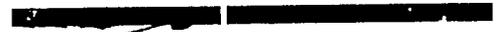


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URBAN FUNCTIONS IN RURAL DEVELOPMENT--BICOL RIVER BASIN
PILOT PROJECT: THE PHILIPPINES

Fourth Quarterly Report: Review of Preliminary Analysis and
Plan of Final Report

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Technical Assistance Bureau
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Trip Report Summary

PURPOSE OF VISIT: The fourth quarterly field visit was scheduled in August in order to monitor and review progress on Phase II of the project--analysis of spatial and linkage data--and to prepare plans for completing the final project report. The U.S. Consultant worked with the GOP (Government of the Philippines) Urban Functions staff in : 1) reviewing preliminary analysis of the data collected on spatial and linkage components of the project, 2) preparing appropriate formats for data analysis to be included in the final study and plan report, 3) organizing for Phase III, and 4) preparing a final outline for the final report.

PARTICIPATING U.S. CONSULTANTS

Dr. Dennis A. Rondinelli

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Urban Functions Project
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DURATION OF VISIT: 12 August-26 August, 1977

PLACES VISITED: Manila, University of the Philippines-Los Banos, Laguna

MAJOR ISSUES, ACTIVITIES AND PROBLEM AREAS

The U.S. Consultant worked with the GOP project staff on four major activities during the field visit: reviewing data collected during Phases I and II of the project, designing appropriate formats for data analysis and presentation, evaluating and redesigning the project's organizational structure for completion of Phase III, and designing the outline and structure of the final report on the analysis of the spatial system within the Bicol River Basin and the development of a policy plan for integrated urban-rural development.

A work schedule was also established for Phase III of the project, within which the GOP staff will complete an initial draft of the final report prior to the fifth quarterly visit of the U.S. Consultant in November.

Operational Progress

The project seems to have recovered time lost due to an initial late start and is nearly back on the original schedule outlined in the project agreement. Phase I, data compilation and collection, is completed and Phase II, analysis of linkage and spatial data, will be completed by September 15.

Disbursement problems reported in the Third Quarterly Report were resolved satisfactorily through the efforts of the staff and AID/P, AD/RD.

The U.S. Consultant reviewed the project organization with the staff and recommended some major changes for Phase III. The nature of work has changed significantly from the data collection and analysis phases, and new demands will be placed on the staff for Phase III, which were not adequately reflected in staffing structure. Part of the problem seemed to be that UPLB pay-scale and accounting constraints limited the amount of time that could be

procured of some key staff members. Some senior staff are only part-time employees of the project during a period in which intensive work will be needed on preparing the final report. The changing nature of the work also presents problems. During periods of data collection and analysis senior staff could work relatively independently on specific segments of the project, and a large number of junior staff were required to complete relatively routine data tabulation tasks. Phase III, however, which is primarily an analytical, writing and planning exercise, will require 1) greater coordination of activities among senior staff members, 2) integration of all staff tasks to produce a final report and plan, 3) concerted effort on the part of the principal report writers, on a full-time basis, 4) stronger supervision of the junior staff on specific activities related to preparation of the final report, and 5) reorganization of the staff to become a support unit to the principal report writers.

Discussions with the project director, deputy project director and senior project staff led to an agreement to reorganize the staff to meet the requirements outlined above. A detailed work schedule was designed to facilitate completion of a preliminary draft of the report by early November and arrangements were made for reviewing the draft in December by GOP consultants. The BRBDP staff and Interagency Technical Staff as well as selected local leaders in the Bicol River Basin will also review and critique the draft report. The U.S. Consultant will provide an in-depth review of the draft report in preparation for an intensive working session in January, during which final revisions will be made. The final report will be completed by the GOP staff during January and will be sent for printing in February. The project should be completed by the end of February, barring unforeseen contingencies and assuming continued recovery of time lost by initial delays in activating the project.

The senior staff will be reorganized into a core writing group to consist of Deputy Project Director Emmanuel I. Astillero and senior staff member Junio Ragragio, with assistance from six to eight staff members and GOP consultants. An editor will be hired to assist the core writing group with editorial and publication questions.

During Phase III, the staff will work at the project headquarters at the University of the Philippines--Los Banos. Some questions arose concerning the adequacy and suitability of facilities for senior staff, but these issues seemed to have been satisfactorily resolved internally prior to the U.S. Consultant's departure.

