Designing Rural Development Projects: An Approach

Prepared for the Investment Centre
of the United Nations Food and Agriculture Organization

Development Alternatives, Inc.
1823 Jefferson Place N.W.
Washington, D.C. 20036

NOVEMBER 1978

931098 6/67

DESIGNING RURAL DEVELOPMENT PROJECTS: AN APPROACH

A Report Prepared for
The Investment Centre
The Food and Agriculture Organization of the United Nations

By Peter F. Weisel
and
Donald R. Mickelwait

AID/CM/TA-C-73-41

Development Alternatives, Inc
1823 Jefferson Place, N.W.
Washington, D.C. 20036

November 1978

TABLE OF CONTENTS

PREFACE. v

CHAPTER ONE
INTRODUCTION 1

DEFINING RURAL DEVELOPMENT PROJECTS 2
THE STRUCTURED OR THE FLEXIBLE APPROACH TO PROJECT DEVELOPMENT 4
SELECTIVELY REDUCING THE DATA REQUIREMENTS. 8

CHAPTER TWO
INFORMATION REQUIREMENTS FOR PROJECT DESIGN. 9

CRITICAL DECISION CATEGORIES. 9

Specifying Project Objectives. 10
Specifying Project Components. 13
Determining Project Management Arrangements. 15
Specifying Project Resource Commitments. 15

A DATA COLLECTION CHECKLIST 16

CHAPTFR THREE
NARROWING DATA REQUIREMENTS FOR PROJECT DESIGN 19

INTRODUCTION. 19
PRECISION AND DETAIL IN DATA COLLECTION 20
LINKING DECISION CATEGORIES TO INFORMATION REQUIREMENTS. 22
CRITICAL JUDGMENTS IN DETERMINING DATA REQUIREMENTS . . .23
STRUCTURING PROJECT COMPONENTS. 27

Viability and Equity of the Society's Organizational Base. 27
The Agricultural System. 31
Non-Agricultural Economic Activity 36
Social Services. 39
Macro Policy Considerations. 41

STRUCTURING PROJECT MANAGEMENT ARRANGEMENTS 41

TABLE OF CONTENTS

EXAMPLES OF DATA REQUIREMENTS AND ANALYSIS IN RURAL DEVELOPMENT PROJECT DESIGN. 46

Example One:

Decision Category: Specifying General Objectives. .46
Decision Category: Specifying General Resource Commitments. 46
Decision Category: Specifying Project Components. .47
The Determination of the Project Components. 50
Decision Category: Specifying Project Management Arrangements 50
Decision Category: Specifying Detailed Project Objectives 51
Decision Category: Specifying Detailed Resource Commitments. 52
Narrowing Data Collection -- The Role of Data Precision, Detail and Critical Judgments 52

Example Two:

Decision Category: Specifying General Objectives. .55
Decision Category: Specifying General Resource Commitments. 55
Decision Category: Specifying Project Components. .56
The Determination of Project Components. 59
Decision Category: Specifying Project Management Arrangements 60
Decision Category: Specifying Detailed Project Objectives 61
Decision Category: Specifying Detailed Resource Commitments. 61
Narrowing Data Collection: The Role of Data Precision, Detail and Critical Judgments 61

CHAPTER FOUR
PROJECT DESIGN METHODOLOGIES 63

NTRODUCTION. 63
ATA COLLECTION TECHNIQUES. 63

Statistical Surveys. 64
Reconnaissance Surveys 67
Comparing Alternative Approaches 68

TABLE OF CONTENTS

Example One:

General Data Collection Methods. 69
The Use of Reconnaissance Surveys. 70

Example Two:

General Data Collection Methods. 70
The Collaborative Specification of Issues. 71
Level of Development as a Factor in Data Collection 72

Example Three:

General Data Collection Methods. 73
The Use of Structured Survey Instruments 73
Administering the Questionnaire. 74
The Uses of Survey Results in Project Design 75
Level of Development as a Factor in Data Collection.76
Conclusions Regarding Data Collection Techniques . .77

WHO SHOULD CARRY OUT THE DESIGN WORK. 79
THE EMERGENCE OF A PROJECT DESIGN 81

CHAPTER FIVE:
THE PROCESS OF PROJECT DESIGN: A SUMMARY. 85

ISSUE ONE: DEFINING RURAL DEVELOPMENT PROJECTS 85
ISSUE TWO: THE STRUCTURED OR THE FLEXIBLE APPROACH TO PROJECT DEVELOPMENT. 86
ISSUE THREE: CRITICAL DECISION CATEGORIES IN PROJECT DESIGN. 86
ISSUE FOUR: LINKING DECISION CATEGORIES TO INFORMATION REQUIREMENTS. 87
ISSUE FIVE: SELECTIVELY REDUCING DATA REQUIREMENTS . .88
ISSUE SIX: DATA COLLECTION TECHNIQUES. 89
ISSUE SEVEN: WHO SHOULD CARRY OUT THE DESIGN WORK. . .89

ANNEX: POTENTIAL DATA REQUIREMENTS FOR PROJECT DESIGN . .91

LIST OF FIGURES

Figure

1 PROJECT DESIGN TIME PHASING. 24

2 DECISION CATEGORY: PROJECT COMPONENTS
I. The Local-Level Organizational Base. 30

3 DECISION CATEGORY: PROJECT COMPONENTS
II. Agricultural System 34

4 DECISION CATEGORY: PROJECT COMPONENTS
III. Non-Agricultural Economic Activity 38

5 DECISION CATEGORY: PROJECT COMPONENTS
IV. Social Services 40

6 DECISION CATEGORY: PROJECT COMPONENTS
V. Macro Policy Considerations. 42

7 DECISION CATEGORY MANAGEMENT ARRANGEMENTS. 45

PREFACE

This report is the result of discussions between the President of Development Alternatives, Inc. (DAI), Mr. Donald R. Mickelwait and Mr. G. P. de Brichambaut, Deputy Director of the FAO Investment Centre, and builds on a preliminary report prepared by Mr. Peter F. Weisel of DAI. Its purpose is to set out a framework within which to select data for collection in designing rural development projects, as well as alternative data collection and analysis methodologies.

There are many sources of background materials for this paper. Over the past five years DAI has been involved in and written extensively on the process of project design. A major work was *Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects*, prepared under contract for the United States Agency for International Development (USAID) and completed in 1975. Subsequent DAI involvement in the design of rural development projects for USAID resulted in two major reports, one entitled *The "New Directions" Mandate: Studies in Project Design, Approval and Implementation* and another state-of-the-art study on *Information for Decisionmaking in Rural Development*. All of these sources were used in the preparation of this paper. In addition, a paper prepared in 1976 by two DAI staff members, Dr. Peter F. Weisel and Mr. Charles F. Sweet entitled "Data Requirements for the Design of Area Development Projects," was a principal source. The task of putting this

material in its present form was undertaken mainly by Peter Weisel and Donald Mickelwait.

The result, we hope, is a report that will prove useful for project designers in the difficult task of designing meaningful rural development projects.

Donald R. Mickelwait
President

November 1978

CHAPTER ONE

INTRODUCTION

Once an idea for a rural development project has been identified, it becomes a critical task to design it to maximize its probable development impact. The problems that must be addressed are many; it is necessary to determine:

- What data to collect in any given project environment;
- Data collection techniques: methods of collection and sources;
- The composition of design teams: who should do what;
- The types of data processing and interpretation needed to produce a design;
- The time frame needed to complete this work.

This document has been developed to help answer these questions as they relate to rural development projects. It is intended for use by the FAO Investment Centre staff, as well as by field staff organizing project design work.

At the outset it is necessary to address three subjects: (a) defining the sort of project to which the following design recommendations are applicable; (b) determining the degree of structure (or flexibility) needed in project development; and (c) planning to avoid overspecification and overcollection,

two common flaws of many project designs.

DEFINING RURAL DEVELOPMENT PROJECTS

It is important initially to clarify the type of project that is the focus of this report. Unfortunately the terms "rural development" and "integrated rural development" have become labels for almost any effort directed at a rural area. For example some governments and funding organizations define integrated rural development organizationally, emphasizing the coordination of inputs into an area by more than one government ministry. Other development agencies define integrated rural development as the delivery of social and economic services to a rural area to improve amenities, but often without basic production and income-generating activities; this is frequently cited as a problem with the "basic needs" strategy. In still other contexts integration is defined merely as the undertaking of multiple, often disparate, activities in the same geographical area. This approach has seldom generated successful, mutually supporting and complementary development activities.

In a number of recent development undertakings, major donors have turned their attention toward project designs that concentrate on specific geographic areas, an identifiable target population, and an objective of increasing socioeconomic welfare through concentrating on agricultural production and income- and

employment-generating activities. This perspective is important to help assure that a project becomes self-sustaining and able to continue after foreign resources and/or technical assistance are withdrawn. Providing development assistance for social services early in a project's life cycle is applicable only if such things as health, education, population, or nutrition present serious constraints to increasing agricultural or income-generating potential.

For example in certain areas a production/income-generating strategy is not feasible at the outset of a project because the local population is afflicted with serious health problems or because technologies for improving agricultural efficiency have not yet been tested; this is particularly true in areas where there are few natural resources and severe climatic conditions. In these cases one alternative strategy would be to concentrate on local organizational development with an initial emphasis on the construction of community infrastructure. Should this initial effort prove successful, agricultural assistance could be introduced. Furthermore, when deciding on a strategy for areas that have experienced severe drought, it is important to distinguish between relief and rehabilitation work and development efforts. In the latter the purpose is to provide a catalyst for a local population to initiate a process of self-sustaining development. There is a strong potential incentive conflict when both are tried at the same time.

This report is concerned with rural development that is centered in a specified geographic area and concentrates on increasing production, productivity, employment and income-generating activities. The provision of social services, infrastructure relief and the development of local institutions is viewed as complementary to the basic economic thrust of a project. Indicators of success for projects with this thrust are outlined in the following chapter, and design recommendations made in this report reflect this basic set of priorities.

THE STRUCTURED OR THE FLEXIBLE APPROACH TO PROJECT DEVELOPMENT

The approach to project development may be highly structured. That is, the host country or the donor agency may request that a mass of planning paperwork accompany the project design, complete with quantified target objectives, schedules, priorities and details of the inner workings of the project during implementation. On the other hand a project may begin with only the specification of a project area, a target population, a management structure, a budget and a general mandate to promote development. In either case there is a trade-off between the "structure" of project design and the "flexibility" needed for project implementation. If the design effort generates a highly structured plan, implementation attempts aimed at following the plan will

also be highly structured. Rarely does a project with a highly detailed plan have within it the built-in flexibility to make corrective changes during implementation or to undertake adaptive field-testing to improve project performance.

Since there are clear differences in the level and type of data required for project design under the two juxtaposed alternatives, the approach to project development is a major consideration in determining information requirements for rural development projects.

These two extreme approaches are often referred to as "blueprint" project designs on the one hand, and the "process" approach to project development on the other. The former is typified by certainty on the part of the project designers that the technology and intervention techniques previously identified are appropriate and, given good management, will work in a local environment. It assumes that solutions to problems are known or can be easily discerned and that projects are merely vehicles for applying them. In such projects field-testing and the ongoing collection of data for purposes of assessing and adjusting project activities is seen as unnecessary. When blueprint projects fail, blame is generally placed on "poor management" or "lack of cooperation" rather than poor selection of technology or intervention techniques.

Recent development experience has produced a mixed record on the success of projects designed in this manner. Clearly

some development activities, such as road construction and other capital development efforts, need to be well specified prior to implementation. Other types of rural development projects designed in this way, e.g., agricultural or integrated rural development projects, have a high incidence of failure precisely because of their inflexibility, their neglect of data-gathering and field-testing aimed at improving implementation, and their assumption that appropriate interventions are known.

In contrast to this thrust is the process approach, which begins with the notion that, more often than not, we have little knowledge of which specific interventions are likely to work over the long run. In this case selected interventions are tried, data are collected, field tests are frequently conducted to assess their effects, and project activities are redesigned in accordance with what is learned over time. Projects are, in effect, modified and adapted as knowledge is gained about their specific environments. In the extreme process approach case, all that is required for initiating project activity is a specification of project objectives, a determination of the area and target group, decisions on implementation arrangements to use, and a budget.

---

[1] See E. R. Morss, J. K. Hatch, D. R. Mickelwait, and C. F. Sweet, *Strategies for Small Farmer Development* (two volumes), Boulder, Colo.: Westview Press, 1976. This report raises serious questions about conventional -- essentially blueprint -- approaches and formulates an alternative strategy capable of both identifying appropriate strategies and applying them. The generalization are drawn from those cases in the study where self-sustaining development did seem to be taking hold. The factors associated with this success were isolated and consideration was given to alternative methods of building those factors into future projects. This led to the specification of the process approach.

This dichotomy between the process and more conventional blueprint approaches is admittedly extreme. Projects today are frequently designed with some mix of these approaches. For example through adaptive research on farmers' lands we may be relatively certain of a particular small farm technology, e.g., proper seeds or production practices, and may wish to initiate this technology immediately. At the same time our certainty about the most appropriate intervention technique may be far less, requiring considerable ongoing testing and retesting. In both cases a certain level of data-gathering will be necessary to determine whether what we expected to work is, in fact, working.

