extension agents and then to the H&SFD PM&E Unit annually by each village panchayat. Providing this information annually will be a condition of the Panchayat - H&SFD Management Plan.

A sample of these data will be analyzed by the H&SFD M&E Unit on an annual basis. Small-scale assessments of production and deforestation levels in a small number of these same villages will be undertaken annually to confirm the accuracy of the original analysis. This information will be consolidated by the H&SFD M&E Unit and provided to managers, and the other users identified in Section I, in an annual report.

B. Project Purpose: The purpose of this project is to develop the institutional capability of the Maharashtra Horticulture and Social Forestry Department to manage communal and private lands for increased and sustained production of forest products.

- Purpose-Level Questions: To what extent does the Maharashtra H&SFD have an increased institutional capacity for increased and sustained production of forest products? To what extent has the H&SFD been successful in motivating villages and villagers to participate in this project?
- Indicators: Number, education and turnover rates of extension agents in each district; preparation by H&SFD of manpower and staffing plans, and adherence to the plans, preparation of an annual plan for forestry production; annual budgetary allocations to H&SFD; hectares planted, seedlings distributed and seedlings surviving, by district, and increased technical knowledge of extension agents as indicated by pre/post tests.

For assessing capabilities of H&SFD extension agents to motivate villagers to participate in the project indicators will include: number of villagers expanding their initial project size per year; number of panchayat requests per year for participating in the program and number of panchayats assuming full responsibility for village plantations under conditions of agreement.

- Data Collection Methodology: Administrative records maintained by the H&SFD regional directors include information on only a few of the indicators listed above. H&SFD regional directors have agreed to re-examine the information currently contained in these records, drop those information items not useful for decision making, and add those items necessary for tracking the above list of indicators. The H&SFD PM&E Unit will be responsible for analyzing and interpreting the data and preparing a semi-annual report.

C. OUTPUTS: Project outputs will be: (1) establishment of community and private plantations; (2) establishment of district and private nurseries; (3) training and placement of experienced extension staff; and (4) completion of research reports.

- Output-Level Questions: To what extent has the establishment and number of community and private plantations and district and private nurseries increased? Have staffing levels increased? Are research reports being completed accurately and on time?
- Indicators: Numbers of community/private plantations and district/private nurseries established per district, per year; numbers of staff persons trained and deployed; results of pre/post testing of trainees; quantity, quality and use of research reports received.

- Data Collection Methodology: Extension agents will be required to provide information to the H&SFD PM&E staff every quarter on the number of plantations and nurseries they helped establish in their districts, the number of hectares planted on these plantations and the seedling survival rate in the village. Spot checks will be undertaken by the H&SFD monitoring staff to confirm the accuracy of this information. The data will be aggregated, analyzed and presented to the users every six months. Local researchers will annually assess the number, relevance and use of research reports prepared by the IT Unit. This assessment will be presented to the users.

IV. SPECIAL STUDIES: Rapid, low-cost studies will be undertaken to examine variations in output achievement by district, to answer both goal and purpose level questions. These studies, using individual and group interview techniques, will be undertaken to identify factors that facilitate or hinder establishment of community and private nurseries and plantations. These studies may be used to compare activities and characteristics of villages progressing well to villages progressing more slowly. Fieldwork and analysis will be completed in six to eight weeks to assure that the information is provided in a timely way to the H&SFD.

In addition, special case studies will be undertaken by the IT Unit annually to examine whether project benefits are distributed equitably among villagers, male and female. Equity indicators to be studied might include the type and quality of benefits actually delivered to male and female villagers in various economic strata compared to those specified in the panchayat agreement and the number and type of complaints regarding distribution of forest projects received by the H&SFD.

V. FEEDBACK: Included in the scope of work for the technical assistance team leader will be a condition that he/she is responsible for working with counterparts to ensure that data analyses are fed back to the planning unit in a timely way.

VI. BUDGET: Approximately 0.5 percent of the \$30 million designated for this project has been set aside for data collection, monitoring and analysis. This total - \$200,000 - will be provided by the Government of India and USAID as follows (this amount includes two scheduled evaluations):

A. Government of India Support:

1. Office Space:

- A. Space for M&E Unit at the H&SFD.
- B. Space for the IT Unit in New Delhi.

2. Staff:

- A. Ten staff for the M&E Unit in the H&SFD.
- B. Five staff for the IT Unit.
- C. Five extension workers in each district, responsible for filling out all forms used for data collection.

B. AID Support:

1. 12 months of long-term technical assistance to the M&E Unit by an expatriate advisor.
2. 12 months of short-term technical assistance to assist with data collection and analysis activities.
3. Hand calculators and vehicles/motorbikes for data collectors.

VII. EVALUATION SCHEDULE: The evaluation schedule and budget have been set forth in the project paper. The results of the data gathering and analysis of (a) forest production levels and deforestation rates; (b) institutional growth of H&SFD; (c) number of plantations established, hectares planted, seedling survival rates; and (d) type of relevance of applied research will be available to provide an empirical basis for the mid-term and final evaluations.

