COOPERATIVE AGREEMENT ON HUMAN SETTLEMENTS AND NATURAL RESOURCE SYSTEMS ANALYSIS

URBAN FUNCTIONS IN RURAL DEVELOPMENT
END-OF-PROJECT ASSESSMENT REPORT

by

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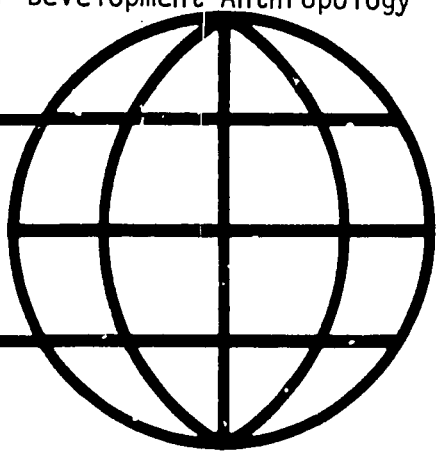

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EXECUTIVE SUMMARY

I. Introduction

This report assesses the Urban Functions in Rural Development (UFRD) Project. It makes extensive use of case study materials on the five field applications of UFRD and on discussions with project participants and regional planning, geography, and regional science specialists.

The UFRD project was developed in the early 1970s by the Office of Urban Development, USAID. The purpose of the project was to design and test methodologies for analyzing the relationship between urban activities and rural development. Based on an extensive review of the literature, the office concluded that: (i) urban-based marketing, storage, processing, credit programs, agricultural input, commercial and social services affect the direction and pace of rural development; and (ii) therefore, the linkages between urban and rural areas must be considered in planning and promoting rural development. Rural-urban linkages include economic (marketing and production), physical (road and rail), administrative (government and communications), and social (interaction and service functions) linkages.

In order to ensure that the methodologies designed for UFRD could be operationalized and were relevant to ongoing development activities, the office decided to design and test these methodologies in the field in each of USAID's major regions. Hence, projects were conducted in the Philippines (1976-1978), Upper Volta (1978-1980), Bolivia (1979-1981), Guatemala (1979-1981), and Cameroon (1979-1982).

II. Principal Findings

The findings of this assessment are mixed. On the one hand, the UFRD Project made significant contributions to the development community. These contributions include:

1. The development of an operational methodology capable of describing: (i) the supply and distribution of urban activities; and (ii) the linkages among settlements and between them and their surrounding rural regions;

2. Enhancing the quality of development planning by raising the level of awareness of the development community and examining rural-urban linkages; and

3. Lending shape to the international debate on how best to identify and strengthen mutually beneficial linkages between rural and urban areas.

On the other hand, despite early findings highlighting some of the deficiencies of the UFRD methodologies, the Office of Urban Development was unable to resolve certain problems encountered in the field. These problems include:

1. The unsuccessful attempts at implementing UFRD plans;

2. The unsuccessful attempts at involving the participation of target populations in the planning process; and

3. The unsuccessful attempts at collecting and combining information on consumer demand for urban activities with the more supply-oriented information collected and analyzed by the UFRD methodologies.

For a more detailed discussion of the findings and the evidence supporting the assessment, the full report should be consulted. These findings are organized under three subheadings: analyses, plan-making, and implementation. The subheadings follow the structure of the UFRD methodology formulated in the Philippines and later refined in Bolivia (see Figure 1). Most of the published literature about UFRD and the interest it has aroused among development

planners and practitioners focuses on this methodology and it is, therefore, this methodology which is central to this assessment.

A. Analyses

The first six steps of the methodology are devoted to measuring and analyzing various attributes of a region and its settlement system.

1. Capabilities.

a. These six steps of analyses are a quick and cost-effective method for generating the following information:

i. supply and distribution of urban functions;

ii. general accessibility of rural and urban populations to various services and functions;

iii. organization of activities in space around settlements of various levels of functional complexity;

iv. spatial variation in levels of development between regions;

v. perceived needs for urban-based functions;

vi. deficiencies (gaps) in the distribution and supply of functions; and

vii. deficiencies in the economic and physical linkages between urban and rural areas and among urban centers.

b. The information provided by the methodology can be helpful for:

i. formulating regional development policies;

ii. formulating settlement planning policies at the regional level;

iii. establishing general locational criteria for settlements of common size and functional complexity; and

iv. identifying deficiencies in the coverage of urban-based services for rural regions.

2. Suggestions for Improvement

Although the ability of the methodology to provide the kinds of information enumerated above is uncontested, several suggestions on how to improve this methodology can be made:

a. Evaluators of the individual field projects found that in some instances too many data were collected and analyzed. It is therefore recommended that a critical data set be identified and adhered to.

b. There is general consensus among project participants that the techniques used to analyze rural-urban linkages were only partial and descriptive. It is therefore recommended that the step in the methodology involving linkages be expanded to capture the more "dynamic" aspects of these linkages.

One consultant found technical problems with the accessibility model that was developed in Bolivia. These problems must be resolved before the model can be used to maximum advantage.

B. Plan-Making

Steps Seven and Eight of the UFRD methodology are devoted to activities that may be characterized as "plan-making," that is, to the identification of investment criteria, the identification of development interventions, and the formulation of investment plans. Several issues concerning the appropriateness of the plans were raised in the field applications of UFRD. These issues

revolved around the question of whether the analytical portions of the methodology were appropriate to the task of formulating plans.

1. Issues Raised.

   a. Many project participants were unclear on how UFRD was able to base its plans and recommendations for specific project interventions solely on the description of the supply and distribution of urban functions and on the description of the linkage among places provided by the first six steps of the methodology. This confusion was first noticed by a consultant in the Philippines and was shared by the members of the project teams in Upper Volta and Guatemala and by mission staff in Upper Volta, Guatemala, and Cameroon.

   b. Of those who did grasp the logic behind formulating plans based on a descriptive analysis of the supply and distribution of urban functions and of rural-urban linkages, many believed that the logic was faulty. A consultant to the Philippine pilot project argued that it was inappropriately based on a "gap" analysis of the distribution of functions among settlements. He argued that this method failed to adequately address demand and geographical accessibility issues. Further, a consultant to the Upper Volta project called the UFRD approach to plan-making too "mechanical" and "scientific" for Upper Volta because it was based on conventional Western typologies of settlements that had little relevance to the realities of Upper Volta.

2. Suggestions for improvement.

The UFRD assessment team concurs that: (i) the methods by which UFRD plans were formulated and the logic behind utilizing these methods remain obscure; and (ii) the appropriateness of basing plans on the descriptive analyses conducted in the first six steps of the methodologies must be seriously questioned. We therefore offer the following recommendations:

a. The methods by which UFRD plans were formulated and the logic behind their use should be made more explicit. This will allow future users of UFRD to understand the approach better.

b. The UFRD methodology should continue to be used to contribute to policy formulation and to provide a method for rapidly analyzing rural-urban linkages, but it should not be used (in its current form) for identification of specific project interventions.

C. Implementation

The last two steps of the methodology are devoted to implementation, monitoring, and institutionalization. In none of the UFRD cases was implementation achieved. The failure to achieve implementation can and has been attributed to a range of factors. The two most cogent explanations for this failure are: (i) the purpose of the UFRD project was to develop and test an operational methodology and, given the extent to which implementation was desirable, implementation had to take a back seat for the design of the methodology; and (ii) despite the efforts of the Office of Urban Development to achieve implementation, it was only once able to link UFRD to an institution with the authority and resources to implement plans and that in this one case, Bolivia, the reason implementation was not achieved did not reflect any deficiency in

the methodology but rather was because a U.S. loan programmed to the institution was cancelled after a coup.

Nevertheless, issues concerning the ability of the UFRD methodology to facilitate implementation have been raised by project participants.

1. Issues Raised

   a. Beginning with the UFRD pilot project it was noted that the UFRD methodology lacked an "implementation" model. In other words, the methodology did not include explicit steps or even general guidelines on how to enlist the support of host institutions in the implementation of UFRD plans or on how to coordinate them in the planning and implementation of specific project interventions.

   b. The project team in Bolivia persuasively argued that the UFRD methodology lacked an emphasis on understanding the nature and role of the host institutions involved in planning and delivering projects and, furthermore, that this deficiency constrained the prospects for implementation of UFRD plans.

2. Suggestions for Improvement

   a. Future UFRD projects should examine the nature of the host institutions involved with planning and implementing projects in a region.

   b. Future UFRD projects should include technical assistance directed at training host institutions on how to collaborate in multisectoral plan formulation and implementation.

III. Extensions for UFRD

The UFRD project was successful in designing an operational methodology for measuring and describing the supply of urban functions (their distribution and ubiquity), the settlement structure (the urban hierarchy), and the pattern of linkages (economic, social, physical, and political) among settlements, and between them and rural areas. The project was less successful in formulating plans that were acceptable to development planners and practitioners. Many were not convinced that the methodology just described was an appropriate base for plan-making. Given this skepticism, it is unlikely that, even under the most favorable circumstances, implementation of UFRD plans will be achieved. Nor is it clear that, in their present state, they should be.

After interviewing project participants and a number of specialists, it is the conclusion of this assessment team that in order for UFRD to be capable of formulating plans and identifying projects, its analytical portions must be extended. New methods must be introduced which respond to the most often heard criticisms of UFRD: (i) it considers only the supply of and not the demand for urban functions and rural-urban linkages; and (ii) it is too "descriptive" and "static" and, hence, incapable of dynamic impact modeling.

We therefore recommend that techniques be developed and applied for collecting and analyzing data on:

1. The effective demand of consumers for specific urban functions--this information can be used to assess the economic feasibility of providing a new urban-based activity at a given location.

2. The behaviors which govern the choice of target populations to utilize an urban-based activity and which govern their choice of where to avail

themselves of the service--this information will allow the impact of locating a new urban-based activity at alternative sites to be modeled.

UFRD should be extended to incorporate demand and behavioral data. By so doing, the capacity of UFRD to formulate workable, actionable plans will be greatly enhanced.

ACKNOWLEDGEMENTS

While we would like to identify all those who have contributed to the development of this report, space here does not allow us to mention everyone. Instead, we will acknowledge only those individuals who contributed in a substantial way to the development of this report.

First, the contribution of Dr. Eric Chetwynd, now of USAID's Rural and Regional Development Division, deserves special mention. Dr. Chetwynd was responsible for the development, implementation, and subsequent evaluation of the UFRD Project. We are grateful to him for his help in conducting this assessment. He holds genuine enthusiasm for the still untapped potential of regional and spatial development concepts, which together with his dedication to development issues continues to inspire our work.

We also wish to thank Dr. Dennis Rondinelli of Syracuse University, who was a most active contributor to the field of UFRD concepts. It was Dr. Rondinelli, whose perspectives in regional planning were highly valuable, and who provided critical support toward the development of this report. A special acknowledgement also must be given to Dr. Hugh Evans, the resident advisor to the UFRD project in Bolivia. His concern with institutional constraints that impinge on planning activities and his sensitivity to planning as a process in which individuals and institutions interact in a reciprocal and dynamic way strongly influenced the findings of this final assessment project.

Finally, we wish to acknowledge the contribution of Drs. Michael McNulty and Gerald Rushton of the University of Iowa, and Dr. Lakshman Yapa of the Pennsylvania State University. This report benefits greatly from their insight and critical commentary.

CHAPTER I

INTRODUCTION

Until the early 1970s, most planners approached the development process from a compartmentalized perspective, separating rural and urban development. In the 1970s, several development planners argued against conceptualizing development in this fashion because it failed to capture the simple fact that development occurs across space and over economic sectors. The realization that rural and urban development are interrelated was accompanied by a number of pioneering efforts to devise appropriate planning methods for studying these interrelationships. One notable effort was the Urban Functions in Rural Development (UFRD) Project.

This report represents the culmination of a year-long assessment of the UFRD approach, and describes the UFRD project, assessing UFRD's five field applications. The purpose of the report is to identify the lessons learned from the UFRD experience so that the U. S. Agency for International Development (USAID) may more effectively plan rural development strategies in the future. This assessment was conducted by a team centered at Clark University.

The report describes the UFRD approach, distinguishes it from what has come to be known as the UFRD project, and further distinguishes these concepts from frameworks underpinning methodologies used in field applications. It contains five case studies, one for each of the locations where UFRD applications were sited, and outlines the lessons learned from these field

applications. While ostensibly this report reviews and assesses the project's activities and outcomes, it also sets forth a set of recommendations to the Division of Rural and Regional Development to provide guidance for future urban-rural function activities.

This report is developed by culling a variety of sources, including over 100 documents on UFRD. Several types of documents were reviewed: progress, and final reports, evaluation and consultant reports; and numerous books, monographs, and articles. In addition, field assessment trips were made to Guatemala, Bolivia, and the Philippines--three of the five field sites in which UFRD projects were conducted--to collect information from primary sources. Interviews were conducted with active participants in the UFRD projects, including project managers, contractors, consultants, and host government officials. Finally, specialists in the fields of spatial analysis, regional analysis, regional development, and economic geography were consulted; these experts shared perspectives and provided critique that assisted in the interpretation and assessment of the project.

One of the significant outcomes of UFRD is a description of the spatial structure of a region. By using the spatial perspective as a point of departure for data collection and analysis, a necessary first step important to assessing the underlying processes that undergird existing conditions can be realized. Thus, the spatial perspective assists in showing the way for change to be realized.

CHAPTER II

BACKGROUND

In discussing Urban Functions in Rural Development (UFRD) it is important to distinguish between the UFRD approach, the UFRD project, and the UFRD methodology. The UFRD approach is based on a concept that views regional economic development from a spatial perspective, whereas the UFRD project comprises a specific set of applications carried out in several countries under a methodology that is structured by a specific conceptual framework. The following discussion draws out the distinctions between these three uses of UFRD.

THE UFRD APPROACH

In its broadest sense, UFRD is a planning approach which generates information on the spatial dimensions of development and on the relationship between urban and rural activities. It actively seeks to apply this information to processes of development planning. The rationale for the approach rests on three assumptions: (i) that urban centers contribute to rural development; (ii) that this contribution can be strengthened by purposeful planning; and (iii) that planning for development--whether rural, regional, or sectoral--can be enhanced by giving special attention to both the spatial dimensions of development and to rural-urban linkages.

The UFRD approach was developed and adopted by the Office of Urban Development of USAID in the early 1970s. Its derivation corresponds to the rise what was then becoming the "contemporary view that spatial considerations an rural-urban linkages are critical elements in rural development" (USAID 1976: 6). While an earlier realization of the importance of spatial

considerations existed, there were few--if any--attempts to develop strategies capable of generating spatial information for planning purposes. At that time, spatial dimensions were largely ignored by rural development planners who had no means of obtaining useful information about them.

The Office of Urban Development conducted two state-of-the-art literature reviews (Miller 1979; Rondinelli and Ruddle 1978) prior to developing the UFRD approach. These studies examined theories from regional science, geography, and development economics, and reviewed the empirical evidence used to support these theories. One of the principal findings of these review papers appeared in a UFRD Project Paper:

> Critical to the success of rural development are the spatial dimensions, not the least of which are the location and use of supporting urban functions and services. In addition to being loci of opportunities for off-farm employment, urban centers provide marketing, storage, processing, supply, credit, health, and other services to the rural areas they serve (USAID 1976: 4).

The Office of Urban Development concluded that the contribution of urban centers to development derives from the functions, services, and activities which are located within them, and through their linkages with surrounding rural areas and towns. Improving this contribution was seen as a way to strengthen rural development and to generate much needed off-farm emloyment. In order to exploit this opportunity strategically, methods were needed to introduce information on the role of urban centers into development planning. The Office initiated the UFRD project to respond to the need to bring this information to the attention of development planners and practitioners.

THE UFRD PROJECT

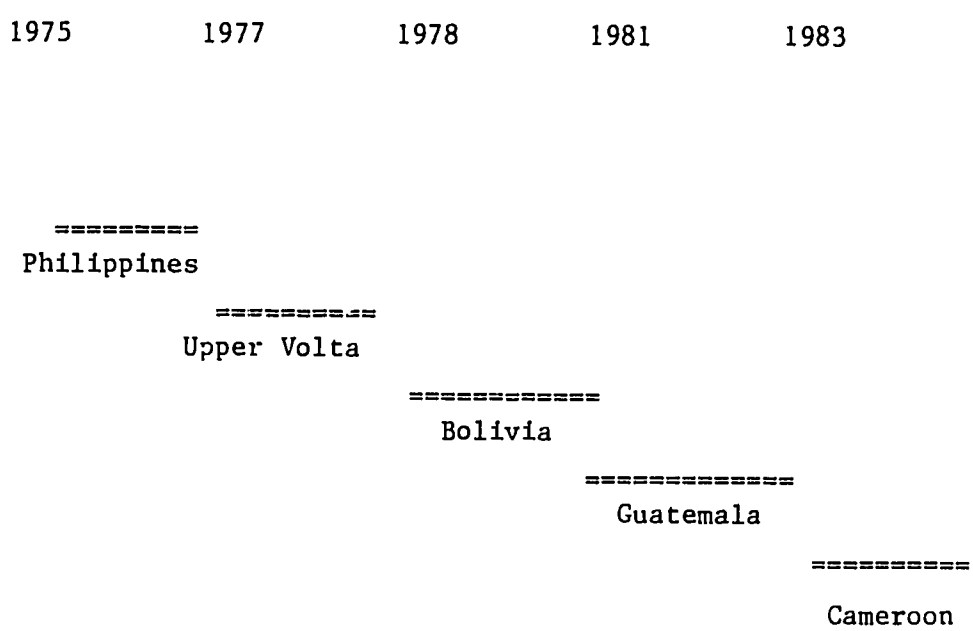
The UFRD project was designed to provide information on rural-urban linkages for region-based rural development planning activities. The principal objective of the project was to develop an analytical methodology to obtain this information. The project paper concisely expressed this objective, indicating that "at the heart of the project is an analytical process which looks first at what already exists, including rural-urban linkages and complementarities....This analysis will provide the basis for plan formulation (USAID 1978a: 18).

According to the UFRD project paper, the purposes of UFRD were: (a) to identify the appropriate modes of rural-urban analysis, and the nature, magnitude, and timing of urban services and activities which support rural development; (b) to apply this mode of analysis to specific rural-based urban centers; and (c) to increase the capability of local officials and citizens to plan, implement, and participate in the benefits of improved facilities and services (USAID 1979a). More specifically, the project was designed to develop an operational methodology to analyze rural-urban linkages, to test and apply this methodology in the field, and to build the capacity of institutions to incorporate the information provided by the methodology into the planning process.

Five field applications of the UFRD project have been conducted to date. The pilot project was carried out in the Philippines in 1976, followed by demonstration projects in Upper Volta, Bolivia, Guatemala, and Cameroon (see Figure 1). In each case, a different set of analytical techniques was selected to respond to local conditions, leading to a variety of results. The development of each methodology, however, was guided by a set

Figure 1

Chronology of UFRD Field Applications



of five principles which were set out by Rondinelli and Ruddle (1978) in their state-of-the-art review on urbanization and rural development. They are:

1. the primary objective of a project should be to create an ongoing planning process for integrated spatial planning as well as to reduce spatial development plans;
2. the design of the spatial analysis employed in a project and the development plans produced by it should be policy-oriented and adjunctive in nature;
3. the use of applied research methods and analytical techniques should be confined to those which are easily performed by planners and easily understood by policy makers;
4. the collection of new data should be limited to areas where significant "information gaps" appear after all existing data sources have been explored; and
5. the combination of analytical methodologies employed should be based on knowledge of the area under study and the operating principles outlined above.

THE UFRD METHODOLOGY

Of the methodologies applied in the five field applications of UFRD, one warrants special attention because it is the methodology that has come to be most closely associated with UFRD in a body of literature that has achieved considerable international diffusion, and it has been replicated in various regional contexts. This methodology was first formulated in the

Philippines pilot project, and later was refined for the Bolivia project. It was applied successfully in the Philippines, in two regions in Bolivia, and in a slightly modified form, in Cameroon.

The Conceptual Framework for the Philippines/Bolivia Methodology

The Philippines/Bolivia methodology is based on the assumption that development depends on, or at least is facilitated by, a settlement system geared towards meeting the needs of rural development. It also assumes that this system should have a specific structure: it should be a well developed hierarchy of places and should have an extensive network of economic, social, political, and transportation linkages between places.

The conceptual framework for the Philippines/Bolivia methodology derives from the theoretical work of Christaller and Losch, and the empirical studies of John Friedmann, Brian Berry, and especially, E. A. J. Johnson (see Miller 1979; Rondinelli and Ruddle 1978). Johnson was the first to assert that a particular pattern of settlement facilitates development. He arrived at this conclusion after conducting a thorough historical study of economic development in Europe.

Johnson observed that the rapid economic development in certain European nations was accompanied by the evolution of a settlement system geared towards serving the economic needs of a dispersed rural population. When a close fit exists between the services provided in settlements and the needs of the surrounding rural population, the settlement system is considered to be well integrated. Further, Johnson observed that the settlement system assumed thegeneral form of a hierarchically organized system in which: (i) large number of settlements are found, ranging from small places that serve

only small, surrounding rural areas performing just a few functions to intermediate secondary cities that serve a regional hinterland and perform a large number of functions, to metropoli that serve the entire nation; and (ii) a settlement system contains a well developed set of linkages among places, including such things as physical (meaning road and rail), economic (marketing and production), social (including social interaction and social service functions), and administrative (by government function and communications) linkages. Settlement systems with these two characteristics are said to be articulated.

Johnson concluded that the existence of these central places in Europe, serving the regions around them and linked to other places in the urban hierarchy, facilitated and were integral to the development of the countries he studied. In India, he observed that the settlement pattern did not conform to this western "central place" ideal, and most rural centers contained few of the functions critical to development. Hence, he argued for strengthening the urban hierarchy so that it would conform more closely to the fully "developed," hierarchically organized, and well linked settlement systems he found in the West (Johnson 1970).

Operational Strategy for the Philippines/Bolivia Methodology

The operational strategy for the Philippines/Bolivia methodology involved analyzing the structure of the settlement system in a region, and its relationship to rural areas in a manner that would allow the degree of articulation (the complexity of the linkages among settlements, of the number of kinds of services they provide, and of their hierarchical organization) and the amount of integration (the extent to which settlements and their surrounding regions function as economic units) to be determined

Rondinelli and Ruddle recommended a general operational strategy for the Philippines methodology. Rondinelli (1980: 6-7) explained that:

> A general framework was proposed for analyzing rural regions and determining the degree of articulation and integration of the settlement system, and the linkages between urban and rural areas. Functional analysis of settlement systems in developing countries could help determine the types of "urban" services and facilities needed at each level of the spatial hierarchy and the means of providing better access for the rural poor to those functions. The study pointed out, however, that any analytical framework would have to be modified in application, adapted to local conditions, and tested in a number of developing countries. The scarcity of data and general unreliability of statistics in developing nations, and the need for analytical techniques that could be easily applied by planners and readily understood by policy-makers in rural regions, mandated substantial testing through experimental and pilot projects. It suggested that the pilot projects focus on three kinds of analysis:
>
> 1. Analysis of Regional Resources and Activities: including such factors as physical characteristics of the region, land and resource uses, cropping patterns, volume and diversity of agricultural production, population distribution and rural settlement and commerical activities, and subsistence system characteristics.
>
> 2. Analysis of Central Places: including the location of market towns, small cities, intermediate or regional centers; the size, composition and density of towns, the location, concentration and dispersion of central functions, changes in the size and concentration of social economic activities over time, and the labor force and income distribution characteristics of settlements.
>
> 3. Analysis of Regional Spatial Linkages: including physical, economic, population movement, technological, social service delivery, political and institutional interaction patterns among settlements within the region, and linkages with external centers.

The Ten-Step Bolivia Methodology

An eight-step methodology was developed for the Philippines project based on the above strategy. This methodology was refined and expanded for use in Bolivia. It was the most refined version of the UFRD methodology,

and accomplished the operational strategy in ten steps. The first six were devoted to analysis, the seventh and eighth to plan-making, and the last two to implementation, institutionalization, and monitoring.

Step 1. Prepare an overall regional resource analysis and socioeconomic and demographic profile of the Basin that would serve as data inventory for planning purposes and as a "baseline" study for monitoring and evaluation.

Step 2. Analyze the existing spatial structure, describing elements of the settlement system, the functional complexity and centrality of settlements, the hierarchy of central places, and the distribution of, and patterns of association among functions within the region.

Step 3. Describe and analyze the major socioeconomic, organizational, and physical linkages among settlements within the study region and between centers located in other regions of the country.

Step 4. Map the information obtained from the functional complexity settlement hierarchy, and spatial-linkages analyses to determine "areas of influence" or service areas of the various settlements within the region.

Step 5. Delineate areas where linkages are weak or non-existent, and marginal areas that are not served by central places or in which rural populations have poor access to town-based services and facilities that are crucial for rural development.

Step 6. Compare information from the regional resources survey, settlement system, and functional distribution analyses with regional development plans and objectives to: (a) determine the adequacy of the

spatial system to meet development needs and facilitate the implementation of equitable growth policy, and (b) identify major "gaps" in the spatial system, in service areas for crucial functions, and in linkages among subareas of the region.

Step 7. Translate the spatial analyses into an investment plan that identifies the projects and programs that will be needed to ameliorate major development problems, to strengthen and articulate the regional spatial structure, and to integrate various levels of settlement within it.

Step 8. Integrate projects identified through spatial and economic analyses into spatially and functionally coordinated "investment packages" for different locations within the region, and a combination of the investment packages into a priority-ranked and appropriately sequenced investment budget for the development of the region over a period of time.