It is probably most useful for the project designers to think of all these approaches as part of a continuum, with the blueprint model at the one extreme and the process approach at the other, and a number of combinations in between. The level and type of data required for project design will differ a greal deal depending upon where one is on the continuum. In projects designed to start with only a few resources, to build as time passes, information requirements for initial design will likely be modest. In contrast, information needs will be substantial if the project is intended to entail an immediate high level of activity and resource outlay and is comprised of a number of discrete components. These issues become an important consideration in selecting a minimum level of data to collect.

SELECTIVELY REDUCING THE DATA REQUIREME

Data collection and analysis requirements follow from a set of critical judgments that must be made about the potential for successful intervention by development assistance into a project area. There are two ways to reduce data requirements to a manageable set. The first is to reduce the precision and level of detail for any one decision category. In some circumstances a list of 50 categories of data may be resolvable in a few days of interviews and visits to the project area.

The second method is to restrict the critical judgments necessary for the determination of project components or management arrangements. Critical judgments revolve around characteristics of the environment -- the social, cultural and economic milieu -- in which the project is to be implemented, and the level of development of the country/region. These characteristics influence the judgments that must be made. That is, in a country with a highly developed economic infrastructure, an early decision might be made to exclude infrastructure development from the project design. Data will be collected until it is determined that a particular component or management arrangement does not need to be considered, at which point further data collection can cease. In this way the number of critical judgments can be restricted, and the data required for collection correspondingly decreased.

CHAPTER TWO

INFORMATION REQUIREMENTS FOR PROJECT DESIGN

Specifying data requirements for rural development project design involves selecting a minimum set of data to collect. The most effective approach to accomplishing this starts with defining data requirements in the context of decisions, or decision categories, that planners must make in the process of project design. It is possible to define a set of decision categories that are common to virtually all rural development projects.

This chapter identifies these decision categories; a checklist of potential data needed to make design decisions in each category is included as an annex. For any single project choices concerning the specific data to collect will revolve around the precision and detail of data collection as well as critical judgments that must be made about potentially successful project interventions. These issues are discussed in detail in Chapter Three.

CRITICAL DECISION CATEGORIES

The decision categories to be considered are:

- Specifying project objectives, including indicators of success;

- Specifying project components;
- Determining project management arrangements; and
- Specifying project resource commitments.

Each of these is considered in turn.

Specifying Project Objectives

Specifying the objective(s) of a project and formulating success indicators for measuring progress toward achieving the objective(s) are the first steps in project design. Figure A-1 in the annex indicates the decision category, critical questions for design decisions related to that category, and potential data requirements.

In commencing a project design, it is possible to begin with any of several levels in specifying objectives. In some instances objectives are defined by the host government, and in others they are left open and evolve only during the design and, in some cases, the implementation process. It frequently falls upon the project designer to be certain that project objectives are well defined and understood. The need for specification is straightforward: a decision to initiate a project should be predicated, at least in part, upon the complementarity of the objectives of the various participants -- donor agency, host country officials, target population and project staff -- to be involved in a project. When objectives are contradictory, or if formal agreement is reached but the interpretations of the

objectives vary significantly, confusion will result with regard to what the project is attempting to achieve, what should be emphasized in project implementation, and what should be measured or evaluated in terms of project impact. This issue of defining commonly understood and agreed-upon objectives is a critical design question and is reflected in the first column of Figure A-1 of the annex.

Further, project objectives can be more or less specific. For large integrated rural development projects they are often broadly focused, e.g., to improve the social and economic well-being of the rural poor. For smaller projects the objectives might be much more narrow. In either case specification must include at least the target population and the geographical coverage of the project.

Indicators of success should be included in the specification of objectives. These indicators in effect "fall out" of the objective that is chosen; they reflect the specific changes that the project is intended to effect. Examples of indicators for rural development projects are numerous and might include, but are not limited to, some combination of the following:

- Increased net income;
- Increased production;
- Increased employment;
- Improved health and nutrition;
- Increased levels of literacy;

- Increased individual or group capabilities to solve development problems;
- Increased capacity for the benefits of development to become self-sustaining; and
- A more equitable distribution of benefits from development.

Such indicators are needed for several reasons. First, they are important in assessing the impact of development efforts over time. Second, they allow officials and project staff to identify possible development trade-offs for each activity that is planned or that takes place in a particular area. Such trade-offs are legendary. Costly agricultural inputs may be introduced that result in significant increases in production but are too expensive to be sustained by local farmers. Others include the construction of such economic infrastructure as irrigation and road systems and their possible effects on the agro-ecological system; or the expansion of cash crop production and its effects on family nutrition. A well specified set of success measures will allow project planners and staff to analyze and draw conclusions about the combination of development strategy, activities, and resources that is most appropriate for producing the desired developmental change.

Further, it is important to establish objectives for each different target group to be included within the project. These groups may include women, farmers, landless laborers, small enterprise owners, and pastoralists. Each group may have special constraints to developmental change and require incentives,

technology transfer and extension methods fitted to its particular situation. One useful method of identifying these differences is to specify the actual behavior changes that the group must aim for if the project is to be successful. In agriculture this might include the adoption of new cultivating practices. It might also involve decisions concerning whether to apply for, accept and use credit and/or consume, store and market output in ways that involve significantly altered behavior patterns. A clear listing of these changes, by target group, is the final outcome of the specification of project objectives.

The first level of decisionmaking for project design involves general project objectives specified in the context of an identified geographic area and target population. The next level involves defining measurable indicators of project success. The final level includes specifying target achievements and behavior modifications necessary for each group identified as beneficiaries in the project.

Specifying Project Components

Figure A-2 of the annex presents the critical questions and potential data requirements for specifying project components. The questions focus on identifying possible project activities, as well as potential constraints to their implementation. At first glance it might appear that both the questions and the data requirements are too extensive. For the design of some projects it will be necessary to collect only a small portion of

these data; for others considerably more will be needed. For example if rural development activities are to be specified in detail prior to project commencement (the highly structured alternative) and implemented in an area where little data are available, virtually all of the information listed may be needed. It will be necessary to know a good deal about agricultural and non-agricultural production potential and problems of the area, how macro-level considerations (e.g., host government financial constraints, development objectives and priorities) might affect the project, whether any aspect of the economic and social support infrastructure presents existing or potential constraints to development activity, and what local organizations or groupings exist within the area, how they are structured, how they function, and what their potential development contributions might be.

If, on the other hand, the rural development project is to be flexible in its project development, showing slow growth after initial pilot testing in the field, data requirements are far less onerous in the design phase, since the data needed for modifications in the original plan can be obtained during implementation. Chapter Three discusses in detail these considerations and the specification of project components based upon selected determinants for choosing among potential data requirements.

Determining Project Management Arrangements

Design decisions related to project management arrangements are summarized in Figure A-3 in the annex. This is a key decision set, which revolves around the structure and capacity of alternative implementing arrangements for the project. Such arrangements can vary widely, from working within existing public or private sector institutions to setting up autonomous project implementation units.

The critical questions for design revolve around the capacity of the organizational vehicle to define effective lines of authority and control over project resources, and provide incentives for efficient implementation -- including incentives for coordination of activities where necessary. The "optimization" of the project management structure is a complex synthesis of what exists and what might work. Frequently this issue gets short shrift in project designs, resulting in management arrangements that work badly when implementation begins.

Specifying Project Resource Commitments

Figure A-4 of the annex spells out decisions and data requirements necessary to specify both host country and donor resource commitments, as well as those of the local target population. The concerns here are the type of resources needed and the quantity, sources, and timing of resource delivery. This infor-

mation will allow a project designer to incorporate into the design the requirements for committing resources to project activities. Projects are far too often bogged down because of seemingly endless delays in procurement of both goods and people.

The focus in project design is frequently on specifying resources to be provided by the host country and donor, with far less explicit attention given to what the target population must commit. This commitment may take many forms that have other opportunity costs: labor for self-help construction, materials, leadership, organizational assistance, or cash purchases. These commitments, if they are necessary for project success, are as important to identify, quantify and record as those complementing assets of the host country and donor agencies. The figures may not enter into the final presentation of the resources required to initiate the project, but they are critical for an understanding of how the project will proceed under implementation.

A DATA COLLECTION CHECKLIST

While decisions can be made intuitively in all of the preceding categories, project designers feel more comfortable with data that allow rational decisionmaking on alternatives for project design. The use of four decision categories, all of which are applicable in varying environments and for different

sizes and types of projects, can generate a long list of potentially important data points, like that presented in the annex. Such a list is not in itself particularly useful, since there is no easy way to differentiate the critical information from the interesting information ("needed" as distinct from "nice to have" data). The data requirements are limited in practice by the fact that there is only so much information a designer can or should acquire and use. However, specifying a systematic method for identifying only critical data for collection remains an exceedingly difficult assignment. Chapter Three presents one potentially useful conceptual framework for addressing this problem.

CHAPTER THREE

NARROWING DATA REQUIREMENTS FOR PROJECT DESIGN

INTRODUCTION

In narrowing the data for collection in any specific situation a number of issues must be addressed. First it is necessary to understand how choices with regard to precision and detail in data collection affect data requirements. One principal determinant of precision and detail is the approach used for project development -- whether the project calls for structure and detail in planning or, alternatively, emphasizes flexibility in implementation. The continuum of loosely defined to rigidly structured project design significantly affects how much data must be obtained by the field team and of what quality.

Second it is useful to link the four decision categories discussed in Chapter Two to information requirements. The data collection effort required for some categories is greater than for others. The time phasing of decisions in the categories gives a general indication of the level of effort needed in each.

The third concept elaborated is that of restricting critical judgments that must be made to determine what project components and management arrangements are to be included in the project design. Restricting the number of critical judgments will effectively reduce data requirements.

Previous Page Blank

Finally, the structuring of project components and management arrangements is discussed in the context of a set of necessary sub-decision categories, and two examples of rural development project designs are given to indicate data requirements under selected situations. These examples offer insights into how the concepts introduced here can actually be used to assist in narrowing data requirements for project design.

PRECISION AND DETAIL IN DATA COLLECTION

Choices must be made by project designers with regard to both the precision and the detail that will be adhered to in the process of data collection. Data requirements will be influenced significantly by those choices.

The single most significant determinant of both precision and detail is the extent to which project designs are rigidly structured or loosely defined. Structured designs call for a considerably higher level of precision in data than those that emphasize learning during the implementation period. The following trade-offs are likely to take place under the heading of more or less precision:

- Unit of analysis, household or group: The community/village/tribe can be used as a basic unit of data collection in flexible project implementations, while the household is likely to be the necessary unit of analysis in highly structured designs.

- Direct or proxy data: Farm records can be used for direct, precise measurement of farm income, inputs, and outputs; or indirect evidence of income (e.g., tin roofs, housing construction, material possessions) can be observed to determine both the level and the relative distribution of income.

- Survey or interview data: Surveys require statistically significant numbers to ensure representative answers (precision). On the other hand formal or informal interviews (i.e., discussions with leaders and knowledgeable project participants, requiring no set number of interviews but undoubtedly far fewer than would be required for a statistically valid survey) can be used to acquire needed design data.

The precision dimension does not eliminate data categories; instead it reduces or increases the effort, time and money needed to fill data requirements by varying the size of the unit of analysis, by accepting proxy data as opposed to direct measurement of variables, or by requiring statistically valid surveys rather than depending on less structured interview techniques.

The second difference between structured project design undertakings and those that emphasize learning while doing under implementation is in the detail collected under each major data heading. Like varying levels of precision, less detail does not eliminate data categories; rather it drops off the sub-points and reduces the number of increasingly more specific questions in the data collection outline. Very simple answers about farm management systems (corn and beans followed by natural browse) might suffice in one instance, while a detailed farm calendar with land use, cultural practices, labor, and crop outputs may

be called for in another. The annex presents potential data requirements in great detail. Less detail simply entails dropping off data requirements from the bottom of each major category. This is one effective method of reducing the data collection effort during the design phase.

LINKING DECISION CATEGORIES TO INFORMATION REQUIREMENTS

Two of the four decision categories outlined in the previous chapter -- the setting of objectives and the scheduling of resources -- are often determined with little direct reference to the local project area. In many instances in the past an objective has been defined and a budget level determined prior to the arrival of the design team. The designers are then obliged to fit a project into the parameters that have been established. This is understandable and feasible; project design has to start somewhere, and a political decision on objectives and resources is not an unreasonable starting point. As the project components and management arrangements are defined, these general objectives and resource/budget commitments can be specified in greater detail.

It is the specification of the project components and management arrangements that requires the greatest understanding of the project area and most often consumes the bulk of the time and energy that go into the design process. An examination of

the time phasing in dealing with the four decision categories implies the general level of effort required for each; this time phasing is presented in Figure 1.

The first phase involves planning to determine the general objectives, target population, location and budget (the general level of resources available for the project). Phases two and three, often dealt with simultaneously, involve field data collection and analysis resulting in the specification of project components and a management structure. The fourth phase is a more specific definition, flowing from phases two and three, of project objectives, expected behavior changes of the target group, and the time phasing of resources from the various sources -- donors, host country, and expected beneficiaries. The final phase is the preparation of the project with complementarity in objectives, components, management structure and resources.

Because the specification of project components and management arrangements requires the greatest knowledge of the project area, it is these two decision categories that are the focus of the following sections.