Completion of Data Analysis

Phases I and II of the project are completed. A small amount of re-analysis and consolidation of data will be done as a result of discussions between the GOP staff and the U.S. Consultant during this field visit. The staff will revise the data compendium described in the Second and Third Quarterly Reports to consolidate some tables and prepare the secondary data for final presentation in a volume to be appended to the final report. Scalogram analysis should be finished by September 15. Preliminary findings of the scale analysis and scalogram exercise are summarized below. All of the linkage studies are now completed and analysis is scheduled for completion by the end of September. The final report of the College of Public Administration study of governmental, political and administrative linkages in the Bicol River Basin should be available by the third week in September and will be an important input into the final analysis and plan for integrated urban-rural development.

Preliminary Findings and Implications

Initial analyses of socio-economic and physical data at the municipal level, and a review of the scalogram of central functions, provide a profile for an almost classic case of rural underdevelopment and inadequate spatial distribution of services and facilities in the Bicol River Basin. Preliminary findings strongly support the basic propositions and assumptions of the Urban Functions in Rural Development overview study, and indeed, go beyond to contribute to a better understanding of the relationship between spatial and economic dimensions of rural poverty in a developing country. The relatively rich data base and the extensive number of studies of various aspects of underdevelopment in the Bicol can be combined into an in-depth analysis of the spatial dimensions of rural poverty in a developing society.

The summary and interpretation of preliminary findings that follows, it should be emphasized, are tentative. The analysis will be modified and documented as data ^{are} ~~is~~ more closely examined over the next two months and integrated into a draft report.

Preliminary findings strongly point to the fact that the Bicol is a subregional area in which services and facilities necessary for serving basic human needs and generating economic development for the rural poor are not only inadequate, but also highly concentrated in a few small central places, which are not widely accessible to people living outside their immediate boundaries. The pattern of settlements is strongly skewed in terms of a hierarchy, and not well articulated in terms of providing central places of different sizes, performing different sets of functions needed for rural development, accessibly located throughout the basin. Almost all services and facilities of consequence to rural development are concentrated in poblacions or town centers, and most

these are clustered near the national highway that cuts through the center of the basin to produce a ribbon of relatively higher level development. A large majority of the rural areas are left unserved by central functions.

Using scalogram analysis and other spatially-related methods, the staff inventoried and scaled 64 major functions, services and facilities that contribute to spatial centrality, in order to determine a functional hierarchy of settlements and to analyze the characteristics and distribution of "urban" functions performed by communities within the Basin. Of the 1,220 settlements within the Basin--composed of built-up areas (poblacions and contiguous barrios) and barangays (small towns and villages)--little more than half contained any of the functions. Nearly 90% of all functions appeared in less than 20% of the settlements. (See Tables 1 and 2).

This highly skewed pattern, in which more than 40% of the settlements are unserved by any function of economic or developmental significance, includes many settlements with only a few very localized social or civic activities. The most ubiquitous of the 64 functions--farmers associations, agro-processing facilities (small rice and corn mills or storage sheds), cottage industries and civic associations--are the most primitive of economic institutions, and even these are found in slightly more than half of all settlements. Most of the other functions that appear in more than 20% of the settlements are either highly localized services, or social organizations with little or no productive activity.

Nearly all services and facilities that could potentially contribute to rural development are found in a few central places, usually poblacions or municipal centers. But even among these "built up areas," functions are unevenly distributed. Nearly 60% of all central functions appear in less than 20% of the built up areas. More than 20% of these places contain none of the central functions.