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DATA COLLECTION, MONITORING AND EVALUATION PLAN

INDIA

MADHYA PRADESH MINOR IRRIGATION

(386-0483)

I. USERS OF THE INFORMATION: The main users of the information are:

- A. Irrigation Department (ID) of Madhya Pradesh: Minor Irrigation Committee; Special Appraisal and Supervision Cells (SASC); and the Planning Units;
- B. Agricultural Department (AD): planning units; and
- C. USAID Project and Program Officers.

II. INSTITUTIONAL LOCUS: The monitoring and evaluation activities will be carried out by the Implementation, Operation, Monitoring and Evaluation Division (IOMED) of the Special Appraisal and Supervisory Cell (SASC) of the ID. IOMED has responsibility for supervising the data collection and analysis effort, for providing needed assistance and for the timely submission of all special studies. The unit will collect and analyze all project goal, purpose and output level data, prepare an annual report and provide timely feedback to the principal information users identified in Section I above.

III. FEEDBACK: To ensure that the data collected by IOMED are analyzed and presented in a intelligible and action-focused format, the project provides for technical assistance to the IOMED staff. A detailed scope of work will specify the nature of the T. A. tasks. IOMED staff will collect the information, analyze the data, prepare the report and present the information to the data users and project managers at specified time periods.

IV. PROJECT GOAL, PURPOSE, OUTPUT QUESTIONS, INDICATORS AND DATA COLLECTION METHODOLOGIES: The Monitoring and Evaluation Unit will examine the following questions during project implementation:

A. Project Goal: The project goal is to increase rural production (food grain and fiber) and income by providing improved on-farm employment opportunities.

- Goal-Level Question: Using the rural household as the unit of analysis, to what extent has production (of food grain and fiber) and prosperity increased among participating farmers?
- Indicators: Yield of food grain and fiber per hectare per household; proxy income indicators such as: use of electricity, motorbikes and bicycles, quality of housing and food consumption habits.
- Data Collection Methodology: Examination of administrative records. If no records exist, procedures will be developed to ensure availability of data throughout the life of the project. Analysis of administrative data will be complemented by the use of rapid, low cost studies. Individual and group interviews, using a small sample of

about five to ten farmers in each minor irrigation system, will focus on trends in the quality of life and on changes in consumption pattern of the participants. This information will be collected annually by the IOMED staff and analyzed within six to eight weeks.

- B. Project Purpose: The project purpose is to increase irrigation coverage and efficiency through improved management and technology.
- Purpose-Level Question: In what ways have better management techniques and technology application contributed to increasing irrigation coverage and efficiency?
 - Indicators: Irrigation coverage for each minor irrigation system; water use efficiency for each minor irrigation system. Each minor irrigation will improve water use efficiency through monitoring water use, preventing over watering and avoiding wasteful water use; e.g., using irrigation system before or after precipitation.
 - Data Collection Methodology: Data on purpose level indicators will be collected and maintained by each farmer organization. Maintenance of records will be required of each unit and included in the article of incorporation. The staff of the IOMED will gather and analyze this data annually. A combination of methods will be necessary to gather technical data concerning irrigation coverage and efficiency of water use. Observation and monitoring of water use efficiency, provided through engineering technical assistance, will measure periodic water flows throughout the system. Analysis of measurements, in turn, will provide trends, indicative of progress toward increasing irrigation coverage and efficiency.
- C. Project Output: (1) Minor irrigations planned, designed and constructed; (2) ID and AD staff trained in "service" management systems; (3) local farmers organized for purposes of operating and maintaining minor irrigation systems; (4) pilot projects set up, using alternative technology and management modes; (5) demonstration 'chaks' established for disseminating tested technology; and (6) socio-economic studies prepared.
- Output-Level Questions: The single most important output question which will be investigated on a regular basis is: To what extent are farmer organizations contributing to increased farmer participation in planning, designing, constructing and maintaining the irrigation systems? Other questions are: (1) To what extent has the target of designing and constructing 50 minor irrigation systems been reached? (2) What is the status of 1,525 in-country trainees and of the 40 officers trained in the U.S.A.? (3) To what extent has the target of organizing 50 farmer groups been met? (4) Have two pilot projects (the target) testing alternative technologies and management modes been set up? (5) How many of the 200 planned demonstration chaks have been completed? (6) What is the status of the planned ten socio-economic studies?

- Indicators: (1) Comparison of achieved outputs against specified output targets on a bi-annual basis; e.g., number of irrigation systems constructed during the first six months, the second six months, etc. that are operational. (2) farmer participation data:
 - o size of farmer membership per annum;
 - o socio-economic status and sex of participating farmer;
 - o frequency of scheduling farmer meetings;
 - o farmers attendance at meetings;
 - o quantity and quality of feedback of farmer groups to the Ag. Dept. and Irrigation Dept. staff;
 - o acceptance of farmer groups recommendations by the Ag. Dept. and Irrigation Dept. staff;
 - o evidence of commitment to operate and maintain irrigation systems; and
 - o willingness to pay water users fee.