CRITICAL JUDGMENTS IN DETERMINING DATA REQUIREMENTS

Data requirements for project design, as already noted, flow from choices concerning data precision and detail. The project designer must determine when enough data have been collected

FIGURE 1

PROJECT DESIGN TIME PHASING

PHASES	OBJECTIVE SPECIFICATION	COMPONENT SPECIFICATION	MANAGEMENT SPECIFICATION	RESOURCE SPECIFICATION
Phase One: Planning to Determine:	General objectives, target, population, location			General resource availability from donors and host country
Phase Two: Field Data Collection on:		Organizations, agriculture, non-agricultural economic activity, social services, macro policy considerations	Government linkages, cooperation	
Phase Three: Data Analysis and Determination of:		Project components	Project organization and management structure	
Phase Four: Determination of:	Specific objectives, behavior changes of each target group			Specific resource commitments from donors, host country, target population
Phase Five: Preparation of an Integrated Project Plan with Complementary:	Objectives ←→	Components ←→	Management ←→	Resources

Often Completed Simultaneously

in order to make decisions concerning project interventions. When "enough" information has been obtained, the data collection effort should cease; collection beyond that point -- in terms of either greater precision or detail -- becomes excessively costly. In some cases little effort in collection may be needed in order to make rational design decisions; in others nearly all of the data listed in the annex may be necessary.

Data requirements further flow from a set of critical judgments that must be made about potentially successful interventions. These judgments revolve around often complex considerations about the environment in which the project is to be implemented; data requirements can be narrowed as the critical judgments that must be made are narrowed and restricted. This concept can be illustrated by several examples.

- A designer may face the task of formulating a project in a country where there is a high level of development in terms of human, economic and social infrastructure. The communications system, including a transport structure, may be well developed and already effectively serving the target population in the delivery of farm inputs and consumer goods and in providing a market for farm output. At the same time the human resource base may be high: there may be rural extension personnel who communicate effectively with farmers, and local entreprenuers who deliver farm inputs in a timely manner. In general the service delivery capability in the project area is high.

  The project designer can usually acquire an understanding of this "level of development" in a short time with minimum effort through interviews and secondary sources, and can effectively restrict or reduce the number of critical judgments that must be made concerning the types of

project interventions that are needed, e.g., road construction and a system of input supply delivery would not be necessary and could be dropped from the project. Data collection can cease when it is clear that a particular project intervention is not necessary.

- At the other extreme is the case where the service delivery capability of a country or within a project area is low. In this instance a much wider array of critical judgments will be necessary in determining appropriate project components or management arrangements. In order to make these judgments data requirements will be considerably greater.

- Project designers will face large variations in the social, cultural, economic, organizational and political context in which projects are to be implemented. One important dimension of this involves whether the target group is likely to have access to the intended project benefits. At one extreme might be a case where the local power structure and social stratification make it highly unlikely that the target population can receive any benefits, most of which will likely be siphoned off by a privileged few. In this instance a potentially large number of critical judgments will have to be made concerning appropriate project interventions for reaching the rural poor.

  The opposite extreme is the case where barriers to benefit access are few. Data collection will be necessary only until it can be determined that the project will not have to include components necessary to address the issue.

As these examples imply, the concept of critical judgments and how restricting them affects data requirements is difficult and illusive. This is because of the large variation in project environments that a designer must face. In broad terms critical judgments must be made around the two general categories noted in the examples: the level of human, economic and social infrastructure development and the social, cultural, economic, organi-

zational and political context in which the project is to be implemented. The judgments are made in the process of project design, though not always overtly, and in the process the number of judgments necessary is restricted or expanded, with the resulting effect on the amount and type of data needed for collection.

STRUCTURING PROJECT COMPONENTS

In structuring project components it has proven useful in past project designs to divide data requirements into the following five sub-decision categories:

- Viability and equity of the society's organizational base;
- The agricultural system: the agricultural resource base, agricultural production technology and agricultural support system;
- Non-agricultural economic activity: the non-agricultural resource base, production technology and support system;
- Social services, including health, nutrition, housing, and education; and
- Macro policy considerations.

Viability and Equity of the Society's Organizational Base

Local organizations can provide a critical underpinning for successful rural development projects. Their importance is highlighted to the extent that such projects must transfer knowledge

to farmers and encourage behavior changes that are likely to have risk implications. In these circumstances a two-way flow from project to farmer and back to project management is essential. Local organizations allow the structuring and channeling of such a communications flow.

In many areas selected for the implementation of development projects, there are no viable organizations that have the promotion of smallholder development as their principal concern. In such instances the critical questions that must be addressed are:

- Does the existing organizational base suggest that organizations that complement project objectives can be helped to emerge?
- Does the existing organizational base allow benefits to flow to the target population? and
- What incentives exist or can be created to promote smallholder organizations that support project objectives?

In the investigation of these issues, it will become evident whether the society is homogeneous or highly differentiated, where political, social and economic power resides, and what problems are likely to be encountered in ensuring that the benefits of development reach the target group. At one extreme project components will be structured to fit a homogeneous society where all are poor, and leadership and local organizations encourage the general distribution of benefits of change and modernization. At the other extreme the society will be fragmented, with economic and political power residing in a few large

holders who have no interest in seeing their own positions eroded by development achievements of the target population. "Community-based" or "selective-recipient" structures will emerge as candidates for project components in the two extremes.

Figure 2 depicts this sub-decision category and the decision options open to the project designer in structuring a local-level project organizational base. The sub-decisions have been reduced to considerations of the viability and equity of possible organizational forms. Data collection will involve these two issues (identifying the cell in the column one matrix into which the organizational base falls). Potential data to be collected in addressing these questions are given in the annex, Figure A-2. The reduction of these data for collection, as noted above, revolves around choices concerning data precision and detail and critical judgments about potentially successful interventions. Because project environments vary so widely, and because projects might be designed with more or less structure, no "cookbook" approach can be used for deciding which data to collect. The examples that follow at the end of this chapter are instructive in showing how data requirements are determined under different real-life situations.

Decision options (column 2) relate to actions to be taken based on answers to the "equitable/viable" set of questions. If, for example, the existing organizational base is deemed both adequately equitable and viable (and thus falls into the first

FIGURE 2

DECISION CATEGORY: PROJECT COMPONENTS

(1) SUB-DECISION CATEGORY	(2) DECISION OPTIONS	(3) PROJECT COMPONENTS
1. The Local-Level Organizational Base.[1]	(1) Incorporate into project. (2) Give organizational development (OD) assistance to existing organizations. (3) Give OD and be prepared to build new organization. (4,7) a. Use incentives for leadership to give equitable treatment to target population. b. Use "selective-recipients" limitations (e.g., credit only for smallholders). c. Assist new competing organization which will be viable and equitable. (5) Assist new organization. (6,8,9) Use adaptive field-testing to determine how to generate a viable, equitable local organization which will complement and support project objectives.	Organizational component based upon judgments and decision options. The organizational component must provide a method of reaching a target population with an effective two-way information flow as well as with other possibly critical project resources.

Equitable \ Viable	(1) Yes	(2) No	(3) Undetermined
Yes	(1)	(2)	(3)
No	(4)	(5)	(6)
Undetermined	(7)	(8)	(9)

[1] Where a local organization falls within this matrix will be determined from more or less data collection and analysis based on the data requirements list in the annex.

cell of column 1 of the matrix), then decision option (1) obtains. If not, then alternative choices are made concerning what must be done in terms of appropriate project interventions. It is from choices made among the various options that the organizational component emerges.

The Agricultural System

Production, productivity and income increases will flow from a variety of factors, e.g., changes in agricultural technology, storage, input availability and/or marketing. The bulk of field data collection should be carried out around these issues. There are three major subdivisions.

A. *The Agricultural Resource Base*

Specifying project components requires a knowledge of the existing agricultural resource base, its type, extent and possibilities for development. Two societies might have comparable output (in terms of surplus over subsistence), yet have exceedingly different levels of potential agricultural production. Harsh climate and poor, eroded and overcrowded/overgrazed land call for a cautious approach to the introduction of technological change, since there may be few interventions that can have dramatic success. On the other hand a rich agricultural area that has not been exploited with improved technology may have a large and rapid improvement potential. These factors will influence the project interventions chosen and the data required for their determination.

B. Agricultural Production and Technology

To make intelligent recommendations for changes in agricultural production and productivity, it is necessary to understand the existing agricultural system. If output is uniformly low and there are no easy answers to increases in productivity, a research program must precede the extension of new ideas. If there are major differences in the results generated at the research station, or among large, medium and small farmers, then different technologies already existing in the project area can be surveyed and considered for introduction into the project. In the most useful and likely case, there might be as much as a three-to-one variance in output between the best and least productive farmers. The most rapid increase in production and income would be accomplished by bringing the small farmers who lag up to the level of the best. The size and timing of the campaign to introduce new technology will depend upon the testing of the new possibilities on farmers' fields.

The production potential is also influenced by the agricultural resource base. In an area of small farmers with severe pressure on land, farm management techniques will be necessary to best utilize the available land, such as maximum use of vertical space, closely controlled interplanting and sequential cropping. The objective is to maximize farm output carefully through a series of small incremental improvements. In an area with a land surplus, where technology and labor have been the constraints, a quick push toward a few cash crops may be in

order. Thus the fundamental decisionmaking about the type of technology to promote depends upon the existing agricultural production potential.

C. Agricultural Support System

For more than a subsistence agricultural system, the following support services must be considered:

- Input delivery, sales and availability;
- Credit for input purchases;
- Machinery for cultivation/harvesting;
- Labor for cultivation/harvesting;
- Storage for harvest;
- Transportation of harvest; and
- Marketing of output.

These services are either satisfactory in their present state or must be augmented or established to integrate with new technology to be promoted by the project. The decision about what should be provided leads to the question of who should provide the services, since the options include using the private sector, the project or the government. Determining which supporting agricultural services are to be included on the project component list constitutes a fundamental sub-decision category of project design.

Figure 3 breaks out this sub-decision category into the three divisions discussed: agricultural resource base, agricultural production and technology, and agricultural support system.

FIGURE 3

DECISION CATEGORY: PROJECT COMPONENTS

(1) SUB-DECISION CATEGORY	(2) DECISION OPTIONS	(3) PROJECT COMPONENTS
II. Agricultural System 1. Agricultural Resource Base Small Farmers / Medium Farmers / Large Farmers a. Has. farmed (average) b. Of has. farmed, percent owned c. Total farm land (percent) d. Of total farm land pct. owned e. Land productivity: i. Improving ii. No change iii. Deteriorating f. Land potential: i. Poor ii. Average iii. High g. Land exploitation: i. Far below potential ii. Below potential iii. Near potential	1. If homogeneous, with smallholder ownership, few problems. 2. If high percentage of large farmer ownership, must protect smallholders from loss of increased income to owners. 3. If land potential high and production far below potential, project can proceed quickly to promote new technology. 4. If land potential low and exploitation near potential, project must go slow and undertake adaptive field-testing to be certain new technology will work.	These are determining factors for the speed and method used by the project in promoting new agricultural technology.
2. Agricultural Production and Technology Crop Lines/Livestock a. Variance in output: i. Among small farmers ii. Between small farmers and large producers iii. Between small farmers and research results tested on farmers' land iv. Between small farmers and research station results but not tested on farmers' land b. If output uniformly low (no variance) and no obvious answers to increased productivity	2 (a)(i). Large (3 to 1): Use as basis for first phase extension while new ideas tested. 2(a)(ii). Large (5 to 1): Test possibilities on small farmers' lands, carefully examining cost, risk, priority and economy of scale considerations. 2(a)(iii): Consider as basis for extension program, taking account of cost, risk, priority and economy of scale considerations. 2(a)(iv): Use as basis for adaptive field-testing in Phase One and extension of results in Phase Two. 2(b). Initiate a research program before extension of new technology.	Phased agricultural research and extension component based upon differences in output in local area, with research and adaptive field-testing of new innovations.

FIGURE 3 (Continued)

(1) SUB-DECISION CATEGORY									(2) DECISION OPTIONS	(3) PROJECT COMPONENTS
3. Agricultural Support System									1. If needed but not adequate, then services are candidates for project support either as: a. Incentives for private sector supply. b. Incentives for responsive government ministry supply. c. Incorporation into the project with project supply. 2. If few suppliers from private sector, then project must supply or increased competition or monopoly position (marketing) will take all benefits of increased output.	Delivery of services as component of project.
Services	Available at Present	Adequate at Present	Needed for Project	Potential for Expansion	Source: Private	Source: Public	Suppliers: Few	Suppliers: Many		
Inputs										
Credit										
Marketing										
Transport System										
Power Resources										
Storage										

It is important to note, as with the local organizational base, that there will be great variation in the data requirements needed to make the sub-decisions. For instance, decisions concerning variance in crop output could be made based on low data precision and little detail or on the quick judgment that the level of research is high and has been tested for years on farmers' land (in essence that an appropriate technology package exists for extension to small farmers). In this instance the need for much of the data presented in the annex will be low. In other instances making a decision on variance in crop output and what that implies in structuring a research/extension component will require breaking out the project area by ecological zone and collecting production data, stratifying farmers from most to least progressive, collecting detailed farm-level data on farming techniques used, including storage facilities, equipment and labor availability. This will help in decisions concerning what to extend, how and to whom. In this extreme case much of the potential data suggested in Figure A-2 of the annex will be needed. The critical judgments and the degree of project structure will be the primary determining factors.

Non-Agricultural Economic Activity

Since agriculture represents the primary mode of productive capacity in most rural areas, it has been singled out for special treatment. "Everything else" is considered to be an adjunct or a complement to improvements in the agricultural system. In some special cases there are ready opportunities for employment,

income and production increases in agricultural processing, forestry, commercial fishing, animal products and related handicrafts. If these opportunities are likely to be central to the project, they should be investigated with the same rigor as the agricultural system itself, with an examination of the resource base, the input-output system and the essential services needed for improvements. Only a few rural development projects have focused on these non-agricultural opportunities in the first phase of a project's implementation. This is the case simply because the majority of the target population in most rural areas depend upon the land for their survival.