TABLE 1

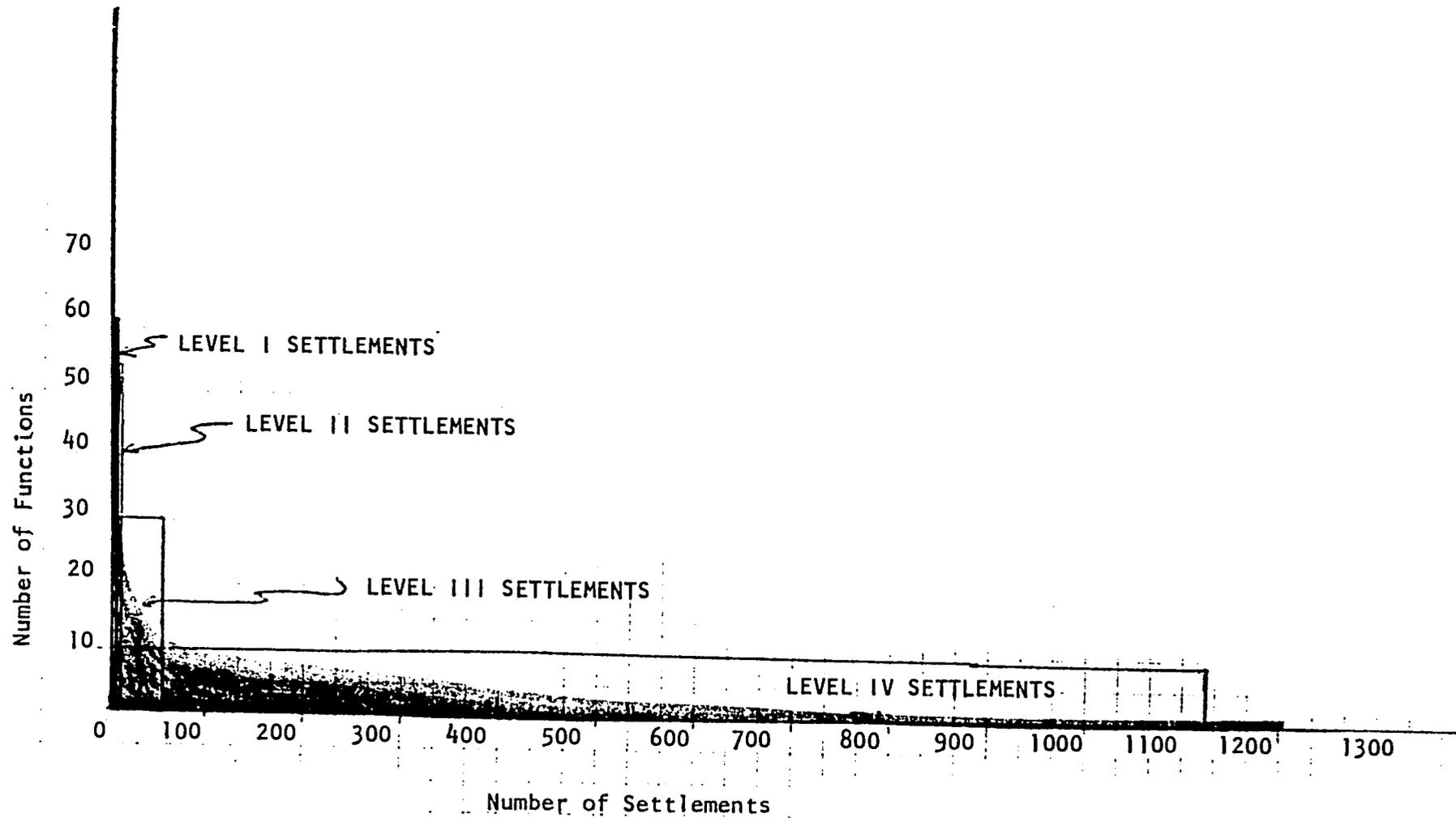
SETTLEMENTS REPORTING PRESENCE OF CENTRAL FUNCTIONS
BICOL RIVER BASIN

Function	Number of Settlements With Function (N= 1,220)	Number of Built-Up Areas with Function (N= 121)
Farmers Association	681	89
Agro-Processing Facility	599	91
Cottage Industry	512	74
Civic Organization	503	74
Piped Water Supply System	305	44
Sports Association	277	54
Paved Basketball Facility	262	63
High School	122	62
Auto Repair Shop	100	33
Private Clinic	95	38
Agric. Extension Sta.(BAex)	93	54
Photo Studio	92	50
Cooperative	90	20
Professional Organization	81	31
Construction Supply Store	78	30
Hardware Supply Store	67	29
Bureau of Plant Industries	66	50
Subdivision (Housing)	65	20
Farm Supply and Agro-chem Store	62	35
Bureau of Animal Indust. (Ext- ension Service)	58	44
Farm Equipment Regional Facility	57	27
Restaurant	56	22
DLGCD (Ministry of Local Government Office)	55	53
Regular (daily) Public Market	54	33
Drugstore	51	30
Playground with Facilities	48	31
Cockfighting Pit (Regular)	45	34
Xerox Copy Service	45	8
Rural Bank	44	36
Labor Union	42	27
PC (Constabulary) Station	36	17
Appliance Store	36	19
Surveyor	36	22
Nightclub or Bar	33	12
Credit Union	33	24
Functional Power Plant/Station	33	13
Telecommunications Station	32	14
Vocational School	31	15
Gymnasium/Auditorium	31	9
Bank or Financial Establish- ment (Other than Rural Bank)	30	10