- Data Collection Methodology: Information on some output level indicators can be obtained from the administrative records of the implementing agencies and from the farmers water user organizations. Rapid low cost studies, using observation and interview techniques, are recommended for collecting data on various aspects of farmers participation in water user organizations. The data collection effort should concentrate on identifying social and cultural impediments to participation, on social and economic factors that either constrain or enhance maintenance and sustainability of water user organizations, problems associated in setting up cost schedules and methods for the collection of fees. A comparative analysis of successful and unsuccessful water user organizations should be undertaken.

V. BUDGET: The data collection, monitoring and evaluation activities will require about one percent, or \$700,000 million, of total project cost projected to be about \$81 million.

A. Government of India Support:

1. Office Space.
2. Five analysts for the ICMED Staff.

B. AID Support:

1. 24 months of long-term technical assistance to the M&E unit.
2. 12 months of short-term technical assistance to the M&E unit to assist in setting up administrative data procedures and in the development of low-cost studies.

VI. EVALUATION SCHEDULE: The evaluation schedule and budget are included in the Project Paper. The collection and analysis of goal, purpose and output level data will be available to evaluation teams to provide an empirical basis for the mid-term and final evaluations.

DATA COLLECTION, MONITORING AND EVALUATION PLAN

PAKISTAN

POPULATION WELFARE PLANNING PROJECT (391-0469)

I. USERS OF THE INFORMATION: The major users of the information will be the Chief Executive and senior management at the Population Development Center (PDC), Population Welfare Division (PWD); the Director General for the Logistics System and Contraceptive Supplies, PWD; the Director, National Institute of Technical Research, PWD; the Director for Program, Training and Education, PWD; the Planning Unit of the Population Welfare Program (PWP) and the relevant project and program officers at USAID.

II. INSTITUTIONAL LOCUS: One major objective of this project is to strengthen the data collection, analysis and feedback capabilities of the GOP Population Welfare Program (PWP) as a whole. Therefore, staff in the Population Development Center (PDC) have been designated to serve as data collectors, analysts and evaluators of the entire program. The Team Leader will work with his/her PWP counterpart to ensure that a sufficient number of these staff serve as the data collectors, analysts and evaluators for the A.I.D. project. Special technical assistance will be provided under the project to assist this core group, to ensure that data collection, analysis, feedback and evaluation of the A.I.D. project is proceeding as planned, and to upgrade the skills of this group if needed.

III. PROJECT GOAL, PURPOSE, OUTPUT QUESTIONS, INDICATORS AND DATA COLLECTION METHODOLOGIES: The data collectors at the Population Development Center will examine the following questions during implementation. Indicators and methods are identified below.

- A. Project Goal: The goal of this project is to reduce the rate of natural population increase from 2.97 percent to 2.6 percent by the end of this project.
- Goal-Level Question: To what extent is the natural rate of population growth decreasing? What is the likelihood that the natural rate of population growth will decrease to 2.6 percent by the end of the project?
 - Indicators: Population growth rate by percentage; crude birth rate; and contraceptive use prevalence by married couples.
 - Data Collection Methodology: Information on the crude birth rate and population growth rate will be taken from government reports and maintained in the administrative records of PDC. If these data are not maintained in government administrative records, the necessary surveys will be undertaken under this project. Contraceptive prevalence surveys will be used to collect the needed data on contraceptive use. It will be the responsibility of the Technical Assistance Team Leader to appoint one person on the staff to ensure that the contraceptive prevalence surveys are carried out at the intervals stated in the

project paper, that data on crude birth rates and population growth is collected and that all these data are recorded in administrative records. This individual will also be responsible for ensuring that these data are analyzed and presented in a report to the users on a regular basis.

B. Project Purpose: The purpose of this project is to strengthen the GOP's population planning, evaluation, research, motivational and logistic capabilities and performance.

- Purpose-Level Question: To what extent have the GOP's population planning, evaluation, research and logistic capabilities improved since this project began?
- Indicators: Use of data generated by program studies and surveys for planning purposes; numbers of trained staff at PWD Centers; the existence of and adherence to a manpower or staffing plan; and development and fulfillment of work plans and objectives by these organizations.
- Data Collection Methodology: The data collection method to be used for generating purpose level data will be routine record keeping. By tracking this information on a yearly basis, a trends analysis can be undertaken to make sure reasonable progress is being made. Data on purpose level indicators are currently not a part of existing administrative records. To gather these data and ensure their maintenance in administrative records at the various organizations, the team leader will meet with the program directors of each organization (PDC, NITR, Logistics System) to identify the type of data and records necessary for monitoring institutional development. These data will be specified when a more comprehensive data collection plan is developed during the first year of the project. The team leader will obtain the services of local researchers to prepare a report to the users annually on this topic.

C. Outputs: The outputs to achieve these objectives will be (1) improved training and data processing and contraceptive distribution capabilities within the involved organization; (2) national contraceptive prevalence surveys and smaller scale evaluation surveys; and (3) construction of a warehouse and research facility.