Step 9. Create an evaluation system for monitoring the implementation of projects and programs and for determining the substantive results of development activities on marginal areas and population groups within the region.

Step 10. Institutionalize the planning procedures in local and regional public agencies charged with investment decision making and with revising the spatial analysis and development plans at appropriate intervals.

The techniques employed in each of these steps are described in the next chapter under the Philippines and Bolivia case studies.

THE RDUSS PROJECT: EXPANDING UFRD TO INCLUDE RURAL-BASED EXPRESSIONS OF DEMAND

The Rural Demand for Urban Services Systems (RDUSS) Project was designed to respond to critical findings from the UFRD pilot project. Specifically, it addressed two findings: target groups were not effectively involved in UFRD planning; and basic information on people's perceptions and behaviors was not being collected. As explained by Eric Chetwynd, then Deputy Director of the Office of Urban Development:

> [The Philippines project] did not have input from farmers, who were the intended beneficiaries of the project. The involvement of the local rural or "target" population in the decision process [is important]...The locational nature and mix of projects such as farm to market roads, improved market storage and processing facilities and agricultural services, to name a few, are of critical importance to the farmers (Chetwynd 1980: 45).

Two of the five field applications attributed to the UFRD project, those undertaken in Guatemala and Cameroon, were actually field projects of RDUSS.

According to the project paper, the purpose of the RDUSS field projects was:

> to develop improved methods of eliciting information on perceived needs and demands and to incorporate these into an improved planning process which leads to implementable plans for upgrading the provision of urban services for rural development (USAID 1978a: 15).

Elsewhere in the RDUSS project paper evidence indicates that the RDUSS project was designed specifically to bring the concept of demand to the supply side of the UFRD equation. Viewed in this way, the RDUSS project can be seen as a part of the UFRD approach. The fact that it was a separate project can be interpreted as the Office of Urban Development's concern to see that the UFRD approach explicitly considered issues from the rural

perspective in terms of perceived needs, actual demand, and local participation of target groups in planning decisions.

The failure of the UFRD project to involve information and input from target groups was due in large part to the dearth of literature on how to involve local populations, especially within the framework of an integrated urban-rural development planning process like UFRD. However, a few works had appeared indicating that local involvement was a key to the success of rural development projects. Among these were USAID's "Strategies for Small Farmer Development," one by World Bank titled The Design of Rural Development, and Uphoff and Esman's Local Organization for Rural Development: Analysis of Asian Experience. However, these works were of little help in developing a strategy applicable to UFRD. Therefore, the Office of Urban Development sponsored a study designed to develop the desired strategy.

The study was conducted by the Development Group for Alternative Policies. This group, known as D-GAP, produced three reports based on its research. The final report was entitled Public Participation in Regional Development Planning: A Strategy for Popular Involvement and was submitted to the Office of Urban Development in December 1979. The report analyzed the planning cycle, indicating that conceptually it consists of eight stages: (1) collect and analyze data, (2) formulate goals, (3) formulate objectives, (4) identify options, (5) assess options, (6) design an implementation plan, (7) implementation, and (8) evaluation. The authors postulated that the two most appropriate stages in which to introduce public participation are the formulation of goals and assessment of project options stages. The report also identified six categories of participatory approaches: (1) "one on one," (2) communication with community leaders,

(3) interaction through community meetings, (4) interaction with representative community functional organizations, and (6) interaction with representative, regional-level organizations. The authors argued that the utility of any one approach should be assessed in terms of:

> (1) the dependability of the information which would result from the use of a given approach, (2) the practicality of the approach in regard to cost and efficiency, (3) the approach's integrability with the regional planning process; and (4) the amount of local support to the plan which the particular approach may generate (USAID 1979b: v).

The authors concluded that a combination of approaches would most likely be necessary, that

> meaningful participation will best result from an ongoing dialogue between the planning entity and local populations, rather than from the elicitation of one-way, one-time public inputs...[and that] to assure the effectiveness and utility of public participation of planners. Public inputs must be made to conform in form and content to the different data needs of the various stages of the planning process (USAID 1979b: iv).

In the 1978 RDUSS project paper, the Office of Urban Development proposed that both technical data and local perception information be incorporated into an integrated urban-rural planning process to be institutionalized in six countries. The technical data were to be generated through the UFRD technical planning framework and approach, while the collection of information on the perceived needs and demands of the local population for urban based functions was to be guided for the front end D-GAP study.

The specific field tasks identified for the sub-projects were:

(a) construction of a regional profile utilizing secondary sources,

(b) collection of more detailed information on the region's agricultural and development potential,

(c) a survey of services and functions using methodologies refined by

(d) field visits and informal interviews to identify appropriate approaches for collecting information on perceived needs for urban based rural services,

(e) visits to test out methods of eliciting information on perceived needs,

(f) collection of such information,

(g) integration of perceived needs data with service center hierarchy and agricultural potential data, and identification of urban based services which are both technically required to stimulate agricultural development and perceived as critical needs by the local rural population;

(h) development of a portfolio of investments, and

(i) meetings and communication with local population to verify the acceptability of the identified subprojects and to elect local support for their implementation.

Tasks (a) through (c) are taken directly from the UFRD project while tasks (d) through (i) constituted the unique contributions which RDUSS was intended to make to it. Implicit in tasks (h) and (i) is the assumption that RDUSS field applications would lead to the design and implementation of specific projects. The Office of Urban Development in its project paper clearly stated that: "It is particularly important that local population participate in the implementation of projects; without this participation by the target group, rural development cannot take place" (USAID 1978a: 10, empahsis added). Unfortunately implementation was not achieved in either of the two RDUSS projects which were conducted

CHAPTER III

UFRD CASE STUDIES

The field applications of UFRD were, first and foremost, intended to develop an operational methodology under field conditions. UFRD was a pioneering effort to introduce information on the relationship between urban centers and rural development, and to provoke a debate concerning what and how information should be collected. The UFRD approach was applied in all five cases to regional development projects, and thus multisectoral planning issues affected the outcome of these cases.

There are five field applications of the UFRD Project that, taken together, constitute a rich base upon which to build an assessment of UFRD. The purpose of these field applications was to demonstrate that it is both feasible and desirable to develop a planning process that makes direct use of information obtained on the role of urban centers in rural development. The Office of Urban Development hoped to show that rural development could be facilitated by implementing UFRD recommendations, thereby strengthening urban functions and making them more accessible to rural populations.

At the time UFRD was initiated, an operational methodology for analyzing rural-urban linkages needed to be developed. The existing scope of integrated rural development projects did not consider the relationship between urban activities and rural development for three reasons: (i) no agreement existed stating that this relationship was important; (ii) no accepted approach for analyzing this relationship had been developed; and

(iii) no evidence was found indicating that information on rural-urban dynamics could be used effectively in a planning process. The UFRD project was one of the few early efforts to develop such an approach. The case studies, therefore, describe the debate about how such an approach should be developed and what goals it should have. The case studies also address many issues relating to regional planning. Among these are: how best to address regional planning needs, and how to formulate and implement plans that require multi sectoral coordination, and whether or not a strategy should be designed to meet regional goals at all.

Regional planning is a major issue while, sectoral planning is not. UFRD evolved at a time when integrated rural development projects were being implemented. These projects involved the formulation of regional plans. Nevertheless, sectoral agencies were the principal means of executing these plans. This created implementation problems as UFRD project teams struggled against a sectorally-oriented institutional environment.

The following case studies are summative reviews of the UFRD demonstration projects, and are presented in the order in which they were conducted--Philippines, Upper Volta, Bolivia, Guatemala, and Cameroon. Each begins with background information on the project, followed by a review of the substantive findings and implications of the field experience. Chapter IV--Principal Findings--synthesizes the lessons learned in the five cases.

THE PHILIPPINES CASE STUDY

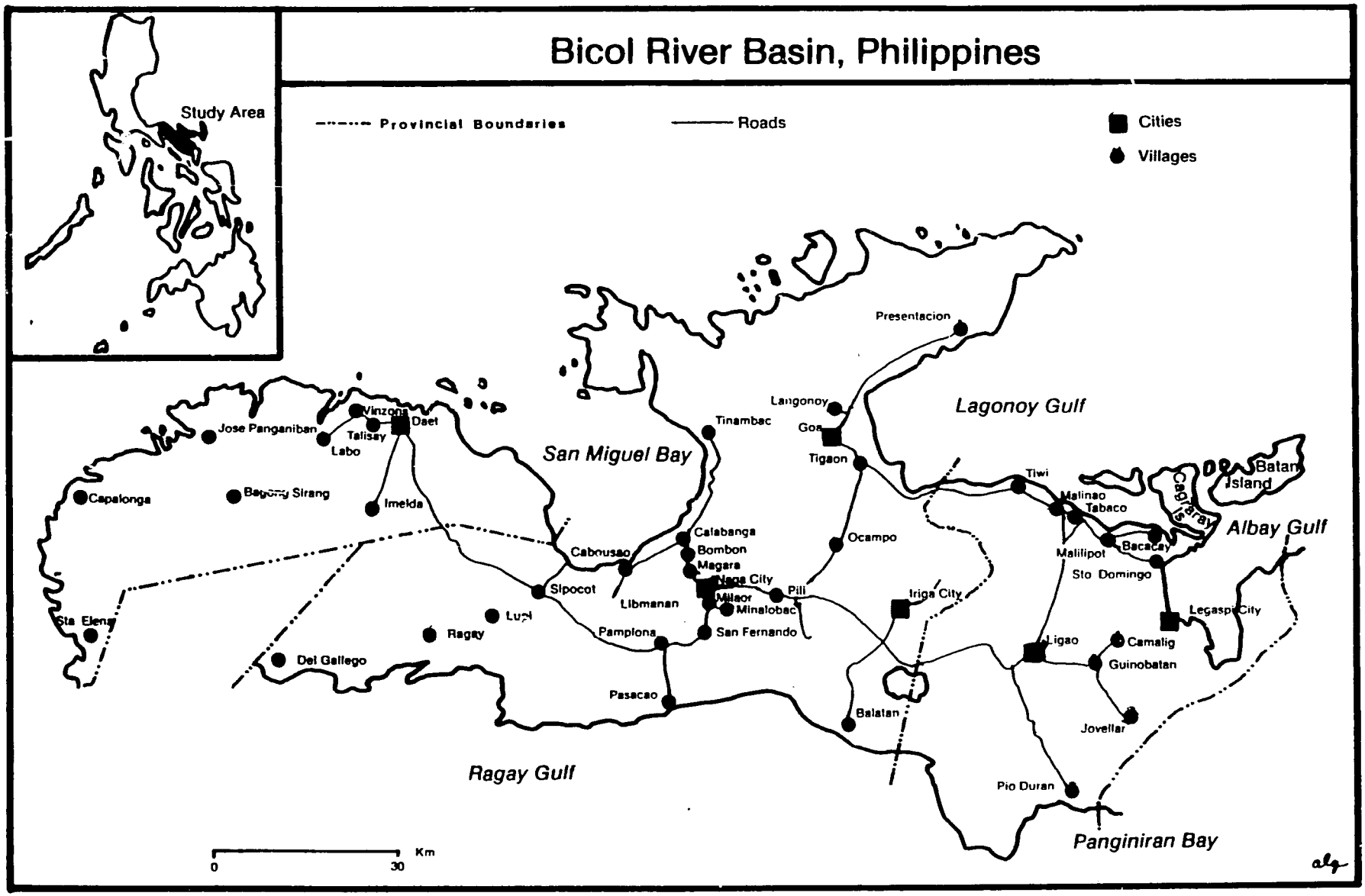
Background

The project in the Bicol River Basin (BRB) in the Philippines provided the first field application for UFRD. The Bicol region was selected principally because the Bicol River Basin Council (BRBC), an institution with regional authority and scope, was well established in the basin. The presence of this institution gave an advantage to the UFRD project because its investment recommendations would require regional coordination among and between sectors. In discussions with the staff of the BRBC in 1975, the Office of Urban Development concluded that the Bicol River Basin Development Program (BRBDP) lacked a spatial orientation: "It lacked a strategy for dealing with the role of urban centers and their connecting linkages in the physical organization and economic integration of the region" (Chetwynd 1982: 7). Recognizing this, the BRBC submitted a project proposal which stated that the rationale for conducting a UFRD project in the Bicol met "the need to reorient urban development in the Bicol River Basin in the context of its rural and agricultural character" (Bicol River Basin Council 1976: 1). The Bicol also was selected because, while the region has a rich resource base, the quality of life is poor.

Characteristics of the Bicol

The Bicol River Basin is located in Southern Luzon, and is comprised of Albay and Camarines Sur provinces (see Map 1). The Basin contains 706,000 hectares of land; roughly half are arable. The climate of the Basin is monsoonal, and the principal and most pervasive natural hazard in the region is

MAP 1


Bicol River Basin, Philippines
Study Area
Provincial Boundaries
Roads
Cities
Villages
Presentacion
Lagonoy
Lagonoy Gulf
Tinambac
Goa
Tigaon
San Miguel Bay
Vinzons
Daet
Jose Panganiban
Talisay
Labo
Capalonga
Imelda
Calabanga
Bombon
Magarao
Naga City
Cabusao
Sipocot
Libmanan
Milaor
Minalobac
Pamplona
San Fernando
Pili
Ocampo
Iriga City
Lupi
Ragay
Sta Elena
Del Gallego
Pasacao
Balatan
Ragay Gulf
Tiwi
Malinao
Tabaco
Batan Island
Caglaray Is.
Albay Gulf
Malilipot
Bacacay
Sto Domingo
Legaspi City
Ligao
Camalig
Guinobatan
Jovellar
Pio Duran
Panginiran Bay
0
30
Km

severe periodic flooding. Often the hard-earned benefits of development are lost to the floods. This problem is so overriding in the basin that planning units in the region are defined with strict hydrological, not economic, considerations.

The Bicol River Basin has a great resource development potential. According to one estimate, "if the rich alluvial soil...was properly irrigated and cultivated the basin could produce enough rice to sustain an additional 8 million peoples" (Rondinelli 1979: 10). In addition to this agricultural potential, the basin has 30 percent of all the marble deposits, 75 percent of the perlite, and 20 percent of the coal reserves found in the Philippines.

However, the economy of the basin is weak and the quality of human services is low. The basin has virtually no industry except for a few small rice and grain mills and cottage industries. Roughly one third of the region's labor is either unemployed or seriously underemployed. Rondinelli (1979: 9) reports that "in 1971 over 80 percent of the population of 1.8 million had incomes below the poverty level of $114 per capita...(while) the poor 50 percent of the population receives only...about $45 per capita a year." Health problems in the basin are significant with an infant mortality rate of 73 in 1,000, and with nearly 80 percent of preschool children suffering from serious malnutrition. Contaminated water supplies and lack of adequate sewage treatment facilities create serious health problems. Moreover, "there is only one physician for 4,600 people, and most doctors are located in larger towns, inaccessible to rural people" (Rondinelli 1979: 10).

The settlement system is relatively complex. The region contains two centers with an average population of 89,892 (Naga-Camaligan and Legaspi-Daraga), 11 centers with populations averaging 11,107, and 43 centers with populations averaging 4,196 (Rondinelli 1979: 320).

Project Objectives

In this region of poverty and promise, the pilot UFRD project was initiated. The purpose of the project, according to the Project Grant Agreement, was "to develop a planning process potentially valid for other countries and to produce a plan for strengthening the contribution of urban centers to rural development in the Bicol River Basin" (USAID June 1975: Annex 1). According to Rondinelli, the five specific objectives of the project were to:

1. Analyze the spatial system of an underdeveloped region such as the Bicol River Basin in order to determine the extent to which the pattern of human settlement contributes to the potential for rural development;

2. Determine the degree to which the spatial system is sufficiently articulated to allow equitable distribution of services, facilities, technical inputs and commercial activities to stimulate agriculture production and overall rural development, and to facilitate the marketing and distribution of rural products;

3. Describe the distribution of existing services, facilities, infrastructure and productive activities, and determine their accessibility by the rural poor;

4. Establish general locational criteria for future investments in services and facilities that will contribute to stimulating the overall growth of the region, increase the access of unserved or poorly served people to 'urban functions' and create a more articulated and better integrated hierarchy of settlements; and

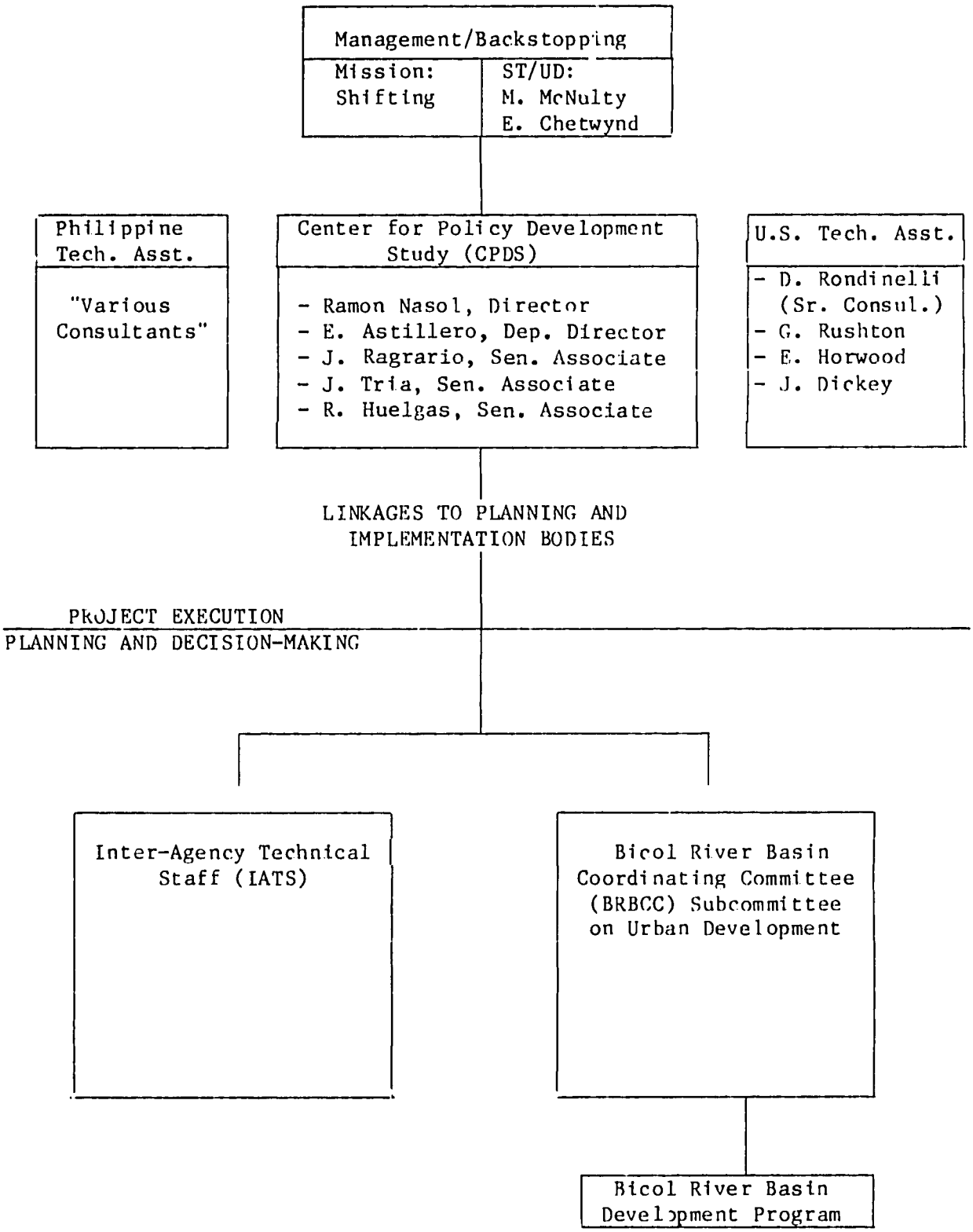
5. Test appropriate methods of spatial analysis that could be modified and updated as part of the continuing planning process within the BRBDP (Rondinelli 1978: 6).

Administrative Arrangements

Several institutions and individuals were involved with the project (see Figure 2). The institution primarily responsible for conducting the UFRD project was the Center for Policy and Development (CPDS) of the University of the Philippines at Los Banos. Ramon Nasol, an agricultural economist, was appointed project director. Emmanuel Astillero, an urban planner, was appointed deputy project director, and Junio Ragrario, J. Tria, and R. Huelgas

Figure 2

Management and Institutional Arrangements for the Philippines UFRD Project



were assigned as senior staff to the project. The CPDS team was assisted by a number of Philippine and American consultants, including Dennis Rondinelli, who served as senior consultant to the project, and visited the Bicol on a regular basis.

It was obvious to all involved in the design of the project that it was necessary to establish some kind of institutional mechanism for linking the university affiliated project team to those institutions responsible for planning and implementing projects in the BRB. This mechanism was particularly important if the project was to fulfill the purpose of formulating a plan, and the goal of having this plan contribute to strengthening of urban-rural relations. The institutional mechanism established created two committees: the Interagency Technical Staff (IATS) and the Subcommittee on Urban Development in the already established Bicol River Basin Coordinating Committee (BRBCC). The IATS was comprised of technical personnel from the development planning staffs of the cities of Naga, Iriga and Legaspi; the provincial development staffs of Albay and Camarines Sur; the BRBDP; and representatives of five national agencies operating in the project area. It was intended that the IATS meet once a month. The subcommittee of the BRBCC also was to meet monthly to review progress and react to findings. Since members of this committee represented the major "users" of the spatial analysis, their involvement was seen as instrumental to making the UFRD study relevant and useful.

The Methodology

The pilot project in the Bicol set out to meet a number of objectives. Among these, the most important were to develop and test methods of spatial analysis, develop a planning process potentialy valid for other countries for

strengthening the contribution of urban centers to rural development, to institutionalize this planning process in the BRBDP, and to produce a plan.

In order to meet these objectives, an eight-step methodology was designed and implemented. This methodology held five guiding principles established at the outset: (1) create an on-going planning process as well as produce a spatial development plan; (2) design the spatial analysis and development plan so that it is policy-oriented; (3) use applied research methods and analytical techniques which are easily performed by rural planners and easily understood by policy-makers; (4) use as much existing data as possible, thus limiting new data collection; and (5) use a combination of analytical techniques and rely heavily on staff knowledge of the area under study.

The methodology developed contained eight steps: six which were concerned with data collection and analysis (see Figure 3), one concerned with plan-making (step seven), and one concerned with institutionalizing the planning process (step eight).

Data was collected for the regional resource analysis (first step), settlements system analysis (second step), and linkage analysis (third step). For the regional resource analysis, the study relied on secondary sources and made use of data on population size, density, conditions of dwelling units, size of municipal revenues, land area, crop production, value of production, and experienced work force. Also included were comparative analyses of changes in population sizes of Barangays, percent distribution of population by municipality, number and percent of households with lighting and toilet facilities, strength of construction of dwelling units, distribution of market receipts by municipality, and distribution of agricultural resources. The types, numbers, and distribution of productive and commercial establishments were compared by

Figure 3

The Eight-Step Bicol Methodology

1. Regional resources analysis -- Data was compiled along over twenty social, economic, physical and demographic dimensions. Location quotients were derived for some of the data and others were used to form a quartile ranking of muncipalities by relative levels of development.

2. Analysis of centrality, functional complexity, and hierarchy of settlements -- The extent and pattern of centrality, the distribution, concentration, and ubiquity of services, facilities, and development functions among settlements were determined using the following techniques: (1) Guttman scaling, (2) manual scalogram of function and services, (3) threshold analysis, using Marshall's rule, and (4) weighted centrality indices, where the weight of a function was based on its ubiquity and the centrality index of a settlement was the sum of the weighted scores of the functions found in it.

3. Analysis of linkages -- The physical (transportation), economic, market, social, administrative, political, and service linkages among settlements were described and analysed in order to determine the extent and the nature of interactions between settlements, their rural hinterlands, and other settlements. This information was used to measure the degree of integration in the settlement system and to provide information to Step 6.

4. Analytical mapping -- The results of the first three steps were mapped to aid in interpretation. Maps included zones of accessibility, levels of settlements, travel patterns, organization of econmic subsytems, and market linkages.

5. Delineation of Unserved and marginal areas -- The travel patterns of rural residents for services and functions were compared with the supply of these services and functions and with the accessbility of rural residents to these services and functions to delineate unserved areas.

6. Determination of regional development needs and adequacy of spatial structure -- The proposed regional plans were examined and the information gleaned in Steps 1 through 5 was used, to recommend how to modify these plans appropriately. For instance, that the strengthening of certain market towns and the construction of certain roads were recommended.

7. Translation fo spatial analysis and development plans into an investment program -- Gaps were identified in the functions provided in the settlement hierarchy and projects were proposed to overcome these gaps.

8. Creation of monitoring system and institutionalization of planning procedure.

municipality as were the numbers and capacities of hospitals, educational institutions, and service establishments.

Sixty-four functions were surveyed in 1,412 settlements for the settlement systems analysis and for the linkage analysis. Data were collected on various attributes of road networks, river transport, rail, irrigation systems, market patterns for agricultural products and manufactured commodities, farm inputs, capital flows, manufacturing linkages, shopping patterns, population movement, journey to work, telecommunications, media, visiting and marriage patterns, electric power, education, health, professional services, government political subdivisions and structural relations, budgetary flows, and informal-political linkages and decision-making.

Clearly, a large amount of data were collected for the Bicol project; what was collected for the regional resource analysis alone resulted in a detailed statistical compendium of social, economic, demographic, institutional, and physical characteristics of the 54 municipios comprising the Bicol River Basin.