TABLE 1 (Continued)

Bus Station w/Major Repair		
Facilities	30	10
Private Hospital	27	15
Lodging Place	27	14
Funeral Parlor	26	13
Bowling Alleys	25	3
College	25	8
Optometry/Optical Shop	23	13
Telephone Exchange	23	8
Train Station	23	17
Paluwagen (Welfare Society)	21	9
Cemetary (Memorial Park)	21	4
Cinema w/daily run	18	8
Shopping center	17	7
Operational Government		
Hospital	16	8
Security Agency	12	4
Port or pier	12	3
Radio Station	11	4
Cinema (less than daily)	11	10
Nursing School	11	3
Newspaper Publisher	10	3
Fire Station with Trucks	10	9
Red Cross Office	3	2
Airport	2	1

TABLE 2
DISTRIBUTION OF FUNCTIONS IN BICOL RIVER BASIN SETTLEMENTS



The functional analysis was used in conjunction with centrality indexes, threshold analysis, and secondary socio-economic, demographic and physical data to construct a preliminary profile of a "hierarchy" of settlements in the Bicol River Basin. (See Table 3.) The skewed hierarchy of settlements reflects the distribution of functions. Based on functional complexity, only two central places--the Naga-Camiligan and the Legaspi-Daraga areas--contained most of the functions found in settlements in the Basin. These two places represent less than one percent of all communities, and contain less than 10% of the Bicol's more than 1.7 million population.

The Naga and Legaspi centers perform primarily commercial marketing and administrative functions, serving portions of the provinces in which they are located. They contain the two largest markets in the Basin, through which selected agricultural commodities are exported to Manila and nearby areas and through which nearly all of the Basin's manufactured goods are imported from Manila. Nearly all periodic markets in the Basin with any external trade linkages deal through these two major markets. Trade linkages between these central markets and others within the Basin, however, seem to be both highly selective and sporadic, and do not provide an institutionalized exchange network needed to stimulate agricultural productivity in the rural hinterlands. Naga and Legaspi contain most of the higher level communications, economic, recreational, administrative and marketing functions found in the Basin. Even they, however, perform few secondary (industrial or manufacturing) activities and offer no significant basis for inter-regional trade.

At a second level are 9 settlements-- Iriga, Tobaco, Goa, Tigaon, Pili, Nabua, Baa, Sipicot, and Libmanan--which as a group seem to function as local service centers with from 30 to 54 central functions. These centers

TABLE 3

PRELIMINARY PROFILE OF LEVELS OF SETTLEMENT IN BICOL RIVER BASIN

LEVEL OF HIERARCHY	NUMBER OF SETTLEMENTS	RANGE OF FUNCTIONS	AVERAGE NUMBER OF FUNCTIONS	SETTLEMENTS	FUNCTIONAL CHARACTERISTICS
I	2	60-64	61	Naga-Camiligan Legaspi-Daraga	Provincial Service Centers
II	9	30-54	39	Iriga City, Tabaco, Goa, Tigaon, Pili, Nabua, Baao, Sipicot, Libmanan	Local Service Centers
III	60	10-29	17	48 Poblacions 13 Barrios	Small Rural Service Centers
IV	1,149	0-9	N.A.	62 Built Up Areas 1,087 Barrios	Non-central Places

perform a few area-wide functions and a larger number of local commercial, administrative, marketing and recreational functions than do the barrios. They tend, however, to be within the influence areas of the two Level I communities, and to serve more as complementary centers than as service areas for their own hinterlands. Most are clustered along the national highway or at a junction with the provincial roads.

A third level of about 60 settlements--less than 5% of all communities in the Basin--act as small rural service centers, in which from 10-29 functions appear. Most of these functions, however, are highly localized and seem accessible only to people living in the immediate vicinity of the barrio or poblacion. These settlements have relatively small populations, averaging 3,000 and their economic significance seems to be limited to performing low-level residentiary functions.