- Output-Level Questions: The key output question is to what extent is project training in all areas (research, logistics, data processing, etc.) contributing to increased knowledge, skills and capabilities of those trained?
- Indicators: Expanded staff capabilities and competency, as demonstrated by increases in the skill and technical knowledge of those trained.

- Data Collection Methodology: New procedures will be developed to collect and maintain this information as part of PDC's record system. The team leader will appoint one person on the staff of the PDC to ensure that appropriate pre/post tests of trainees' knowledge and skills are administered at intervals throughout the project. This information will be provided to the users to determine if and how the training courses should be modified. In addition, the team leader will appoint one or two staff in the monitoring and evaluation unit of PDC to gather and analyze data on other output achievements and prepare a monitoring report for the users every six months.

IV. SPECIAL STUDIES: A special study of the cost-effectiveness of the GOP population program will be undertaken and funded by A.I.D. toward the end of this project. The study will attempt to calculate the cost of averting a birth—the conventional measure of cost-effectiveness—by calculating the number of births averted over a one year period. The methodology which will be used is roughly as follows: (a) the number of active users of contraceptives is calculated by contraceptive method; (b) coefficients of the use-effectiveness, derived from international data, thus deriving a measure known as "couple years of protection" (CYP); (c) the CYPs for all methods are then aggregated to provide a single estimate which can be converted into an estimate of the total number of births averted; and (d) this figure is then divided by the total cost of the program to produce the final estimate of the average cost of averting a birth. The results of this study will be provided to the users and the PWP Planning Unit to determine whether the program can be made more cost-effective.

V. FEEDBACK: It is the responsibility of the team leader and of the A.I.D. project data collectors, analysts and evaluators on the staff at PDC to ensure that the results of project data collection and analysis are communicated in a timely, understandable and actionable format to the users of the information and the GOP's PWP Planning Unit so that modifications and improvements in project implementation can be made in a timely way.

VI. BIDGET: Approximately two percent of the \$25,600,000.00 total project costs has been set aside for data collection, analysis and short-term technical assistance. This total - \$500,000.00 - will be provided by AID and GOP as follows:

A. Government of Pakistan Support:

1. Office Space: At the PCD for the M&E Unit.
2. Staff: Ten staff for the M&E Unit to serve as data collectors, analysts and evaluators.

B. AID Support:

1. 36 months of long-term assistance by the team leader to the unit.
2. Hand calculators for data tabulation.

VII. EVALUATION SCHEDULE: The evaluation schedule and budget are set forth in the project paper. The results of the data collection and analysis on the questions of: (a) the population growth rate and contraceptive prevalence rate; (b) institutional growth of the GOP Population Welfare Program's capabilities in planning, monitoring, evaluating, conducting research and logistics; and (c) results of the training program in improving trainees' skills and knowledge will be available to provide an empirical basis for the findings and recommendations of the mid-term and final impact evaluations.

DATA COLLECTION, MONITORING AND EVALUATION PLAN

BURMA

PRIMARY HEALTH CARE II
(482-0004)

I. USERS OF THE INFORMATION: The primary users of the information generated by this system will be the Director General of the Department of Health in the Ministry of Health, Director of Public Health, Deputy Directors, Division/State Health Directors and the relevant project and program officers at USAID. This information will also be planned with and made available to the volunteer health workers and representatives of the Village Tract Peoples' Council.

II. INSTITUTIONAL LOCUS: The institutional locus of the project's built-in data collection, monitoring and evaluation system is the Health Department's Information Service. Staff from the Information Service will be responsible for training VHWs, Rural Health Center staff and Division/State staff in procedures for data collection. Supervisors will be responsible for day-to-day supervision of data collectors and for ensuring that forms are filled out accurately, completely and on a timely basis.

III. PROJECT GOAL, PURPOSE, OUTPUT QUESTIONS, INDICATORS AND DATA COLLECTION METHODOLOGIES:

- A. Project Goal: The goal of this project is to reduce morbidity and mortality caused by diarrheal disease, malnutrition, selected infectious diseases and improper obstetrical care in children under five and their mothers.
- Goal-Level Question: To what extent have morbidity rates declined among children under five and their mothers?
 - Indicators: For morbidity, percentage change each year in the following:
 - (i) diarrheal #/1,000
 - (ii) moderately and mildly malnourished/age #/1,000
 - (iii) neonatal tetanus #/1,000
 - (iv) number newborn entering surveillance system #/1,000
 - Data Collection Methodology: The project calls for the development of an improved information system that will provide the DOH with information needed to monitor project progress, manage the project effectively and plan further progress, manage the project effectively to plan further programs. To ensure that this information system provides a useful management tool, the overall approach used will be a rapid appraisal feedback system through which members of the user group receive information on critical indicators (both process and outcome) every six months. This type of approach will allow for a continual analysis of trends toward achievement of project objectives over time to ensure that reasonable progress is taking place. In this way, problem areas can be identified and corrective action initiated as they arise.

