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Bicol Program Impact Evaluation

MAY 1985

AN EVALUATION OF THE BICOL RIVER BASIN DEVELOPMENT PROGRAM

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Finally, and most importantly, we express our warmest friendship with the people of the Bicol. We visited their region during palay harvest. That is a lovely time to visit with palay being made to dry on almost every concrete stretch of road. It is an image of plenty that the team hopes will become a reality for all Bicolanos.

ACRONYMS

ADB	Asian Development Bank
ADT	Area Development Team
AFD	Administrative and Finance Department
AID	Agency for International Development
BDPB	Bicol Development Planning Board
BFD	Bureau of Forest Development
BIAD	Bicol Integrated Area Development
BIDECO	Bicol Development Company
BIHNPP	Bicol Integrated Health, Nutrition and Population Project
BHA	Barangay Health Aide
BLUDPP	Buhi-Lalo Upland Development Pilot Project
BMS	Bicol Multipurpose Survey
BRBC	Bicol River Basin Council
BRBCC	Bicol River Basin Coordination Committee
BRBDP	Bicol River Basin Development Program
BRBDPO	Bicol River Basin Development Program Office
BREP	Bicol Roads Evaluation Project
BSFRP	Bicol Secondary and Feeder Roads Project
CAMS	Council for Asian Manpower Studies
CBR	Crude Birth Rate
CCC-IRD	Cabinet Coordinating Committee for Integrated Rural Development
CDR	Crude Death Rate
CLT	Certificate of Land Transfer
CMG	Composite Management Group
COA	Commission on Audit
CY	Crop Year
EO	Executive Order
FPA	Fertilizer and Pesticide Authority
GOP	Government of the Philippines
GRDP	Gross Regional Domestic Product
GSRDP	Gross Sub-Regional Domestic Product
GVA	Gross Value Added
Ha	Hectare
IAD	Integrated Area Development
IDA	Integrated Development Area
IMR	Infant Mortality Rate
IRRI	International Rice Research Institute
LCPIIS	Libmanan-Cabusao Pump Irrigation System
LIA	Lead Implementing Agency
LOI	Letter of Instruction
M-99	Masagana 99 Program
MA	Ministry of Agriculture
MAF	Ministry of Agriculture and Food
MAR	Ministry of Agrarian Reform
MDR	Maternal Death Rate
MNR	Ministry of Natural Resources

MOH	Ministry of Health
MPWH	Ministry of Public Works and Highways
NACIAD	National Council on Integrated Area Development
NEDA	National Economic and Development Authority
NFA	National Food Authority
NIA	National Irrigation Administration
NRO	NEDA Regional Office
O and M	Operation and Maintenance
OBM	Office of Budget and Management
OCC	Office of the Cabinet Coordinator
OPM	Office of the Prime Minister
PAC	Private Advisory Committee
PD	Presidential Decree
PEC	Program Executive Committee
PMD	Program Management Department
PMO	Project Management Office
PO	Program Office
PPD	Program Planning Department
RDA	Regional Development Authority
RDC	Regional Development Council
RDIP	Regional Development Investment Program
SEPP	Socio-economic Physical Profiles

CONSULTATIVE MEETINGS

During the course of the evaluation, the team interviewed well over 250 people directly connected with the BRBDP, NACIAD, BRBDP projects as well as local government, private businessmen and rural households in the Bicol Region. We want to particularly thank Governor Felix Imperial of Albay, the Program Executive Committee Chairman; Governor Felix Fuentebella of Camarines Sur; Archbishop Teopisto Alberto; Director Carmelo Villacorta, the BRBDP Director; Alberto Olaguer, Regional Executive Director of NEDA; and Salvador Pejo, former BRBDP Director.

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The Executive Summary of the Evaluation Report was formally presented to key GOP and AID officials on May 7, 1985. The presentation was attended by Minister Escudero, Assistant Minister Jose Medina, Jr. of MAR, Gov. Imperial, Assistant Minister Ibay, Assistant Director-General Lawas, Assistant Administrator del Rosario, Director Villacorta, and Director Pejo. A separate presentation was conducted for Deputy Minister Leviste, NACIAD Executive Director and NACIAD Deputy Executive Director Limcaoco.