The overwhelming majority of settlements--over 1,000 or about 95% of the total--fall into a fourth category of residential, non-central places. These are villages of at most a few hundred families engaged in subsistence or near-subsistence agriculture, working as tenants, on plantations or on small-family owned plots. The demographic surveys indicate that the majority of these barrios have populations of from about 400 to 1,000, generally too small to support any significant form of economic or service activity, even periodic markets, which are the most basic of agricultural exchange arrangements. All communities in this category had less than 10 functions; most contained only a few or none at all. The only functions consistently found in these barrios were ubiquitous local units serving a neighborhood or cluster of houses: sari-sari stores and sometimes a chapel or elementary school. The initial implication is that most of the settlements have populations substantially smaller than necessary to support most functions found in

the Basin and do not constitute viable economic entities. Their pattern of distribution, small size and weak linkages make them inadequate to serve basic human needs, other than a place to build a small hut or shelter, or to provide the productive inputs needed to accelerate rural development.

It should be noted that Guttman scaling of functions provided a functional profile of "built up areas" within the Basin with relatively little differentiation. There were few breaks in the scale scores. Level I and II settlements differ from each other only marginally. Comparison of scale scores with profiles of economic, social, physical, and demographic characteristics indicates that Naga and Legaspi are clearly the Basin's primary central places, but that Level II communities do not differ from each other significantly or from some Level III settlements. Some smaller Level III communities are indistinguishable, for all practical purposes, from many larger barrios in Level IV. Although there are sound methodological and technical criteria for dividing settlements into the four-level hierarchy on the basis of scalogram and Guttman scales, and while the division of the settlements into levels is extremely useful for analysis, planning and programming, in reality, there seems to be little functional specialization or division of labor among communities in the Bicol River Basin. This seems to reflect the predominance of its subsistence agricultural economy and low-levels of income.

Moreover, initial analysis indicates that, within the national spatial system of the Philippines, even the largest central places of the Bicol are only third level settlements. An analysis of the Philippines settlement hierarchy recently undertaken by the PPDO designates Manila as the nation's primate city, which is at least 10 times the size of the only two other regional centers, Davao and Cebu.

The Basin's cities of Naga and Legaspi fall within a third level of settlements performing subregional commercial and administrative functions. These two centers contain virtually no manufacturing activities, and except for limited agricultural exports, provide little or no economic base for exchange with other centers outside of the Basin. They have limited absorptive capacity for migrants, offer limited nonagricultural employment opportunities and hold little current "growth pole" potential. Indeed, they are probably channels for population out-migration and the outflow of resources from the Basin, rather than stimulators of area-wide development.

Bicol's highly skewed distribution of services and facilities is aggravated by extremely weak economic, physical, service and social linkages among settlements. Although some of the functions included in the scale could not be expected to be widely distributed--they are highly central functions requiring large population thresholds--most were basic commercial, administrative, and service functions essential to meeting human needs and accelerating rural development. If they are not widely distributed in settlements throughout the Basin, those living in rural areas should at least have easy access to places where they are located. But central places within Bicol are not easily accessible to most rural areas and settlements are not strongly linked.

The transport linkage analysis, for instance, shows that more than 70% of all roads in the Basin are of poor quality and need upgrading. Only the national highway cutting through the center of the Basin and a few provincial roads are of all-weather construction, and passable during the rainy season. Farm-to-market roads are few and of poor construction. Many rural barrios can only be reached by small boat or on foot. The inadequacy of regular transport linkages

is reflected in part by the heavy dependence on non-motorized vehicles, animal-drawn vehicles, use of illegal "skates" along the railroad track and small boats and barges. The railroad provides limited services to points outside the Basin, and the major centers are linked to Manila by infrequent bus and air service.

Physical infrastructure that might link communities, and that is necessary for higher level economic activities, is clearly inadequate. Electrical power is unreliable, with frequent brown-outs and black-outs, even in Naga and Legaspi. Telephone communications are sporadic, and most places within the Basin lack telephone exchanges.

Formal government linkages among levels are dominated by national ministries operating within the Basin, and formal structure is highly centralized. Most local officials are appointed by and responsible to national ministries. Municipal officials generally are not under the authority of the mayors, themselves holdover appointees under martial law, who have few resources to solve local problems. Most municipalities in the Basin are dependent on the national government for most of their revenues and authority. Decisions often are made through highly personalized relationships.