Information on the indicators listed above is not currently a part of the Department of Health's administrative records. As part of this project, Village Health Volunteers will be trained to fill out the appropriate forms to report this information regularly to the Department of Health. The Department of Health will then forward this information every six months to the M&E unit for analysis. The M&E unit will analyze the data and provide the results of the analysis to the users every six months.

B. Project Purpose: The purpose of this project is to expand village volunteer health services and to improve the quality of these services.

- Indicators:

of expansion

- (i) number of CHWs and AMWs and TBAs trained, equipped and deployed;
- (ii) percentage of villages and village tracts with CHWs and AMWs.

of improvements

- (i) overall village sanitation, including latrine number and use/results of sanitation checks;
- (ii) frequency of and attendance at personal hygiene lectures;
- (iii) number of immunizations, curative treatments and total patients by VHWS;
- (iv) for the AMW, number of prenatal visits, percent of infants/children in regular weighing, and percent of infants/children having diarrhea.

- Data Collection Methodologies: Data on the indicators listed above will be collected on a continual basis as part of the project's built-in data collection, monitoring and evaluation system. The methods used to generate this information will be a combination of simple record keeping, observation, and interviews using a structured questionnaire. The information will be collected by selected Division/State staff, VHWS and Rural Health Center staff. The Department of Health's Information Service, with assistance from the technical evaluation/information specialists, will be responsible for training data collectors and supervising the effort, preparing simple data collection forms, analyzing the data, and preparing the findings that will be included with output level information in a biannual report.

C. Project Output: The project's output will be modifications and improvements in existing health care services, through better trained, equipped and supervised volunteer health workers and community programs.

- Output-Level Question: To what extent has the number of trained VHWS increased, by type of worker? How many villages are now covered by trained VHWS? What improvements have been made in the training of VHWS?

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- Indicators:

- average number of days worked by a VHW over a six-month period;
- number of VHWs trained (broken down by type): (1) pre-service, (2) in-service;
- additional material included in training such as diarrheal disease and weight surveillance;
- percent of VHWs that have received initial supply kits upon graduation;
- average number of days that a VHW works without a full supply kit during a six-month period;
- number of additional villages covered by trained VHWs every six months.

- Data Collection Methodology: This information will be collected every six months by selected Division/State staff, VHWs and Rural Health Center staff as part of the project's built in monitoring, data collection and evaluation system. With the assistance of the technical evaluation/information specialists, the Department of Health's Information Service will be responsible for developing simple data collection process, analyzing the data and preparing the findings in a format useful for effective project management. Furthermore, the Health Information Service will also be responsible for preparing the final written document containing the findings and disseminating copies to the members of the user group on a biannual basis.

IV. SPECIAL STUDIES: Some goal and purpose level questions require more in-depth investigations and studies; these questions and ways to answer them are described below.

Goal and Purpose-Level Questions: Following the analysis of data and trends, managers will want to know which factors are responsible for variations in morbidity by district or province. Similarly, they may want to learn why VHWs are more effective in some areas than others. To answer these questions, rapid, low-cost studies will be undertaken in the districts in question. Two public health workers will write a report based on interviews with VHWs and project participants, to be completed in six weeks. In addition, a series of special studies will be conducted on both operational and technical subjects to provide DOH with information to manage the program more effectively. Subject areas may include financing, private sector roles, cost-efficiency and workload evaluation.

V. FEEDBACK: It will be the responsibility of the contractors providing technical assistance to the Health Information Service to develop a plan that ensures that data is collected, properly analyzed, and fed back in a timely, actionable format to the users identified in Section I.

V. BUDGET: Accepted project budgets for data gathering, analysis and monitoring are usually between 0.5 percent and 3 percent of project costs. Therefore, \$150,000 of the \$10 million total AID funding for this project has been set aside for data collection, analysis and monitoring and two project evaluations.

A. Government of Burma Support:

1. Office Space: Office space for the monitoring and evaluation unit of the Department of Health.
2. Staff: Ten full time staff persons for the M&E unit will be provided. Appropriate numbers of staff to fill out administrative data forms in each district will be designated and trained.

B. AID Support:

1. Long-Term Technical Assistance: 18 months of long-term technical assistance to the M&E unit.
2. Short-term Technical Assistance: Six months to assist M&E unit in training and data collection tasks.
3. Commodities: Hand calculators for each district.

VII. EVALUATION SCHEDULE: The evaluation schedule and budget has been set forth in the project paper. The results of the data gathering and analysis on the indicators listed in Section IV will be available to provide an empirical basis for the findings and recommendations of the mid-term and final evaluation.