Thoughtful projects are designed in phases or stages, and a second-phase investigation of income and employment generation through processing, or the exploitation of some other available resource is often proposed. The design of the project should include funds and personnel who can undertake investigations during the first phase to determine promising follow-ons and expansion of the project. If development is viewed as a continuing growth in capacity, initial increases in smallholder production will be followed by initiatives that extend, multiply and spread the benefits throughout the target population.

Figure 4, as in the preceding cases, presents the decision options for structuring non-agricultural economic interventions. Potential data requirements are spelled out in the annex.

FIGURE 4

DECISION CATEGORY: PROJECT COMPONENTS

(1) SUB-DECISION CATEGORY				(2) DECISION OPTIONS	(3) PROJECT COMPONENTS
III. Non-Agricultural Economic Activity					
Alternatives	Likelihood of Early Success	Time to Design Comprehensive Project Component	Optimum Time Phasing to Complement Agricultural Production Increases	1. If high likelihood of early success, low design time requirements and output needed immediately to complement increased agricultural production, then put as project component in first phase. 2. If not, hold until second phase.	Either add as project component in first phase or, if prospects attractive later, add capacity to design while other components are ongoing.

Social Services

It is always possible that a failing in a social service -- health, nutrition, education, potable water -- could present a serious obstacle to the improvements that are the first objectives of a rural development project. In some areas endemic disease prohibits settlement, the introduction of livestock, or the use of irrigation water on fields. Elimination of the mosquito, fly and snail -- often carriers of debilitating diseases -- may require special project components that address these issues. In other projects that use migrants as a major source of farm labor, housing and health conditions may be important determinants of a sufficient labor supply. If the local leadership and target population are unable to provide literate/numerate managers and decisionmakers for the organizations to be supported by the project, nonformal education and leadership training may be necessary. In each instance the question to be resolved involves the impact of a constraint in social services upon the fulfillment of first-round, production/productivity/income objectives. In a second phase, after significant progress has been achieved, the improvement of social services in conjunction with a strengthened local capacity to pay for the services, should be considered. Figure 5 presents decision options for this subdecision category.

FIGURE 5

DECISION CATEGORY: PROJECT COMPONENTS

(1) SUB-DECISION CATEGORY	(2) DECISION OPTIONS	(3) PROJECT COMPONENTS
IV. Social Services Constraints that Block Increased Agricultural Production Health Nutrition Education/Training Water Supply	1. If major constraint, add as project component. 2. If minor constraint, add investigation for inclusion in second phase.	Selection and time phasing of project components.

Macro Policy Considerations

The components of the project have an implied set of outputs which, when taken together, will affect production, distribution and marketing within the project area. In many countries there are budgeting, pricing, subsidy, and rationing allocations that serve as parameters for project development along with the overall government development philosophy and priorities. The project components must fit into these economic and development policies, so that a government pricing change, for example, will not eliminate all potential benefits of the project. World market prices and other factors often outside of the influence of the country where the project is being implemented should be considered when determining the cost/benefit returns of development activities. Figure 6 suggests decision options for this sub-decision category.

STRUCTURING PROJECT MANAGEMENT ARRANGEMENTS

While data collection to specify project components concentrates on local organizations and circumstances, the determination of project management arrangements requires a knowledge of government linkages to and from the project area. The critical questions involve which government agency is undertaking what type of interaction with the local population in fields important to agricultural and rural development. This is particularly true

FIGURE 6

DECISION CATEGORY: PROJECT COMPONENTS

(1) SUB-DECISION CATEGORY	(2) DECISION OPTIONS	(3) PROJECT COMPONENTS
V. Macro Policy Considerations National/regional policies imposed which might serve as constraints to the project Possible Constraints — Impact on Proposed Project Price setting Subsidies Exchange rate Export promotion Import restrictions Budget constraints Land tenure policies	If constraints exist, pursue alternatives to change/alleviate problems.	Use to ensure project components fit within macro policy framework.

for agricultural input sales and supplies, extension, credit and marketing, which may be provided by many or no government agencies. The first requirement is to determine who is doing what to whom, for example, to know that a statutory board provides seeds, technical assistance, production credit and marketing at a fixed price to all farmers, and in fact includes a large percentage of small farmers as clients. A listing of government agency involvements provides the basis for a judgment about who currently services the target population and thus has the capacity to expand.

It is also important to note the target population's perceptions of government services. In areas where a service is combined with a tax function, the service aspect is often subordinate in the minds of small farmers to the detrimental aspects of fines and levies imposed. In this instance the punitive aspects must be transferred, or else some other agency should be assigned to deliver the required technical assistance and services.

There are only a few major alternatives for the selection of the overall structure and organization of a project. Historically a project has been assigned:

- To a national line agency (Ministry of Agriculture);
- To integrated agencies (e.g., a rural development agency);
- To regional, provincial, or district governments (a provincial development program);

- To regional coordination and development authorities (e.g., a river basin development authority);
- Or a special project management unit with semi-autonomous status in the project area.

The selection of the most appropriate organizational structure is a subject still open to debate and disagreement. The examples in the following section offer illustrations of situations that have, in the past, called for one kind of organization or another.

The next set of sub-decisions flow from the fundamental decisions on project organization. A management structure should have the elements of control over financial resources, staff, equipment, setting of priorities and generation of an information and reporting system. The more "coordination" that is required from various agencies, the more important it is that positive incentives be built into the project to ensure that such cooperation will take place. Examples of project management structures are included in the examples given in the next section.

The sub-decision categories in this section -- choosing a project organization structure, ensuring necessary cooperation and coordination, and determining management control and responsibilities within the structure -- are reflected in Figure 7. Again, potential data points for making these sub-decisions are given in Figure A-3 of the annex.

FIGURE 7

DECISION CATEGORY: MANAGEMENT ARRANGEMENTS

(1) SUB-DECISION CATEGORIES	(2) DECISION OPTIONS	(3) PROJECT ORGANIZATION AND MANAGEMENT
I. Project Organization and Management Structure		
1. Government linkages down to the local area.	Use to determine project organization by selecting from basic alternatives of: a. National line agency (Ministry of Agriculture) b. Integrated national agency (Rural Development Authority) c. Regional/provincial/district government d. Regional coordinating agency e. Special semi-autonomous project management unit	1. Mixing and matching to obtain lead and supporting agency/government roles in project.
2. Intra-government agency cooperation and coordination.		2. Use to determine management arrangements with specifications for control over: a. Resources b. Staff c. Equipment d. Priorities e. Information flows

Source

Activities	National: Line Agencies (List)	National: Special Agencies (List)	Regional (List)	District (List)	Local (List)	Impact by Source
Ag. Extension						
Ag. Inputs						
Ag. Credit						
Ag. Research						
Cooperative Development						
Marketing						
Education						
Health						
Nutrition						

Incentives for Cooperation:	National: Line Agencies (List)	National: Special Agencies (List)	Regional (List)	District (List)	Local (List)

Incentives for Independent Action:					

EXAMPLES OF DATA REQUIREMENTS AND ANALYSIS IN RURAL DEVELOPMENT PROJECT DESIGN[1]

Example One: A Rural Development Project in a Remote and Isolated District, Implemented in a Relatively Poor Country with a Large Subsistence Agricultural Sector.

Decision Category: Specifying General Objectives

A project to increase surplus maize production (from the point of view of the host country government) and to increase income and production of smallholders (from the point of view of the donor), with a demarcated geographic area and a target population of small farmers. There was general agreement that the project would include infrastructure assistance -- roads and bridges.

Decision Category: Specifying General Resource Commitments

Twenty million dollars had been allocated for the project by the donor agency in its forward budgeting process.

Field Investigation

A six-week country visit by a design team of four started at the central Ministry of Agriculture with interviews and discussions on macro policy and macro constraints. This was followed by

---

[1] These examples, though not identified by name or geographic area, are real examples drawn from DAI design experience.

visits with officials at each level in the administrative hierarchy, ending with a 20-day bicycle trip throughout scattered communities within the project area talking with potential project participants. The collection document used in this process approximated that presented in the annex. Ideas for project components were reiteratively considered, discussed, modified and/or discarded. At the end of the trip a project outline was prepared and discussed through the administrative chain, beginning with the district-level officials and ending with the Minister of Agriculture. The project, after being approved in concept, was then written and submitted to the host country and donor for final approval.

Decision Category: Specifying Project Components

a. Sub-Decision Category: Organizational Base

The field data collection team determined that there was no existing viable organizational base except the traditional tribal/extended family allegiances. It was possible to identify communities/villages where there would be local participation in decisionmaking and the basis for a two-way communication flow. After holding nearly 30 village/community meetings, the team decided to use the existing structure as the basis for interaction between the project and the target population, and to both station project staff in villages and have villages select local farmers to participate in paraprofessional training so they could act in cooperation with the project field staff. The visits by the design team were a strong influence in obtaining the commit-

ment of the chiefs and sub-chiefs to cooperate with the new development program. The existing land distribution system suggested that using the traditional organizational base for the project would encourage widespread distribution of the benefits of development.

b. Sub-Decision Category: Agricultural System

The field team determined that small farmers varied in their output of both subsistence and cash crops in three distinct ecological zones, and that there was also great variance between international research station results and farmer production. The research station yields required high levels of cash purchases as well as a functioning delivery system for technical assistance and inputs. There had been no successful adoption of research station recommendations by small farmers.

The field team also determined that essential services for agricultural support were nonexistent, and that the government's funding constraints would undoubtedly make any provision of services a short-term commitment. Thus the project would have to become self-sustaining and the small farmers (or farmer groups) would have to be self-reliant and not depend upon the expenditure of government funds for support to their agricultural system. Roads and bridges greatly limited transportation of surplus maize; agricultural implements were crude and inappropriate; pricing policies did not provide incentives for increased production; and exchange rate manipulations actually encouraged the import into the region of low-priced maize from a neighboring foreign

country. In addition the existing agricultural extension system was engaged in punitive activities and had lost the confidence of the local population.

c. Sub-Decision Category: Non-Agricultural Production

The project team determined that increasing primary agricultural output among smallholders was the first project priority, and any attempts at employment generation or additional income growth through complementary activities would wait until after the first several years of project operations.

d. Sub-Decision Category: Social Services

The project team determined there were no overriding health, nutrition, education or housing problems that would inhibit the increase in basic agricultural production, the first objective of the project. Thus no project components involved social services in the first phase.

e. Sub-Decision Category: Macro Policy Considerations

The project team determined that there were real constraints imposed by the pricing and exchange rate policies of the national government. A marketing study was built into the early days of the project to determine exactly how additional maize production would be marketed and at what price. A study of the effects of the macro policies was to be made and submitted to the Ministry of Agriculture. The field team did determine that early production increases would be accommodated at a price that was profitable to smallholders, although that would be contrary to certain

pricing policy regulations of the government.

The Determination of the Project Components

The project was designed with six subsystems. They were:

- Research and extension (with a major objective to find and extend low-cost, improved maize technology);
- Farmer Group Development (which was to begin with existing tribal organizations and slowly develop production-oriented farmer associations and some regional cooperatives);
- Appropriate technology (to identify and then produce improved but handmade and locally fabricated agricultural implements);
- Marketing and credit (to facilitate the improvement of the private sector marketing activities in the project area by fostering competition);
- Infrastructure development (including major support to road and bridge renovation, as well as building construction); and
- Information systems (to tie the project together and to ensure that a two-way information flow would assist project management with continuous progress reports as the project got underway).

Decision Category: Specifying Project Management Arrangem

a. Sub-Decision Category: Project Organization

The design team determined that there was no viable l_____ in the project area between the government and the agricultural system. Existing extension efforts were neither effective nor appreciated, since the extension agents also had tax and fine authority. The local administrative structure was heavily

engaged in security concerns, and was not thus appropriate to serve as the basis for the project. In this instance (and it is the first in which such an organizational structure was used by DAI in rural development projects), the decision was made to establish a separate Project Management Unit (PMU), which would have autonomous control over project activities and funds. The very real problem of transition from the PMU to the regular government authority after the depletion of project resources was addressed, and a phased shifting of project responsibilities to the district officials after the first several years of successful operation was outlined. The judgment was made that the local administrative structure could carry on the work of the project, but could not set up and initiate it.

b. Sub-Decision Category: Project Management

With a Project Management Unit established as the organizational structure, the details of how the project would be structured and managed were addressed. A host country employee of the Ministry of Agriculture was named project director, and the chief of the donor technical assistance team named deputy. Joint sign-off on expenditures was established, and the remaining project staff were divided by responsibilities under the six project subsystems.

Decision Category: Specifying Detailed Project Objectives

The field team was able to identify the actual target groups by ecological zone and to provide actual target objectives for

achievement by the groups. Major behavior changes necessary in farmer production systems, farmer groups, and infrastructure users were noted. In addition the field collection team identified women as an important but overlooked resource for change and modernization in the project area, and a special project component was established and technical assistance directed toward this group.

Decision Category: Specifying Detailed Resource Commitments

As part of the final project design submitted to the host country and donor, the design team specified the resources needed by year, by major expense category (including technical assistance), by hard currency or local currency, and by loan or grant donor funds. In addition the contributions of the farmers and other cooperating target personnel were noted and considered as part of the necessary resources of the project.