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AN EVALUATION OF THE BICOL RIVER BASIN DEVELOPMENT PROGRAM

EXECUTIVE SUMMARY

A. INTRODUCTION

The purposes of the evaluation are to:

- (1) Examine the impact of USAID assistance on the economic and social development of the Bicol River Basin.
- (2) Review and assess the role of the Bicol River Basin Development Program Office (BRBDPO) in the region's development, with special emphasis on the office's performance in coordinating development resources.
- (3) Assess the integrated area development (IAD) strategy as a model for regional development.

The evaluation occurs at a time when USAID assistance to the Program is terminating. This is assistance that has covered more than ten years and totalled almost \$29 million--a significant proportion of about P1.5 billion committed to the program thus far by AID, the Asian Development Bank (ADB), the European Economic Community (EEC), and the Government of the Philippines (GOP). The evaluation also occurs at a time when economic difficulties facing the Philippines are encouraging perhaps the most fundamental re-examination of development strategies that has been seen in many years.

B. THE PROGRAM

1. OBJECTIVES

The major objective of the Bicol River Basin Development Program is to increase the per capita income of rural families. Secondary and supporting objectives are to:

- (a) increase agricultural productivity,
- (b) increase employment opportunities for the majority of the farm population,
- (c) provide for a more equitable distribution of wealth, and
- (d) promote agro-industrial and industrial development in the project area.

2. STRATEGY

The Bicol River Basin Development Program has been a test case in the refinement and application of an integrated area development strategy. In the context of the BRBDP, this meant working from problems and constraints back to a multi-sectoral (and presumably multi-agency) strategy to address the problems and overcome the constraints. This has also meant, in some sense, a "systems" approach to problem identification and development planning.

The area component of integrated development is a key element of the program's strategy. A river-basin, a hydrologically-defined rather than administratively-determined area, was to serve as the boundary for the "system". This broad definition soon proved problematic given the available financial resources and the delineation of eight smaller "integrated development areas" (IDA) in Camarines Sur alone. However, these also were not one-to-one reproductions of administrative boundaries, but areas defined more in terms of natural system. But whether the whole Basin was one IDA or several, there was a common assumption made about the relationship between development within the Basin and development in other parts of the Bicol region. The assumption was that if integrated development was successfully concentrated in an area with high quality growth potential, that realized potential would set in motion functional economic relationships and positive economic development throughout the region.

C. IMPACT ANALYSIS

The analysis covered the impact of the Bicol River Basin Development Program on the socio-economic development in the program area. For the most part, the analysis is not directed at individual projects or the relative contributions of all projects, but rather at the overall program. By overall program, we mean the USAID-assisted projects, the domestically funded activities and other public and private investments which have occurred within the program area.

1. AGRICULTURAL PRODUCTION AND PRODUCTIVITY

At the regional level, the data suggest that it may take some time for program impacts on agricultural productivity to be fully noticed. Impacts at the project level have been promising, but have not occurred on a scale large enough to influence region-wide agricultural performance indicators.

At the program/provincial level (Camarines Sur), the data indicate that the irrigation projects resulted in an increase in the effective crop area with a corresponding increase in total production. The availability of irrigation water enabled the program beneficiaries to plant during the dry season.

While productivity has risen to over 3 tons per hectare within the project influence areas, this is short of pre-project target levels of 4.5 tons per hectare.

(i). In the Libmanan-Cabusao (BIAD I) Project, project targets could not be attained due to technical and management problems. On the farm level, however, farmers in the flood-free areas with sufficient irrigation were able to increase the effective crop area planted. With modern technology and appropriate water management, they were able to increase both total production and farm productivity. In the flood-prone areas, the use of high input rice technology became a risky venture.

(ii). In the Bula-Minalabac Land Consolidation Project (BIAD II), initial indications show positive impacts in terms of both increased total agricultural production and productivity.

(iii). In the Rinconada/Buhi-Lalo Project (BIAD III), rehabilitation of the Upper Lalo Irrigation System has improved the reliability of irrigation water supply. This has contributed to moderate increases in total farm production and productivity.

Although rice producers in the project areas have adopted high yielding varieties (HYV's), the provision and utilization of fertilizers and institutional credit show a declining trend.