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DATA COLLECTION, MONITORING AND EVALUATION PLAN

INDONESIA

PRIVATE SECTOR MANAGEMENT AND DEVELOPMENT PROJECT
(497-0345)

I. INTRODUCTION: Private Sector Development in Indonesia is primarily constrained by a lack of trained managers, which can be attributed to insufficient training efforts and capabilities of the government, private companies, and institutions. Only one percent of the workforce is in management or supervisory positions and two-thirds of this percentage are government employees. One private sector organization that has the basic capability to address this problem is the Institution for Management, Education and Development (LPPM), recognized as one of the best management development institutions in Jakarta. The Private Sector Management Development Project will offer a six year institutional development package to LPPM as a beginning effort to meet private sector management training demand. As indicated in the Project Paper Evaluation Plan, "the critical measure of project success is the extent to which LPPM develops and expands as an institution".

II. USERS OF THE INFORMATION: The users of the information will be the LPPM coordinator, managing director and the project steering committee. The five steering committee members will work with USAID and the technical assistance consultants to develop a "Management Information System" (MIS) for data collection, monitoring and evaluation of the project by the end of the first planning consultancy (project month nine).

III. INSTITUTIONAL LOCUS: The long and short-term consultants will assist the LPPM staff in developing an MIS for both the project and the institution. The information generated by the MIS will be gathered by the Research Division and provided in quarterly reports to the project steering committee and USAID. In addition, the project will provide a short-term consultant to assist Research Division staff in data compilation, analysis and extrapolation of useful findings from various data for the quarterly report.

IV. PROJECT GOAL, PURPOSE, OUTPUT QUESTIONS, INDICATORS AND DATA COLLECTION METHODOLOGIES: LPPM Research Division staff will examine the following questions during implementation. Indicators and methods are identified below.

A. Project Goal: The goal of the project is to expand the capacity to produce private sector/business managers in Indonesia.

- Goal-Level Question: Using LPPM as the unit of analysis, what is the percentage increase in managers graduated from LPPM annually and the number placed in management positions in the private sector over the life of the project? By comparison, what is the percentage increase in managers graduated annually from other institutions and placed in management positions in the private sector?

- Indicators: (1) the number of managers graduated from LPPM and comparison institutions; (2) the percentage of these placed in management positions; and (3) national statistics on the percentage of national workforce in supervisory and/or management positions.
 - Data Collection Methodology: The number of LPPM and comparison institution graduates, gathered through simple administrative record keeping, will be compared on a yearly basis beginning five years prior to the project and five years beyond, to determine any increase. Similarly, graduates will be tracked to determine how many entered management/supervisory positions, through follow-up surveys sent to each graduate six months after training. If national statistics on management manpower levels are not periodically available, LPPM's Consulting Division will submit a proposal to the Indonesian Government to amass and report such statistics (via sampling) on a regular basis. These data will be collected by LPPM staff and provided in an annual report to the users identified in Section I.
- B. Project Purpose: The purpose of the project is to contribute to the institutional development and expansion of the LPPM.
- Purpose-Level Question: How has LPPM further developed and expanded its institutional capacity as a result of the project? Has the staff been trained appropriately to achieve the purpose? To what extent are other institutions offering management courses through LPPM assistance? How has the Research Division of LPPM been restructured, and is it more effective?
 - Indicators: (1) Development of institutional and manpower plans and adherence to the plans; (2) development of a management information system; (3) staff training successfully completed at appropriate levels; (4) increases in consulting contracts and consulting staff; (5) increases in the staffing and output of the Research Division; and (6) the number of other institutions offering management training as a result of LPPM assistance.
 - Data Collection Methodology: New procedures will be developed by which Research Division staff will collect and maintain this information as part of the LPPM's Management Information System's records. They will also be responsible for analyzing the data, preparing quarterly reports and forwarding copies of this report to the users.
- C. Outputs: The outputs involved to achieve these objectives are: (1) a revised Institutional Plan and Management Information System; (2) trained professional staff; (3) an expanded consulting program; (4) an established outreach program; and (5) a restructured research program.
- Output-Level Questions: The two most important output questions are: (1) is training contributing to enhancing the capacity of professional staff (pre/post test results)? and (2) to what extent has the consulting program expanded?
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- Indicators: (1) number of staff trained and types of degrees earned; (2) results of in-house and short-term training; (3) number of new consulting staff, and percentage increase in awarded bids; and (4) number of research staff and percentage increase in research output. For outreach program: (1) number of institutes assisted; and (2) number of graduates and percentage of these placed.
- Data Collection Methodology: The new procedures developed for the MIS will include plans for the collection and recording of all the information items listed above. Staff in the Research Division will be responsible for ensuring that this information is collected, recorded, analyzed and presented in a quarterly report. Staff training and consulting activities will be measured through simple record keeping within the Research Division. Pre/post tests will be administered to all trainees to determine the results of training.

IV. FEEDBACK: As the Management Information System comes "on-line" and begins to produce data, the Research Division Director will ensure that the quarterly reports are completed and reported to the users of the information. In addition, the first several reports produced should be reviewed by USAID evaluation staff for appropriateness of data and overall efficiency as an evaluative exercise. The steering committee and LPPM directors should have more frequent access to data analysis results, so that modifications and improvements in project implementation and the LPPM Plan can be made in a timely way.