In a similar fashion, considerable time and energy were devoted to performing a wide range of analyses. For the regional resource analysis, dozens of variables were aggregated and disaggregated, manipulated in basic statistical ways, and compared. In addition, location quotients were deprived from appropriate data, and three indicators of level of development were selected and used for ranking municipalities by: (1) socioeconomic and demographic characteristics which correlate strongly with levels of development in the Philippines; (2) share of industrial, commercial, and agricultural production establishments in the Bicol, and (3) the number of transportation outlets. For the analysis of the settlement system, both simple and sophisticated analytical

techniques were employed. Functional complexity analyses of municipalities using a computer-assisted Guttman scaling technique was performed. A scalogram of settlements on the 64 surveyed functions was prepared and interpreted. Threshold analysis was applied in order to approximate the population sizes required to support existing services in the Bicol. Further, to obtain an indication of the centrality of a settlement, weighted centrality indices were computed for all 1,412 settlements. The linkage analysis did not make use of formal analytical techniques, but relied instead on descriptive statistics and on analytical mapping. Finally, several maps were drafted and used with overlays to help formulate an investment plan.

The investment plan generated by the UFRD methodology consisted of established criteria for siting infrastructure and services. As Rondinelli explains, "From the various functional and spatial analyses, the staff of the Bicol project was able to identify a set of appropriate services, facilities, and institutions needed at each of three levels of settlement--rural service centers, market towns, and regional urban centers" (Rondinelli 1980: 38).

Review

While the participants in the Bicol Project had high aspirations for directly influencing the selection and site of future investments in the basin, it had to settle for far less, and those involved had to content themselves with focusing on the development of a methodology for analyzing the contribution of settlements to rural development.

The tasks of developing a replicable methodology and testing appropriate modes of urban-rural analysis as called for in the UFRD project paper were the principal ones to which the field application in the Philippines was devoted.

Chetwynd indicated that "Because it was the first field application, the selection and use of analytical methodologies in the Bicol project were characterized by trial and error" (Chetwynd 1982: 8). In his evaluation of the Bicol project Evans states:

> The outline of a more detailed methodology designed specifically to aid planners in translating concepts of integrated development into an investment plan for selected projects evolved during the first application of the UFRD approach in the Bicol River Basin in the Philippines...consequently, this first version of the methodology reflects an emphasis on analysis, and did not fully explore the subsequent steps of project selection, investment planning, and implementation (Evans October 1982: 41).

Issues Raised

As might be expected in a new field application of an innovative approach to planning, a number of issues were raised by those involved with the Bicol project. They were posed with particular enthusiasm because four field applications of UFRD would be conducted later, and the benefit of lessons derived from the Bicol project could directly improve the UFRD projects to follow. For the purposes of presentation, although they are interrelated to a large degree, these issues can be organized under two topics: <u>data collection</u> and <u>analysis</u>.

<u>Data Collection</u>. Because of the special attention devoted to testing methods of urban-rural analysis, the most prominent issue--which incidently influenced subsequent applications of UFRD most profoundly--dealt with whether it was necessary to collect and analyze the volume of data which were collected during the project. In an evaluation of the project conducted by the Office of Urban Development six months after the project ended, Edgar Horwood concluded that: "the UFRD project has been data rich...perhaps less of the study resources should have gone into the data base" (Horwood 1978: 12). Chetwynd, in a paper prepared in 1980, also acknowledged this fact: "The project was data intensive and extensive, and if anything, erred on the side of

collecting too much data" (Chetwynd July 1980: 9).

Thus, the Bicol experience strongly indicated that "there should be far greater selectivity in data collection" (Chetwynd July 1980: 9).

Analysis. A number of issues also were raised concerning the analytical portions of the methodology. Some of these issues related to specific techniques employed, while others addressed broader questions: what planning purposes were to be met by the analytical tasks to be performed, and how could the UFRD analysis be improved to make it more effective for planning?

Additionally, a number of people were seriously concerned as to whether the techniques employed formed an appropriate base for plan-making. Rushton, an American consultant assisting in the design of the linkage analyses, in his report indicated that: "No where (to my knowledge), in the literature related to this project, does there exist an analytical framework for relating the results of the first two (analytical) phases to achieving the third phase (plan formulation), even though this critical link must be made for the Bicol project goal to be realized" (Rushton February 1977: 6). Horwood stated that. "the conceptual scheme lacks consideration of organization for the political (planning and decision-making) use of the data" (Horwood September 1978: 12).

Indeed, explanations about how plans were developed were not particularly satisfying:

> This aspect of the project involved two planning activities. First, the planning analysis is translated into an investment programme that identifies the types and locations of projects needed in the region, suggests appropriate projects for overcoming "gaps" or bottlenecks to development of sub-areas within the region, and recommends investments that will build the locational advantages of strategically important settlements in the regional spatial system. Second, the projects should be combined into "investment packages" for various

> locations in the region, and the investment packages should be combined into an operating plan for development of the region over the next planning period. The investments are ranked by priority and sequenced for funding and implementation. Supplementary investments and support services are identified and included in the annual operating or short-term investment plan.
>
> From the various functional and spatial analyses, the staff of the Bicol project was able to identify a set of appropriate services, facilities, and institutions needed at each of three levels of settlement--rural service centres, market towns, and regional urban centres--to meet basic human needs, articulate the settlement system, and stimulate resource development (Rondinelli 1980: 33).

The critical point here is that a major effort must be made to relate analyses more directly to the needs of the planning function, and to analyze the institutional framework of planning in a region. Analysis of the decision-making context of these institutions also is critical.

Another issue raised by both Horwood and Rushton concerned whether the analyses performed were too static and descriptive. Horwood and Rushton both believed that the analytical section of the methodology would have to be more "dynamic" if it was to be useful as active planning function.

Horwood recommended that the analysis address the "impacts of changes in scale and function of settlements when existing hierarchies are disturbed, as by transport change" (Horwood September 1978: 5-6). Similarly, Rushton commented that "if there is any purpose to spatial linkage analysis it is, I believe, in collecting data to model spatial flows, using a model that predicts the flows" (Rushton February 1977: 4).

Thus both consultants believed that analyses must go beyond simple descriptive techniques to the dynamic or impact type, albeit simple, modeling approaches.

Rushton also expressed a general dissatisfaction with the linkage analysis. Rushton's report states:

> There are conceptual problems of relating the results of the linkage analysis to the project goals. There are technical problems in analyzing linkage data that have not been solved before commitments to the details of data collection are made and, finally, there are substantive problems in identifying a limited number of variables and in choosing the scale at which they should be measured (Rushton February 1977: 3).

Rushton felt that it would be very difficult to collect data relevant to the study of linkages, and once it was collected it would be of little value to macro-level planning. He also expressed concern that the linkage analysis as configured would be incapable of delineating functional economic areas or calibrating and testing a spatial choice model.

Moreover, Rondinelli, in his summary and evaluation report of the Philippines project, expressed dissatisfaction with the linkage analysis. He regretted that the analysis turned out to remain only "partial and descriptive."

In addition to these recommended changes in the methodology, the Office of Urban Development itself was aware that the lack of social information and target group input into the UFRD planning process was a serious issue that needed to be addressed. They recommended that future projects rectify this deficiency. Chetwynd wrote:

> Even though the Bicol project did provide for the participation of local and other government authorities, it did not have input from the farmers, who are the intended beneficiaries of the project...the location, nature, and mix of projects such as farm to market roads, improved market, storages and processing facilities and agricultural credit services...are of critical importance to the farmers (Chetwynd 1980: 9).

Without information on the needs of these farmers, the reasons for their choice of where, why, how often, and which services and functions they utilize, these projects could not be selected or designed properly.

The emphasis on demand data, while rather straightforward, was perhaps the most important finding of the Bicol experience. The need for "social," or what was later called "demand" information, and the need for procedures to involve target groups in the UFRD planning process became increasingly clear to the Office. This finding was so important that the Office began to work on developing methods for generating demand information and involving target groups almost immediately after the Bicol project was completed. This work culminated in the development of another project entitled The Rural Demand for Urban Service Systems Project (RDUSS).

Impact of Institutions

Institutionalization of the UFRD planning process in the Bicol River Basin was never achieved. Rondinelli reported that:

> The visit of the Clark University Area Development Project team to the Bicol River Basin during December 1982 to assess the use of the UFRD study that had been completed in 1977 revealed that the Bicol River Basin Development Program (BRBDP) has not made extensive use of the findings. Although awareness of the study is relatively high among BRBDP staff who were with the program during the UFRD study, new staff members did not seem familiar with it. The problems of follow-on and institutionalization of the UFRD approach should be addressed in future applications of the methodology, and this report outlines the reasons for the weak follow-up activities in the Philippines (Rondinelli December 1982: 2).

Apparently, institutionalization was never achieved because of operational problems exogenous to the methodology itself. Gerald Karaska and Lakshman Yapa noted in their trip report from their 1982 UFRD assessment field trip to the Philippines that: "IATS which was intended to be the principal liaison between UFRD and local authorities did not conduct local meetings as originally planned, which prevented transfer of UFRD methods to provincial and local-level planning (Clark University 1982: 3). Rondinelli, in his report from that trip noted that :

> (1) one of the apparent problems with institutionalizing the UFRD in Bicol was that the study was done...without significant financial commitment by USAID/Manila or the Bicol River Basin Program (making funds for follow-up and implementation unlikely)...(2) the use of an intermediary organization, the...CPDS...to carry out UFRD studies seem also to have limited its institutionalization within the BRBDP. Much of the skill development that resulted from UFRD was in CPDS among its consultants rather than the BRBDP (Rondinelli December 1982: 1-2).

Clearly, much closer attention to establishing strong institutional linkages both in the design of the project's administrative arrangements and throughout the project would have increased the chances for the institutionalization of the UFRD planning process and the implementation of UFRD plans. The issue of institutionalization should have--and could have--been addressed in the methodology. According to Rondinelli, the "project sought primarily to devise and test a methodology...and the details of institutionalization were left almost entirely up to the Bicol River Basin Development Program" (Rondinelli 1980: 40). Hence, while the eight-step methodology nominally included concern for institutional linkages in its eighth step, in reality it did not do so. Though improving the methodology might not have helped much, given the operational problems just outlined, it could have had some impact.

Two lessons were learned from the failure of the UFRD project to adequately address institutional issues to have a long term impact on Philippine planning and decision-making institutions. First, to fulfill its goals, UFRD methodologies must take explicit steps early on and throughout the life of the project to identify, communicate with, and involve relevant planning institutions in the UFRD planning process. More importantly, proper administrative arrangements must be established for a UFRD project before a Project Grant Agreement is ever signed. An institution with financial responsibility for the project and with the authority to allocate monies for implementation of

projects should be responsible for the project. While it was helpful to have a university outside the immediate planning process directly involved, implementation might have had different outcomes if institutions more directly related to these tasks were given responsibility. To these two lessons, a third will be added after considering implementation issues below.

Impact on Implementation

The Bicol project did not result in the implementation of any specific projects. The reason for this is fairly obvious. As Chetwynd pointed out, it is based in the fact that "the Bicol analysis did not get down to the identification of specific projects" (Chetwynd July 1980: 9). This was a serious omission for a project which hoped to make a tangible impact in the region. Chetwynd felt:

> ...this was a design flaw which has since been corrected. The ultimate objective of Urban Functions in Rural Development now is the identification of a portfolio of projects, screened for economic feasibility and relative priority and presented in the context of a plan or strategy for strengthening Urban Functions in Rural Development of the Region (Chetwynd July 1980: 9).

Though the project did not identify and recommend specific projects, it did generate a general plan that established criteria for siting infrastructure and services. However, this plan also was not implemented. The most likely reason for this failure, again, related to institutional issues. As a result, this link between implementation and institutions was perceived as being critically important in all the other field applications of UFRD. The Clark University assessment team reported that:

> One of the apparent problems with institutionalizing UFRD in Bicol was that the study was done with "add-on" funding by AID/W without financial commitment by USAID/Manila or the Bicol River Basin

> Development Program. When financial resources for such a project are basically free to the implementing agency there seems to be little motivation to invest its own resources in follow-up activities (Rondinelli December 1982: 1).

A third reason why the plan was not implemented, and one for which the project itself cannot be blamed, was the high turn-over of personnel within USAID/Manila and the BRBDP. Individuals, who originally expressed strong interests in pursuing the UFRD project and having project staff advise BRBDP on investment programming, were transferred to new posts.

Although the failure to implement projects or plans can be attributed to exogenous operational problems and "design flaws," it is important to note that the methodology did not--but should have--included a clear set of tasks to achieve implementation. Of the eight steps of the methodology (see again Figure 4), none dealt explicitly with implementation (a situation which was rectified in subsequent projects). Horwood explained that, "the Rondinelli conceptual scheme lacks any implementation model, and when confronted with the completion of the study the BRBDP operational officers contracted seemed not to have any grasp of implementation concepts" (Horwood September 1978: 5).

Three lessons, then, were learned regarding implementation. First, in order to increase the chances for successful implementation, an agency with the authority and resources to implement projects should be directly and principally involved with execution of the entire project, including data collection and analysis. The structures originally set up for the project to link into planning institutions--the IATS and Sub-Committee on Urban Development of the BEBCC--were not sufficiently strong enough to ensure the involvement of appropriate implementing institutions. Second, institutional experience (orientation and capabilities) suggests that the identification of specific

projects is much more relevant than a macro-plan, and that specific projects stand a much greater chance of implementation than do macro-plans which require massive resources, commitment, and institutional coordination.

The Contribution of the Bicol Methodology

The contribution which the Bicol project made to the formulation and testing of a replicable methodology for analyzing and strengthening the role of urban centers in rural development was indeed notable. Although a number of issues of concern with the methodology were raised, the methodology which was developed in the Bicol was replicated, though with modification, in all the other UFRD field projects.

The methodology resulted in the generation of a number of outputs. The regional resource analysis resulted in a statistical compendium of socioeconomic variables for the Basin and in a better understanding of how the Bicol region compared with other regions in terms of its level of development. The analysis of the settlement system resulted in the definition and delineation of a functional urban hierarchy and an accurate measurement of the spatial distribution of the supply of urban functions supportive of rural development and a reasonable level of quality of life. The linkage analysis permitted a rough approximation of areas of influence surrounding the larger urban centers to be made, and this in turn permitted a description of the nesting in the urban hierarchy and the delineation of rational economic planning units. By examining the Guttman scalogram, potential gaps in the urban hierarchy were quickly identified for future, more detailed study. Areas without accessibility to urban centers also were preliminarily identified by interpretation of maps depicting transport, distribution of urban functions, and area of influence.

The diffusion of this methodology in the Philippines speaks to its success and its importance despite the issues which were raised about it. In a December 1982 report on the dissemination of the UFRD project commissioned by the Clark University Assessment Team, Conchita Ragragio wrote:

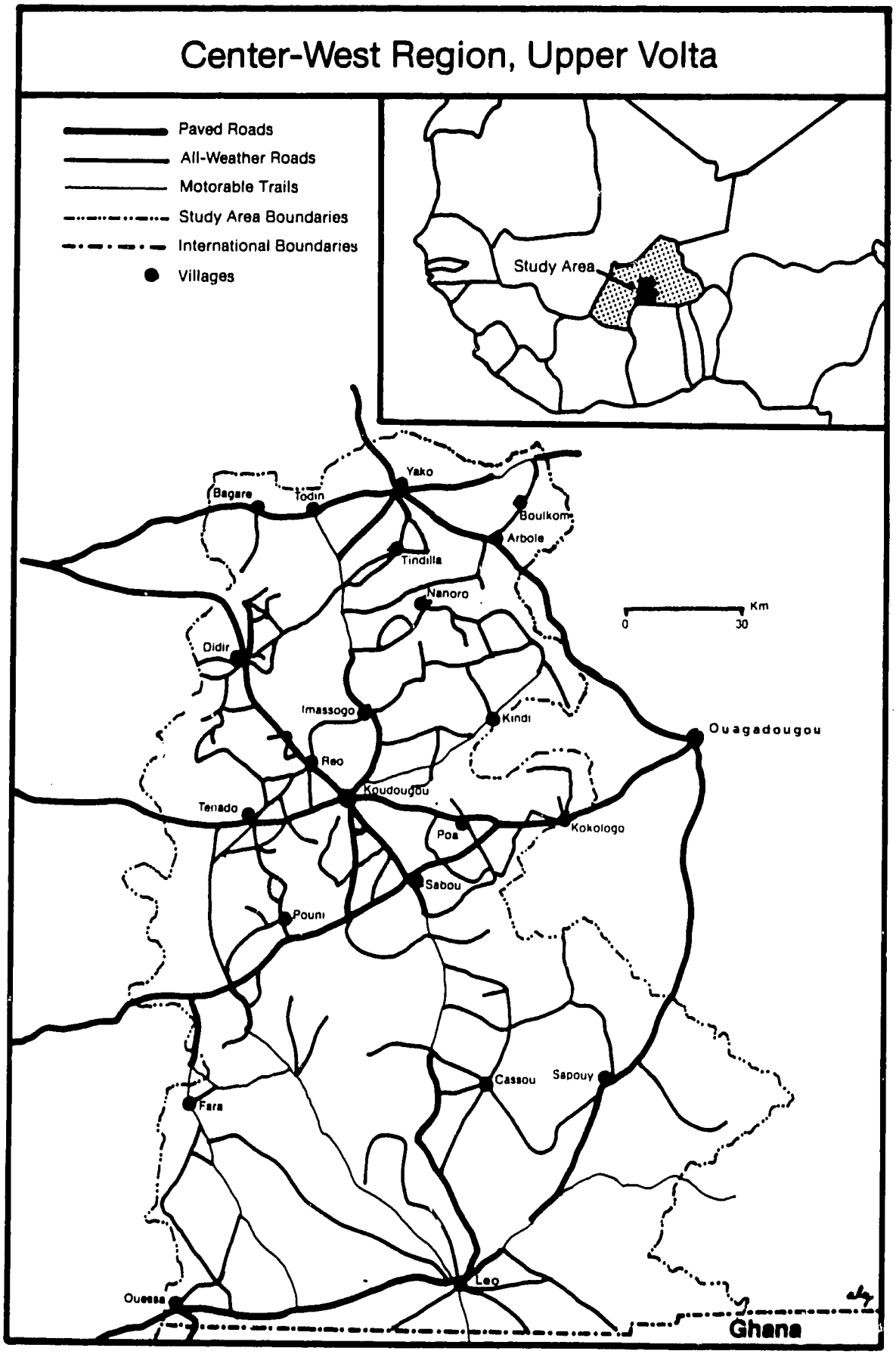
> Interview responses indicate the use of the project as a reference in academic and training programs of various colleges and institutes of the University of the Philippines, the National Economic and Development Authority's regional development staff, and the National Council on Integrated Area Development. It has been cited in a number of articles and research papers by those who were with the project staff. It is included as a methodology in the analysis of spatial structures in some technical proposals of projects of the Ministry of Human Settlements (Ragragio January 1983: 2-3).

THE UPPER VOLTA CASE STUDY

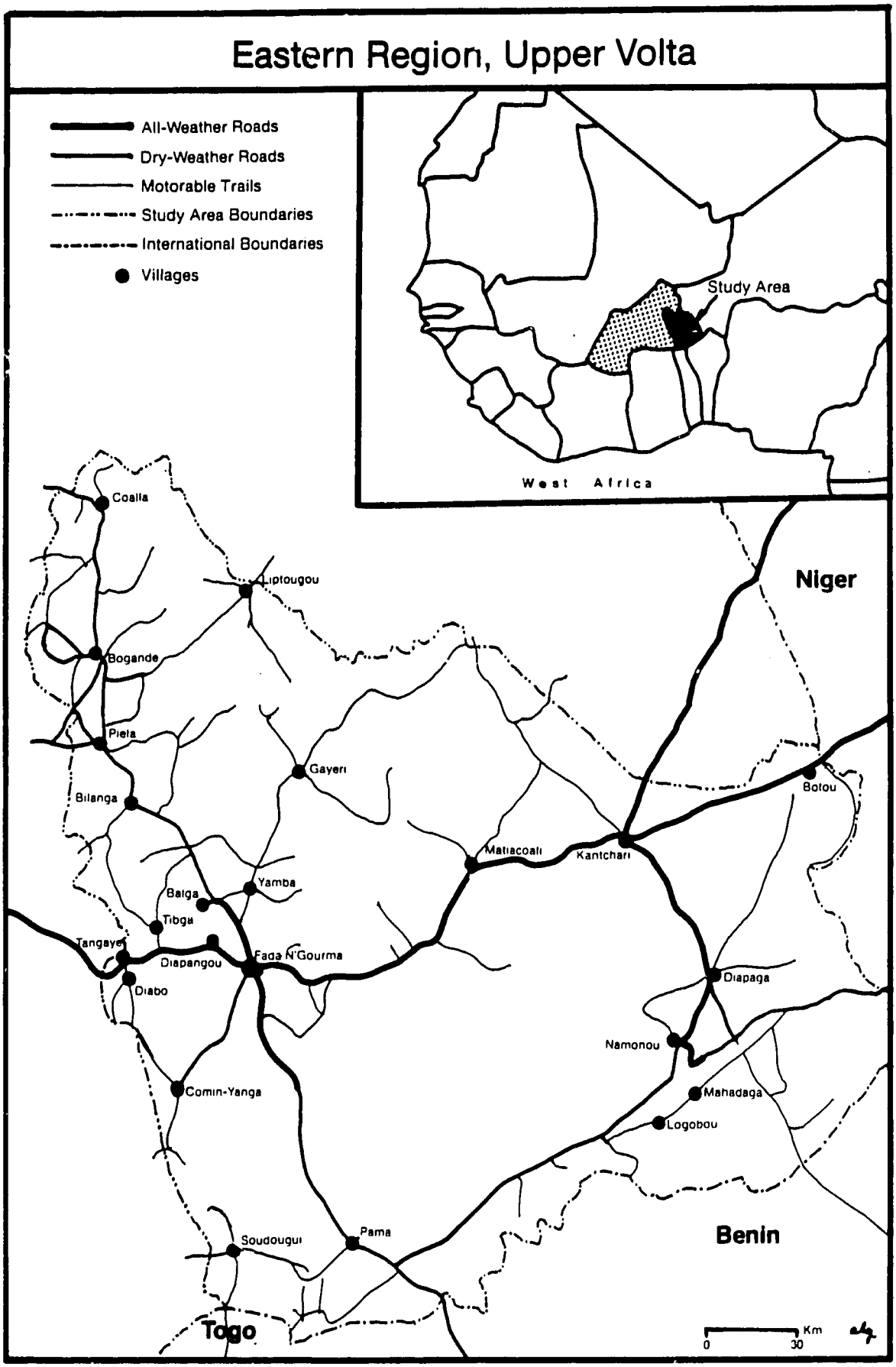
Background

The second field application of UFRD was conducted in Upper Volta. The Upper Volta Project area is comprised of two non-continguous sites--the Center-West Region (the Koudougou Department) and the Eastern Region (the Fada Department) (see Maps 2 and 3). The selection of the two sites represented a compromise struck between the USAID mission and the Office of Urban Development. Koudougou was included because it met three of the four criteria which the office applied to the selection of a site. It contained: (1) "substantial areas of high and low population density"; (2) "a relatively well-defined system of urban centers"; and (3) "a reasonable degree of rural development potential" (Chetwynd and Hawley April 1977: 7). The fourth criterion--met by Fada but not Koudougou-- was "considerable programmatic involvement on the part of the USAID mission in Upper Volta (Chetwynd and Hawley April 1977: 7). Fada, unfortunately, met only the last criterion, and obstensibly was not an adequate site. However, the mission insisted on including it.

MAP 2


Center-West Region, Upper Volta
Paved Roads
All-Weather Roads
Motorable Trails
Study Area Boundaries
International Boundaries
Villages
Study Area
Km
0
30
Yako
Bagare
Todin
Boulkom
Arbole
Tindilla
Nanoro
Didir
Imassogo
Kindi
Ouagadougou
Reo
Koudougou
Tenado
Poa
Kokologo
Sabou
Pouni
Cassou
Sapouy
Fara
Leo
Ouessa
Ghana

MAP 3


Eastern Region, Upper Volta
All-Weather Roads
Dry-Weather Roads
Motorable Trails
Study Area Boundaries
International Boundaries
Villages
Study Area
West Africa
Coalla
Liptougou
Bogande
Piela
Gayeri
Bilanga
Botou
Matiacoali
Kantchari
Yamba
Balga
Tibga
Tangaye
Diapangou
Fada N'Gourma
Diabo
Diapaga
Namonou
Comin-Yanga
Mahadaga
Logobou
Soudougui
Pama
Niger
Benin
Togo
0
30
Km

Koudougou, then, satisfied the substantive requirements of a UFRD site as envisioned by the site selection team from the Office of Urban Development, but was of less interest to the mission; in fact it was not covered by its program. The other site, Fada, satisfied the mission, and was a region in which they were programmatically involved.

Characteristics of Fada and Koudougou

While the site selection team sought a region with a relatively well-defined urban system and reasonable rural development potential, the urban systems in Koudougou and Fada and their rural development potential can only loosely be described in those terms. In fact, neither of the two sites contained a large number of centers that could be characterized as urban, nor were areas of high agricultural potential. These facts made the Voltan sites much different environments for the application of UFRD than was found in the Bicol River Basin in the Philippines. There the UFRD site had rich agricultural potential and a complex settlement system.

The Koudougou department was selected because its settlement system was considered "relatively well-defined," though containing only six centers with population greater than 10,000, and only 50 places with populations exceeding 3,000, in a region of two and a half million hectares. The Fada region, by far the more poorly urbanized of the two locations, contains only one center over 10,000 in population (Fada N'Gourma), and only four over 5,000 in population. Only 18 percent of the settlements in the region contain more than 1,000 people. When compared to the higher level of urbanization found in the Bicol, where there were two cities with populations near 100,000, one with 46,000 and

two over 10,000 in a region of 706,000 hectares, the level of urbanization in Upper Volta was "relatively" low. The implications for the approach to UFRD developed in Upper Volta were quite profound, as will be shown below.