Narrowing Data Collection -- The Role of Data Precision, Detail and Critical Judgments

In this case there was no need for great depth of precision and detail in data collection, since the project followed a flexible process approach in which data collection and project redesign were to continue throughout implementation. Indeed, given the sparseness of data about the project area it would have taken considerable time and resources to collect the precision and detail needed for a more structured approach. Instead the

data collection effort involved reaching general conclusions about the design of the project when consensus was obtained on major issues. That unanswered questions were to be addressed under implementation is illustrated by the preceding listing of project components: research and extension focused on adaptive testing; farmer group development started with an existing structure and moved toward production-oriented farmers' associations as more was learned about effective approaches to accomplish this; technologies were identified and tested for appropriateness before a production capability was developed, and all of this was tied into an information system aimed at providing the needed data.

The narrowing of data requirements, then, resulted primarily from limiting the precision and detail of the data collection and not restricting significantly the critical judgments necessary for the determination of project interventions. A field collection document similar to that presented in the annex was used. Virtually all of the data categories in the annex were addressed and judgments were made about them as they related to project interventions. Again, what was operative in narrowing the collection requirements was the detail and precision of data collected under each category. An indicator of the level of detail and precision is the time spent and data sources for the various categories and sub-categories.[1]

---

[1] This listing is a general summary of potential data requirements, which are elaborated in the annex.

- Two days in the capital city in discussions with government officials on project objectives, general levels of resource commitments, and macro-level policy problems of pricing of agricultural goods and exchange rates.

- Visiting 20 to 30 villages, talking to samples of five to seven farmers and local leaders in each concerning the following:

  - Farm production;

  - Farming practices used;

  - Availability of land, equipment and other farm assets;

  - Storage problems;

  - System of land utilization;

  - Adequacy of the agricultural support system (input supply, markets);

  - Infrastructure needs;

  - Adequacy of extension activity;

  - Availability and applicability of research results;

  - Credit availability;

  - Family decisionmaking in agricultural activities; and

  - Pricing problems.

- Holding approximately 30 group meetings of farmers and leaders, where the following were discussed:

  - The viability of local-level organizations;

  - Local ecological and demographic characteristics;

  - Adequacy of the social and economic infrastructure, e.g., health facilities, education facilities, roads, water;

- The links between central government ministries, extent and adequacy of government staff, and funds available in the project area.

Four days of meetings with provincial and national officials to settle on funding and staffing resources needed by year and source (donor, host country and project participants).

These issues cover all points presented in greater detail in the annex. For each it was necessary for the design team to make judgments related to potential project interventions. The necessary detail and precision for data collection and analysis was achieved in approximately six person-months of designer and field data collector effort.

Example Two: A National Farm Management Project, Implemented in a Relatively Well-Developed Country.

Decision Category: Specifying General Objectives

A project to increase farm output and income for selected small farmers who had received land under a redistribution program, with an emphasis on improving farm management skills and providing technical assistance.

Decision Category: Specifying General Resource Commitments

Two million dollars had been allocated by the donor during a prior budgeting cycle.

Field Investigation

A dozen different two- to four-week visits/missions were undertaken by consultants over the course of two years, all financed by the donor. These missions, carried out in conjunction with host country personnel, included field visits, general collaborative project design work, issue resolution, pilot model testing and final project design preparation.

Decision Category: Specifying Project Components

a. Sub-Decision Category: Organizational Base

In this relatively well-developed country there was a plethora of potential local organizations to serve as the base for project activities. This organizational base, however, changed over the two years of project design. Initially there were to be local organizations of land redistribution recipients, grouped approximately 20 to an area. Since a variety of assets were held communally by all farmers, and a number of different accounting reports required for tax purposes, these seemed to be natural and potentially workable groupings. However field investigations revealed that in some localities they did not exist and could not easily be generated, due largely to animosities between farmers resulting from the land titling and distribution process. As a result two alternative models emerged. The first was to tie into existing and viable multipurpose cooperatives. This approach would serve only a minor percentage of the total target population, but was favored by the donor and was satisfactory to the

host country for the initial two-year trial stage. The second model used the private sector, which was well-developed in this country, to provide a commercial service that would be subscribed to by the client farmers. The farmers would cluster in groups of from 300 to 500, which was large enough to sustain a professional agriculturalist and staff. The farmers would be further grouped by geographic location in clusters of approximately 20.

b. Sub-Decision Category: Agricultural System

There was little variance among the target population, since all were coping with new problems of farm management with limited experience and/or resources. The national agricultural support system functioned well and inputs were commercially available. The farmers were all in the cash sector, which was necessary if they were to make the payments on the newly acquired land. Credit was essential and available from several public and private sources, but difficult for the uninitiated to acquire. One of the functions of the project, as it was originally conceived, was to provide credit application assistance, but not to provide credit funds. Technical assistance in farm management was the missing element. The government's extension service did not reach the target farmers, and major charges were necessary to generate practical knowledge of what the farmer might do to maximize his income and how to organize an effective extension and education service for knowledge transfer.

Once agreement was reached on the fundamental thrust of the project there remained several additional unanswered questions. There was disagreement over what qualifications to require and salary levels to offer the paraprofessional workers who would help prepare credit applications, compile and analyze farm records, and exchange information provided by the professional agriculturalists. While the concept of farm records to help an individual farmer was accepted, it remained to be established that records of several hundred farmers could be analyzed and used to assist in improving all farmers' crop rotation systems, cultivation practices and, ultimately, incomes. These issues were identified and a pilot test of the technical assistance approach and farm records system was undertaken; this effort helped resolve many of the questions and led to the design of the full project.

c. Sub-Decision Category: Non-Agricultural Production

This project focused exclusively on agricultural production. The non-agricultural sector was well established and viable.

d. Sub-Decision Category: Social Services

Excluded from the project on the basis that it provided no constraints to project implementation.

e. Sub-Decision Category: Macro-Policy Considerations

This category presented real problems for the design team. To encourage shifts to more profitable and intensively cultivated crops, the government was imposing high rates of interest

for production credit for such staples as wheat. This incentive system worked for the larger farmers, but was a disincentive for the target group of small producers, who had neither the resources nor the farming understanding to switch rapidly from traditional crop lines. Thus the 60 percent per annum interest charges (real cost) caused serious hardships. This issue was resolved by a project modification as the donor insisted that credit be made available to the target population, not from the traditional sources, but from donor-supplied development assistance funds at approximately 20 percent interest per annum.

The Determination of Project Components

The project was composed of technical assistance units of professional agriculturalists who were supported by paraprofessional staff who interacted directly with approximately 500 target farmers. The farmers were assisted in preparing credit applications and the generation of a farm plan for the year. The paraprofessionals helped the farmers keep detailed records of farm input and output in a way that profit and loss could be analyzed by crop line and over the total year's activity for the farm. By utilizing comparative analysis of all farmers serviced by the technical assistance unit, the professional agriculturist could determine which farmers in similar environmental zones had the most earnings by individual crop line. Specific interview forms then could capture the details of the farming activities of the "best" farmers and (using price projections for the coming year) generate new farm plans, which would be based on far

better empirical data concerning the local area's production potential.

Decision Category: Specifying Project Management Arrangements

a. Sub-Decision Category: Project Organization

In the early stages of the project, the sponsoring organization was a semi-autonomous arm of the Ministry of Agriculture, primarily engaged in training. As the project developed over the course of several years and grew into a national program, several other agencies within the Ministry of Agriculture wished to participate. Eventually the project organized directly beneath the top echelon of the Ministry, over the sometimes competing semi-autonomous agencies. One major problem faced by the project was that, given an extremely fluid political situation, the project organization changed with nearly every trip of the donor's consultants.

b. Sub-Decision Category: Project Management

The project was managed by a coordinating committee. Fieldwork was the responsibility of one of the arms of the Ministry of Agriculture. The level, timing and delivery mechanism for a government-provided subsidy to make use of the technical assistance services during the first few years constituted a critical decision. Over the long run farmers, generating their own funds, could themselves support payments needed for private-sector technical assistance should assistance be needed beyond that provided by the evolving local-level cooperatives.

Decision Category: Specifying Detailed Project Objectives

The design team was able to estimate the probable production and income benefits to the target farmers. Time phasing of the arrangements allowed priorities to be placed on those geographic areas that were most in need of assistance.

Decision Category: Specifying Detailed Resource Commitments

The design team was able to prepare a detailed budget for each phase, categorized by donor and host country contribution.

Narrowing Data Collection: The Role of Data Precision, Detail and Critical Judgments

In contrast to example one, this project design benefited from a wealth of data on a wide array of issues: the adequacy of agricultural input supply and marketing, the level and availability of social services, a number of macro-level considerations, and the capacity of the economic infrastructure of the country. The result was that the need for many critical judgments was eliminated for a series of project interventions, by simply deciding that these interventions would not have to be addressed in the project. Data collection thus focused on very specific problem areas:

- The form local-level farmer organizations should take;
- The best way to organize extension services to transfer farm management knowledge to farmers;

- The most effective means of assisting farmers in acquiring credit;
- The qualifications/salary levels that the paraprofessional staff should have, and how they could best be organized;
- How a detailed farm records system could work;
- The macro-consideration of the interest rate to charge farmers; and
- The organizational structure of the project.

While restricting the number of critical judgments narrowed data requirements, further narrowing was accomplished by limiting the detail and precision in the answers to these issues. The project was designed flexibly, to learn from doing and to redesign specific project components over time. The result was a project that narrowed data requirements both by restricting critical judgments and by limiting the detail and precision of initial data collection.

CHAPTER FOUR

PROJECT DESIGN METHODOLOGIES

INTRODUCTION

When data requirements have been specified, a series of additional issues remain that the project designer must address:

- The data collection techniques to use: methods of collection and sources;
- Who should carry out the collection and analysis tasks; and
- The emergence of a project design.

DATA COLLECTION TECHNIQUES

Data collection techniques can be classified and grouped in a variety of ways. It is probably most useful for our purposes to view them in relation to the degree of formal structure involved. In doing so one analytical contrast stands out, with "statistical surveys" at one extreme and "reconnaissance surveys" at the other. The characteristics of these two approaches are considered in turn.[1]

---

[1] The intention here is to identify and summarize these approaches. For greater detail, see Development Alternatives, Inc., *Information for Decision-making in Rural Development*, submitted to the Office of Rural and Administrative Development, AID, May 22, 1978, Volume Two.

Statistical Surveys

Statistical surveys refer to techniques that utilize data from a sample to make inferences, i.e., to generalize about the characteristics of a larger population from which the sample has been drawn. Statistical surveys depend most commonly on enumerators who have been trained to administer a questionnaire or comparable collection instrument, with predetermined categories of data. For rural development there are two principal alternatives that may be used in drawing a sample:

- The area frame sample utilizes a specified geographical area, usually a small segment or "block" in the total land area of a region or country, as the unit from which desired data are to be collected. Generalizations about agriculture and/or other economic activities within the total land area are derived by compiling data gathered within the selected segments.

- Population Sampling is used when the focus of the survey is on a particular target population or on specific categories within the population inhabiting an area. Here the basis of the sample is not territorial units but rather a given number of reporting units (e.g., households, individuals, farms) selected from the total number of such units. There are a variety of techniques for drawing a population sample: randomization, stratification, clustering.

Normally such surveys generate large quantities of raw data. The results are then coded, aggregated and analyzed by tabulation or computer, and statistical conclusions are drawn regarding particular characteristics of the population under study.

If the project design proceeds from a large baseline household survey, experts should be involved in the drawing of a sample and the development of quantifiable (and computerizable) data collection instruments. However if the interview technique is used to develop a modest survey, to be completed by project designers during a limited design period, then the following simplified sample selection techniques may be useful:

1. Determine by a rapid survey and/or discussions with the most knowledgeable local inhabitants, leaders and government officials, a useful categorization of households within the area to be surveyed, e.g., landholdings, crops grown, production techniques, ecological zone, resource availability (credit/no credit, irrigation/no irrigation). This categorization should reflect projected variance in the important population characteristics to be measured. If it is thought that dividing households by ecological zone would accomplish this, then the use of this categorization alone would be sufficient. The more heterogeneous a population, the more likely will there be variance in the critical variables, and thus the number of categories needed for grouping households would be greater. The number of categories used will greatly affect the size of the sample.

2. Restrict the household categories to dichotomous cells (high/low) if possible, or the number of cells in the matrix will expand very quickly. For example assume that there are two important distinctions (high/low) within the following known categories in the project area:

Categories	Values
Ecological Zone	High/low
Farm size	High/low
Technology level	High/low
Crop mix	High/low

With two values for each category, there are $2^4 = 16$ possible combinations. If each category were divided into three values, then $3^4 = 81$ possible combinations would result. The fewer the basic distinctions, the easier it will be to draw a stratified sample, and the total sample needed for generalized "representativeness" can be kept to a minimum.

3. Randomize the sample to the extent possible. Use lists of households if such exist or, if not, use an alternative method, a variation of which might be to choose every third house from the center of the community along each of three access roads, and completing a sample of 30 respondents for each cell in the basic category matrix. If there are 16 combinations, as in the first example, it would require 16 x 30 = 480 perfectly matched respondents to fill the matrix cells. Since the respondents will not fit exactly into the cells (i.e., 30 perfectly matched respondents per cell), it will likely require 600 respondents to approximate a fully stratified sampling of the population.