V. BUDGET: Approximately 1.5 percent - \$120,000 - of the \$6.4 million total project costs should be set aside for data collection, analysis, short-term evaluation specialists and two project evaluations. Funding will be provided by USAID and GOI as follows:

1. Government of Indonesia Support:

- A. Office space in the LPPM Research Division for the M&E Unit.
- B. Five staff from the LPPM Research Division to work in the project's M&E Unit.

2. AID Support:

- A. 24 months of long-term technical assistance, to be devoted, in part, to the M&E Unit.
- B. Six months of short-term technical assistance to help the LPPM staff in developing an M&E Unit for the project and provide direct assistance to the unit in data collection and analysis activities.

VI. EVALUATION SCHEDULE: The results of the data collection and analysis will provide an empirical basis for the findings and recommendations of the mid-term and final impact evaluations. The data which will be most useful for the evaluation will pertain to: (1) the increase in management/supervisory level positions in the workforce; (2) the institutional growth of LPPM; and (3) the institutional growth of other institutions as a result of the Outreach Program.

ANNEX IV

BIBLIOGRAPHY ON METHODOLOGIES FOR PROJECT EVALUATION

Rapid Appraisal

"An RRA Case Study: The Cotton Project in The Gambia", Bulletin, Vol. 12, No. 4, 1981, Institute of Development Studies, Sussex.

Bartlett, C.D.S., "A Project to Identify Suitable Innovations for Small Farmers in Nigeria", Agricultural Administration, Great Britain, 8, 1981, p. 451-462.

Belshaw, Deryke, "A Theoretical Framework for Data - Economizing Appraisal Procedures with Applications to Rural Development Planning", Bulletin, Vol. 12, No. 4, 1981, Institute of Development Studies, Sussex.

Carruthers, Ian, and Robert Chambers, "Rapid Appraisal for Rural Development", Agricultural Administration, Great Britain, 8, 1981, p. 407-422.

Chambers, Robert, "Rapid Rural Appraisal: Rationale and Repertoire", Public Administration, Vol. 1, 1981, p. 95-106.

Collinson, Michael, "A Low-Cost Approach to Understanding Small Farmers", Agricultural Administration, Great Britain, 8, 1981, p. 433-450.

Ellman, Anthony, "Rapid Appraisal for Rural Project Preparation", Agricultural Administration, Great Britain, 8, 1981, p. 463-471.

Hildebrand, Peter, "Combining Disciplines in Rapid Appraisal: The Sondeo Approach", Agricultural Administration, Great Britain, 8, 1981, p. 423-432.

Howes, Mick, "Confessions of a Fieldworker - How I Stratified a Rural Population", Bulletin, Vol. 12, No. 4, 1981, Institute of Development Studies, Sussex.

Longhurst, Richard, "Research Methodology and Rural Economy in Northern Nigeria", Bulletin, Vol. 12, No. 4, Institute of Development Studies, Sussex.

Moore, Mick, "Beyond the Tarmac Road: A Guide for Rural Poverty Watchers", Bulletin, Vol. 12, No. 4, 1981, Institute of Development Studies, Sussex.

Palmer, Ingrid, "Women's Issues and Project Appraisal", Bulletin, Vol. 12, No. 4, 1981, Institute of Development Studies, Sussex.

Richards, Paul, "Appraising Appraisal - Towards Improved Dialogue in Rural Planning", Bulletin, Vol. 12, No. 4, 1981, Institute of Development Studies, Sussex.

Stocking, Michael, and Nick Abel, "Ecological and Environmental Indicators for the Rapid Appraisal of Natural Resources", Agricultural Administration, Great Britain, 8, 1981, p. 473-484.

Swift, Jeremy, "Rapid Appraisal and Cost-Effective Participatory Research in Dry Pastoral Areas of West Africa", Agricultural Administration, Great Britain, Vol. 8, 1981, p. 485-492.

Qualitative Methods

"An Information Gathering Strategy" in Making Rural Development Self-Sustaining: A Guide for Project Planners and Managers, Development Alternatives, Inc., November, 1982.

Chambers, R., "Rapid Reconnaissance for Development Administration: Rationale and Repertoire", Public Administration and Development, Vol. 1, No. 2, 1981.

Miles, Mathew, and Huberman, Michael A., Qualitative Data, Analysis: A Sourcebook of New Methods, Sage Publications, Beverly Hills, California, 1984.

Murphy, J. T., Getting the Facts: A Fieldwork Guide for Evaluators and Policy Analysts, Santa Monica, California, Goodyear Publishing Co., 1980.

Qualitative and Quantitative Methods in Evaluation Research, ed. by Thomas D. Cook and Charles S. Reichardt, Vol. 1, Sage Research Progress Series in Evaluation, Sage Publications, 1979.

Health and Population

Cole-King, Susan, "Approaches to Evaluation of Maternal and Child Health Care in the Context of Primary Health Care", World Health Organization, n.d.

Cullivan, Donald, et al, "Institutional Assessment for Water and Wastewater Institutions", January, 1986.