The Voltan sites also were dramatically different in climate and development potential from the Bicol River Basin. Both Voltan sites are characterized by a "savanna and Sahelian marginal character where temperatures are generally high and rainfall is sparse and relatively uneven" (USAID June 1980: Pt. II: 3). In contrast, the Bicol is characterized by frequent flooding, and the climate is monsoonal. Moreover, the resource base differed markedly. The Bicol has a number of unexploited natural resources that attracted attention of foreign investors. Fada and Koudougou, on the other hand, have a limited resource potential. According to the final report for the Upper Volta Project:

> The basic constraint on the country is its very limited resource endowment. Although the economy depends almost entirely on agriculture, it has limited rainfall (500 mm to 1,000 mm concentrated on 3 to 5 months of the year) on generally shallow and infertile soils. Its domestic markets are not particularly important in the greater scheme of things, and export markets are relatively inaccessible due to the landlocked position of the country. Other than agriculture, only government and commerce offer alternative employment possibilities within the country...Natural and other resources being insufficient to offer a potential base for industrialization (USAID June 1980: Pt. I: 1-2).

While the socioeconomic conditions in the Bicol were extremely poor, the conditions in Upper Volta as a whole, are far worse. Upper Volta continually has been high on the World Bank's list of the 25 most needy countries. The service coverage in Fada and Koudougou is far below that found in the Philippines, while the health problems found in the regions constitute one of the world's greatest human tragedies. Mortality rates are among the highest in

the world. Many health problems exist in the region, including measles, malaria, whooping cough, meningitis, diarrhea, river-blindness (onchocercosis), and cholera. In Fada department, at the time of the project, there were only 26 dispensaries, 26 maternity clinics and one hospital to serve 400,000 people scattered throughout the countryside in remote villages. In Koudougou there were 45 dispensaries, 44 maternity clinics, one "medical center," and one hospital for 800,000 people. Education services were also limited. Koudougou had 86 primary schools and three secondary schools, and Fada had 35 primary schools and no secondary schools. However, these statistics are somewhat misleading since during the life of the project it became apparent that most of these facilities were not adequately staffed or supplied, and in some cases were virtually inoperative (USAID June 1980).

Project Objectives

The first formulation of the project objectives came during the site selection visit of Chetwynd and Hawley in April 1977. Clearly influenced by the lesson learned in the Philippines--that a UFRD project should first and foremost be oriented towards the identification of specific projects--the report from this trip listed two proposed project outputs. The first was to develop a planning framework for strengthening the contribution of urban centers to rural development, and the second focused on generating a list of identified projects to actually strengthen that contribution (Chetwynd and Hawley April 1977).

The Project Grant Agreement did not include a formal statement of project objectives. Instead, they were developed over the course of two or three consulting trips made to Upper Volta by the Office of Urban Development while

waiting for the U.S. contractor to arrive in the field. Four objectives were articulated: (1) to carry out urban functions studies of the center in Fada and Koudougou, (2) to develop a plan for strengthening the contributions of urban centers to rural development, (3) to include in this development plan a list of future project priorities...these projects may include the upgrading or strengthening of existing facilities and services, and (4) to increase the capacity of the Ministry of Rural Development, the Agricultural Planning Cell, and the Koudougou and Fada Offices of Regional Development (Chetwynd and Perry October 1979).

Administrative Arrangements

The Voltan institutions responsible for implementing the project were the Ministry of Rural Development and the Offices of Regional Development (ORD)* in Fada and Koudougou. The ministry was responsible for: incorporating the project administratively into its Agricultural Planning Cell, assigning a project director, appointing two senior research associates, integrating the project with other ministries and departments, and informing the ORDs as to their responsibility. The Ministry of Rural Development was selected, according to the project design team, because it was the only government agency sufficiently decentralized at the level of the ORD. The ministry also had programmatic interest in rural development, and held the capacity to implement projects (Chetwynd and Hawley April 1977). However, the ministry itself only implemented agricultural programs. The extent to which it was within its mandate to consider non-agricultural projects was questionable.

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* There are nine Offices of Regional Development (ORD). Each corresponds roughly to one of the nine administrative regions in the country.

The ORDs were responsible for establishing the project within their planning cells and for facilitating the project by insuring that the project was appropriately linked to other sectoral agencies.

The project team developed was surprisingly small. Mr. Baouar, from the ranks of the Ministry of Rural Development, was assigned project director responsibility. While he was supposed to be "responsible for general project direction and leadership and...have major responsibility for project coordination and management" (USAID 1977), he in fact devoted little of his time to the project, and was removed from his position in 1979 (Fass July 1980a). Thomas Mead was selected as the U.S. contractor to the project. His designated title was deputy project director and it was his responsbility to provide technical assistance and coordinate project activities. Mead was assisted by two researchers: Emil Pare, a geographer, and Julien Campaore, a statistician. Pare, however, was replaced early on by R. Tindano. When Baouar was replaced in the autumn of 1979, Pare returned to the project as project director.

Because Mead did not arrive in the field until March 1979, one and a half years after the Project Grant Agreement was signed, a number of consultants from the Office of Urban Development were sent to Upper Volta to assist the Voltan project team. Though coverage was certainly sporadic and infrequent the following trips were conducted: Chetwynd visited July 21 to July 28, 1978 to initiate work on the project. Edward Perry and Aidan Southall arrived August 7, 1978. They inventoried urban functions, began to analyze the settlement system, and assess the institutional and social context in Upper Volta. These tasks required approximately one month. Edward Perry and Thomas Mead arrived March 1979 to introduce Mead to the project.

Within the USAID mission in Ouagadougou, the manager assigned to backstop the project changed several times, so there was little continuity at the mission.

Methodology

The methodology which was specified in the Project Grant Agreement was very similar to the one tested in the Bicol. Its ten analytical tasks strongly resembled the Bicol methodology in both concept and content (see Figure 4).

The first step, Task "A," requires an inventory of services and functions, and Task "B," classification of the centers in each ORD according to locally meaningful functional definitions, corresponded to step two of the Bicol methodology--the analysis of the settlement system. Tasks "C" and "F," the identification of urban-urban, urban-rural and rural-rural linkages, and the analysis of linkages, respectively, corresponded directly to step 3--the analysis of linkages--in the Bicol version. Tasks "D" and "G," the delimitation of areas of influence, and the identification of weaknesses and gaps existing in urban services, corresponded to step 6--the delineation of unserved and marginal areas. Task "E," the assessment of agricultural activity and potential, corresponded to step 1--the regional resource analysis. Tasks "H" and "I" were a more specific version of step 7--translation of spatial analysis into an investment plan--in that "H" called for the identification of potential projects and their rough screening for economic feasibility, and "I" called for prioritizing a list of recommended policy interventions. Finally, task "J," developing an evaluation system for project monitoring and implementation, corresponded to step 8 of the Bicol methodology--creation of monitoring system and institutionalization of the planning process.

FIGURE 4

Technical Tasks for Upper Volta Project Implementation

Task	
A	Inventory to be taken in each of the centers, exclusive of villages and hamlets, in order to determine the nature and extent of the services and functions it provides.
B	Centers in each ORD will be classified by locally meaningful functional definitions such as hamlets, villages, market towns, service centers, and secondary cities. This typology will conform to function rather than size.
C	Links between urban centers in the ORD and between these centers and external centers...will be identified. This analysis includes physical linkages (roads, rails, and ecological interactions), economic linkages (capital and goods flows, marketing, production interdependencies, etc.), service delivery linkages (transportation, health, education and training, credit and financial networks, telecommunications, power, and professional or technical services), political or administrative linkages (budget flows, interjurisdictional transactions, etc.), and social linkages (visiting patterns, kinship patterns, etc.). These linkages will be reduced to a system of overlays to create a structural overview....
D	To complete the picture, the area of influence of each urban center will be determined (e.g., by extent of market reach or other locally meaningful measures) and reduced to an overlay.
E	Agricultural activity and potential of the region will be assessed (much of this information should be available from existing sources).
F	Using the foregoing as baseline data, an analysis of urban-rural linkages critical to the support of rural and agricultural development in the ORD will be performed. This may be done by consulting existing models and by interviewing officials, technicians, extension workers, and farmers in the ORD.
G	By comparing the model thus developed with the existing structure of the region derived from the previous steps, weaknesses and gaps existing in urban services to rural development will be identified.
H	These deficiencies will be translated into projects and programs which are given rough screening for economic feasibility.
I	The resulting projects are to be put into the context of a planning framework for the ORD's by which the relative priority and timing for each project or category of projects can be estimated. The product of this step will be a development plan for the ORDs.
J	An evaluation system will be developed for project monitoring and implementing the results of the project.

Except for tasks A, B, and E, however, these ten tasks were not completed (Fass July 1980a: Annex 2). Instead, with the encouragement of the Office of Urban Development (Letter from Edward Perry to Thomas Mead June 27, 1979), which was more concerned with experimenting with different approaches suitable to different contexts than with rigidity adhering to the pilot approach, the project team developed a different approach.

The methodology which was actually implemented was quite different from the methodology which was described in the Project Grant Agreement. For Tasks C, D, F, G, H, I, and J, Mead substituted a qualitative and descriptive study of 45 centers. The Office of Urban Development endorsed the idea of pursuing a simple qualitative approach. Perry and Chetwynd wrote, "One cannot depend on complicated analytical tools in a situation where the data bank is weak and the urban and the urban structure simple. This is the case in Upper Volta and we feel the project team has done well to employ qualitative measures" (Chetwynd and Perry October 1979: 10).

The three criteria which were applied to the selection of the forty-five centers for intensive study looked to see: (1) if they were administrative headquarters, (2) if they were market centers, and/or (3) if they had a larger number of central functions. The study of these centers involved: (1) the implementation of detailed village questionnaire which included interviews with locally recognized figures of authority and knowledge, interviews with several residents, and interviews with ORD staff; (2) the implementation of market studies for each center under a contract to a consulting firm; and (3) the subsequent selection of a number of potential sites for a pilot project for the provision of services through locally generated revenues.

According to Fass, these studies were designed by Mead to answer the following four questions in sequence: "(1) What are town-based functions?

(2) Which of these functions are in the public domain (dispensaries, schools, etc.)? (3) How can these facilities be made to function better? and (4) Which communities are demonstrably dynamic ones and make the best pilot project sites for local revenue-generating projects that would yield funds to improve the facilities and services in question?" (Belsky and Karaska April 1983: 1).

Review

Both the questions which the implemented methodology was intended to answer, and the concepts and methods that it employed were different from those employed in all other UFRD projects. According to Evans, who serves as contractor to the Bolivia project, the UFRD methodology:

> is intended to be a method for planning integrated regional development, and as such focuses on the spatial dimensions of the regional economy. This means that data gathering and analysis are oriented to the specific tasks of identifying the spatial constraints and opportunities for development, testing the a priori assumptions underlying the strategy of spatially integrated development and providing the information necessary to elaborate details of such a strategy (Evans October 1982: 43).

An a priori assumption bases Evans' evaluation and forms the development model against which spatial opportunities and constraints to development are identified. Essentially it holds that a well integrated and articulated settlement system, which is geared towards supporting rural development, is a necessary condition for development. These assumptions flow from Central Place Theory and the principles inherent in the theory's logic--urban hierarchy, threshold, and range.

The questions the Voltan methodology was intended to answer were not explicitly spatial, and were more sectorally oriented toward the provision of public services rather than areally oriented toward the formulation of a regional plan to strengthen the contribution of urban centers to rural

development. Moreover, they were not focused on articulating the urban hierarchy or oriented spatially toward assessing the adequacy of the present spatial system. The concepts of threshold and range did not enter into the methodology. The a priori assumption that a well-integrated and articulated hierarchy of settlements is a necessary condition for development was not held by the project team. Little attempt was made to understand the spatial structure of the region and the implications of that structure for regional development. Furthermore, the methodology all but ignored urban functions which were not services in the public domain. According to Fass:

> A few types of information on urban functions were not gathered for all 45 centers, and include agricultural processing activities, credit, and so on...(and) while the market studies undertaken by SAED...cover certain types of data well, such as frequency of operations, size, coincidence with locations of populations centers, areas of service for buyers and sellers, etc. There are gaps with respect to the marketing of agricultural inputs like fertilizer, seeds, tools, informal, credit, etc. (Fass, March 1980: 3).

Hence, many of the functions supportive of rural development were excluded from careful consideration. The methodology did not effectively analyze the contribution of urban functions to rural development because it left so many of them out of the analysis.

The Voltan methodology was a disappointment because it did not meet the objectives of UFRD. It was not an exhaustive effort to analyze and plan for the contribution of the settlements in Upper Volta to rural development. Rather, it was more an assessment of the human services needs in the rural areas in Upper Volta, and an attempt to devise a means of providing them so that they could be controlled by local authorities, maintaining locally generated revenues. The project can be said to have been successful on the service assessment dimensions, but not within the context of UFRD.

Issues Raised

In the process of abandoning the methodology developed in the Bicol and adopting a new one, the participants in the Upper Volta project again raised a number of issues about the nature and the utility of the UFRD methodology.

The project team decided not to adhere to the intended UFRD methodology outlined in the Project Grant Agreement because they had numerous reservations about the methodology's appropriateness. The basic reservation that was reported indicated that the team felt "the UFRD approach...is much too mechanical and 'scientific' for the realities of Upper Volta, or of Africa in general" (Fass July 1980a: 41). Mead and his assistants were not confident that the UFRD methodology was capable of generating regional plans and identifying projects based on its analytical steps. In a technical note to the final report, Fass explained that:

> Another cause of concern was the PROAG's insistance that projects could be identified from the sequence of overlay and linkage tasks described in it...it was not evident that the discovery of an empty space on a map was sufficient information upon which to suggest the possibility of a program or project (Fass July 1980b: 3).

The team also had difficulty understanding and applying the term "urban functions" in the Voltan context, and whether or not the term was even appropriate. This confusion was shared by the staff of the mission and by the Voltans. Fass explained in a meeting with this assessment team that "the words 'urban function' have little meaning in a country where there is little that can be identified as urban. Lower order functions are...not necessarily located in 'urban' areas in Upper Volta, and are traditionally thought of as either rural functions or public services: (Belsky and Karaska April 1983: 1).

In his technical note to the final report Fass claimed that, "The business of suggesting that services or functions in rural development are 'urban' may have been one of the primary causes of confusion in Upper Volta with respect to the UFRD project" (Fass July 1980b: 2).

The project team also raised the issue of whether or not defining an urban hierarchy in rural Upper Volta was useful. They felt that defining hierarchies--if indeed hierarchies did meaningfully exist--was not a worthwhile exercise for planning purposes. In his first quarterly report, Mead expressed his belief that attempting to define an urban hierarchy in the Voltan context was rather futile because there is a dearth of nucleated settlements (Mead June 1979). This sentiment was shared by Southall who wrote:

> Conventional Western typologies of towns and cities must be abandoned, for none of them are valid cross-culturally. To define a rigid, three-level hierarchy by using descriptive labels such as regional center, market town, rural service center...does not necessarily reflect the existing situation in Upper Volta or its future needs (Southall August 1978: 6).

Thus, Perry, in his, the first delineation of the hierarchy in the project area, defined 18 levels to the hierarchy (Perry September 1978).

Another basic issue revolved around whether or not it was appropriate to depend exclusively on the UFRD methodology for identifying projects and formulating a regional plan. In a technical note to his evaluation report, Fass stated:

> It was suggested in the evaluation report that the original outputs defined in the PROAG (Project Grant Agreement) may have been overstated in terms of what the application of UFRD, by itself, could reasonably have been expected to provide (Fass July 1980b: 1).

He also commented that the linkage analysis "taken literally, might have been overambitious" (Fass July 1980a: 29). In other words, it was questionable to those involved with the project that UFRD could provide the information necessary to formulate a regional plan without other information feeding into plan development. As Fass wrote:

> to understand how UFRD might have worked better in Upper Volta, one does not have to look far. It is, for example, an integral component of (another planning effort in Upper Volta). However, it only represents one of 23 different activities defined as essential for the purposes of regional planning and rural development (Fass 1980b: 4).

Indeed, Evans said that "the UFRD methodology is not intended to take the place of more conventional sectoral planning, but to complement it by providing a spatial perspective on the region's economy" (Evans October 1982: 43). Because the UFRD project in Upper Volta was not integrated into larger regional planning effort, as it was in the Philippines with the Bicol River Basin Development Program, providing a spatial dimension to a regional planning process that did not exist seemed difficult, inappropriate, and a waste of resources that might otherwise go directly into planning for the delivery of services.

Fass summarized this problem and concluded that a lesson should be learned from the experience; the UFRD must be designed into a larger regional planning effort if it is to be useful:

> For some reason or another, it is sometimes assumed that the "urban functions in rural development approach" is something which can be used by itself to prepare plans and identify projects in a comprehensive manner and thus, much is expected of it. This assumption is false, and the expectations are exaggerated....It complements systematic sectoral approaches by highlighting the factors associated with overcoming the constraints of time and distance and by identifying planning dimensions and project typologies which would otherwise by overlooked. It is therefore essential that projects of the type undertaken in Upper Volta, be part of existing "integrated planning" efforts (Fass March 1980: 10-11).

Impact on Institutionalized and Implementation

Learning from the mistakes made in the Bicol, the Office of Urban Development did ensure that identifying specific projects was the principal goal of the Upper Volta project. Also, having encountered problems in linking the Bicol Project to host government institutions which could plan and implement UFRD findings, the Office was careful to select the Ministry of Rural Development, making it responsible for planning and implementation. The Office also insisted on close collaboration between the project team and host institutions. The Project Grant Agreement stressed that the ministry, through the project director, was to contact and involve other institutions charged with the responsibility to conduct non-agricultural rural development. In 1979, Chetwynd stressed that contractors and subcontractors were required to integrate their work more carefully than was done in the Bicol case. First, there was over a year's delay in getting Mead into the field. This frustrated the mission and the Voltans who were anxious to begin the project. Second, when Mead was selected, he was not qualified in spatial and regional planning, therefore was unable to clarify the confusion of the Voltan institutions as to the meaning and importance of UFRD. Third, when Mead departed from the specified methodology, the mission's approval was never requested; they learned of the changes made in the methodology long after they occurred. This also frustrated the mission staff, who were not convinced that the new methodology was appropriate to the original goals of the project. Fourth, and by far the most damning, the Voltan project director, Mr. Baoure, did not do an effective job, and he perpetuated a number of gross indiscretions that greatly aggravated the mission. Mr. Baoure did not devote much time to the project. This was a major problem because he was primarily responsible for involving other Voltan

institutions. Several improprietous activities in which Baoure participated alienated the mission whose support for the project was critical, but was, somewhat understandably, not forthcoming.

The Contribution of the Voltan Methodology

The principal contribution of the modified methodology implemented in Upper Volta to UFRD was that it introduced a "grassroots" approach. This contribution stems from the efforts which Mead made to involve local people and institutions in the planning process and the formulation of project proposals. In so doing he underscored the need for this kind of participation in UFRD projects. The Upper Volta project picked up on the theme that emerged during the Bicol project--that social information was important to understanding spatial constraints and opportunities for development and that local participation was necessary to facilitate the implementation of plans and projects.

During the period in which the Office of Urban Development searched for a project director, Perry and Southall were sent to Upper Volta. Southall reported on the social and institutional context in which the project was to be implemented. Southall submitted a report which addressed a number of social issues, foremost of which was the need for a "grassroots" approach to UFRD planning. According to Fass, "this report was apparently well received by DS/UD (The Office of Urban Development)" (Fass July 1980a: 46). Southall wrote:

> wherever possible functions must be developed from the bottom rather than the top. Otherwise effective local participation will never be secured...from this perspective the importance of urban functions in rural development is that they must be controlled and implemented not for their own sake but always from the perspective of their potential impact on rural development at the grassroots. If the development impasse is to be broken through, there will certainly have to be some revolutionary changes of methods (Southall August 1978: 7).

Unfortunately, Southall did not specify what kinds of methods the project could use to analyze the impact of UFRD plans on target groups. Nevertheless,

he drew added attention to the need for a more socially oriented approach in UFRD planning.

Mead, on the other hand, not only saw the need for grassroots participation and information, he acted on it. Chetwynd and Perry noted that:

> Informal discussions held with civil servants responsible for these (service) facilities as well as with canton chiefs, canton secretaries, village chiefs and private citizens...activates the participatory component of the project...the reaction to this approach has been 'uniformly favorably and sometimes enthusiastic' (Chetwynd and Perry October 1979: 5).

According to Fass, "Because of the 'grassroots' orientation of the survey, it also was possible to identify service priorities expressed by the communities concerned, and the degree of community participation in the construction and maintenance of future new or improved service facilities" (Fass March 1980: 3). Thus, Mead's informal attempt to involve local people in the planning process marked the first attempt of several to come in the later UFRD projects.

BOLIVIA CASE STUDY*

Background

The Office of Urban Development selected Bolivia as the first site for a Latin American field application of UFRD for two reasons: it was one of the first nations in Latin America to create and support semi-autonomous regional planning authorities within the national planning system; and, according to the

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*The report by Rushton and Yapa (1983) provides a significant discussion of the UFRD/Clark University Assessment Team findings in Bolivia.

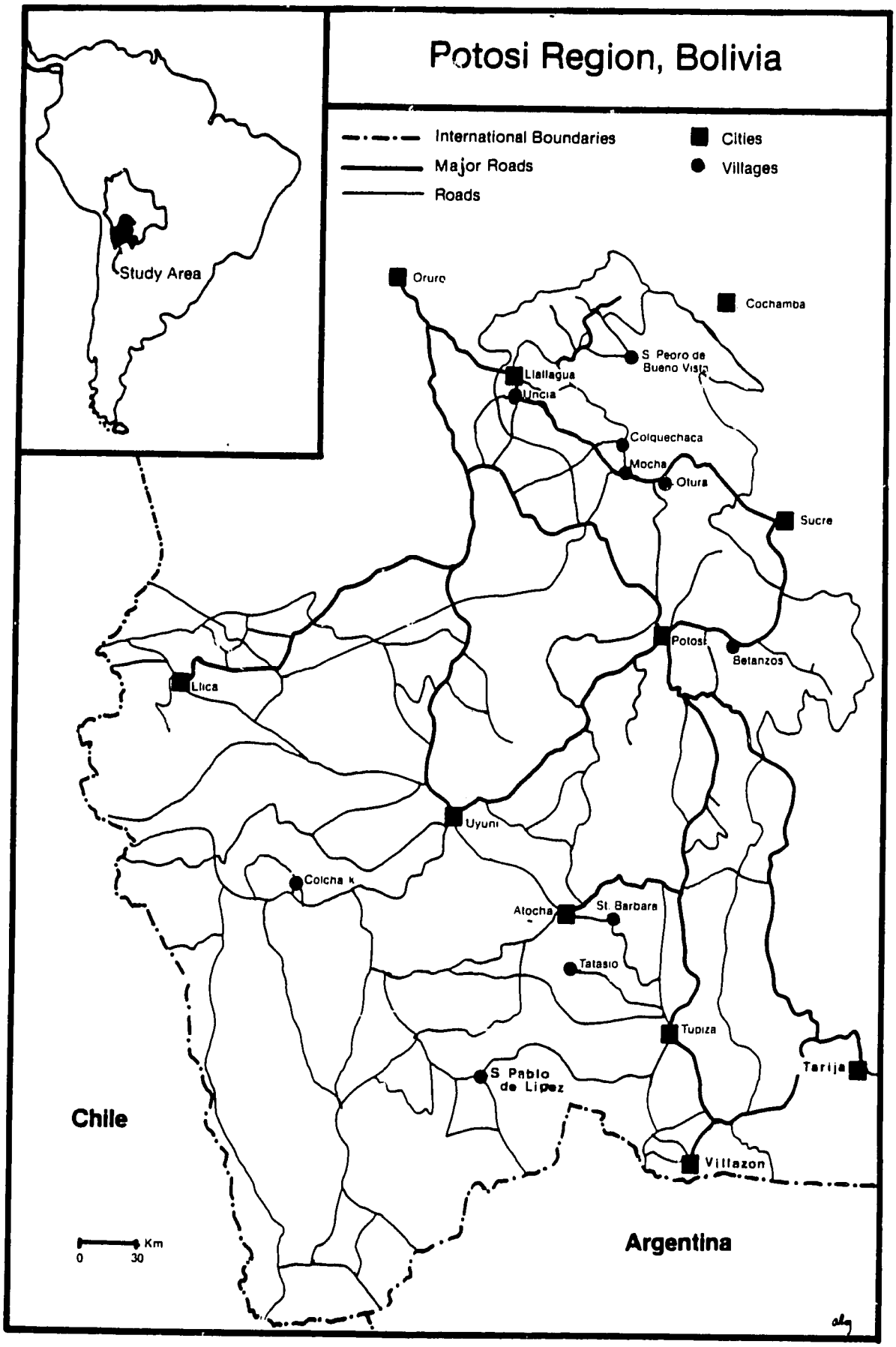
site selection team which visited Bolivia in March of 1977, it had "an unusually long history of explicit concern with spatial dimensions of development" (McNulty and Conroy 1977: 10). Because UFRD was oriented toward regional development planning projects with a strong spatial perspective, these two characteristics of the planning system made Bolivia a suitable location for a UFRD field experiment.