2. HOUSEHOLD INCOME

Significant increases in average household income were reported for the program area and for each of the three provinces included under the Program. In Camarines Sur, where BRBDP activities were concentrated, the average annual household income reported for 1983 was highest at ₱7,855. In Albay, average household income was ₱7,083 and in Sorsogon, ₱6,918. Rates of change in average household income between 1978 and 1983 were about the same in Camarines Sur and Albay and lower in Sorsogon. It appears that income increases were positively related to BRBDP efforts. In the Integrated Development Areas where more projects were implemented, the average household income levels were higher.

Sixty-two percent of total income in Albay in 1983 came from outside agriculture. In sharp contrast, 61.7 percent of total income in Camarines Sur was from agriculture. Sorsogon's picture was more balanced with 51.6 percent of total 1983 income coming from farming and fishing. The strong performance of Albay despite very limited BRBDP activities in that province can be attributed in part to the relatively good road network as well as its non-traditional income bases.

3. INCOME DISTRIBUTION

Income distribution became more unequal from 1978 to 1983. The degrees of inequality, however, are approximately the same in each of the three provinces. Increase in income between the two survey years was found to be positively related to household income levels.

4. EMPLOYMENT

The composition of the labor force in terms of skills classification by sex has changed somewhat from 1978 to 1983. The most notable change was that more females were entering the labor force, both in agriculture and non-agriculture occupations. Significant increases in labor force participation rates were reported for each of the three provinces and the Program Area as a whole. However, serious underemployment was quite evident in that the proportion of the labor force which had a job in the past week (i.e., the week before the survey) was much larger than the proportion who had a job for at least the past two weeks. Clearly, there is a problem of underemployment and low productivity. This can be seen in the age composition of the labor force which shows that children are a significant proportion of the employed. It could not be that there were so many employment opportunities available that even school-aged children chose to work. Rather, many households could not afford to invest in human capital.

5. REGIONAL DEVELOPMENT

Regional disparities in economic growth continue to persist. The Bicol Region still has one of the lowest per capita gross Regional Domestic Product (GRDP) among the 13 regions of the country. In fact, in 1982 and 1983, per capita GRDP of Region V registered negative growth rates.

The gross sub-regional domestic product (GSRDP) of the program area has increased over the years, but still not sufficiently enough to pull itself out of the depressed region category. This may be due to the following factors: its over reliance on agriculture, the inputs of which are highly sensitive to foreign exchange fluctuations, to availability of credit and to changes in the cost of money; the susceptibility of the region to typhoons, droughts, volcanic eruptions and other natural calamities; and the difficulties encountered by the region in its drive to expand its industrial base such as the high cost of power, poor communication facilities, lack of sufficiently attractive business incentives, unstable demand for some of its manufactured products, and the prevailing peace and order conditions.

On a provincial basis, in 1981, Camarines Sur contributed 50.3 percent of the GSRDP of the program area, followed by Albay with 38.9 percent, and Sorsogon with 10.8 percent. Comparing 1978 and 1981 figures, Camarines Sur registered the highest average annual growth rate of gross value-added (GVA) in agriculture while Albay had the highest growth rates in industry and services. Since the agriculture-related projects under the BRBDP have been largely concentrated in Camarines Sur, it may be inferred that these may have been partly contributory to the increases in the GVA for agriculture during the given periods. Since projects like irrigation, flood control, and roads have long gestation periods, as may be expected, the positive effects are only beginning to trickle in now. It is only with continuing support, particularly in the areas of maintenance and management, can we hope to attain the full benefits from such capital-intensive infrastructure development.

On health, population and nutrition, in the program area, infant mortality rate (IMR) and maternal death rate (MDR) have declined significantly. However, crude birth rate (CBR) has continued to rise particularly in Camarines Sur, thus causing a wider gap between CBR and crude death rate (CDR). Our failure to reverse this trend will cause the population of the region to grow at continuously high rates thereby putting additional stress on the region's resources. A decrease in the 2nd and 3rd degree levels of malnutrition has been observed. In terms of morbidity, communicable diseases still remain as the principal causes of illnesses. From the above indicators it may be said that the BRBDP through its Integrated Health, Nutrition and Population Project has contributed to the improvement of maternal and child health, and to some extent to the upgrading of the nutritional levels of the population. In terms of infrastructure, for the 400 target barangays, the Program has assisted considerably in the provision of communal water systems and environmental sanitation facilities. Greater attention, however, will have to be given to family planning and to the control of communicable diseases. In terms of area coverage, it is necessary to include Sorsogon which historically has exhibited high death rates.