Drake, William, et al, Select Annotated Bibliography for an Evaluation of KB-Gizi: The Integrated Family Planning/Nutrition Program in Inonesia, Community Systems Foundation, 1984.

Information for Management of Primary Health Care, Information for Action Resource Guide, World Federation of Public Health Associations, Geneva, Switzerland, July, 1984.

Information Systems in Primary Health Care, American Public Health Association, Series 1, No. 6, January, 1983.

Nystuen, John D., The Primops Experience: Information Processing in the Design and Performance of a Health Care System, Community Systems Foundation, 1980.

Sirageldin, Ismail, et al eds., Evaluating Population Programs: International Experience with Cost-Effectiveness Analysis and Cost-Benefit Analysis, St. Martin's Press, New York, 1983.

Nutrition

A Field Guide for Evaluation of Nutrition Education, Office of Nutrition, Agency for International Development, June, 1975.

Drake, William, et al, "The Study of Community-Level Nutrition Interventions: An Argument for Reflection-in-Action", Human Systems Management, Vol. 4, No. 2, 1983.

Miller, Roy I., and Sahn, David, "Built-in Evaluation Systems for Food Programmes-- Why and How?", Prepared for the Workshop on Evaluating the Impact of Food Programmes, Massachusetts Institute of Technology, Cambridge, Mass., September, 1981.

Schon, Donald, et al, "Social Experimentation as Reflection-In-Action: Community-Level Nutrition Revisited", Knowledge: Creation, Diffusion, Utilization, Vol. 6, No. 1, September, 1984.

_____, and Timmons, Robert J., Combatting Malnutrition: Program Characteristics That Improve Chances for Success, Community Systems Foundation, 1984.

_____, and Miller, Roy, "The Rapid Information Feedback System: A Mechanism for Promoting Community Learning", Community Systems Foundation, 1981.

Rural Roads

Hermann, Chris, "Evaluating the Socio-Economic Impact of Rural Roads Projects: Three Approaches to Baseline - Follow-up Data Collection Design", Center for Development Information and Evaluation, Bureau for Program and Policy Coordination, Agency for International Development, 1984.

Agriculture

Casley, D. J., and Lury, D. A., A Handbook on Monitoring and Evaluation of Agriculture and Rural Development Projects, World Bank, Washington, D.C., November, 1981.

Dillon, John and Hardaker, Brian J., Farm Management Research for Small Farmer Development, Food and Agriculture Organization of the United Nations, Rome, 1980.

Guidelines for the Design of Monitoring and Evaluation Systems for Agriculture and Rural Development Projects, World Bank, Washington, D.C., 1981.

Guidelines for ISNAR Reviews and Evaluations, International Service for National Agricultural Research, The Hague, July, 1984.

Murphy, Josette, "Assessing the Past to Plan the Future", A Paper Presented at the Regional Workshop on Research Program Evaluation, Dhaka, Bangladesh, October, 1984.

Murphy, Josette, and Spray, Leendert H., Introduction to Farm Surveys, International Institute for Land Reclamation and Improvement, the Netherlands, 1983.

Readings in Research Program Evaluation, Background Document Prepared for the Regional Workshop on Research Program Evaluation, Dhaka, Bangladesh, ISNAR, The Hague, October, 1984.

Tripp, Robert, "Data Collection, Site Selection and Farmer Participation in On-farm Experimentation", International Maize and Wheat Improvement Center, 1982.

Energy

Hageboeck, Molly, et al, "Planning Rural Energy Projects--A Rural Energy Survey and Planning Methodology for Bolivia", Practical Concepts, Inc., 1980.

McGowan, Richard, "Data Collection Handbook for Energy Systems Installed in Developing Countries", Associates in Rural Development, 1984.

Private Sector

Daines, Samuel R., Agribusiness and Rural Enterprise Project Analysis Manual, Agency for International Development, 1979.

Goldmark, Susan G., and Rosengard, Jay, Evaluating Small-Scale Enterprise Promotion: State-of-the-Art Methodologies and Future Alternatives, Prepared for the Office of Urban Development, Agency for International Development, May, 1981.

Hunt, Robert W., The Evaluation of Small Enterprise Programs and Projects: Issues in Business and Community Development, Agency for International Development Evaluation Special Study No. 13, June, 1983.

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Food for Work

Drake, William, "An Emerging Monitoring and Evaluation System for PL 480 Title II Food for Work Programs in India", Submitted to the Agency for International Development, Community Systems Foundation, 1983.

Evaluation Plan for the PL 480 Title II Food for Work Program in India, Practical Concepts, Inc., Agency for International Development, USAID/New Delhi, December, 1980.

Monitoring and Evaluation

Managers Guide to Data Collection, Office of Evaluation, Bureau for Program and Policy Coordinzation, Agency for International Development, November, 1979.

Patton, Michael Quinn, Utilization Focused Evaluation, Sage Publications, Beverly Hills, California, 1978.

Rossi, Peter H., and Freeman, Howard E., Evaluation: A Systematic Approach, Sage Publications, Beverly Hills, California, 1982.