The Department of Potosi was selected as the project site because it had the greatest number and widest range of urban centers of the five mission sites selected (Pando, Beni, Potosi, Tarya, and Chuquisaca) for a larger project called the Rural Development Planning (RDP) project. The UFRD project was conducted as one component of the RDP Project. The relative complexity of the settlement system in Potosi distinguished it from the other four departments and constituted a desirable characteristic for a field site, particularly because experience in Upper Volta suggested that settlement systems with a low complexity make poor choices for UFRD exercises.

Characteristics of Potosi

The Department of Potosi is located in the southwestern corner of Bolivia (see Map 4). According to the 1976 census, the department had a dispersed and unevenly distributed population of approximately 658,000. The distribution of the department's population is determined largely by topography, with the lowest population densities occurring in the mountainous Andes in the west and the highest in temperate valleys and lowland plains in the east. In particular, the highest densities are found around the mining centers in the province of Bustillo and around the capital city of Potosi. The people of the Department of Potosi are overwhelmingly (71 percent) rural. Only 15.35 percent of the

MAP 4


Potosi Region, Bolivia
International Boundaries
Major Roads
Roads
Cities
Villages
Study Area
Oruro
Cochamba
S Peoro de Bueno Vista
Llallagua
Uncia
Colquechaca
Mocha
Otura
Sucre
Potosi
Betanzos
Llica
Uyuni
Colcha k
Atocha
St. Barbara
Tatasio
Tupiza
Tarija
S Pablo de Lipez
Villazon
Chile
Argentina
Km
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30

population in 1976 lived in towns over 20,000 and only 13.7 percent lived in towns with 2,000 and 20,000 inhabitants.

Both the rural majority and, to a lesser extent, the urban minority live in conditions of extreme poverty. In a nation which itself is considered one of the poorest in Latin America, Potosi is probably the poorest department. In 1976, the per capita annual income ($458) in Potosi was the lowest in the country. Infant mortality rates, one of the best indicators of a low general standard of living, are extremely high in the department. In twelve out of fifteen provinces more than one out of every ten children die before their first birthday; in the other three provinces it is more than one out of six.

Potosi residents derive their incomes principally from mining and agriculture. Mining accounts for the majority of the gross domestic product but employs only 12 percent of the work force. According to Evans (1982a: 25), however, "although mining dominates the local economy, it has generated few forward or backward linkages to related activities, with the result that the industrial sector is practically non-existent but for a few small food and drink establishments." Economic prospects in Potosi are correspondingly bleak. Except for mining, which has already reached the limits of its capacity to provide employment, there are virtually no other off-farm employment opportunities in the department. The mining sector also appears to be stagnating with little possibility of active revitalization. In the agricultural sector the outlook is not much better. Agricultural productivity in the department is the lowest of all of Bolivia. This low productivity has been attributed to low rates of investment in the sector, an unfavorable dry and cold climate, the widespread use of traditional farming techniques which are considered ineffectual, as well as lack of infrastructure and services necessary to support rural development (Rondinelli and Evans 1983).

Project Objectives

The objectives of the UFRD Bolivia project were established in November 1978 by a consultant to the Office of Urban Development, as part of the Terms of Reference for the project. According to the consultant, the chief objective of the project was to establish a permanent capacity in the Departmental Development Corporation in Potosi (CORDEPO) to: "(1) collect and analyze planning data, and (2) undertake urban functions in rural development analysis, planning, and project identification" (Rhoda 1978: 2).

It is important to note here that from the start the primary emphasis of the project was on increasing the institutional capacity of CORDEPO to plan more effectively for the Department of Potosi. This focus on institutions reflects the goal of the RDP project of which UFRD was a part. The goal of the RDP Project was to improve the Bolivian planning system through "systematic conceptual and technical improvements in plan preparation and their implementation at the departmental and national levels" (USAID 1978). This focus of the RDP Project on institutions was very significant to the way in which the Bolivia UFRD Project was conducted. The UFRD Project had to respond to CORDEPO's need to formulate and coordinate the implementation of a regional plan. This required that the UFRD Project team work closely with CORDEPO and that the project be oriented towards the formulation of a comprehensive regional plan.

Administrative Arrangements

Responsibility for administration and execution of the Bolivia UFRD Project was divided among a number of institutions and individuals. Administrative responsibility for the project was shared by the Ministry of Plan Coordination (MPC), the Departmental Development Corporation (CORDEPO) in Potosi, the Office

of Urban Development of USAID, the USAID Mission to Bolivia, and a consulting firm called Practical Concepts Incorporated (PCI). The MPC was the primary implementing agency of the larger RDP project; CORDEPO was responsible for providing counterparts to execute the UFRD study and, through its president and director, for coordinating the efforts of the project team. The Office of Urban Development and the mission, together, were responsible for backstopping the project and for conducting evaluations of the UFRD component. PCI, the contractor to the RDP Project was responsible for selecting and recruiting a spatial planner to act as the director of the UFRD component.

The leader of the project team was Hugh Evans. He was contracted through PCI to assume the responsibilities of a long-term integrated rural-urban development specialist. Ten full-time project team members provided by the Bolivian Government worked for Evans. These ten were largely responsible for executing the UFRD component through performing such tasks as gathering data, implementing field surveys, and analyzing data and writing reports.

In addition, short-term consultants were subcontracted to provide technical assistance to Evans and the ten members of project team. In all, three consultants were utilized. Ray Bromley helped develop a market survey, John Dickey helped design an accessibility model, and Dennis Rondinelli helped to develop the workplans for the project and worked as senior advisor to the project.

Administrative support for the project was provided by the Office of Urban Development. In the office, then Deputy Director Eric Chetwynd was the project manager. In CORDEPO, its president (originally Gil Vilegas and later Victor Lopez) sought to secure funding for UFRD identified projects from a number of national and international sources.

Methodology

The methodology applied in the Bolivian field application of UFRD was based on the eight-step methodology which was employed in the Philippine pilot project. According to Evans (1982a: 2), the a priori strategic goals of the Potosi version of the methodology were: "the articulation of the urban-rural settlement system; and the integrated development of functional economic areas based on their productive potential." At the outset of the project, Evans and Rondinelli developed a ten-step methodology which Evans then modified and employed in the field. As can be seen in Figure 5, this ten-step methodology is contrasted with the eight-step methodology employed in the Bicol. Although the names of the steps were changed somewhat and their overall organization modified, the essential structural and substantive differences between the two methodologies are limited to four features: (i) the Potosi methodology introduced an accessibility study (Step Four of the Potosi version), (ii) it included a step explicitly designed to identify and design packets of projects (Step Eight of the Potosi version), (iii) it modified a step so that the implementation of projects as an issue was explicitly addressed (Step Nine of the Potosi version), and (iv) it included the collection of primary data on several new variables through a household survey and interviews with officials and professionals in regional-level organizations. The collection of these data was an attempt to introduce social information to UFRD and to facilitate local participation.

The accessibility study, designed by Evans and Dickey, utilized primary data collected for 200 households on the number and travel times of visits made by people to various "urban functions." These data were used in conjunction with data generated by the survey of urban centers, and secondary data collected on the transportation network and demographics to compute accessibility

Figure 5

Steps in the Potosi and Bicol Methodologies

Bicol Version	Potosi Version
1. Regional Resource Analysis	1. Basic resource analysis
2. Analysis of centrality, functional complexity, and hierarchy of settlements	2. Analysis of settlement system
3. Analysis of linkages	3. Analysis of linkages
4. Analytical mapping	4. Study of accessibility
5. Delineation of unserved and marginal areas	5. Analytical mapping
6. Determination of regional development needs and adequacy of spatial structure	6. Interpretation of existing spatial structure
7. Translation of spatial analysis and development plans into an investment program	7. Elaboration of strategy for integrated regional development
8. Creation of monitoring system and institutionalization of planning procedure	8. Design and selection of packets of projects
	9. Implementation, monitoring and evaluation
	10. Creation of a continuing planning process

indices for every function in a particular location and a total accessibility index for each canton.

The first step in computing an accessibility index was to identify zones and their centroids. After these zones were established, transport links were identified, interzonal travel times computed, indices of "functional travel convenience" developed, functions weighted, population weights and development weights for each zone developed and, finally, accessibility indices for each function and each settlement computed. In mathematical form, the formula for computing accessibility was:

I. $Aij = (N_{kj}/T_{ik})$

where Aij = individual access to function j in zone i;

and N_{kj} = The number of establishments of function j in zone k:

and T_{ik} = the travel time from zone i to zone k

II. $A = (Aij \times W_j)$

where Ai = the accessibility index for function j in zone i:

and W_j = the weight assigned to function;

III. and $W_j = N_j \times t_j \times P$

and N_j = average number of visits by a household in time to to the function j:

T_j = average travel time to function j;

P_j = proportion of the population that uses function j;

IV. $A\ (P)_i = A_i\ P_i = A_{ij} \times W_j \times P_j$

where $A\ (P)_i$ = the total accessibility index for zone i.

According to Evans (1982a: 63), the accessibility model was introduced, "in an attempt to define with greater precision the effective service area of a town." The need to define such areas more precisely had been identified by Rushton (1977) at the time of the Bicol project but had yet to be addressed. Evans (1982a: 63) explained that:

> linkage analysis... provides a first approximation of the level of interaction between the larger towns and their hinterlands, and sketches out the area of influence of each settlement. However, many of the links revealed in the analysis represent long journeys in terms of time or distance, which imply inadequate service for residents of more remote locations.

The Potosi project team needed to define "effective service areas" with "greater precision" in order to implement the newly added step designed to identify and design "packets of projects." Based on the definition of these areas (also called functional economic areas), "the Department was divided into seventeen planning areas, some of which are already functioning as an economic unit, while others are thought to have the potential to do so" (Evans 1982a: 99). The final report describes how packets of projects were then developed for these areas:

> The design of these project packages, and the coordination of spatial and sectoral plans, was accomplished by a complex and sometimes lengthy process involving the participation of the entire planning staff working together in interdisciplinary teams. To expedite this process, use was made of a two-dimensional matrix in which the columns represent sectoral projects and the rows represent packages of projects in each area.
>
> The process began with the identification of the principal economic activities of each area, or potentially productive activities. This information came primarily from CORDEPO's own department of agriculture and the local office of the Ministry of Agriculture, and was occasionally supplemented by data from the UFRD surveys of urban

centers and markets. Using this information, and their personal knowledge of each area, staff members proposed two or three key agricultural activities to be the focus of production efforts, and estimated current and potential output. From this starting point, preliminary proposals were put forward for related activities, such as plants for sorting and packing, mills, slaughterhouses, and other small scale, labor intensive food processing operations.

Staff members then made a preliminary estimate of the inputs required to support these productive activities, such as the extent of irrigation works, the capacity of storage facilities, the number of extension agents, the amount of credit, and the provision of agricultural supplies. Next, they identified the need for infrastructure indirectly related to agricultural production and small scale manufacturing, such as electrical energy, and most importantly markets and and local feeder roads. Using the inventory of urban functions to be found in each settlement, and the study of accessibility, staff were also able to determine the need for other basic infrastructure and complementary services for the inhabitants of the area, such as drinking water, sewerage, schools, training centers, health care facilities, and various kinds of stores. To complete the project package proposals were also included for farmers cooperatives, credit associations, and other supporting community organizations.

The location of these facilities was determined in light of the preceding spatial studies and the hierarchy of settlements in the area. Using the scalogram analysis as a guide, new urban functions identified as necessary ingredients in the project package, such as a market, farm supply store, high school or health facility, were located accordingly in the rural center or the local centers. Almost invariably a key ingredient was the provision of local feeder roads designed explicitly to reinforce the position of the rural center by linking it to local centers and other surrounding communities (Evans 1982a: 103-105).

Review

The UFRD experience in Bolivia is especially significant because it resulted in the clearest, most refined, and most powerful formulation of the UFRD methodology and because it came closer to implementing the plans and projects derived from UFRD than any of the other field applications.

The issues which were raised by those involved with the project which concerned the UFRD methodology were largely concerns about how to focus and

restructure the project in order to make it more clear, efficient, and lead more deliberately to implementation.

Benefiting from previous experiences with UFRD and the orientation of the RDP Project (of which it was a component) toward institution building, the project team recognized early on the critical link between institutional factors and implementation. The project team therefore worked as closely with CORDEPO as possible and was sensitive to the broader context of Bolivian regional planning, as it presented constraints on and opportunities for CORDEPO to act as an agent in regional development. The team worked to integrate the spatial prerogatives of the UFRD strategy of hierarchy articulation and functional economic area integration (which was labeled as the strategy of "integrated regional development" in the project documentation) with the sectoral prerogatives established by the many line ministries whom CORDEPO had to coordinate in the formulation and implementation of a regional plan for the Department of Potosi. Such careful attention to institutional considerations not only brought UFRD close to implementation, but also raised a number of issues concerning the capacity of regional authorities to play an active role in development.

Issues Raised

The project team raised the issue of how instrumental CORDEPO could be in development in Bolivia in light of problems with the regional planning system identified by the team. They found that

> (1) To start with there has been no effective regional planning at the national level... neither has there been much serious planning at the departmental level... (2) A second major problem of regional planning concerns the lack of coordination between units of the

> central government and the regional development corporations... (3) The lack of coordination between line agencies and the regional corporations means that the latter are obstructed from fulfilling their role of chief coordinator with overall responsibility for development activities at the departmental level... (4) Sectoral concerns have clearly taken precedence over regional concerns... (5) There are institutional rigidities to overcome. Intrenched funding patterns built up as a result of past practice cannot be changed quickly...and (6) There are always competing needs for scarce public resources (Evans 1982b: 12-15).

Within this unfavorable institutional environment, the project team could only assist CORDEPO in formulating its five year development plan. Neither CORDEPO, nor any project for that matter, could significantly influence the politics of decision making and implementation despite its importance to the success of all regional planning projects.

The fact that such problems existed at the macro-level aside, the project team nevertheless raised and attempted to address institutional and technical, analytical issues involved with formulating and implementing projects at the regional level. For each such issue, refinements or changes in the UFRD methodology were recommended for future projects.

An institutional issue raised in this regard was the importance of and the problems in coordinating other agencies in the formulation of regional plans. The project team recognized that "effective implementation of a plan requires coordination with other agencies not just at the point when projects have been carried out, but earlier during the design and selection of project packages, and also during the preparation of investment plans" (Evans 1982b: 52). The planning procedures in CORDEPO, however, did not involve sectoral agencies in the plan formulation and project design stages of its planning process, which led to "inevitable inconsistencies between spatial and sectoral proposals... (to) to the surface during the preparation of investment budgets" (Evans 1982b: 54).

Evans recommended that the UFRD methodology be expanded to address the issues of the non-involvement of and lack of coordination between sectoral agencies in all phases, including plan formulation. He recommended that:

(1) The UFRD methodology be expanded to include: a preliminary review of public agencies and other organizations involved in the social and economic development of the region; a framework outlining their potential role in the planning process not just at the implementation stage, but throughout all the planning tasks; and identification of actions needed to institutionalize the practice of integrated regional planning within local agencies (Evans 1982: 55);

(2) The UFRD study should not be treated as something self-contained and separate from the mainstream planning activities in the region, but integrated closely into ongoing tasks, and designed to yield useful inputs into current planning decisions (Evans 1982b: 62). Evans believed that these recommendations would:

> lead to a plan showing how each agency and organization might appropriately be drawn into the planning process, be it for data gathering, analysis, project design, project selection, investment planning, implementation, monitoring or evaluation. The plan should also take into account the participation of community groups, not necessarily at the macro level of region-wide planning, but at the later stages of more detailed planning for selected areas (1982b: 62).

When the Clark University assessment team visited Bolivia in August 1983, it reached similar conclusions as to the importance of involving sectoral agencies in all phases of the planning process, and made recommendations similar to those offered by Evans. The Clark University team concluded that "the process of plan development and coordination with the sectoral departments should be considered one and the same process" (Rushton and Yapa 1983: 6).

The Clark University team posed the following concerns:

> First, can a plan which shows how the rural people will gain improved access to health care possibly be the best plan if developed without considerable input from the sectoral department that is most familiar with health problems... Second, since sectoral departments are normally charged with the task of planning improvements in the system of services they control, parallel and often incompatible plans will be developed if, at the same time, a second group (in this case, CORDEPO) is also independently planning for the sector (Rushton and Yapa 1983: 6).

The assessment team therefore recommended that UFRD include technical assistance for training the staff of regional development authorities in managing the implementation of multisectoral plans. Bolivians themselves expressed the need for such assistance a number of times during the team's visit (Rushton and Yapa 1983: 7-9).

In addition to these institutional concerns, the assessment team raised issues concerning the quality and appropriateness of the accessibility study (see also Yapa 1983; Rushton and Yapa 1983). The assessment team's principal criticism of the accessibility study was that:

> In attempting to add a geographical accessibility component to the UFRD methodology, Evans and Dickey are ignoring a fundamental flaw in the original UFRD methodology. The question that needs to be answered is whether "gap analysis" (as identified from a Scalogram analysis of the presence or absence of functions in urban places), is the more appropriate way to identify which functions should be added to which places in order to improve rural access to urban services or whether geographical accessibility analyses should be used for this purpose (Rushton and Yapa 1983: 4)?

Believing that the answer to this question should be that geographical accessibility analyses <u>should</u> be used for this purpose and <u>not</u> the functional gap analyses, the assessment team argued that "by regarding the accessibility analyses as complementary in an undefined sense to the functional gap

analyses, however, it is unclear in the work of the Potosi group how the results of these analyses are to be used in the process of developing a concrete plan for improving urban services for the benefit of rural populations" (Rushton and Yapa 1983: 4).

Two other issues were raised by the Clark University team. First, the accessibility study did not meet the analytical need for a "measure of access deprivation because geographical accessibility of an area in the study was measured in terms of all occurrences of a service irrespective of its location within the region whereas the need is to measure the access of people at specific sites to a service at a specific site" (Rushton and Yapa 1983: 5). Second, the decision to aggregate into geographical areas (zones) "people who were in fact distributed throughout each zone would inevitably cause errors and biases in measuring the access of rural people to services" (Rushton and Yapa 1983: 5). They pointed out that, "measures of geographical access to the services in question could have been computed in a 'regional accounting model' that preserved the geographical detail of the original data" (Rushton and Yapa 1983: 5).

Impact on Institutions and Implementation

Like the other field applications of UFRD, the Bolivia project did not result in the implementation of UFRD recommendations. The reasons for this failure, however, ostensibly can not be attributed to the project itself. In fact, were it not for two unforeseen events outside the project's control, the plans of UFRD would almost certainly have been implemented.

The project had two means by which its recommendations could potentially have been implemented. One way would have been through the disbursement of a

$10 million loan that was to be granted to the Bolivia government to implement projects recommended by components of the RDP Project. Had this loan actually been granted, monies would most likely have gone to implement UFRD plans because, of the five components of RDP, UFRD was the component found on evaluation to be the most successful. Unfortunately this loan was never granted because of a chill in United States/Bolivia relations caused by the coup d'etat of Colonel Natush. The second avenue open to the UFRD project for the implementation of its plans was through the implementation of CORDEPO's five year plan. The Clark University field assessment team found, however, that while the UFRD project did have a significant influence on the content of the Five-Year Development Plan formulated by CORDEPO, for reasons beyond the scope of the UFRD Project, the plan itself, as of August 1983, was not implemented. According to the team:

> Within CORDEPO the plan seems to have been largely ignored in formulating annual operating budgets which describe the projects that will be undertaken each year. Explanations for this included... that administrative continuity had been broken in 1982 by changes in government leadership at both local and national levels; that the focus of the development plan for the region had changed to reflect the three current national priorities of employment generation, increased food production and export generation... we therefore conclude that the UFRD study and plans have so far affected only to a small degree the project implementation activities of its parent organization CORDEPO; that it has affected little, if any, of the activities of related sectoral agencies (Rushton and Yapa 1983: 8).

In contrast to this failure to implement plans and projects, the Bolivia project, like the Bicol pilot project, "succeeded in gaining the attention and influencing the views of regional planners throughout Bolivia" (Rushton and Yapa 1982: 8). The assessment team noted that "UFRD methods are now widely known and, in broad terms at least, are understood" (Rushton and Yapa 1983: 9). UFRD's influence in Bolivia appears to have been so great that it has led to a

full-scale replication of the UFRD methodology in the Department of Oruro. Rushton and Yapa (1983: 8) noted that:

> In addition to the technical accomplishment of data gathering and data analysis in that region, there was plenty of evidence that these results were being used creatively in a dialogue with other agencies whose budgets and administrative authority included the organization and a delivery of urban services.

To ensure that this kind of successful institution-building would be continued and expanded, Evans (1982b: 56) recommended that a step be added to the UFRD methodology which would be designed to:

> consider actions needed to ensure that participating organizations develop their own capacity to practice integrated regional planning after outside technical assistance is terminated. This ought to include measures for establishing a permanent unit responsible for spatial planning; training the staff of this unit; setting up a reliable system for storing and accessing data on the spatial characteristics of the region obtained through field surveys and other sources; and exploring the potential use of micro-computers for selected tasks such as scalogram analysis, modelling accessibility, evaluating projects, and preparing investment plans.

The Bolivia UFRD project also had an impact on the activities of international aid agencies active in the country. According to the Clark team, the final report of the project "appears to have been important in attracting to the department several international agencies (five were named) who were seeking to fund the kind of detailed area development projects that the UFRD study produced" (Rushton and Yapa 1983: 8).

Contribution of the Potosi Methodology

The additions and refinements made by the project team to the UFRD methodology in Bolivia represent a major contribution to the evolution of the methodology.

The development of a method for delineating functional economic areas with precision had eluded the UFRD project until the Bolivia field application. The Clark University assessment team pointed out:

> The personnel of the Potosi pilot project showed considerable initiative and innovation in recognizing certain deficiencies of the original methodology. For example, they discovered that UFRD methods do not explicitly assess the needs of the rural population for improved access to urban services. They saw that, although the study of spatial linkages reveals the broad interconnections in the urban hierarchy, it does not show the level of accessibility of rural people to specific services located in specific urban centers (Rushton and Yapa 1983: 3).

The Bolivia project team responded to this problem by designing an accessibility model that greatly increased the precision of the delineated boundaries of functional economic areas. The accurate delineation of these was especially important because it identified these areas for use as the planning units for integrated area development projects.

The concept behind the accessibility study method also was a major contribution to the UFRD methodology:

> The Accessibility Model introduced by Dickey and Evans to UFRD methods is clearly a recognition that access to urban functions should be measured directly as should also the consequence in rural accessibility of filling any "functional" gaps in the (manual) scalogram. It was, therefore, an important and positive conceptual improvement in the UFRD methodology (Rushton and Yapa 1983: 4).

Another important contribution stems from the project team's sensitivity to the importance of institutions in formulating and implementing plans. Simultaneous with its analytical efforts, the team made vigorous attempts to work with host planning institutions to gain implementation of these projects. The team operated under the conviction that the ability to coordinate sectorally oriented agencies in the formulation and implementation of multisector plans at the regional level (the kind generated by the UFRD planning process)

was as important to the success of UFRD as the analytical rigor with which these plans were formulated. The staff of the project team therefore devoted a great deal of their time and energy to understanding and working with these institutions. Though the project team did not succeed in involving the sectoral agencies directly in all the stages of the regional planning process, it did succeed in demonstrating how, through simple methods, competitive sectoral and spatial objectives could be addressed.

The project brought a third dimension to a planning matrix which had previously been only two dimensional. A spatial dimension was added to the macro (global) policy objectives and sectoral priorities dimensions--

> In Potosi, the concepts of designing packages of projects for specific areas as opposed to the more conventional approach of individual projects in each sector, introduced a new perspective on the allocation of investments...Whereas before, the discussion had always been in terms of sectoral needs and priorities, now for the first time the distribution of resources in different parts of the department was taken into account explicitly (Evans 1982: 97).