   This approach may constitute a larger task than the design team wishes to undertake, and the alternative is to reduce the number of collection cells by collapsing categories or by excluding those that have been found to comprise only a small percentage of the local population. If farm size correlates highly with technology level, while crop mix varies considerably with ecological zone, then only two categories would be used to explain the variance of the local area, and 120 respondents could provide generalizable insights on the local population.

As the discussion suggests, the critical factors for the designer to focus on in sample selection for a statistical survey are "variance" of the conditions of the local population, with increased variance requiring an increase in the sample size, and developing a process for randomization of the selection of respondents.[1]

---

[1] There is a vast literature on sampling and sampling techniques. The bulk of this is highly technical and not easily "usable" by project designers in the field. For example, this discussion focuses on the variance among the population characteristics to be measured as an important consideration in choosing

Reconnaissance Surveys

In contrast to statistical surveys, this approach is much less structured: it depends on an open-ended process of questioning and observations, conducted by one or more qualified rural development specialists who concentrate the collection effort on key informants (as opposed to "representative" respondents). The reliance placed on such specialized individual skills of the collector/analyst contrasts sharply with the utilization of trained enumerators, whose tasks are intended to be more straightforward. The rationale underlying the reconnaissance survey assumes that it provides a way of synthesizing data rapidly into information, drawing on the analytical skills of the rural development specialist.[1] In the statistical survey, on the other hand, the linkages between data and information are only implicit, and are often difficult to operationalize. Utilizing this approach for project design, the specialists carry out two discrete functions: (1) the collection of data on a local area, including data on the prospects for modernized change; and (2) the specification of a proposed development strategy and interventions.

---

a sample size. There are special formulas for determining appropriate sample size, but the variance information that must be plugged into the formula may be missing ex ante. Thus a simplified approach such as the one discussed here is suggested.

[1] "Data" refers here to specific data points, such as those used to complete entries on a questionnaire, e.g., age, residence, occupation, "Information" is data analyzed in a form that can be used in decisionmaking.

Comparing Alternative Approaches

The distinction between these two approaches helps to isolate the strengths and weaknesses of the techniques available to decisionmakers. When rigor and precision are highly valued, the appeal of statistical surveys is likely to be strong; where a premium is placed on timely qualitative analysis (which also indicates orders of magnitude for quantifiable features of a rural environment), the reconnaissance survey offers obvious advantages.

In normal practice projects are designed using some combination of these techniques. As might be expected, highly structured statistical surveys that are carried out during a relatively short design period, e.g., one to three months, are the least useful. They consume more time than is normally available (resulting in data becoming available only after its potential use has passed) and produce far more data than could be effectively assimilated into a project design. Nevertheless, statistical surveys do have an important role to play. They are often valuable as secondary source data in the form of surveys done previously that a designer can draw upon quickly. They can also be valuable when used to gather information about a particular limited dimension of the project area, e.g., the potential market for a specified crop, as opposed to the far more energetic census-type surveys that try to capture "everything". In this more limited role structured surveys would be used in conjunction with reconnaissance interviewing. Selecting collection

approaches does not involve an "either-or" situation having to choose between reconnaissance or formal surveys. The approach should be tailored to the needs of a particular situation, and frequently a combination of approaches is used.

It is instructive to analyze these alternative techniques as they are used in the real world. The examples that follow cover this dimension of the two discussed in Chapter Three. A third example is included that was not presented previously, but it is instructive here because it relied heavily on statistical survey data collection techniques.

Example One: A Rural Development Project in a Remote and Isolated District, Implemented in a Relatively Poor Country with a Large Subsistence Agricultural Sector.

General Data Collection Methods

A review of the few secondary sources that existed revealed that little was known or certain about the district chosen for implementing the project. Some census data did exist, but they were long since out of date. Population centers were identified, but there were no data on agricultural production, cropping cycles, land distribution patterns, or government extension into the countryside. Neither were there agricultural research data that would indicate potential for improvement. In short, the design team began with a nearly nonexistent data base.

The Use of Reconnaissance Surveys

In the discussion in Chapter Three of narrowing data requirements for the design of this project, the data collection methodology and level of design team effort were spelled out in some detail. This project exemplifies a case, which is not uncommon, where a great deal of information is needed to structure a project but where initially there are almost no data available. Six person-months of design team time were consumed in carrying out a reiterative process of asking questions until it was agreed that enough was known about a particular subject so that the designer could move to the next issue. Between 20 and 30 leaders were interviewed, both individually and in groups. The result was a project design that spelled out half a dozen discrete components, but recognized that the project interventions would be modified and refined as more was learned during implementation.

Example Two: A National Farm Management Project, Implemented in a Relatively Well-Developed Country,

General Data Collection Methods

Chapter Three described how rapid survey methods were originally used in the field by the donor's consultants to determine existing conditions among the target population, the status of

present local farmer organizations, the effectiveness of the transfer of agricultural technology, existing mechanisms for small farmers to obtain credit, and critical farm management needs. Not only was the target population very homogeneous (land reform recipients with little farm management experience and few assets other than their mortgaged land), but all agriculture was in the commercial sector and the statistical base in the rural sector was good. Agricultural research station results were contrasted with target population results, as well as established smaller and larger farmer output. The major constraints of credit acquisition and farm management (and related technical assistance in planning farm management) emerged relatively quickly as the primary issues to address. One of the biggest problems proved to be how these issues should be addressed.

The Collaborative Specification of Issues

The donor consultants worked in close collaboration with consultants hired by the host country sponsoring agency. Differences between the views of the two design groups centered over the qualifications (and thus performance and pay) of the paraprofessionals who would work directly with the target population. In addition it was not generally accepted that comparative aggregate analysis of individual farm records could be used to improve overall technical assistance in farm management in a subsequent cropping cycle.

Once the issues were specified, the donor agency and the host country sponsoring agency agreed to run a pilot test to determine whether there was a "market" for farmer-directed extension assistance and at what level. After six months the farmers in the test were willing to use their own funds to continue the services, which was taken as a fundamental predictor of the success of the overall national project.

Overall the donor design team made more than 14 trips, and 12 person-months of designer and field data collector time were committed to the project. Some of the effort went to collection of pilot test data, but the majority of the effort was expended in specifying the implementation plan and project organizational and management arrangements.

Level of Development as a Factor in Data Collection

Chapter Three pointed out that this recipient country was one of the most developed in the Third World. The human resource base was excellent. Only a small portion of the overall agricultural system needed to be included in the project, since credit, marketing, input provision, machinery, labor and basic agricultural research did not require duplication. The farmers were well integrated into the cash economy. Their problems did not revolve around risk aversion, but around learning better farming procedures (particularly alternative crops to those traditionally grown for sale), and obtaining technical assistance to increase agricultural production and to acquire credit to pay for the required

inputs. Because of all of these factors, judgments could be made quickly to reduce the data required for collection.

Example Three: A District Development Project in an Easily Accessible Rural Area, Implemented in a Poor Country with a Large Agricultural Subsistence Sector.

General Data Collection Methods

The district chosen for this project was to be a model district development throughout the country. Secondary sources provided little of the data needed for project design. Census figures were available but were based upon a sampling frame that had not proven reliable, and the data were more than seven years old. There was little reliable information on the rural areas for farming systems used, availability of agricultural information, or marketing and input supply availability. The decision was made to use a series of structured statistical surveys to obtain the needed information.

The Use of Structured Survey Instruments

The design team hired a local social scientist and six experienced local field data collectors and designed two sets of structured questionnaires with members of the host country sponsoring agency. The first was a community questionnaire to be used with the leadership group. The questions included were

general, attempting to obtain an overview of agricultural and socioeconomic variables: which crops were most profitable, how often water was plentiful or scarce, what technical assistance the leadership thought would be useful. The unit of analysis was the community.

The second set of questionnaires were based upon the farm household and the large group of landless laborers. Using these questions, which included 296 separate data entries, the interviewer attempted to obtain a clear picture of the assets and farming practices of the individual farmer, plus enough socioeconomic background to allow categorization for comparative analysis. The questionnaires were written in English, translated into the local dialects, tested in the field, and subsequently revised. At the same time a questionnaire for women was designed and executed by a cooperating Private Voluntary Organization that had an interest in a women's development program.

Administering the Questionnaire

Elaborate sampling designs were simply not appropriate in this case. Instead each of 17 villages selected in an area frame sample was approached through the traditional leadership, which called for a meeting initially of the village elders at the house of the leaders. At these meetings the community questionnaire was administered, and discussion among the leadership was used to obtain consensus on specific questions. As the questioning proceeded the leadership determined that no serious harm would

come from field team contact with small farmers in the community. The staff then went to the farmers' fields to seek interviews with those who were working that day. The first farm-level questionnaires were completed on farms near the leader's house, which was most often located nearest to the major source of water and subsequent questionnaires were administered progressively further away.

Over the course of four weeks, more than 125 farm household questionnaires were completed. The coding and aggregation required the effort of eight people for three full weeks, working ten hours a day. The results showed no contradiction between the community questionnaire and the household questionnaire results. However, responses to the community questionnaire, coming from the local leadership, reflected the high end of the local economic scale, for it was this group that had consistent access to the benefits of irrigation. The household questionnaires showed that nearly 30 percent of those working in the fields had no land, and another 30 percent had land but with such limited access to water that cropping patterns were limited to wheat every other year. The results provided new insights into the inner workings of the district, but did not provide the basis for project design.

The Uses of Survey Results in Project Design

Critical judgments identified in the design process were not assisted by the results of the structured surveys. There was

no agreement on a viable, respected organizational vehicle, no understanding of how water rights were allocated, no empirical knowledge of the amount of water flowing through any one canal during irrigation. The information from 125 households did not paint a portrait of the district that could be used for project design. While the information could have been exceedingly useful for implementation, particularly in dividing the district into matching categories for further testing and monitoring of the results of development intervention, there were few data directly applicable to important design judgments. After the survey instrument data collection and analysis was completed, it was still necessary to conduct in-depth interviews to determine cropping patterns based upon water availability -- a more complex matter than could be dealt with by 125 questionnaires without the aid of computerization.

Level of Development as a Factor in Data Collection

This country, and the district chosen for development, is extremely poor. Access to the project area is relatively easy since it is connected by an all-weather road; and because it is near the capital city other amenities, such as education and limited health facilities, were available. Yet so little was known about the economic and social systems of the rural farmers that a great many questions had to be addressed to uncover what might have been constraints to effective project implementation.

The vast majority of the data collection points listed in the annex were addressed, and a survey instrument was used for

most. The need for the data was based upon the level of development, the large number of agricultural supporting services that the project might have to provide, and a government policy that had restricted the previous accumulation of research knowledge. This situation resulted in a great mass of data, which was more than could be intelligently processed and analyzed in the two months provided to the design team. The solution, which was built into the project design, was to begin slowly with a few low-risk innovations and services, and use the first years to acquire the data base that would be needed before major recommendations for improving agricultural production and income could be made. A double paradox resulted. First, because of the paucity of data and the low level of development, the collection effort resulted in data overload. Second, the paucity of data needed for critical judgments, in the context of the data overload, created a situation where the project began without answers to fundamental questions, but initiating a process for answering those questions over the course of the early years of implementation. The project was designed to be exceedingly flexible, reflecting the lack of knowledge needed to commence project implementation.

Conclusions Regarding Data Collection Techniques

The preceding examples provide interesting contrasts in approaches to data collection. In the first case effective use was made of the reconnaissance survey technique in project design;

in the second considerable information was available, largely from previous studies, to design a project adequately, although other factors intervened to delay and hinder effective project design and implementation. In the third case statistical survey work was carried out during the design process with unproductive results. While this sample of three is too small to draw generalizable conclusions, it does provide valuable insights.

The examples make a strong case for the use of some form of reconnaissance survey in nearly every design. This does not diminish the possible value of data generated through statistical surveys. When considerable data are available before a design team begins to work, only a limited collaborative/reconnaissance collection effort may be needed. What the third example indicates is that often statistical data collected and analyzed hurriedly during the design process may be less useful than frequently imagined. They are collected in a structured fashion and so do not allow for the reiterative process of pursuing new issues that arise during the course of interviewing and that may often be important in making the critical design judgments. Finally, the time involved in analyzing a bulk of statistical data can work against its effective use in the formulation of a project.

WHO SHOULD CARRY OUT THE DESIGN WORK

The examples emphasize the value of reconnaissance work, along with drawing on previous statistical surveys or carrying out such surveys with a limited focus. For statistical survey work it is necessary to organize and train a set of field enumerators and to provide needed supervision. For reconnaissance surveys experience has shown that a team approach to project design is most effective. Because of the positive role reconnaissance surveys have played, and because it is the approach that is probably least well understood, the following comments focus on it. Several dimensions of the question of how best to carry out the fieldwork need to be pursued.

One dimension concerns the source of personnel for a field design team. It has proven to be both necessary and desirable to have representatives from a donor agency and the host country participate, regardless of the source of the "core" team. Normally the most useful sort of host country participant is a responsible member of the organization tapped to implement the project. When the donor participant is from a local mission or headquarters, and when the host country representative is from the implementing agency, the individuals in question frequently have a greater incentive to make the project design a living, workable document that can be implemented, rather than simply a mechanism for transferring funds from the funding source to the host country.

When outside consultants are used it is invariably preferable to put together a team that shares a common approach to development and has a common institutional base, or has at least worked together in the past, instead of assembling individuals whose paper qualifications rate them as experts but whose ability to work together as a team is not proven.