Regarding the road impact, greater mobility, travel time savings, improved access to market as well as to medical, educational and recreational facilities, and higher levels of trading activities have been realized. On the negative side, improved roads have not induced the entry of significant volumes of new economic activities into the respective influence areas. For some existing businesses like rice milling and warehousing, some indicators point to the decline in the volume of business generated inasmuch as the palay is directly brought out of the affected municipalities. This development reminds us that road construction is the minimum requirement for inducing significant economic progress to flow into a given area. Having utilized a more expensive road surface type as in the case of the Program may prove to be a costly mistake if these present negative trends continue in the future.

D. THE ORGANIZATION OF THE PROGRAM

The macro-environment within which the BRBDP evolved and now functions was reviewed. The macro-environment includes three major components: (1) the network of institutions the Program interacts and relates with; (2) the dynamic system which continually generates policy initiatives or redirections which significantly impact on the operation of the entire administrative system; and (3) the resources and capabilities of the Program to play its mandated role in the broader network. The following major themes were discussed in the review.

1. The capabilities and resources of all the participants in a sub-regional or regional interagency development program, such as the BRBDP, will affect the feasibility, quality and durability of the roles participating agencies will actually play in a program.

2. Successful implementation of "integrated" sub-national development programs depends to a large extent on the managerial, technical, and financial

capabilities of participating agencies, as noted above. Therefore, any suggestions to strengthen the managerial, technical, or financial capabilities of a program should not be restricted to strengthening special program offices alone, but rather need to include complementary steps which will affect the capabilities of all important program participants. These steps should begin with a careful assessment of whether the powers and resources vested in specific agencies can support the mission they are asked to accept.

3. The growing complexity of the Philippine bureaucracy and the expansion of government concerns have led to an almost indiscriminate utilization of inter-agency or multi-sectoral committees. When these committees are not given clear functions which they can actually and usefully address, several well-known problems tend to surface--such as declining participation, poor follow-up, etc.

4. If a program office is going to be able to effectively execute its coordinative and management functions in an inter-agency program environment, then two matters need attention. First, establishment of coordinative committees should be accompanied by the development of some minimum standards for participation. These standards should consist of agreed levels of representation and communication that ensure that the committees can function as intended. Second, the political status of the Program Director, relative to those he is tasked to coordinate, must be strengthened.

5. The creation of the NACIAD to succeed the Cabinet Coordinating Committee on Integrated Rural Development underscores the importance given to establishing a planning and coordinating body for all IAD's. The fact that the BRBDPO is under the NACIAD, which is a subcommittee of the Cabinet headed by the Prime Minister, provides the Program Office not only with an aura of power but also a direct channel to top decision makers.

6. The role of the Cabinet Coordinator vis-a-vis the NACIAD and the BRBDPO needs to be clarified, particularly in view of the fact that the Cabinet Coordinator's role could be considered modified to the extent that his functions under PD 1553 are incompatible with the functions of the Chairman of the NACIAD under the revised charter of the NACIAD, Executive Order 835.

E. RECOMMENDATIONS

The recommendations are built on six fundamental premises.

1. For the Bicol River Basin area, the real challenge of integrated area development is only now beginning. This challenge is precisely to facilitate full productive utilization of core infrastructure through a pattern of public and private investment that realizes the potential that the infrastructure offers.

2. The broader challenge facing the program area is a product of the deeper patterns of development revealed by the impact analysis. These patterns reflect factors which are endogenous to the BRBDP area, as well as factors which are external--most notably the macroeconomic environment,

national development policy, and the level and quality of government services available. Taken together, however, the picture painted is of a second-generation type of development challenges focused on agribusiness, non-agricultural enterprise formation and expansion, and rural institutional development.

3. Looming on the horizon is a reduction in the role of foreign development assistance and finance in supporting the BRBDP. This means that the BRBDP faces new challenges in project design, funding and implementation. It means new challenges for cooperation between public and private investment. And it means new very basic challenges for the BRBDP itself--how it functions and what it does.