GUATEMALA CASE STUDY

Background

The selection of Guatemala as the second Latin American site for the application of UFRD resulted from a trip made to the Guatemala mission by a team from the Office of Urban Development to discuss possible areas of collaboration. In late June of 1978, John Dickey and Michael Conroy visited the mission and reviewed the documents for a project, entitled the Integrated Area Development Studies (IADS) Project. Convinced that there was an excellent basis for collaboration between the mission's IADS Project and the UFRD Project, the team reached a general agreement between the Office of Urban

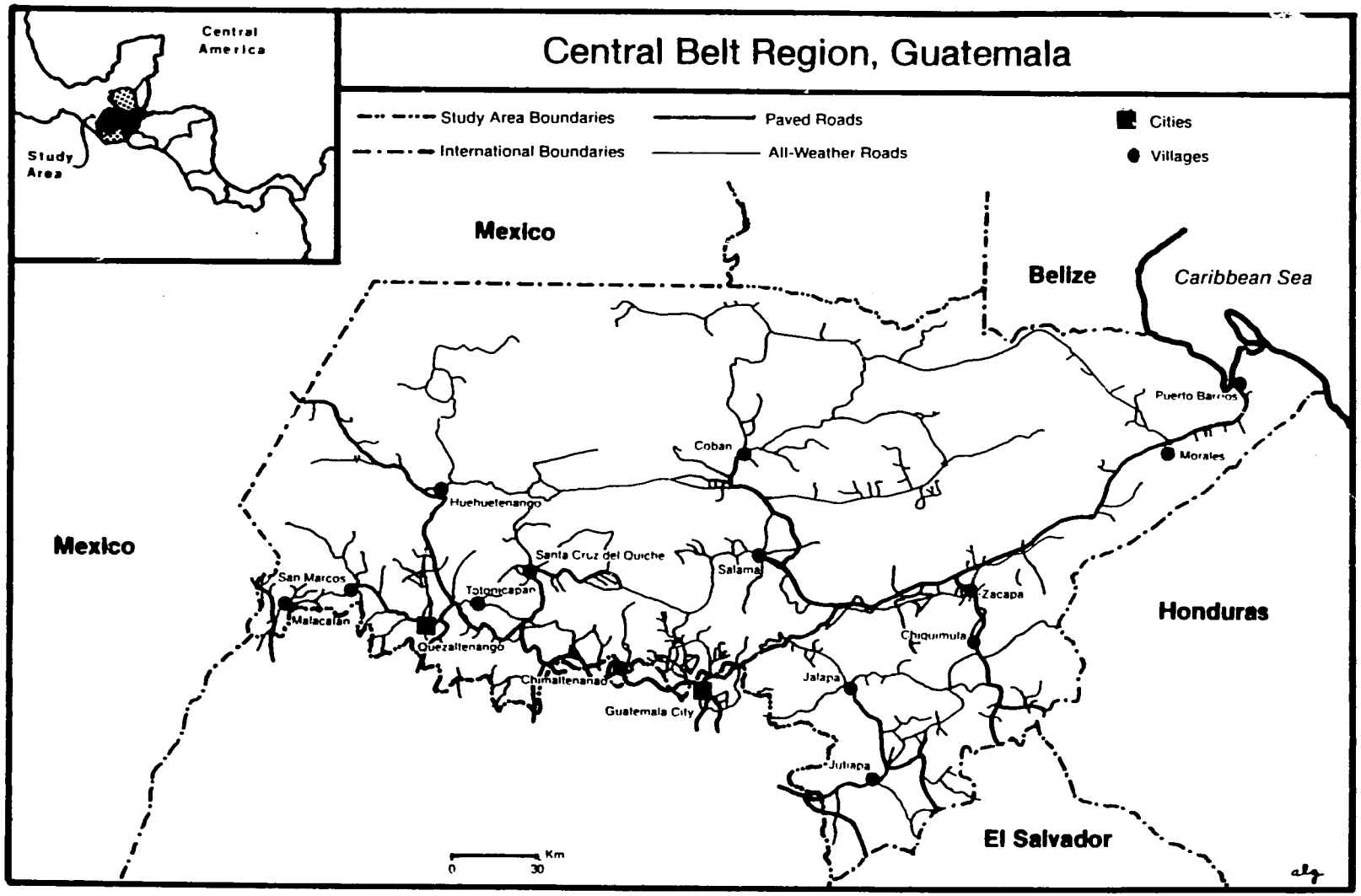
Development and the mission on collaborative project implementation. The purpose of this agreement was to link "two closely-related and complementary projects with respect to determining needs and priorities for economic and social infrastructure and services of the types required to improve the well-being of the rural poor majority in Guatemala" (USAID 1978b: 1). Eight steps were proposed in the agreement for expanding IADS to include the UFRD Project, including one which specified the number of municipios which were to be included in the project site. Two hundred and nine municipios in the Southern Highlands were selected for the project study area. These comprised the entire set of municipios which the mission had classified as marginal and submarginal.

Characteristics of the Project Site

The 209 municipios in the project area occupy approximately 60,000 square kilometers in the highlands in the southern portion of the country (see Map 5). The area contains approximately 4 million of the country's 7 million people (and almost the entire indigenous Indian population), and is the poorest in the country. It has the lowest literacy rate, the fewest services, and the most inchoate infrastructure. The area's settlement system is relatively complex. There is one city with a population of 77,000, five over 20,000, five over 15,000, and eight over 10,000 (Wilkie and Ludwig 1983).

It is important to note that at the time of the project, the level of political violence in Guatemala, particularly in the project area, was extremely high. As Steven Miller (December 1982: 4) of the Office of Multisectoral Development noted in a report on the project: "The change of government from the Langeind Garcia regime to the Lucas Garcia regime was a slow

MAP 5


Central America
Study Area
Central Belt Region, Guatemala
Study Area Boundaries
International Boundaries
Paved Roads
All-Weather Roads
Cities
Villages
Mexico
Belize
Caribbean Sea
Puerto Barrios
Morales
Coban
Huehuetenango
Mexico
Santa Cruz del Quiche
Salama
San Marcos
Tolomicapan
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process and apparently involved a large shift in the senior staff in most ministries. This discontinuity was minor when compared to the escalation of violence, particularly in the Western Highlands, which followed the change of government."

Project Objectives

The objectives of the Guatemala UFRD project, are assumed to be those for the larger IADS project, since none were established specifically for it. According to the Project Grant Agreement, the goal of the IADS Project was to

> "evaluate and execute a systematic planning methodology based upon infrastructure, services and natural resource data collected at the level of the municipality for determining the needs and priority for investment in economic and social infrastructure and services of the type required to improve the well being and increase the incomes of rural Guatemala" (USAID 1978c).

The project's objectives were: "(1) the execution of three inter-related studies, (2) the development of a planning methodology based upon data generated from these studies, and (3) the organization of an experimental program for eliciting expressions of perceived requirements for participation" (USAID 1978c). The first study inventoried available infrastructure and services and defined an urban hierarchy; Study Two surveyed natural resources and analyzed resource potential; and Study Three analyzed the Guatemalan tendency to travel varying distances to obtain access to urban functions. Activity One involved the creation of an extensive set of experiments with local participation in planning and implementation; and Activity Two sought to develop a data bank and a planning methodology to determine investment priorities for infrastructure and services.

Administrative Arrangements

Responsibility for conducting the project was shared by four institutions: The Instituto de Fomento Municipal (INFOM), the Ministry of Agriculture, the National Economic Planning Council (SGCNPE) and Iowa State University (United States contractors to the project). INFOM was responsible for Studies One and Three and Activity One. The Ministry of Agriculture was responsible for Study Two. SGCNPE was responsible for Activity Two; and the Iowa State team shared in the responsibility for all project studies and activities. Jerry Knox was director of the Iowa State project team, which was comprised of a number of consultants called upon periodically to perform certain specific field tasks. The project manager from the Office of Urban Development was Eric Chetwynd, while the staff in the mission responsible for backstopping the project changed several times.

The Methodology

The integration of UFRD with the IADS project strongly influenced the character of the UFRD methodology employed in Guatemala. The primary objectives of the IADS Project were to assemble an extensive computer data base and to develop a methodology for establishing investment priorities for services and infrastructure which would facilitate the use of the computer data base. Chetwynd (February 1981: 1) of the Office of Urban Development noted that, "the project was, and is, a data base on which integrated rural and regional plans can be based." The Project Grant Agreement was very specific in stipulating that the methodology for determining investment suitability should be based upon infrastructure, services and natural resources data at the level of the municipio (USAID 1978c). The Iowa State University project team, therefore

expended its maximum effort to establish the computer data base and develop a methodology that would make use of the collected data. According to the project team, "the primary purpose of the integrated data base developed for the IADS Project was to link land use and natural resources data, infrastructure and services patterns, local participation, and demographic data to permit planning analyses at the regional and national level" (Iowa State University 1983: 16). Given the entry of the data into a computer, the logical use for the data base was to develop a methodology which was in the form of a set of equations.

This was a planning methodology which was outwardly very dissimilar from that used in the other UFRD projects. The Guatemalan methodology was much more data intensive and extensive, computer-oriented, and quantitative than was the more general and qualitative methodology employed in Upper Volta, Bolivia, the Philippines, and Cameroon. The Guatemalan methodology consisted of a series of multiple regression equations to estimate "gaps" in various services and infrastructure, which, when combined as a composite score with an estimate of resource potential in each municipio, resulted in a "suitability for investment score" that could be ranked and compared with other municipios. This methodology rested on the assumption that the existence of services and infrastructure make a site more suitable for investment. In its final report, the Iowa State team stated that, "the underlying assumption is that the lack of rural development is directly related to the lack of supporting urban infrastructure. Knowledge about these relationships should enable more efficient rural development programs and projects to be devised" (Iowa State University 1983: 24).

Where equity was the ultimate goal, as opposed to "suitability," the methodology could be used to determine which municipios had the greatest "gaps"

in services and infrastructure and which therefore needed more investment. This contrasts the planning method used in other UFRD projects in which investment priorities were based on map analysis of overlays and on an assessment of the spatial constraints to development.

Review

It is important to note that while the largely "quantitative" nature of the multiple regression approach may appear to be different in kind from the "qualitative" approaches developed for the other UFRD projects, it is, in fact, only a difference in technique and not in fundamental logic. The Guatemala methodology rested on most of the same basic assumptions as the other UFRD methodologies. Specifically, the methodology rested on the following assumptions which were common to the Philippines, Bolivia, and Cameroon UFRD projects: (i) that the existence of services and infrastructure makes a location more suitable for investment; (ii) that services and functions ought to be located in centers of concentrated population in order to provide a dispersed rural population efficiently; (iii) that urban infrastructure is a prerequisite for rural development; (iv) that recommendations for providing new services and infrastructure geared towards growth-with-equity considerations should be based on a gap analysis; and (v) that information on regional resources should be linked to information on the supply of urban functions and infrastructure.

The methods used by the Iowa State team to execute its settlement system study were also similar to the methods used in all other UFRD field applications. The urban and functional hierarchies were defined based on an analysis of centrality, employing information from an inventory of urban functions. A minor difference in the centrality index formulated by the Iowa State team was

that it included only economic functions (not government and public services) so that only the economic centrality of a place was indexed. Areas of influence were derived by performing a discriminant analysis on origin-destination data to determine which origins clustered around which destinations. Hence, as in the Philippines, areas of influence were delineated based on observed patterns of interaction. The findings of this study, however, raised a number of issues concerning whether or not central place theory was useful for planning purposes or even for simple descriptive study.

Issues Raised

The Iowa State project team raised two sets of issues concerning the UFRD component of the IADS Project. The team questioned: (1) the appropriateness of applying central place theory for descriptive and prescriptive uses in Guatemala, and (2) the completeness of the data set for planning uses.

The Iowa State team reviewed the applications of central place theory in Guatemala and concluded that the theory has serious limitations as both a descriptive tool and normative model. Drawing largely on the work of Carol Smith (1972), the project team argued that "where conditions of competitive retail trade exist, then central place (theory) provides a powerful model of market organization. In the case of Guatemala where many of the conditions are absent, central place is not always a good model of explanation" (Iowa State University 1983: 28). The team observed that "the hierarchical arrangement of places for Guatemala failed to follow the progression and nesting of places predicted by central place (normative) model; nonperiodic trade has tended to converge on a few isolated high-level centers" (Iowa State University 1983: 28). They concluded: "The key to identifying integrated market activity in

the rural areas of Guatemala must center in the spatial analyses of periodic markets" (p. 36); and that a

> one-sided analysis of market demand with its urban bias would be misleading...(it would) tend to reinforce existing patterns of urban administrative dominance. To correct such a bias would require that links between the system of periodic and nonperiodic markets be clearly identified" (p. 37). For these reasons, while recognizing that central places models could be used for normative purposes, the Iowa State team concluded that it is much more desirable to use rationales other than central place theory for selecting investment priorities such as natural resource potential or growth-with-equity goals (Iowa State University 1983: 24).

The Iowa State project team also raised issues concerning the nature and quality of the data base. At least three deficiencies in the data set compiled for the IADS project are identified in the project documentation: demand, accessibility, and employment information. That these three were singled out indicates that these kinds of information are generally deemed critical for a regional planning data base, and particularly one designed for planning the provision of urban services and infrastructure.

Several project documents note that the data set's potential to be used constructively in planning for the provision of infrastructure and urban functions was seriously constrained by the lack of data on demand for these services (either effective or actual). The American contractors to the project themselves noted that "little data on demand was contained in the clean data base." This was a limitation on the utility of the data for many types of analyses (Iowa State University 1983: ii).

The data set also was criticized for its lack of reliable information on the dynamics behind the utilization of urban services--the principles and behaviors governing spatial choice. While this information was originally thought to be important and an attempt was made to collect such information for Study Three (the Accessibility Study), the data were unreliable and had to be

discounted from the analysis. In an assessment of the Iowa State team's technical assistance to the project done for this assessment, Ludwig noted that:

> A survey instrument was designed to obtain data on the number, cost, type, mode, frequency, origin and destination of trips taken by all members of 314 households sampled from three subregions on the basis of population and area. Riordan and McKee in 1982 note that: (1) confusion still exists as to whether the study was to be representative of the target region as a whole (presumably the 4 or 5 contiguous municipios) when, in fact, it is representative of only three subregions; (2) that there was a lack of adequate communication between INFOM and ISU and insufficient technical assistance was provided ISU; (3) that the questionnaire was long and cumbersome to administer and many respondents were reluctant to answer the questions asked; and (4) that costs of transport were not gotten directly from the survey but will have to be estimated later as an analytical rather than a statistical exercise.
>
> The 1982 Knox report notes (1) that initial data analyses showed such internal inconsistencies as the cost of walking trips being equal to those taken by taxi, and (2) that general travel patterns can be ascertained by examining the data but more detailed analyses could not be completed. The 1982 Riad Mahanyi paper (for a professional conference) appears to contain the information and conclusions that must have been a part of his finished final report to AID. He concludes that 314 was too small a number of households to produce sufficient trips and that data measuring transport time, distance, cost, et al. are not reliable, citing the walking/taxi trip equivalence noted by Knox above.
>
> The assessment research group is under the impression that the households surveyed were to be rural and headed by farmers. All Study Three descriptions seen by the group, unless they were changed later, specify the need for data on rural farmers traveling to obtain urban-based goods and services or to sell their produce in urban markets. Mahanyi's 1982 paper reports a stratified sampling of households by size of place in the urban hierarchy. He included places in five levels which he refers to as national, large, medium, small and local. The proportion of interviews conducted in the latter three level was per the distribution of population in those centers. The inclusion of larger centers thus accounts for responses regarding travel by taxi but surely reduces the number of respondents who are market-bound Maya farmers with loads on their backs (Ludwig 1983: 8-9).

This description explains the fundamental weaknesses of the data collected for the accessibility study, namely, that they were not representative of the whole region, they ignored rural households, and were unreliable and internally inconsistent. Finally, the lack of information on employment was judged to constrain the use of the data set for general regional planning. Miller (December 1982: 2) of the Office of Multisectoral Development noted that, "a rather glaring gap appears in the data on the human resource base, especially employment."

Lessons Relevant to RDUSS Objectives

The project in Guatemala was the pilot application of the Rural Demand for Urban Service Systems (RDUSS) Project (see Belsky and Karaska 1983b). The RDUSS Project was an attempt by the Office of Urban Development to explicitly introduce information on the demand of target groups for urban functions and to involve target groups directly in the UFRD planning process. As a result, the UFRD project in Guatemala pioneered efforts to meet the expanded UFRD goals embodied in the RDUSS Project.

According to the Project Paper for RDUSS, the UFRD Project "lack(ed) an important ingredient: information and input from the rural target group population" (USAID 1978a: 2). In response to this deficiency the objectives of the RDUSS project were to develop methods for gathering information on target groups and for involving target groups in the UFRD planning process. Two components of the IADS project were included specifically to respond to the objectives of RDUSS--the Accessibility Study (Study Three), and the Local Participation (Activity One) component (USAID 1978b).

As noted above, the data on urban services and infrastructure utilization by target groups was so unreliable that the Accessibility Study had to be abandoned. In addition, it also was noted that an insufficient amount of information on the demand of the target groups for urban services and infrastructure was collected. Hence, the IADS Project was unable to arrive at effective methods for gathering information on the target groups. It therefore failed to meet one of the two objectives of RDUSS.

The Local Participation Activity failed to achieve the other objective of RDUSS--to involve target groups in the UFRD planning process. It failed to do so for three reasons. O'Regan and Hellinger (January 1979: 1), consultants who helped write the background study for the RDUSS Project, explained two of the reasons in a memo to then mission project manager David Peacock:

> There are two factors which seem to limit the possibilities for effective public input in the current project: the nonlinkage of project and implementational planning to the data collection and analysis processes; and the lack of representative development organizations in Guatemala at either a regional or national level. As to the nonlinkage factor, we have found that it can often be difficult to elicit either significant public interest in, or valid responses to, broad information gathering exercises which do not exhibit some promise of addressing immediate development concerns. As to the second factor, the canvassing of regional organizations representative and knowledgeable of local-levels provides a cost-effective short-cut, for eliciting needs-information in a reliable and aggregate form.

A third reason for the failure of the IADS Project to experiment with methods for involving local participation was most forcefully expressed by Miller (December 1982: 3) who wrote: "The section on participation in decision-making does not really need further comment. The level of fear and violence in most areas of the study at the time, and probably today as well, simply do not make this a reasonable experiment, especially when detached from the actual process of project development."

The fact that the local participation component failed suggests that at least three conditions are critical to its success: (1) linkage to the actual process of project development and implementation, (2) existence of representative development organizations, and (3) a low level of political violence.

Although the local participation component failed to meet its own objective of experimenting with methods for directly involving target groups, and lessons can be learned from this, the component did successfully meet a related objective of RDUSS. The final report of the United States contractors explains:

> The ultimate goal of the local participation study was to determine ways in which local participation could be effectively incorporated by Guatemalan and international agencies in rural development projects in Guatemala. Originally twenty (20) local participation experiments were proposed. These were planned to be evaluation studies of participation in actual development projects... A much more modest effort was undertaken to simply survey local community officials and residents asking them to state their preference for different kinds of services and infrastructure, as well as answer questions about patterns of participation in recent community development projects in their vicinities... Information was sought about the following topics: 1) community development projects that had been carried out in the past two years, and the type and level of local participation in these projects; 2) the local official's priorities for future development projects needed by their communities; 3) the local official's opinions concerning the role local participation should play within development projects; 4) an assessment of the benefits and problems of local participation within projects carried out in the officials' communities. The local participation questions appended to the Study One interview schedule were repeated in the Study Three interview schedule (Iowa State University 1983: 39-40).

A significant finding of the effort to survey locally perceived development needs was that, "the relative ranking for development priorities for residents was virtually the same as that for community leaders" (Iowa State University 1983: 41). This finding was significant because it suggests that the "key informant technique" is an adequate substitute for a stratified survey of a target group population for determining locally perceived needs for infrastructure and services.

Impact on Institutions and Implementation

The project in Guatemala was plagued perhaps more than any other of the UFRD projects by institutional problems. These problems were so vast that they hardly bear recounting. Suffice it to say that when a Clark assessment team visited Guatemala, the final report listed these findings: "The project has been characterized by a lack of coordination among the various ministries of the Government of Guatemala, Iowa State University, and AID/Guatemala in its implementation phase. This lack of coordination was later compounded when a decision was made to abandon any substantial coordination efforts and permit each participating institution to pursue independently its own research and planning objectives" (Karaska and Lombardo 1982: 1, emphasis added).

Interestingly, as a result of poor relations between the U.S. contractors and their Guatemalan counterparts stemming from interpersonal conflicts too numerous to recount here, a separate central place study was conducted by INFOM independently of the Iowa State team. The INFOM study used a centrality index to define the functional and urban hierarchies in the project area as did Iowa State. The INFOM study accepted the utility of central place theory to planning whereas the Iowa State study did not. Based on central place theory:

> a four point program was proposed by the Institute [INFOM]... [This] constitutes a practical use of the central place analysis. The first of these points would focus on deconcentration of development investment in major cities and the shifting of this investment to less developed areas with a concentration on rural production and on the infrastructure that supports that production. The second point would also involve decentralizing of investments but in this case by orienting them to population centers in the middle of the urban hierarchical structure....The third point in the program envisions a more equitable distribution of investment in order to strengthen the economic and social ties between small cities and their areas of influence in the urban hierarchy. A fourth program would improve existing

> transport ties between the rural locations and the urban centers by heavy investment in the road network (Wilkie and Ludwig 1983: 1-2).

Because the INFOM study recommended specific projects based on a qualitative assessment of the supply and location of urban functions and infrastructure in order to: (1) develop the middle levels of the urban hierarchy, (2) strengthen rural-urban linkages, and (3) build roads between urban centers, the INFOM study was very similar to the UFRD projects done in the Philippines and Bolivia.

The data base established by INFOM as a result of the IADS Project and the methodologies employed by INFOM in its studies currently are being used by both the government of Guatemala and the Inter-American Development Bank in their planning activities.

The Contribution of the Guatemala Methodology

The methodology implemented in Guatemala, though seemingly different from the one implemented in the Philippines and Bolivia, was similar to the Bicol methodology. Although a manual scalogram was not used to identify "functional gaps" in the urban system, a multiple regression technique was used that essentially accomplished the same thing. The one novel methodological contribution that the project did make stems from its method of collecting data on the perceived needs of rural populations. Collection of such information by use of key informants residing in small rural towns proved to be a very reliable indicator of the needs perceived by rural populations living in the hinterland of these towns. This is a significant contribution that improves upon the "grassroots" approach advanced in the Upper Volta project.

CAMEROON CASE STUDY

Background

The selection of Cameroon as the site of the second UFRD field application in Africa was initiated by the Cameroon mission who were interested in studying the role of urbanization in development. The mission was mainly concerned with the rapid rate of rural to urban migration and with the weak role played by secondary cities in Cameroon in the development process (PADCO April 1979).

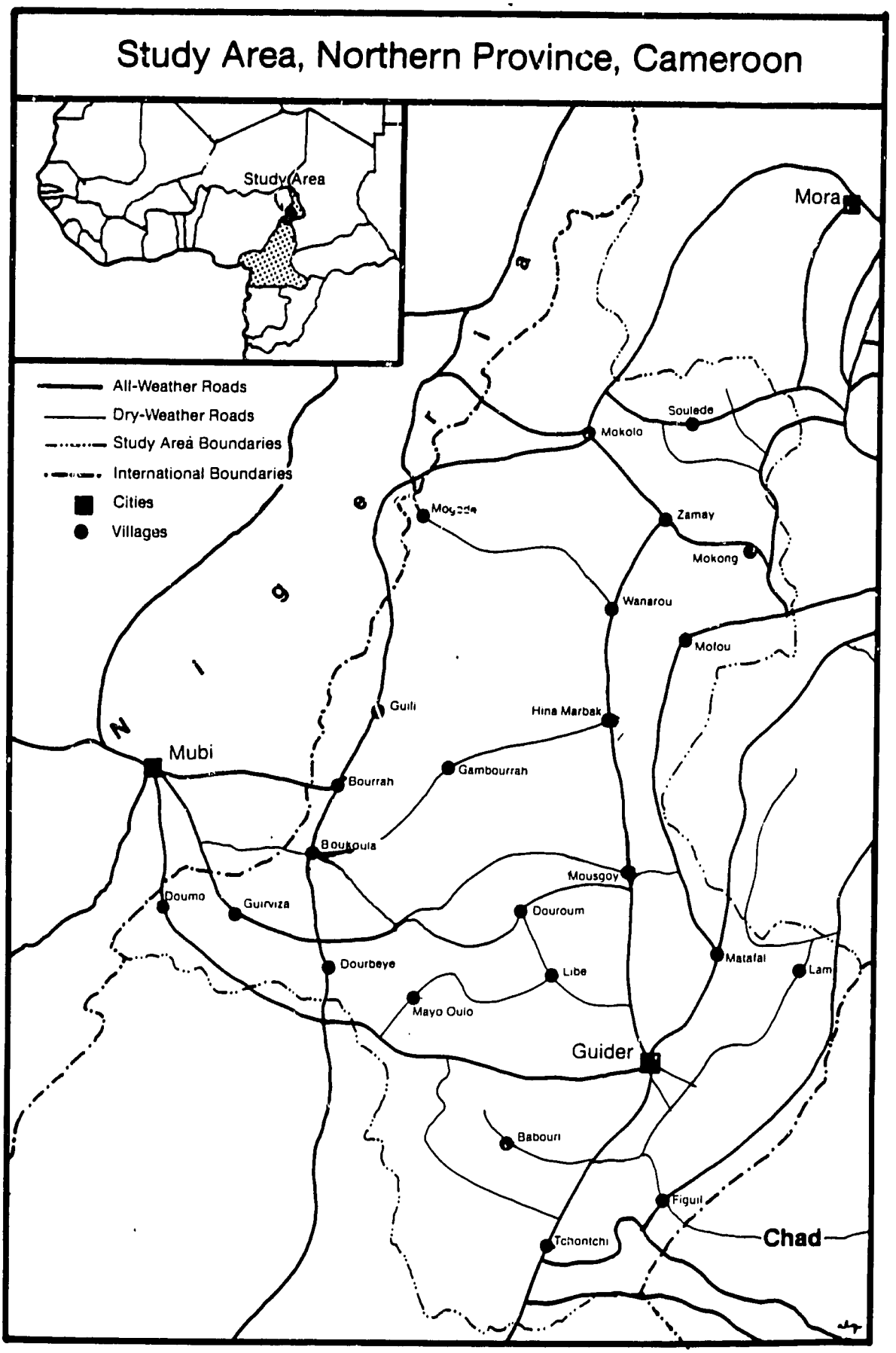
The site selected for the project was located in the Mandara Mountains. It comprised the Arrondissements of May Oulo and Guider in the Benoue Department and the Arrondissements of Mokolo Bourrah in the Margui Wandala Department. Also included, but not actually within or continguous to the project area, were the secondary cities of Maroua and Garoua. The principal reason for selecting this area was that it was previously targeted by the mission for development in the Country Development Strategy Statement (Farbman May 1979). Maroua and Garoua were included in the project area because they were secondary cities that served and influenced the project area. Also, the mission was anxious to strengthen the contribution of secondary cities to rural development.

Characteristics of the Project Site

The Cameroon project site is comprised of four morphological zones: mountains, plateau, piedmont, and plains (see Map 6). The highlands, much like in the Potosi Region, occupy three-fourths of the project area, making transportation difficult and many areas inaccessible.