A second dimension of the issue involves the specialties that are needed on a design team. One approach is to assemble a team composed of individuals with a series of technical specialties (e.g., range agronomists, water development specialists) that seem to fit the demands of the development problem at hand. In the past this approach has not produced the best designs. At least one member of a design team should have sufficient technical background to judge the appropriateness of different technological packages, but the critical skills needed on a team tend to be not so much technical in nature as those that contribute to a sensible project in a particular political, economic, social and cultural milieu. This requires individuals with a certain breadth of experience in a variety of development situations, and with the personal skills needed to collaborate and negotiate with host country officials.

In a number of instances a core group consisting of a rural development specialist, an anthropologist or rural sociologist, an economist (usually an agricultural economist), and an agriculturalist has proven to be effective. It is preferable if at least one member of the core group also has experience and exper-

tise in project management arrangements and another in information requirements for rural development projects. A design team can generally find much of the technical knowledge needed to develop project components available in the host country. Where more detailed study or work is required, this can be built into the project design.

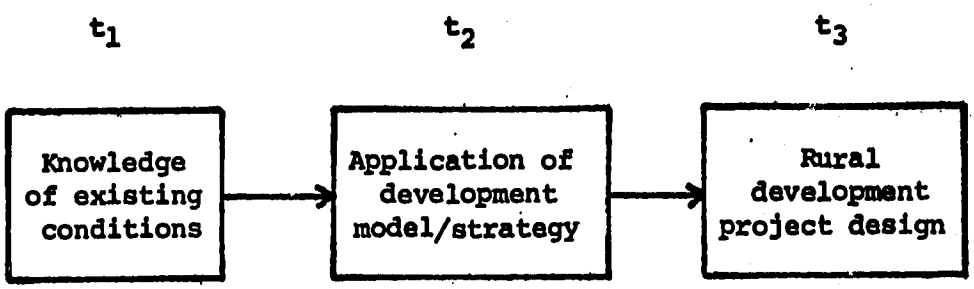
Finally, one approach that has proven successful has been to contract with local social scientists to do preliminary studies prior to the arrival of a core team. As noted earlier, these studies can be statistical surveys on specified subjects if enough lead-time is allowed and sufficient resources made available. On the other hand, they can consist of less structured fieldwork at collecting data in a short time on, for instance, local farming systems or production practices. With these data, and with these same individuals also participating throughout the design process, the team will have available a knowledge base of the local area that will be invaluable in the design work.

THE EMERGENCE OF A PROJECT DESIGN

We have identified decision categories and sub-categories for designing projects, and have discussed the difficult task of narrowing the data to be collected. We have discussed techniques to use in collecting data as well as the composition of project design teams. But how, with all of this, does a design actually emerge?

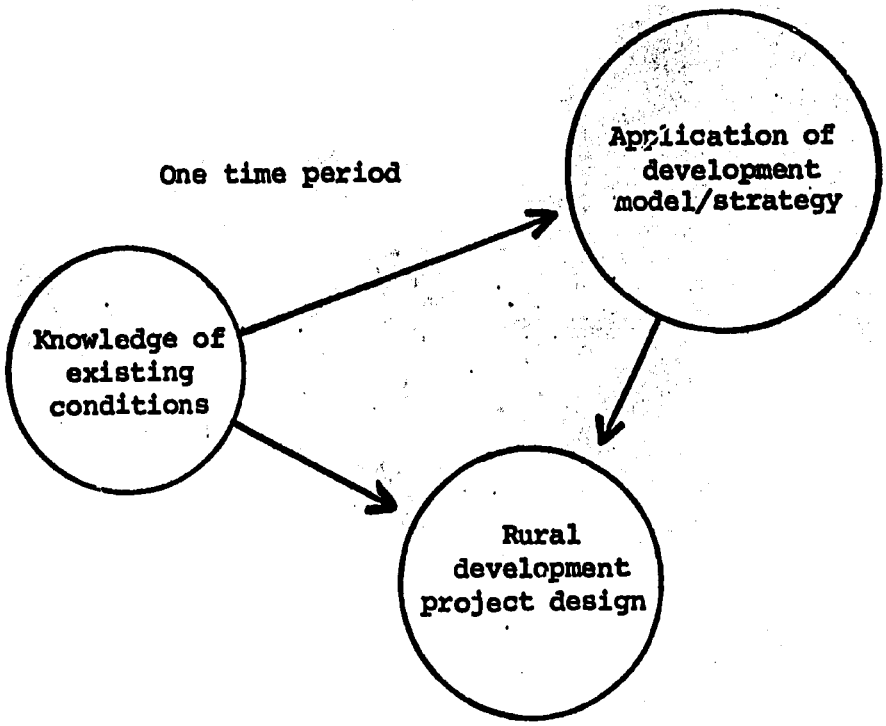
There is no magic to this process. The information collected during the design work, with its design implications, must be combined with information held by project designers on development strategy or a development model. As we noted in Chapter One, one model that appears to be having a substantial impact on rural development focuses on local farmer involvement in decisionmaking, a high level of local resource commitment to development activities, and is based on increasing production/productivity/income of a rural population.

In combining the information acquired during the design activity (knowledge of existing conditions) with a model of development, the process of generating a project design may be viewed as sequential:



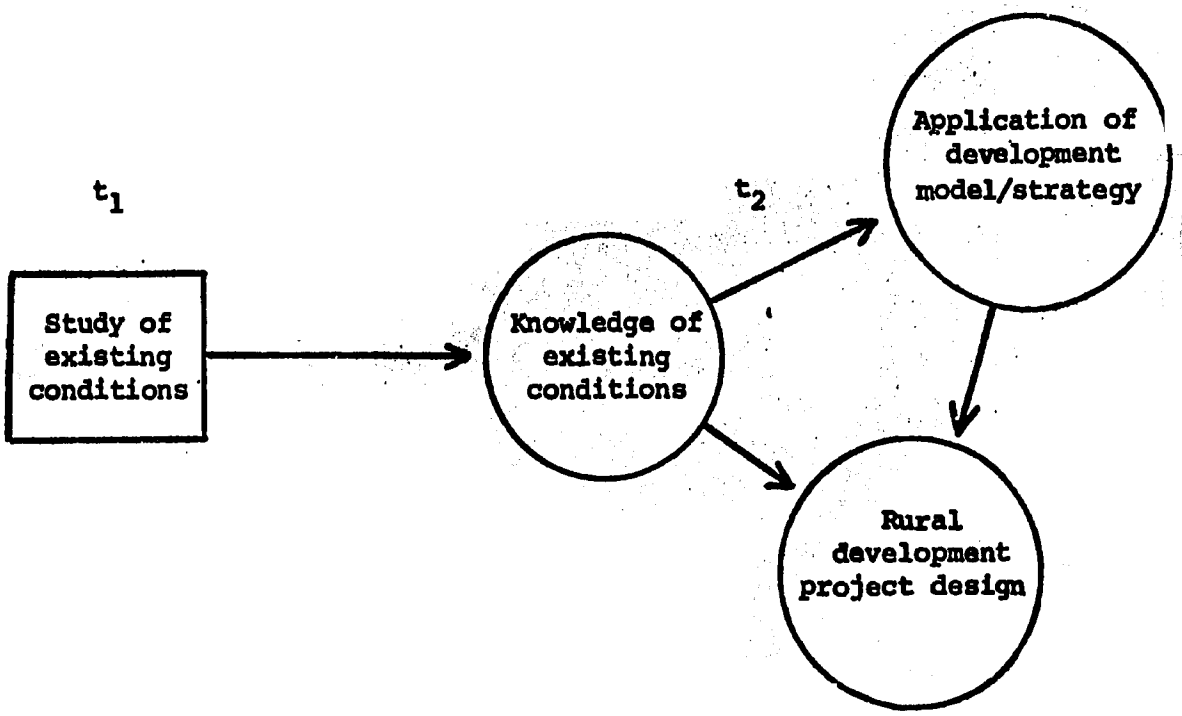
In this approach the knowledge of "what exists" may be provided by either of the two general data collection techniques (statistical surveys or rapid reconnaissance), but each step will be performed in a different time period and more often than not by different people.

Alternatively, the process may be simultaneous:



In this situation the primary focus is likely to be on reconnaissance surveys supported by secondary source data, and the entire reiterative process may be carried out by the same field team of developmant specialists. A useful variant on these two approaches, mentioned earlier, has been to define data requirements that can be fulfilled by social scientists prior to the arrival of a design team, and then include the data collectors as part of the team.

In this instance the sequencing would be:



In any of these approaches the ingredients are the same: the need to collect information relevant for design purposes, understand its implications for design, and combine it with a model of development to produce a project appropriate to a given local environment.

CHAPTER FIVE

THE PROCESS OF PROJECT DESIGN: A SUMMARY

The previous chapters have set forth certain requirements for designing rural development projects. They have addressed a set of issues with which any project designer and data collector will have to deal. Depending upon the knowledge base from which a designer begins a design, the development model applied, the particular environment in which the project is being undertaken, and the strategy chosen for project development, these issues will be of greater or lesser concern. It would be well to summarize these issues and put them in perspective.

ISSUE ONE: DEFINING RURAL DEVELOPMENT PROJECTS

The terms "rural development" or "integrated rural development" have acquired numerous meanings, often with little agreement about which is the most appropriate. For the purpose of this report the focus is upon projects that have a primary objective of increasing the socioeconomic welfare of a rural population through concentrating on agricultural production and income- and employment-generating activities. Providing development assistance for social services early in a project's life cycle is applicable only if such things as health, education,

population or nutrition present serious constraints to increasing agricultural or income-generating potential.

ISSUE TWO: THE STRUCTURED OR THE FLEXIBLE APPROACH TO PROJECT DEVELOPMENT

The approach to project development can vary from one extreme requiring a highly structured design to one where there is great flexibility in defining what project interventions will be tried, starting with the specification of a project area, a target population, a management structure, a budget and a general mandate to promote development. Since there are clear differences in the level and type of data required for project design under these two juxtaposed alternatives, the approach to project development is a major consideration in determining information requirements for rural development projects.

ISSUE THREE: CRITICAL DECISION CATEGORIES IN PROJECT DESIGN

The specification of data requirements for rural development project design involves selecting a minimal set of data to collect. This can best be done in the context of decisions, or decision categories, that planners must make in the process of proj-

ect design. It is possible to define a set of decision categories that is common to virtually all rural development projects, namely:

- Specifying project objectives, including indicators of success;
- Specifying project components;
- Determining project management arrangements; and
- Specifying project resource commitments.

It is also possible to spell out potential data requirements for each decision category. Defining a systematic method for narrowing the data to only those critical for collection is an exceedingly difficult assignment, and revolves around choices concerning the precision and detail of data to collect, as well as restricting critical judgments that must be made about project interventions.

ISSUE FOUR: LINKING DECISION CATEGORIES TO INFORMATION REQUIREMENTS

Two of the four decision categories, specifying objectives and scheduling resources, are often determined with little reference to the local project area. It is the determination of the project components and management arrangements that requires the

greatest understanding of the project area and most often consumes the bulk of the time and energy of a design team. When structuring project components the designer must divide data requirements into a set of sub-decision categories:

- Viability and equity of the society's organizational base;
- The agricultural system: the agricultural resource base, agricultural production technology and agricultural support system;
- Non-agricultural economic activity: the non-agricultural resource base, production technology and support system;
- Social services, including health, nutrition, housing, and education; and
- Macro policy considerations.

For determining management arrangements the sub-categories include the project organization structure and management control and responsibilities.

ISSUE FIVE: SELECTIVELY REDUCING DATA REQUIREMENTS

Data collection requirements follow from a set of critical judgments that must be made about the potential for successful project interventions. There are two ways to reduce data requirements to a manageable set: (1) reduce the precision and level of detail of data for any single decision category; and/or (2) restrict the critical judgments necessary for determining project components or management arrangements. When a project

is to be implemented in an area with an adequate social and economic infrastructure, an early determination can be made not to include these in the project design and so judgments about them need not be made. The number of necessary judgments becomes restricted.

ISSUE SIX: DATA COLLECTION TECHNIQUES

There are a number of data collection techniques that have been used in project design, ranging from highly structured statistical surveys to informal field reconnaissance work. For most rural development projects some combination of these techniques is used, though the latter has proven considerably more useful in project designs that are carried out over a short period like one to three months, and which have a small data base from which to draw initially.

ISSUE SEVEN: WHO SHOULD CARRY OUT THE DESIGN WORK

Statistical surveys require organizing and training field enumerators and providing adequate field supervision. For carrying out reconnaissance surveys there are several critical considerations. First, a team approach has proven most effective and it is important that representatives from both the donor and

the host country participate. Ideally these individuals would be scheduled to have some responsibility for project implementation as well. Second, it is useful if the individuals comprising the team share a common approach to development and have worked together in the past. Finally, teams whose members have a wide background in rural development problems tend to be more effective than groups comprised solely of technical experts. A core group consisting of a rural development specialist, an anthropologist or rural sociologist, an economi t and an agriculturalist has proven to be effective.

FIGURE A-1

SPECIFYING PROJECT OBJECTIVES

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
I. What is the project attempting to achieve? What are the target population and geographic coverage? Are the defined objectives of those involved in the project mutually complementary? Contradictory?	I. During the first phase of project design, list possible alternatives with regard to:[1] • Project objectives; • Target population, including possible sub-groups within that population, e.g., women, farmers, landless laborers, pastoralists; and • Area covered by the project. After project components and management structure have been determined, specify above in greater detail.
II. What are the indicators of success for the project? Do major trade-offs arise when assessing each possible development activity in the context of the success indicators?	II. List possible alternative indicators of project success.
III. What are the objectives for each specific target group or sub-group within the target population?	III. For each target group or sub-group list: • Specific objectives; and • Behavioral changes necessary to achieve specific objectives.