According to preliminary findings of the College of Public Administration's study of government structure and services in Bicol and the staff's review of secondary data, government services provided by all levels are highly localized. Health, education and other public facilities generally extend services only to populations living in the immediate vicinity of their situs. Even the schools in the larger centers primarily only serve the local area. Health, education and agricultural extension services are far below standards set by national ministries. Preliminary surveys of selected national ministries show that their service and facilities distribution decisions have usually not been made on the basis of spatial analysis or with a clear recognition of population distribution patterns.

Such standards are usually set at the national level with little regard for regional conditions. (See Appendix 1.)

Similarly, the early case studies of the College of Public Administration, indicate that location decisions at the local level are highly political in nature, generally without regard for areawide or spatial implications, and often get bogged down in lengthy political stalemates. Because settlements are weakly linked and the interdependencies are not clearly visible, each local jurisdiction pursues its own interests without considering larger, regional development issues. (See Appendixes 2 and 3.)

Analysis of social linkages further confirms the weaknesses of interaction among settlements in the Basin. In most municipalities, a very small percentage of local men and women marry spouses from outside the immediate locality.

Social interaction patterns among communities in the Bicol seem to be constrained by well defined cultural and linguistic boundaries. The GOP staff is continuing its analysis of marriage patterns and will develop a cultural subarea boundary map to further explore the implications of social linkage on subarea interaction.

Market linkages, which should form a major network of commercial interaction needed to stimulate rural development, also are weak in the Bicol. The greatest market interaction occurs through the central markets located in the two Level I settlements. Regular and periodic markets in smaller communities are generally linked to either Naga or Legaspi. But neither regular nor periodic markets appear frequently in the settlement pattern and those periodic markets that do exist usually serve only the barrio in which they are located. There is little evidence of a well integrated network of markets covering the rural areas in the Basin. A significant portion of the Basin's population lives in settlements too small to support even a periodic market, which adversely affects their ability to sell agricultural surpluses, obtain household goods or to buy inputs needed to increase

Attention of the GOP project staff will focus during Phase III on the implications of the spatial analysis for development policy, planning and programming. The implications for project identification and location will be explored and the issues of equity and access will be examined. Strategies for investment in projects and programs and general location criteria will be suggested.

Dissemination of Results and Institutionalization
of Planning Processes

With the expected completion of the final report by the end of January 1978, the U.S. Consultant suggested that the GOP project staff use part of January and the month of February to disseminate the findings of the study among appropriate academic, government and planning agencies in the Philippines and to assist the Bicol River Basin Development Program to adapt the project's spatial analysis methodology and to institutionalize the planning process.

Tentative plans were made to brief the AID/P staff in Manila and BRBDP on initial findings in November. Other groups, including National Economic and Development Authority regional planning directors and staffs could be briefed in January when final revisions are made in the draft report.

The GOP project staff expects to make tentative findings available to selected representatives of BRBDP and government agencies working in the Bicol during an assessment workshop to be held in late October. The workshop participants will be asked to assess proposed national, regional and local government, as well as BRBDP, plans and programs in light of the initial spatial analysis findings. They will be requested to determine the degree to which proposed plans reflect spatial and locational considerations, and to recommend ways of dealing with spatial

problems related to economic development goals. The recommendations will be included in the policy conclusions of the final report.

Transfer of Procedures and Methodologies to
Other AID Supported Projects

Similarly, in order to assess the replicability of the procedures and methodologies tested in the Philippines, and to transfer adaptable elements to other AID/W, TA/UD, pilot projects, it is suggested that a seminar or workshop be held in Washington at the completion of the Bicol Urban Functions in Rural Development final report. Representatives of the GOP project staff who have worked most intimately on the details of the project should be invited to present a thorough and detailed review of the procedures, methodologies, findings and problems, as well as an evaluation of potential applications, for representatives of the pilot projects to be undertaken in Africa and South America. Interested TAB and regional office personnel in AID/W should also be invited. A major objective of the Bicol project was to test a methodology suitable for adaptation by other countries, and dissemination through an international workshop seems essential to meet that objective.

Moreover, the U.S. Consultant has urged the project staff to design a final report of the Bicol project that is both attractive and easily distributable. The first chapter of the report should concisely summarize the problem, review analytical procedures and methodologies, present the findings and outline major policy and program recommendations, so that it can be used as an "executive summary." The usefulness of the report to local and national policymakers and planners in the Philippines is only one major criterion of success of the project; its usefulness to planners and policymakers with similar problems in other developing nations is of equal importance.