The site is characterized by a long dry season and high temperatures averaging 27°C (80°F). As in Upper Volta, the long, hot, dry season created drought conditions and seasonal famine. The Cameroon site has a climate and a resource base which made increased agricultural production problematic.

MAP 6


Study Area, Northern Province, Cameroon
Study Area
All-Weather Roads
Dry-Weather Roads
Study Area Boundaries
International Boundaries
Cities
Villages
Mora
Soulede
Mokolo
Zamay
Mokong
Wanarou
Mofou
Hina Marbak
Guili
Mubi
Bourrah
Gambourrah
Boukoula
Mousgoy
Doumo
Guirviza
Douroum
Dourbeye
Libe
Matafal
Lam
Mayo Oulo
Guider
Babouri
Figuil
Tchontchi
Chad

However, unlike the Voltan site, the Cameroon site of 7,328 square kilometers is very thickly settled. The average population density was about 65 persons per square mile in 1976, with densities exceeding 100 persons per square kilometer in some rural areas. This compares with Upper Volta which had average population densities of 8 and 34 in Fada and Koudougou, respectively. The urban system is not much more developed in Cameroon than it was in Upper Volta. According to the 1976 census, only 5.3 percent of the population in the project area could be classified as urban (people living in villages with populations over 5,000), and when Garoua and Maroua were added, 24.7 percent were classified as urban. In the project area there is one town (Maroua--62,000) with a population over 10,000, one town (Garoua) with a population over 5,000, and four towns over 2,000. This compares with one city over 10,000, four towns over 5,000, and 35 towns over 2,000 in Fada and two cities over 10,000, 19 towns over 5,000, and 76 towns over 2,000 in Koudougou in Upper Volta. Perhaps the most startling indicator of the weak and poorly integrated settlement system in the project region was the inchoate road network. A mere 228 kilometers of surfaced roads connected nearly 700 settlements in the region. Though there are a fair number of unsurfaced roads, all are impassable during the wet season.

Most of the population of half a million in the region ekes out a marginal to submarginal existence on the slopes of the Mandara Mountains. Roughly 85 percent of these half million are involved in agricultural activities. The major crops in the region, in order of ubiquity, are rainy season white sorghum, rainy season red sorghum, groundnuts, cowpeas, and cotton. Cropping was most intensive in the immediate vicinity of sare's (small rural dwellings), and dropped off dramatically at short distances from them. There are few manufacturing activities conducted in the region. In addition, the lack of available credit services is a constraint on the expansion of the manufacturing sector.

Very few services are available in the region, and they are not equitably distributed with respect to the population. The few schools that do exist (one small school for every 4,205 persons) are inaccessible to many, and are in disrepair. Health coverage in the project area was very poor. In most instances health facilities amount to one-third the minimum standards established for the rest of the nation, which are low even by standards acceptable in many other African countries. To compound the health situation, nearly every source of water in the project area was contaminated.

Project Objectives

In response to the conditions in the project area and to the mission's desire to integrate urban dimensions in its dominantly rural development strategy in the Mandara Mountains, the Project Grant Agreement stipulated that the goal of the project was to assist the government of the Cameroon to develop the institutional framework to increase the access of the rural poor to existing services and facilities available in urban areas, and that the purpose of the project was to help the mission assess and analyze the prospects for strengthening the essentially agricultural-oriented strategy underway for the Mandara Mountains by integrating urban components into it (USAID August 1979: Annex One). In addition, four objectives were identified for the project: (1) to analyze the spatial system relating urban and rural areas to determine the extent to which the pattern of human settlements contributes to the potential for rural development; (2) to determine the degree to which the spatial system is sufficiently articulated to allow equitable distribution of services, facilities, technical inputs, and commercial activities to stimulate agricultural production and overall rural development, including the marketing and distribution of rural products; (3) to identify potential project areas and establish

general locational criteria for future investments in service facilities and infrastructure, particularly in the urbanized areas, that will contribute to stimulating the overall growth of the region, increase the access of unserved or poorly served people to urban-based services, and create a more articulated and better integrated hierarchy of settlements; and (4) to develop and test appropriate methods of spatial analysis that can be modified and updated as part of a continuing planning process in North Cameroon, and that may serve as a model for application to other regions of Cameroon (USAID April 1979: Annex One).

Administrative Arrangements

The institution that was to be principally involved with the UFRD project changed at the outset of the project. Originally, the project was to be the principal responsibility of the Ministry of Economic Affairs. When the project began, the major support for the project came from the Division De L'Amenagement du Territoire (DAT) of the newly created Ministry of Housing and Town Planning (MHTP). The MHTP was made principally responsible for executing the project and institutionalizing the UFRD planning process.

The project team was comprised of three members. The Project Director, Ed Perry, was a regional planner with experience with the Office of Urban Development and the Upper Volta Project. The position of project economist was filled by John Horton, a sociologist. The position of the sociologist was filled by Kamanda Bayie, a Cameroon sociologist. Other individuals who were involved with the project included: Claude Mathieu, principal counterpart in the MTP; Lambert Tam, MHTP; Leroy Jackson, project manager, USAID: Yaounde; Michael Farbman, project manager, Office of Urban Development; Simon Fass, U.S. consultant to the project; and Emil Pare, consultant.

Methodology

The methodology employed in Cameroon proceeded in three phases. In the first phase, primary and secondary data were gathered on the characteristics of the project region, particularly on its spatial structure. In the second phase, sectoral and special studies were conducted in the project region. In the third phase, the results of the first two phases were integrated and specific project recommendations made.

The data gathered in the first phase came from both primary and secondary sources. Primary data were collected by implementing a survey in the form of a group questionnaire for 72 centers, selected on the basis of: (1) population, (2) the number of the functions they offered; (3) geographic representativeness, and (4) any special features which distinguished them from other centers. The survey inventoried goods and services (functions), and collected data on permanent and seasonal migration, agricultural production, commercialization, product flows, small scale industry, roads, water supply, education facilities, health facilities, credit, agricultural extension and physical inputs, and locally perceived needs and problems. These primary data were supplemented by data from secondary sources.

Data collected in Phase One were used to define: a functional and an urban hierarchy; subareas based on the identification of effective service areas (for purposes of planning agricultural input and service requirements); to determine locally perceived needs; and to develop settlement profiles. In order to ascertain the functional hierarchy, functions were weighted by ubiquity, and then examined for natural break points. To determine effective service

areas, information on utilization of services generated by the village survey was used. Service areas were derived by drawing a line between a place and a higher order place if 35 percent or more of the services that were not available in the lower order place were obtained in the higher order place. This information was combined with information on physical linkages, and a scalogram analysis performed to define an urban hierarchy.

In Phase Two, three field surveys were implemented: water needs and resources, agricultural range and forestry potential, and small and medium enterprises. Sectoral studies were conducted on agriculture, the productive sector, electricity, water supply, administrative services, transport, communications, tourism, health, and education. According to the final report, "In determining the appropriate locations for sector interventions service specific characteristics such as range, threshold and economies of scale are applied" (Perry 1983: 4).

In the final phase of the project, both sectoral and multisectoral recommendations for specific project interventions were made. Unfortunately, the only information on how multisectoral regional plans were formulated appears in the final report as:

> Functional integration in these sectors is made possible by using a framework whereby interventions in one sector compliment those in another. Proposals have been made for increasing agricultural production through the increased application of agricultural inputs. However, in order to make such inputs available will require better roads, a reliable system of supply and increased credit. Furthermore, these same improved roads as well as increased processing units and chemical storage are necessary to handle the projected expanded production. Spatial integration has been made possible by the use of existing urban centers...in planning for the development of rural areas. Thus, interventions have been proposed for selected settlements to respond to the development needs of their rural hinterland populations (Perry 1983: 1).

Review

It is clear that the methodology employed in Cameroon was similar to the ones employed in the Philippines, Bolivia, and Guatemala. Like the others, it: (1) included a regional resource analysis, (2) defined an urban hierarchy based on an inventory of services and functions and a Guttman Scalogram, (3) combined this information with centrality indices for each settlement, with estimations of areas of influence, and with road network information in order to assess the general spatial constraints to and opportunities for development; and (4) used this information to: (a) recommend investments in certain functions in towns at various levels of the urban hierarchy based on a gap analysis of the hierarchy with the goal in mind of "integrating" the settlement system; and (b) delineate areal units for rural development planning based on the observed travel patterns of residents in smaller towns for functions found in other larger towns.

However, the Cameroon methodology differed from the others in two respects. First, it included, as Phase II, a set of sectoral studies. The purpose of conducting these studies was to facilitate the identification of specific plans and projects. According to the project team, "within an action-oriented framework, the purpose of this Phase Two ...is to further define specific locations and specific program and project interventions" (USAID August 1981: 1). Second, the methodology included a more detailed study of rural to urban migration than had been included in any previous UFRD projects.

Issues Raised

The inclusion of a set of sectoral studies again raised the issue of whether or not the UFRD methodology provided sufficient information for basing

the development on comprehensive regional plans. That the Cameroon project team deemed it desirable to conduct a number of sectoral studies lends credence to the conclusion that the UFRD methodology, if it is to be of utility to planning, must be linked to a larger regional planning exercise, and to more traditional sectoral analyses. As was the case in Upper Volta and Guatemala, the UFRD project in Cameroon was not linked to a broader regional planning effort and its recommendations were not, as was the case in Bolivia, intergrated with recommendations generated by sectoral analyses. It is to the project team's credit that it decided to conduct sector studies, and that these studies were of high quality. However, while ambitious, this attempt at sectoral planning could not compensate for failing to work with an institution with regional planning authority.

Another issue which was raised during the Cameroon project, (raised during previous projects also) was whether or not the UFRD methodology provides an appropriate analytical base upon which to select specific project interventions. In its evaluation of the project the mission stated that: "There has been some criticism that the list of investment represents a 'shopping list' of projects, rather than an integrated, cross-sectoral plan" (USAID May 1982: 2). According to Jackson, once Mission Manager for the project, "the mission and the local (Cameroon) authorities did not comprehend how recommendations were arrived at and the extent to which they did comprehend it, they felt it lacked analytical rigor" (Belsky June 1983: 30). These observations confirm similar conclusions drawn by the Voltan and Guatemalan project teams and by the evaluators of the Philippines and Voltan projects.

Impact on Institutions and Implementation

Because the UFRD project in Cameroon only recently has been completed and because a field assessment trip to Cameroon was not made, it is impossible to say with assurance whether or not the UFRD planning process was institutionalized in Cameroon, or whether its recommendations for projects were implemented. It is clear, however, that the project did satisfy the Ministry of Housing and Town Planning, and that this ministry was convinced that it could replicate the project methodology in other regions. The mission reported that:

> The project has, according to the Ministry of Housing and Town Planning, produced its expected outputs. These include a viable UFRD methodology which can be applied to other regions of Cameroon and a plan for the development of the project area containing a list of future investments in services, facilities, and infrastructure (USAID May 1982: 2).

On the other hand, the project seems to have been disappointing to the mission and to other Cameroon institutions for a number of reasons. According to Jackson, the mission was not convinced that: the project team had fulfilled its obligation to elicit local participation, the methodology lacked analytical rigor, and the project team was inexperienced and inadequately staffed (Belsky June 1983: 3). In its evaluation (USAID May 1982), the mission expressed its dissatisfaction with its own role in backstopping the project, with the government of Cameroon's role, with the fact that the project "was in a sense 'imposed' on Cameroon in that DS/UD (Office of Urban Development) was looking for virgin lands to test its theory and methodology, and was not designed and evolved within the Cameroon context, and with "the whole range of possible implementation problems" which beset the project. According to Jackson:

> Many Cameroon institutions were unhappy with the project because they felt the project team was not readily available, the project team worked around and/or in spite of them... The team did not perceive what services were actually needed...(and) because the project had no actually needed...(and) because the project had no resources with which to implement its recommendations (Belsky June 1983: 3).

In light of the fact that many Cameroon institutions were frustrated with the project and, according to the mission, "the project was not linked into the existing government/planning system, nor was the interest of various ministries sustained" (USAID May 1982: 15), it is unlikely that the plan and project recommendations of the project will be implemented.

It should be noted that a number of the above implementation and institutionalization issues suggest things to be learned that either reinforce lessons learned through other field applications, or add to them. First, in order to be successful a UFRD project must be sensitive to the unique demands of the host government and conditions in the host country. It should not be artificially "imposed" from outside.

Second, given the special knowledge required to conduct a UFRD project and to explain it to others, the project team must be carefully selected and should spend considerable time educating their counterparts and the mission staff. A similar lesson was learned in Upper Volta and Guatemala, where the technical assistance teams were not properly trained to lead a UFRD project.

Finally, as was stressed in every project since UFRD first was applied in the field, a great deal of energy and effort should go explicitly towards developing strong links with a range of planning and decision-making institutions. The Cameroon project team was very successful in forging strong bonds with the Ministry of Housing and Town Planning, but the participation of many more institutions will be necessary in the future to implement UFRD project recommendations. It is now up to the ministry to involve and organize these other institutions to implement regional development plans, if it is feasible and within its authority to do so.

The Contribution of the Cameroon Methodology

By demonstrating the importance of analyzing migration trends to planning for the role of urban centers in rural development, the Cameroon project made an important contribution to the development of the UFRD methdology. Given the importance of rural to urban migration and its particular importance in Africa, its inclusion as a topical study area in the Cameroon project is its credit. Using primary and secondary sources of data, the scope, direction, and impact of migration in the study area were evaluated. Primary data were collected as part of the group interviews in the 72 selected villages. Village groups were asked a number of questions: how many people left their communities every year in search of seasonal employment; how many people had left their communities over the last five years; how many people had left their communities over the last five years; where seasonal migrants went, where permanent migrants went, where immigrants came from, and why migrants left and immigrants came. These data were broken down by ecological zones and compared.

As a result of this special migration study, the project team was able to conclude that Garoua received the most permanent and seasonal migrants in the area, that within the project area migration is characterized by movement from the mountains to the plains, that lack of access to social infrastructure, employment opportunities, good soil and arable land are the main causes of migration. The study concluded that:

> present trends if unchanged will mean: (1) continued abandonment of mountain terraces, resulting in increased soil and water loss of mountain slopes; (2) increased rural-rural migration...causing reduced fertility of the region's soils through extensive shifting cultivation practices; (3) increased migration to Garoua and Maroua occasioned by the expansion of their urban economies and the transformation of seasonal to permanent migration...; and (4) increased importance of outmigration to Nigeria (Perry 1983: 28).

These conclusions, among other things, illuminated the relationship between the causes and impacts of migration, and resource management measured the magnitude of the impact of migration on Garoua and Maroua and identified the causes of migration which would have to be remedied to limit and guide migration. Without studying migration, the kind of extremely thorough, descriptive analysis done in the Philippines can be seen to be incomplete.

CHAPTER IV

PRINCIPAL FINDINGS

In this chapter, the principal findings of the UFRD assessment are elaborated. Lessons learned from the field applications are enumerated and the capabilities and limitations of the UFRD methodology are assessed.

The case studies reviewed in Chapter III demonstrate that a wealth of knowledge was gained as a result of the UFRD project and that a number of lessons were learned in each of the individual field studies. Our purpose here is not simply to recount these lessons, but rather, to generalize the common attributes of each, highlighting those most important to the future use of UFRD. This chapter is more interpretative. It is based not only on the review of the documents generated by the five UFRD field demonstrations, but on interviews with those people principally involved with UFRD in the Philippines, Bolivia, and Guatemala.

LESSONS LEARNED: FINDINGS FROM THE FIELD

Perhaps the greatest contribution of the UFRD project derives from the many valuable lessons learned during its five field applications. These lessons are valuable because they indicate a number of new directions in which the UFRD approach can be applied. From the perspective of forward looking practitioners these lessons are particularly important.

1. UFRD must be oriented more toward project implementation.

The UFRD project was originally intended as a mechanism for developing and testing an operational methodology. Plan implementation as a project goal, however, was not stressed at the outset. The evaluator of the Bicol

pilot project commented that the methodology did not include an implementation model and was not geared toward implementation in demonstrable ways (Horwood 1978: 5). Although subsequent field applications did attempt to achieve implementation, no financial resources were explicitly programmed for that purpose. As a result, and because much effort was necessary to develop an effective analytical methodology, hopes for implementation could not be set very high. One noteworthy exception is Bolivia where implementation of UFRD plans was almost achieved, failing only because a Bolivian coup led to withholding an American loan, part of which was scheduled for the implementation of rural-urban development projects. Nevertheless, Dr. Evans, the resident advisor to the project, expressed concern in his final report that UFRD did not include specific steps designed to achieve implementation and recommended that such steps be included in the future (Evans 1982b: 55).

A consensus now exists that future UFRD projects should specifically address implementation issues by including explicit implementation tasks in UFRD methodologies. UFRD was an important first step to bring new information to the attention of planners in a quick and cost effective manner. The next vital step is to see that this information is used in the implementation of UFRD plans.

2. UFRD's techniques must be directed toward selecting and designing projects for investment in order to achieve implementation goals.

Although the UFRD project paper did not establish project implementation as a goal, nevertheless, the Office of Urban Development tried to achieve it as they saw the five field demonstrations as an opportunity to influence development in tangible ways. As early as the Bicol pilot project, the Office recognized that if implementation was to be achieved, UFRD

would have to move beyond formulating broad plans, such as general locational criteria and investment programs (as were set forth in the Bicol), and be project-specific providing project identification. Chetwynd, then of the Office, wrote that "the Bicol analysis did not get down to identification of specific projects. This was a design flaw which has since been corrected" (1980: 45).

Consequently, those projects that came later--the Cameroon, Upper Volta, and Bolivia--all identified specific fundable projects. In Upper Volta, local revenue-generating projects were designed. In Cameroon specific projects were recommended based on sectoral and spatial studies. "Packet projects" for functional economic areas were recommended in Bolivia. Thus, UFRD already has some experience in identifying specific projects.

3. UFRD must deal more explicitly with institutional issues and respond directly to institutional requirements.

Institutional issues dealing with the formulation and implementation of plans have come to be considered of equal importance to the technical methods used in the formulation of plans. Most planners now argue that the nature of institutions responsible for conducting planning is a key determinant in the success or failure of planning efforts. To respond to this growing sensitivity to institutional factors, technical assistance capabilities and methodologies have been developed for analyzing institutional environments and coping more effectively with them.

From the start, those involved with UFRD were sensitive to institutional parameters and made an effort to understand and work within them. In the Philippines, great care was taken to establish mechanisms by which the university consulting group administering the UFRD project could directly influence the regional planning authority (through the Bicol River Basin

Coordinating Committee) and the line agencies active in the project region (through the Inter-Agency Technical Staff). In Upper Volta, the Office of Urban Development established the UFRD project in the Ministry of Rural Development because the ministry had the authority for supervising the project at the decentralized regional level. Similar care was taken in the other field projects as well. However, the UFRD methodologies employed in each of the five cases did not explicitly consider or directly measure interaction among the institutions responsible for planning, decision-making, and implementation in a project region. An institutional study was done in the Bicol and the project team in Bolivia did make a concerted effort to conduct these kinds of institutional analyses, but it was not until the Bolivia project that it was recommended that such institutional studies be conducted at the outset in future UFRD projects so that their results could be used in guiding the rest of the project (Evans 1982b: 55).

Sensitivity to host planning institutions is particularly important given the prevailing concern with implementation. Institutions are responsible for both planning and implementation and are the vehicles through which these activities take place. In addition to sensitivity to institutions, institution-building is critical. Again, this was a concern of the Office of Urban Development from the outset of UFRD and is an objective which should be further emphasized.

4. Much planning occurs and most institutions are established along sectoral lines. UFRD therefore ought to consider sectoral planning needs more closely.

When UFRD was designed, integrated rural development strategies were being energetically pursued by the World Bank, the United Nations, and USAID (Rondinelli and Ruddle 1978: 21-29). Since that time, there has been a

trend away from integrated planning. In many respects this parallels the heightened sensitivity to institutional factors in the development process--awareness that for planning to be effective, it must be linked directly to an institution with implementing authority.

The role of institutions in implementation is central, as planning in the Third World revolves largely around sectoral agencies. Planning projects must try to take this reality into account. Friedmann has described this situation:

> In most countries planning for specific sectors of the public economy such as transport, housing, education, electric power, or agriculture, is considerably more successful than either coordinated intersectoral or spatial planning at the national level. The reason is that sectoral planning is done by the very agencies that are in charge of making the programmed investments....Planning in these cases is used to guide the daily work of the agency. It provides the necessary information and analysis, produces future projects, furnishes evaluation of costs and benefits, and in a multiplicity of other ways is tied into the formulation of policies, program development, and project design.
>
> Planning in this sense is effective because it is intimately joined to the exercise of power, that is, to control over the legal and monetary resources for carrying out intended actions. Where planning is so integrated without intended action, it must operate under a set of realistic constraints that make its contributions immediately relevant to the manager of power. Plans are usually formulated in terms of the available instruments for implementing programs; questions posed by the potential use of these instruments are the problems to which planning will generally respond. Sectoral planning is, therefore, closely linked with the available instruments of power (1973: 273-274).

Evans recognized in Bolivia that: "sectoral concerns have clearly taken precedence over regional concerns" and that "in developing countries, sectoral planning is usually the norm and spatial planning is likely to be introduced as a parallel activity" (1982b: 15).

Given this reality, future UFRD projects should be made more immediately useful to sectoral planning needs. The information generated by the UFRD methodology should be related to sectoral planning processes.

Developments in the UFRD field applications already foreshadow this finding. In Cameroon, for instance, the project deliberately devoted a major share of its resources to sectoral studies. The hope was that this would lead more purposefully to the implementation of project findings. Unfortunately, host sectoral agencies were not actively enlisted or involved in these studies, and therefore did not have the desired effect. In Bolivia, the project team was very careful to balance the recommendations of sectoral agencies with those of UFRD.

5. UFRD should continue to address regional planning needs despite the the fact that most planning is conducted along sectoral lines.

Although sectoral planning does prevail in the Third World, there are some countries where regional planning institutions have the authority to formulate and implement plans; thus they can pursue regional planning and promote regional development effectively. Even in places where regional planning institutions are nascent and currently without the authority to implement projects, there often is a sincere commitment to make regional planning work. UFRD can and should provide information to these institutions and help local agencies institutionalize a spatial planning process.

6. In order to make a meaningful contribution to regional planning, technical assistance must build the capacity of regional institutions to coordinate sectoral agencies in both the formulation and implementation of multisectoral regional plans.

If UFRD is to be useful to regional institutions, it must address the problems of coordinating sectoral agencies in multisectoral plan formulation and implementation, overcoming an institutional reluctance to cooperate.

This was an important finding of the Bolivia project; in the final report Evans noted that:

> A major problem of regional planning concerns the lack of coordination between units of the central government and the regional development corporations (and)...the lack of coordination between line agencies and the regional corporations means that the latter are obstructed from fulfilling their role of chief coordinator with overall responsibility for development activities at the departmental level (1983, 13-14).

The Clark University assessment team also found that the Bolivians themselves recognize the need to build the institutional capacity of regional agencies to coordinate sectoral agencies, but that the willingness of the parties involved is not always forthcoming. Rushton and Yapa noted that "among the Bolivian principals associated with the UFRD projects, there now is full recognition of the importance of involving sectoral agencies from the beginning in plan formulation" (1983: 7).

In light of this lesson, it would appear that UFRD projects should include technical assistance in sectoral agency coordination as part of their overall design.

7. **A bottom-up approach has been perceived as necessary for UFRD. This approach should address issues of rural demand for and access to urban functions and local participation in planning.**

The Office of Urban Development recognized early on that the UFRD project was quantifying and analyzing the supply of urban functions, but was failing to directly measure the perceived needs of rural target populations. Moreover, these target groups were not actively drawn into the UFRD planning process. Concerned with these deficiencies, the Office initiated the RDUSS project (Belsky and Karaska 1983).

The decision to move in the direction of greater rural participation and to collect data on social interactions and perceived needs of rural target beneficiaries was made just after the Bicol pilot project. In the Upper Volta case, Mead, the director, was encouraged to involve local people as much as possible in the project and to measure perceived needs (Perry 1979). Mead was successful in doing so. He went directly to the towns and interviewed hundreds of people. In the process, Mead, unfortunately, raised expectations on the part of many of those he interviewed that projects would be put in place, but such projects were never funded. Nevertheless, he did succeed in measuring the needs of the local people quite well. In Guatemala, despite the high levels of political violence in the rural areas in 1979, the project team was able to measure the perceived needs of rural populations. In this case, a key-informant survey was used and compared to the more costly and time consuming technique of surveying urban and rural households. The key informant technique proved to be as accurate as the household survey. In an attempt to measure the accessibility of functions located in towns from the rural point of view, the Bolivian project team developed a crude accessibility index, implemented from a household survey of 200 homes.

While these examples of an evolving rural demand-based approach are noteworthy, much work remains. Developing a rural demand-based approach to urban functions analysis and planning should involve at least four components: (i) an assessment of locally perceived needs; (ii) a measurement of demand in an economic sense; (iii) a measure of geographical and institutional accessibility; (iv) an assessment of the behaviors governing spatial choice; and (v) local participation in the planning process.

A rural demand based approach to urban functions planning should build on RDUSS and on the front-end study which was produced for it (USAID 1979b).

CONTRIBUTIONS OF THE PHILIPPINES/BOLIVIA UFRD METHODOLOGY

The UFRD methodology is the most significant contribution that the UFRD project makes to the development community. Through its field applications, it has been demonstrated that the methodology not only is simple and easy to implement, but also replicable and suitable to most Third World contexts (with the exception of regions with virtually no nucleated settlements, as in extreme cases like the one encountered in Upper Volta).