[1] Chapter Three discusses the influence of the time phasing of project design decisions on data requirements. In terms of specifying project objectives as well as defining resource commitments this time phasing is important.

ANNEX

POTENTIAL DATA REQUIREMENTS FOR PROJECT DESIGN

FIGURE A-2

SPECIFYING PROJECT COMPONENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS[1]	POTENTIAL DATA REQUIREMENTS
I. Local-Level Organizational Base: What are the actual and potential contributions to development that are being or could be made by the local population organized both informally and formally?	I. Data related to the existing structure, function, and viability of local-level organizations as follows: • Organizations by type and function. • Characteristics of each organizational type including: - Size of organization, characteristics of members, and geographic coverage of membership. - Equity in the delivery of services of organization, including breakout of services and beneficiaries. - Capacity to deliver services in a timely way, including timing and magnitude of service delivery. - Process of organizational decisionmaking, e.g., leadership selection, policies, and operations. - Level of technical/managerial skills within the organization. - Organizational capability to mobilize internal and external resources. - System of accountability to membership and to population as a whole. • Actual and potential contributions to development by organizational type.
II. The Agricultural System: What agricultural production activities should be built into the project? This decision category requires data related to the agricultural resource base, current agricultural production and technology, and the agricultural support system.	
1. Agricultural Resource Base: Is the agricultural resource base adequate to support increased agricultural production and productivity?	1. Characteristics of the major ecological zones in the project area as they relate to development potential. For each ecological zone determine: • Climate. • Soil fertility (by type of soil). • Rainfall (level and regularity). • Altitude and terrain. • Extent of soil depletion and erosion. Project area resource base. For each ecological zone: • Demographic factors: - Population density. - Average number persons per farm, broken out by age for small, medium and large farms. - Migration patterns. • Has. of total farm land, broken out by small, medium and large farms. - High productivity (has.). - Average productivity (has.). - Low productivity (has.).

[1] In the case of project components, the categories below under which the critical design questions are presented are organized according to the sub-decision categories defined in Chapter Three of the text, "Structuring Project Components."

FIGURE A-2 (Continued)

SPECIFYING PROJECT COMPONENTS

CRITICAL QUESTIONS FOR DESIGN DECISION	POTENTIAL DATA REQUIREMENTS
	• Has. farmed (average) by small, medium and large farmers: - High productivity (has.). - Average productivity (has.). - Low productivity (has.). • Has. owned by small, medium and large farmers: - High productivity (has.). - Average productivity (has.). - Low productivity (has.). • Farm land potential by small, medium and large farmers: - Poor - Average - High • Farm land exploitation by small, medium and large farmers: - Far below potential. - Below potential. - Near potential. • Forest land exploitation: - Far below potential. - Below potential. - Near potential. • Surface and ground water exploitation: - Far below potential. - Below potential. - Near potential. • Density of grazing of livestock by small, medium and large farmers.
2. Agricultural Production and Technology: 2.a. Farming systems: What farming systems are currently in use?	2.a. For each ecological zone, data as follows: • Farm output of primary crops/livestock: Ecological Zone 1 -- Small Farmers Crop Line/Livestock Most productive ____ ____ ____ Moderately productive ____ ____ ____ Least productive ____ ____ ____ Ecological Zone 1 -- Large Farmers Crop Line/Livestock Most productive ____ ____ ____ Moderately productive ____ ____ ____ Least productive ____ ____ ____ Ecological Zone 2 -- Etc.

FIGURE A-2 (Continued)

SPECIFYING PROJECT COMPONENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
	• System of land utilization: Ecological Zone 1 -- Small Farmers Crop Rotation/Fallow Periods Most productive _____ _____ _____ Moderately productive _____ _____ _____ Least productive _____ _____ _____ Ecological Zone 1 -- Large Farmers Crop Rotation/Fallow Periods Most productive _____ _____ _____ Moderately productive _____ _____ _____ Least productive _____ _____ _____ Ecological Zone 2 -- Etc. • Farming technology used. By ecological zone, for large and small farmers broken down by most productive, moderately productive, and least productive; collect the following: - For each crop, sequence of farming operations for a cropping cycle. - For each crop, variations in practices used for land preparation, planting, weeding, fertilization, insect/disease control, harvesting, storage. - For each type of livestock, variations in husbandry practices. - Differences in processing activities.
2.b. Agricultural research: To what extent have new technologies been developed, tested and proven on farmers' own land?	2.b. Agricultural related research, its type, extent, results and level of testing on farmers' lands, to include: • Output levels from research stations, broken out by crop line/livestock. • Technology available at research stations, broken out by type of crop/livestock. • Technology tested on farmers' land and comparison with practices used. • Process of testing new technology on farmers' land. • Farmer reaction to the technology tested. • Process of modifying new technology to local conditions.
2.c. Extension Services to Farmers: To what extent does a two-way communication take place between extension workers and farmers that results in the introduction, modification and acceptance of new technology?	2.c. Adequacy and extent of the extension services, to include: • Number of extension workers and their roles as perceived by themselves and by farmers. • Extent, type and quality of interaction between extension workers and farmers. • Recruitment, training, potential for upward mobility, supervision, and support of extension workers. • Effectiveness of different approaches used for agricultural technology transfer. • Problems encountered in effective introduction/modification and acceptance of new technology.

FIGURE A-2 (Continued)

SPECIFYING PROJECT COMPONENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
3. Agricultural Support System:	
3.a. Agricultural Inputs: Are agricultural supplies being provided in an adequate and timely manner?	3.a. Agricultural input information, to include:

	Critical Needs	Availability (Include Sources)	Adequacy of System	Extent of Coverage in Project Area	Constraints to Expanding System
Crops					
Livestock					
Agricultural Processing					

3.b. Credit: Are there credit needs for the development of the area that are not being effectively met?

3.b. Credit needs and availability to include:

- Critical investment requirements vis-à-vis the availability of cash resources for farmers, merchants, and other entrepreneurs (such as agricultural input suppliers).
- Traditional and modern credit sources. For each source delineate:
  - Qualification criteria.
  - Distribution of loans, i.e., geographic and size of enterprise.
  - Degree of technical supervision to clientele.
  - Capacity and efficiency to make and manage loan decisions.
  - Terms of loans by loan type.
  - Repayment history and whether returns from loans cover costs.
- Adequacy of available credit sources.
- Potential for expanding sources.

3.c. Marketing of Agricultural Output: Is there a market system that operates effectively/adequately in purchasing agricultural products?

3.c. Agricultural marketing system, including market mechanisms and pricing structure:

- Types of market mechanisms by geographic coverage.
- Capacity of market system by primary agricultural product, supplies, and consumer items (extent to which market system is adequate or is acting as a constraint).
- Constraints to expanding capacity and coverage of the various market mechanisms to meet needs of area development.
- Current pricing of primary products and goods with reference to fluctuations by market mechanism.
- Price differentials by geographic coverage, enterprise, and quality of product.
- Profitability of principal products for farmers, merchants, processors, and wholesalers.
- Imbalance in pricing system that affects producer decisions (i.e., returns from various agricultural products vs. input prices).

FIGURE A-2 (Continued)

SPECIFYING PROJECT COMPONENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
3.d. Transport System: Are improvements needed in the transport system to ensure the movement of supplies, commodities, personnel, and local output?	3.d. Availability and adequacy of a transport system, including: • According to the criteria of population density, agricultural input supply and output needs (both actual and potential), and needs of all other economic activity of the area, map the road and bridge system with specification of needed improvements and linkages (to include a delineation of the location, composition, condition, length and width, drainage, and current patterns of use of all roads and bridges to be rehabilitated or constructed. The system should include primary, secondary, and farm-to-market roads. • Capacity, use, and linkages with the road system of air, water, and rail transport systems with specific reference to needed improvements.
3.e. Power Resources: Are power resources sufficient to meet the present and potential agriculture and industrial requirements in the project area?	3.e. Needs and adequacy of power resources, including: • Power needs of primary agricultural and industrial activities as well as current sources and their capacity for meeting requirements.
3.f. Storage Facilities: Are present warehouse and storage facilities adequate for the present and potential future agricultural production?	3.f. The need and adequacy of storage facilities, including: • Storage facilities available by geographic coverage, broken out by on-farm and off-farm storage needs.
III. Non-Agricultural Economic Activity: Are there alternative economic activities that can be initiated or expanded during the life of the project that will increase employment, income, and savings of the target population?	III. For non-agriculture activity in the area, data as follows: • Ownership and management structure of present enterprises. • Effects on employment, income, and savings in defined geographic area. • Capacity, output, and profitability. • Effects on agricultural production and the environment. • Potential for initiating new and/or expanding existing enterprises to include: - Availability and access to markets. - Adequacy of investment capital, raw materials, labor (skilled and unskilled), and management. - Government regulations and policies that might affect enterprises. - Prospective profitability and effects. • Probable direct payments or tax revenues for development of local area.
IV. Social Services: Are inadequate social services in the areas of health, nutrition, education and the availability of potable water acting as constraints to the fulfillment of the primary production/productivity/income objectives of the project?	
1. Health Care System: Is a system of health care available that ensures a minimum standard of health so that people are actively involved in development activities?	IV.1. Health care related data, including: • Major health problems and effects on production activity. • Adequacy of the health system for solving the problems with specific reference to the commitment of local resources for its development.

FIGURE A-2 (Continued)

SPECIFYING PROJECT COMPONENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
2. Nutrition Services: Do low levels of nutrition act as constraints to development activities? Are there opportunities to improve nutrition so that the population can become more actively involved in the development process?	2. Data on nutrition levels, including: • Major sources of nutrition with specific reference to deficiencies by age group and ecological zone. • How projected agricultural production would/would not affect the level of nutrition. • Mechanisms which would promote the adoption of improved nutritional practices, e.g., education programs.
3. Education/Training: Do local educational and training facilities and/or programs provide a level of training needed to effectively implement the project activities?	3. Education and training data related to the following: • Availability, coverage, content and effect (re: transferring knowledge and/or skills which influence behavior) of educational and training activities. Among those that should be considered, in addition to the formal education system, are functional literacy and adult education programs, informal activities of primary and secondary schools, missionary centers, and technical institutions.
4. Water Supply System: Is a clean water supply available throughout the year within walking distance of population concentrations, and if not are there alternative sources that could be tapped or technologies for purification in use?	4. Data related to the availability of water, including: • Sources and coverage of water supplies with an indication of incidence of water related disease. • Potential sources of clean water and/or technologies for water purification that are in use in project area or in similar ecological zones in other parts of the country.
V. Macro Policy Considerations: What are the macro-level parameters which must be taken into account in project component specification and into which the components must fit?[1]	
1. Management of the Economy: How do the policies and operation of the government in the management of the economy affect local-level development activity?	V.1. Macro-economic policies related to: • Market and price regulations, including price setting. • Subsidization policies affecting rural activity. • Foreign exchange regulations as they affect the availability of resources in the project area. • Import/export policies and regulations. • National/regional budget priorities and constraints. • Land tenure policies.
2. Government Development Philosophy and Priorities: Do government development philosophy and priorities influence the scope of activities that can be undertaken?	2. Indicators of government development priorities including: • Stated government development philosophy and priorities. • Actual allocation of resources for development.

[1] These macro-level considerations -- or considerations that focus primarily on national-level policies and which are more often than not beyond the ability of the project to influence -- are necessary in the process of project design. They are not, however, the primary focus of this report. The central concern revolves around data needed concerning the project environment -- local-level social, economic and cultural data.

FIGURE A-3

DETERMINING PROJECT MANAGEMENT ARRANGEMENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
I. Project Organization and Management Structure: What is the optimal organizational structure for the project and how should management control/responsibilities within that structure be defined?	I. Data concerning existing and potential alternative organizational structures as well as management arrangements, including: • Listing of organizations and agencies, both public and private, by type and function, that provide or would provide development-related goods and services to target groups. • For each organization and agency, specification of control over staff, finances, other resources, and information flows. • For each organization, staff lines of authority and definition of responsibilities. • With regard to goods and service delivery, for each of the organizations above: - Timeliness of delivery. - Adequacy of delivery. - Need by target group. - Potential for expansion. - Equity of delivery. - Ability to carry out needed coordination with other organizations, agencies, individuals. - Incentives for cooperation/incentives for individual action. • Attitudes of target population, local lenders and local officials concerning: - Timeliness of delivery. - Adequacy of delivery. - Need. - Potential for expansion. - Equity of delivery. - Ability to carry out needed coordination with other organizations, agencies, individuals. - Incentives for cooperation/incentives for individual action.

FIGURE A-4

SPECIFYING PROJECT RESOURCE COMMITMENTS

CRITICAL QUESTIONS FOR DESIGN DECISIONS	POTENTIAL DATA REQUIREMENTS
I. During the first phase of the project design process, what are the general types and quantities of resources available from donors and the host country?	I. List types and quantities of expected resources by source.
II. After project components and management arrangements have been defined, what are the specific types and quantities of resources to be committed by donors, host country and target population? What is the timing of delivery of the resources?	II. List specific types and quantities of resources to be provided by each source. Specify timing of resource delivery.

Previous Page Blank