As evidence of its acceptance, the methodology has diffused to at least six academic institutions in the Philippines, and portions of it have been incorporated into technical proposals for other planning projects. In Cameroon, the Bicol methodology was replicated almost in its entirety, gaining the confidence of the Cameroon host institution. This institution, the Ministry of Town Planning, has stated that it is convinced that the methodology can be replicated in other regions of the country, and it plans to do so. In Bolivia, the Bicol methodology, with some important refinements, was replicated again with considerable success, so much so that, had it not been for political issues outside the project's control, portions of the UFRD gnerated plans would have been implemented. Perhaps the greatest indication that the project succeeded in developing a replicable methodology is the project which the Clark assessment team discovered in Oruro, Bolivia (Rushton and Yapa 1983). In this province, without any outside technical assistance and without financial support from USAID, the Bolivians themselves are employing the UFRD methodology developed in Potosi. Most

recently, the government of the People's Republic of China has expressed a strong interest to apply the UFRD methodology.

Through its considerable diffusion and through its consequent impact on the way rural development is now perceived, UFRD has succeeded in bringing important issues concerning the spatial and rural-urban linkage aspects of development to the attention of development planners and theorists around the world. That this spatial approach was promoted by a large and influential development agency makes its contribution even more significant. The UFRD approach sparks constructive debate at professional meetings, international symposiums, conferences, and classrooms and in ever-expanding literature. Sessions on UFRD have been conducted at the meetings of the Association of American Geographers and the Planning and Transportation Research and Computation group; UFRD was the topic of an international symposium at the Asian Institute of Technology and is scheduled as part of a symposium to be held in Dakar in April of 1984; it has been the subject of courses taught at Syracuse University, the Virginia Polytechnic Institute, University of Pennsylvania, and at a number of universities in the Philippines.

Below, both the specific capabilities and the limitations of the methodology as suggested by issues which were raised with it are discussed. For a more detailed discussion of the methodology's capabilities and of its appropriate uses, consult Rondinelli, 1984.

Capabilities

The methodology employed in the Bicol--later refined in Potosi--demonstrated the following specific capabilities:

1. The UFRD methodology constitutes an excellent method of situational analysis of rural-urban linkages.

In countries where planners have little information on how the economy, polity, and people are organized in space, or how urban activities are distributed, UFRD is an effective way to quickly provide that knowledge in a cost effective manner. It provides descriptive information on:

a. supply and distribution of urban functions;

b. general accessibility of rural and urban populations to various services and functions;

c. organization of activities in space around settlements of various levels of functional complexity;

d. spatial variation in levels of development between regions;

e. Perceived needs for urban-based functions;

f. deficiencies (gaps) in the distribution and supply of functions; and

g. deficiencies in the economic and physical linkages between urban and rural areas and among urban centers.

2. The methodology is easy to use and perform and is replicable in any region where centers of varying sizes and degrees of functional complexity are found.

That the UFRD methodology is replicable by local planners has been proven by the project in Oruro, Bolivia where the methodology is being successfully applied without any outside technical assistance. The ministry which conducted the UFRD project in Cameroon also is confident of its replicability. Experience in Upper Volta indicates, however, that in regions where the level of urbanization is extremely low, the usefulness and meaningfulness of the methodology first must be considered.

3. The methodology provides an effective method by which rational economic planning units can be defined.

The UFRD methodology can be credited with finding that traditional ways of bounding planning regions (along natural resource regimes) are inappropriate for economic planning. In the Bicol, one of the principal project findings was that it is inappropriate to bound the Bicol region according to hydrological principles for both flood control and economic planning. Based on observed patterns of marketing interactions, alternative areal planning boundaries for economic planning were recommended. In Potosi, even more careful attention was given to the problem. The concept of functional economic areas (which states that the space economy is organized into areas that, because of the intensity and nature of interactions from place to place, function as economic areas) when used in tandem with the accessibility model developed in Bolivia, proved capable of defining rational economic planning areas.

4. The information which the methodology provides can contribute in tangible ways to both the formulation of regional development and settlement planning policies and strategies, and to regional planning processes already in place but have previously ignored urban centers and rural-urban linkages in their development strategies.

The information provided by the methodology, as described in the introduction of this report and as summarized in the first and third finding above, is useful in both policy formulation and regional planning. Its contribution to policy formulation can be seen most vividly in Bolivia where international aid agencies utilized the project's final report to establish regional macro-policy targets (Rushton and Yapa 1983). The application of

the methodology also constitutes an excellent first step for countries considering decentralization policies because it directly measures the supply of urban functions, where they are located, and the degree of importance of each settlement to its rural hinterland (its degree of linkage/interaction).

The contribution that the methodology can make to regional planning processes already in place, again, is demonstrated best in the Bolivian case. There, the information provided by the methodology proved extremely useful in contributing to the Development Corporation's regional planning process. The definition of functional economic areas became the basic areal planning unit in the corporation's plans; and spatial prerogatives were used, integrated, and balanced with global and sectoral objectives by use of a matrix format. Hence, the project demonstrated how information from the methodology could be used in the planning process.

5. In terms of directly prescriptive applications, the UFRD methodology can be used:

a. to establish general locational criteria for settlements at each level of the hierarchy; and

b. to identify deficiencies in the coverage of functions in the urban hierarchy based on a gap analysis of a manual scalogram--a technique approximating a Guttman scale analysis.

Limitations: Technical Issues Raised Concerning the Methodology

During the field applications, a number of specific issues were raised about the techniques incorporated into the UFRD methodology and their uses.

These issues, excluding those previously discussed concerning implementation, institutionalization, and the need for a rural demand-based approach, are described below.

1. The methodology runs the risk of performing too many analytical tasks and collecting too much data.

This issue was raised first by Norwood in the Philippines. Though it may be that too much data was collected and too many analyses attempted, this may be a consequence of the fact that it was the pilot project. The project team was in the midst of developing a new methodology, incurring all the false starts that this kind of work necessarily involves. While less data were collected and fewer analyses performed in Bolivia, considerable and perhaps unnecessary effort was expended nonetheless. A minimal data set should be described and those analyses be identified that are needed for planning before the methodology is applied in a given region.

2. The linkage analysis is only partial and descriptive and not equal to the task of defining functional economic areas with precision.

This finding was first advanced by Rondinelli in the Bicol and was acted upon by Evans in Bolivia. While the linkage analysis remained partial and descriptive in Bolivia, it was supplemented by the use of an accessibility model which was capable of defining functional economic areas with somewhat greater precision.

3. The manual scalogram provides a powerful descriptive format for presenting data. Planners tend to mistakenly assume that all "gaps" that appear in the scalogram should be "filled."

According to those involved with the selection of the manual scalogram as an analytical technique for use in the UFRD methodology, the use of this

technique for use in the UFRD methodology, the use of this technique as a basis for project identification was never intended. Rather, it was expected that the technique serve as another descriptive tool. The scalogram has a unique ability to convey a graphic sense of the distribution of functions in settlements and thus was judged a positive contribution to the UFRD methodology.

Nevertheless, a strong tendency exists in the field to assume that projects can be selected exclusively from a gap analysis of a scalogram. This is no doubt the case because local planners, in seeking a method for prescriptive planning, seized upon the scalogram as a seemingly simple and appropriate prescriptive technique. Despite the efforts of several consultants to explain to these planners that the scalogram is only a descriptive technique, many continued to see it as a prescriptive one, and either attempted to use it for such purposes or took issue with its appropriateness as a basis for project selection.

4. The accessibility model used in Potosi and the use of centrality indices in both field projects have technical problems.

Yapa has pointed out that both the accessibility model and centrality indices lead to certain ambiguities in interpretation (Rushton and Yapa 1983; Yapa 1983).

CHAPTER V

RECOMMENDATIONS

Based on the lessons learned from the five field experiences with UFRD and the lively debate which it has sparked, we offer recommendations concerning how UFRD should be developed in the future. Concern is focused primarily on the UFRD approach, and secondarily on the UFRD methodology.

Recall that the UFRD approach is designed to introduce information on the roles that urban centers play in the development process. The assumption is that functions located in urban areas and economic activities in them are necessary to both regional and rural growth. Urban centers are viewed not only as places in need of infrastructure, such as housing and sewage, but as potentially active catalysts in the development process.

This kind of information is of considerable value for a whole range of planning tasks. That it has been used to date only in regional planning exercises is an indication of the historical context in which it emerged--integrated rural development planning. It is not indicative of any natural restriction to its use in regional planning. With this in mind, several recommendations follow:

1. **The UFRD approach should be flexible.**

It should be capable of providing information for the task of policy and strategy formulation whether the goals are rapid situational assessment, regional plan formulation and implementation, or sectoral planning. The UFRD approach can and should be used to enhance <u>both</u> regional and sectoral planning.

2. **The Office of Multisectoral Development already has an effective, tested, and cost-effective methodology for providing background**

information on the role of urban centers in a region. They should package and disseminate this UFRD methodology.

This has already begun with the production of a handbook on the UFRD methodology. Additionally, the Office of Multisectoral Development should consider developing a UFRD training course and holding workshops on the methodology in principal AID regions.

3. **The Office of Multisectoral Development should continue to refine the UFRD methodology and develop it as a rapid urban assessment tool.**

Many countries need to assess the structure of their urban systems as a preliminary step to formulating urban and regional policies. The UFRD methodology is ideally suited for this purpose, but the methodology must be refined. For instance, a critical data set should be established, the linkage analysis should be strengthened, and the problems with the accessibility model be resolved. In addition, more information on rural demand and the behaviors governing spatial choice and movement should be introduced, and methods for generating this information tested.

4. **The Office of Multisectoral Development needs to articulate how the UFRD approach is useful to sectoral planning and should develop methodologies to do so.**

Third World realities make it necessary that information on rural-urban linkages be tailored for use in sectoral planning and must begin to develop methodologies for that purpose, if it is to result in the implementation of its plans. The Division of Rural and Regional Development has already begun work in this direction exploring techniques for planning the location of services and improving techniques for analyzing agricultural marketing and off-farm employment opportunities.

5. **The UFRD approach must place priority on project identification and design when, in the future, it is applied to implementation planning.**

UFRD analyses and methodologies must be more clearly and directly related to project identification and design than they have been so far. The critical and logical next step in the development of the UFRD approach is to develop new methodologies, particularly for sectoral planning needs.

6. **Unless the UFRD approach is being used specifically for strategy and policy formulation at the national or regional levels by missions or host governments, financial resources must be programmed for implementation.**

The only reason that UFRD recommendations were not implemented in Bolivia was that money scheduled to be used for this purpose was not forthcoming. Similarly, in Upper Volta, the Cameroon, and the Philippines, implementation could have occurred if implementation monies were available. In general, when these resources are not programmed, planning is a somewhat futile exercise.

7. **When the UFRD approach is applied to regional planning, it is recommended that technical assistance directed at involving and coordinating sectoral agencies in both the formulation and the implementation of regional plans be included as part of the assistance package.**

Experience with UFRD clearly demonstrates that multisectoral coordination in plan formulation and coordination is necessary if plans are to be implemented (as illustrated in the Bolivia project). Where institutions lack the capacity for this kind of coordination, it must be built up through technical assistance. Following the recommendations of Evans (1982b, 55):

> [A] review of agencies involved in development activities should include public institutions, nongovernmental bodies, and prominent regional groups from the private sector. It should seek to provide a brief description of their resources of information and skilled manpower, links to national ministries or other arms of the central government, sources of funding, responsibilities and scope of activities.
>
> The next step should lead to a plan showing how each agency and organization might appropriately be drawn into the planning process...The plan should also take into account community groups... at the later stage of more detailed planning...A final section should consider actions necessary to ensure that participating organizations develop their own capacity to practice (Evans 1982b).

Sensitivity to the nature and goals of all institutions involved with planning in a region, including the regional planning institution itself, is essential to the successful application of the UFRD approach.

8. In the future, it should be made clear that the manual scalogram is only a descriptive technique and should not be used as the sole basis for the identification of possible implementation projects.

To avoid any ambiguity in the use of the scalogram, it should be unequivocably explained to potential users that the scalogram is only a descriptive technique. By so doing, the technique will not be misconstrued as constituting an appropriate base for plan-making. The arguments advanced by Rushton (1978; Ruston and Yapa 1983) are useful in this regard. They indicate that while building on the existing distribution of functions among settlements is a prudent idea, doing so based on a "gap analysis" of a scalogram is taking this logic too far. This is the case because using the scalogram in this way is only a rational exercise if tendencies in the distribution of services in the existing urban hierarchy have a spatial logic, and a rationality that can and should be built upon.

Because literature on the subject suggests that existing urban systems generally do not meet the needs of rural populations, but rather exist to meet the needs and demands of an export-oriented, post-colonial economy, it is imprudent to build on their logic. Rushton points out that using the descriptive scalogram technique as a prescriptive base for planning is tantamount to enforcing settlement distributions which are already "dendritic" and ineffective in meeting domestic demand, especially in the rural areas.

9. **The main thrust in future developments of the UFRD approach, whether these developments be in refining the already tested methodology for assessment purposes or in developing new methods for linking the approach to regional or sectoral implementation planning, should be in the direction of a "bottom-up" approach.**

The need for a rural demand-based approach to UFRD is apparent. In order to promote regional and rural development effectively through planning, it is necessary to measure and analyze the perceived needs of target groups and to measure and analyze the effective demand for a function. In addition, involving rural target groups in project design and implementation is highly desirable.

The Rural Demand for Urban Service Systems Project was a necessary but insufficient step in this direction. While based on a "demand-side" approach, it can be argued that the designers of the project failed to perceive the full meaning and potential of the concept of "demand" for enhancing the UFRD approach.

The traditional economic definition of demand is the desire and ability to consume a certain good or service. By limiting this definition of demand to only the desire or need for a good or service, the Office of Urban Development

failed to consider the important implications of the "ability" to consume a good or a service. Questions about what target groups are "able" to consume and why, were never asked. Hence the questions concerning what price (including travel and social costs as well as the cost of the good or service) a consumer is willing to purchase a good or service and why at that price (the dynamics of consumer choice) were never answered. The information on the supply and flow of ideas, goods, and services provided by the current methodology must be supplemented with rural demand-based information. This information should include data on: (i) behaviors which govern the choice of consumers to utilize a service, function, or activity in a particular location (impacts of choosing locations of investment projects can be better modeled); (ii) effective demand for functions and services (so that rational economic decisions to provide or not to provide a function can be made); (iii) perceived needs of the target group (so that they can be factored into decisions); and (iv) geographical accessibility to the function (so that issues of accessibility can be addressed in project planning). Lastly, local participation in the design and implementation of projects should be actively promoted.

Central to this rural demand-based approach is the issue of accessibility. After all, if target groups cannot gain access to a function, it is useless to them. The importance of "accessibility" as an issue was recognized by UFRD in its project paper. The RDUSS Project attempted to address this issue, and in Bolivia the project team devised an accessibility measurement index. Measuring accessibility involves collecting data on at least the following variables: (i) location of all occurrences of the function; (ii) geographical access of a specific target group to that function; (iii) economic access of the target group to the function.

Measuring accessibility, however, is only effective if information is collected on the behaviors of the target group. Without this knowledge, it is impossible to predict the response of consumers to changes in service provision and, hence, impossible to model impacts of alternative locations and project designs.

REFERENCES

Belsky, E. 1982. Iowa State University trip report. Worcester, MA: Clark University.

Belsky, E., and G. Karaska. June 1983a. Memo to the files. Worcester, MA: Clark University.

_____. 1983b. The Rural Demand for Urban Service Systems Project: The "demand" approach. Worcester, MA: Clark University.

Bicol River Basin Council. 1975. Project proposal for Urban Functions in Rural Development Study. Bicol River Basin, Philippines: Bicol River Basin Council.

Bromley, R. 1983. The urban road to rural development: Reflections on USAID's 'urban functions' approach. Environment and Planning 15:429-32.

Chetwynd, E. 1980. Regional planning projects to strengthen the contribution of urban centers to rural development. Proceedings of Seminar H held at the Planning and Transport Research and Compution Annual Meetings. 37-52.

_____. February, 1981. Memo to the files. Washington, D.C.: USAID, Office of Urban Development.

Chetwynd, E., and B. Hawley. 1977. Urban Functions in Rural Development in Upper Volta. Washington, D.C.: USAID, Office of Urban Development.

Chetwynd, E., and E. Perry. 1979. Mid-term evaluation of Urban Functions in Rural Development Project in Upper Volta. Washington, D.C.: USAID, Office of Urban Development.

Evans, H. 1982a. Urban Functions in Rural Development: The case of the Potosi region in Bolivia. Part I: Concepts, methods and applications. Washington, D.C.: USAID, Office of Multisectoral Development.

_____. 1982b. Urban Functions in Rural Development: The case of the Potosi region in Bolivia. Part II: Preliminary evaluation. Washington, D.C.: USAID, Office of Multisectoral Development.

_____. 1983. Planning and decision making: Implementing an integrated approach to development in the Potosi region of Bolivia. Unpublished PhD dissertation, Massachusetts Institute of Technology.

Farbman, M. 1979. Trip report from TDY in Cameroon. Washington, D.C.: USAID, Office of Urban Development.

Fass, S. 1980a. Report of the project management review of the Urban Functions in Rural Development Project in Upper Volta, February 22, 1980. Washington, D.C.: USAID, Office of Urban Development.

_____. 1980b. Final evaluation report of the Urban Functions in Rural Development Project. Washington, D.C.: USAID, Office of Urban Development.

_____. 1980c. Final evaluation report of the Urban Functions in Rural Development Project: Technical note. Washington, D.C.: USAID, Office of Urban Development.

Friedman, J. 1973. Chapter 12. In Urbanization and the developing countries: Report on the sixth Rehovat Conference, ed. by R. Weitz. New York: Praeger.

Horwood, E. 1978. A report to the Office of Urban Development on the evaluative site visit to the Bicol Urban Functions in Rural Development Project. Washington, D.C.: USAID.

Iowa State University. 1983. A rural development planning program for Guatemala. Ames, IA: Iowa State University.

Johnson, E.A.J. 1970. The organization of space in developing countries. Cambridge, MA: Harvard University Press.

Karaska, G. 1982. Trip report -- Philippines, 1-11 December 1982. Worcester, MA: Clark University.

Karaska, G., and J. Lombardo. 1982. Report to USAID/Guatemala: Integrated Area Development Study. Guatemala City: USAID/Guatemala.

Karaska, G., D. Rondinelli, L. Yapa. 1982. Evaluation of Urban Functions in Rural Development in Bicol, Philippines, 30 November - 1 December 1982. Worcester, MA: Clark University.

Ludwig, A. 1983. A review of Iowa State University's technical assistance contribution to the Integrated Studies Project in Guatemala. Worcester, MA: Clark University.

McNulty, M. 1983. Review of spatial planning/decentralization issues in Kenya. Worcester, MA: Clark University International Development Program.

McNulty, M., and M. Conroy. 1977. An evaluation report on potential sites in Bolivia and Paraguay for the Urban Functions in Rural Development Project. Washington, D.C.: Office of Urban Development.

Mead, T. 1979. Urban Functions in Rural Development in Upper Volta: A quarterly report, March 12 to June 11, 1979. Washington, D.C.: USAID, Office of Urban Development.

Miller, J. 1979. Regional development: A review of the state-of-the-art. Washington, D.C.: USAID, Office of Urban Development.

Miller, S. December 1982. Memo to the files. Washington, D.C.: USAID, Office of Multisectoral Development.

O'Regan, F., and D. Hellinger. January 1979. Memo to David Peacock. Guatemala City: USAID/Guatemala.

PADCO. 1979. Urban Functions in Rural Development in North Cameroon: Terms of reference. Washington, D.C.: USAID, Office of Urban Development.

Perry, E. 1978. Urban Functions in Rural Development in Upper Volta: Report of a field visit. Washington, D.C.: USAID, Office of Urban Development.

_____. 1979. Letter to T. Mead, June 27.

_____. 1983. Final report to the Cameroon Urban Functions in Rural Development Project. Draft of a final report prepared for the Office of Multisectoral Development and the USAID mission to Cameroon.

Ragragio, C. 1983. A report on the dissemination of the Urban Functions in Rural Development Project. Worcester, MA: Clark University.

Rhoda, R. 1982. Urban and Regional Analysis for Development Planning. Boulder, CO: Westview Press.

_____. 1978. Scope of work for urban-rural spatial planner (resident in Potosi). Washington, D.C.: USAID, Office of Urban Development.

Rondinelli, D. 1979. Applied policy analysis for integrated regional development planning in the Philippines. Third World Planning Review, Vol. 1, No. 2, 150-178.

_____. 1978. Bicol River Basin Urban Functions in Rural Development Project: Summary and Evaluation. Washington, D.C.: USAID, Office of Urban Development.

_____. 1980. Spatial analysis for regional development: A case study in the Bicol River Basin of the Philippines. Resource Systems Theory and Methodology Series no. 2. Tokyo: United Nations University.

_____. 1983. Report on UFRD completion and follow-up activities in the Bicol River Basin, Philippines. Worcester, MA: Clark University.

_____. 1984. Applied methods of regional planning: The Urban Functions in Rural Development Approach. Forthcoming from Westview Press.

Rondinelli, D., and H. Evans. 1983. Integrated regional development planning: Linking urban centers and rural areas in Bolivia. World Development 11(1):31-53.

Rondinelli, D., and K. Ruddle. 1978. Urbanization and rural development: A spatial policy for equitable growth. New York: Praeger.

Rushton, G. 1977. Urban Functions in Rural Development -- Bicol River Basin pilot project: The Philippines. Washington, D.C.: USAID, Office of Urban Development.

Rushton, G. 1983. Indian Planning of Urban Functions for Rural Development. Worcester, MA; Clark University.

Rushton, G., and L. Yapa. 1983. Review of USAID Bolivian Urban Functions in Rural Development Project in Potosi, Bolivia. Worcester, MA; Clark University.

Rushton, G., L. Yapa, and H. Evans. 1983. Diary of UFRD evaluation trip to Bolivia, 9-19 August 1983. Worcester, MA: Clark University.

Smith, C. 1972. The domestic marketing system in western Guatemala: An economic, locational, and cultural analysis. Unpublished PhD dissertation, Stanford University.

Southall, A. 1978. Urban Functions in Rural Development in Upper Volta: Report of a field visit. Washington, D.C.: USAID, Office of Urban Development.

USAID. 1976. Urban Functions in Rural Development project paper. Washington, D.C.: USAID, Office of Urban Development.

_____. 1977. Project agreement between the Government of the Republic of Upper Volta and the Government of the United States of America for Urban Functions in Rural Development. Washington, D.C.: USAID.

_____. 1978a. Rural demand for urban service systems project paper. Washington, D.C.: USAID, Office of Urban Development.

_____. 1978b. General agreement between DS/UD and USAID/Guatemala on collaborative project implementation. Washington, D.C.: USAID, Office of Urban Development.

_____. 1978c. Project grant agreement between the Government of Guatemala represented by the General Secretariat of the National Planning Council and the United States of America through USAID. Washington, D.C.: USAID.

_____. 1979a. Project grant agreement between the United Republic of Cameroon and the United States of America for Urban Functions in Rural Development in North Cameroon. Washington, DC.: USAID.

_____. 1979b. Public participation in regional development: A strategy for popular involvement. Washington, D.C.: USAID, Development Group for Alternative Policies for the Office of Urban Development.

_____. 1981a. Urban Functions in Rural Development: Final report of a field demonstration in Fada N'Gourma and Koudougou Regions in Upper Volta, 1978-1980. Washington, D.C.: USAID, Office of Urban Development.

_____. 1981b. UFRD outline of Phase I report and Phase II workplan. Washington, D.C.: USAID, Office of Urban Development.

USAID. 1982. North Cameroon Urban Functions in Rural Development Project: Project evaluation. Yaounde, Cameroon: USAID.

Wilkie, R., and A. Ludwig. 1983. Central place systems in Guatemala: The findings of the Instituto de Fomento Muncipal (a precis and translation). Worcester, MA: Clark University.

Yapa, L., and G. Karaska. 1982. Trip report to the Bicol Urban Functions in Rural Development Project. Worcester, MA: Clark University.

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Horowitz, M., J. Nellis and F. Young. Mission to the Commissariat General au Developpement Regional (Tunisia): Report and a Proposal to USAID/Tunis (French and English version). 1983.

Horowitz, M., M. Salem-Murdock. Report on the Tunisia Mission, January 10-27, 1983. 1984.

IDA. Report on the Case Studies Workshop on Region Based Development. 1984.

Jones, A.K., and R. LaPorte. Report on the Administrative Structure, Management and Training for Baluchistan Area Development Project (BADP)PID. 1982.

Koenig, D. Monitoring Plan for Manantali Resettlement Project Paper (USAID u625-0955). 1983.

Little, P. Local Resource Management in Kenya: An Issues Paper. 1984.

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Perez-Crespo, C.A. Economia y Desarrollo de San Julian. Boletin Informativo Agrapecuario. Corporacion Regional de Desarrollo de Santa Cruz (CORDECRUZ). 1984.

Scudder, T. Regional Planning for People, Parks and Wildlife in the Northern Portion of the Sebungwe Region, Zimbabwe. 1982.

Scudder, T. The Accelerated Mahaweli Programme (AMP) and Dry Zone Development - Report Number Four. 1984.

Scudder, T. The Accelerated Mahaweli Programme (AMP) and Dry Zone Development - Report Number Five. 1984.

Spooner, B. and A. Jones. Baluchistan: An Introduction. 1982.

Spooner, B. and L. Glickman. Baluchistan, Pakistan: A Socio-Economic Literature Review and Analysis. 1982.

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