4. It is important to recognize the BRBDP as part of an "experiment" in regionalization. An important dimension of this experiment, which is national in scope, is that there is not necessarily only "one" way; only a single path that if followed by one must somehow be followed by all. In fact, different paths are being taken, and the travellers who have embarked on these paths have almost all had to acknowledge in one way or another the BRBDP. For all intents and purposes, BRBDP was out there first. But if the several paths are to contribute to any more general understanding, then two things must happen in a more intensified manner: (a) the different sub-regional and regional IAD programs must participate in a broader sharing of experiences and lessons learned from what has occurred thus far, and (b) political commitment at the national level to the value and purpose of the whole experiment must be reaffirmed.

5. The Bicol River Basin Development Program is much more than the Program Office. The Program is the full range of technical, administrative, financial, social, and political resources in the region. The composition of the Program is not limited to public institutions and representatives, but rather includes the wide variety of private actors and agencies. Program management and organization needs to more clearly reflect this.

6. The BRBDP and the BRBDPO are evolving to develop a new orientation. We now ask of the Program, of the Program Office and of the broader institutional and political context--what can be done? To answer this question, it is imperative that we do not have feet of clay. We have to stand on a firm foundation of existing and reasonably expected capacities of the Program network, of the Program Office, and of the broader environment.

We have three broad recommendations, directed at the content of the Program; the organization and management of the Program; and the broader institutional and political context in which the Program functions.

1. The impact analysis and the public sector fiscal outlook point to complex second-generation problems confronting the Region and the Program. Issues of underemployment, unemployment, worsening income distribution, capital flight, low productivity, inadequate economic diversification and possibly declining public investment resources all require a systematic and credible response--particularly in light of the Region's socio-political

problems. The Bicol River Basin Development Program needs to begin a significant shift in the content and orientation of its programming to more clearly reflect the "second-generation" problems now characterizing the region. This implies the following steps:

- a. Optimize the productive potential contained in the infrastructure investments already made. The real challenge of integrated area development does not lie in the completion of infrastructure, but in the facilitation of the economic and social externalities the infrastructure can support. Unfortunately, there is evidence that in regions such as the Bicol, most of the productive potential the infrastructure can stimulate either does not appear, or appears too little and too late to have the desired impact. Optimizing productive potential means investing a bit more to get the full returns on the large investments already made. Optimizing productive potential will be a fundamentally programmatic challenge, in large part related to the allocation of existing government services.
- b. The BRBDP will need to diversify its project interests beyond palay production to other agricultural and agricultural-related pursuits. In particular, the BRBDP will need to consider more strongly than it has issues related to the formation and expansion of cottage, small and medium enterprises. There is a significant programmatic component to this challenge that concentrates on the financing of innovative enterprise development and natural resource management and utilization efforts. The BRBDP needs to become more actively oriented to a developmental strategy, helping to design and negotiate innovative incentive systems that can link development financing to the kinds of needed productive investment and entrepreneurship that are required.
- c. The BRBDP will need to address an important infrastructure issue that has not been adequately recognized to date: communication. Until the region is capable of more reliable and extensive communication with the rest of the country, the vision of private investment is going to be constrained.
- d. The BRBDP will need to continue, and in fact, to increase its attention to problems of family planning, health and nutrition in the BRBDP area. While we have reported significant impacts from the BIHNPP, it is essential not to confuse a good start in addressing the most basic dimensions of human welfare--health itself--from having made any sustainable breakthrough. As noted in the impact analysis, health and mortality conditions in Sorsogon generally, and still in many other parts of the BRBDP area, are simply not acceptable. The BRBDP should not take a proprietary view and conclude, even if only implicitly, that these matters are the responsibility of a specific line agency. The problem is more complex than that. The BRBDP should act accordingly.

2. Program organization must change to be more compatible with and supportive of the programmatic challenges that will be increasingly addressed. It serves little purpose to adopt new directions if program organization is not fully oriented to implement those directions. The management, organization, and activities of the Bicol River Basin Development Program need to reflect more directly the changing needs in the region and the changing environment of the program. This implies the following steps.

- a. The Private Advisory Committee needs to be restructured in order to permit it to perform the role that is now urgently needed, namely a full and broad interaction between the BRBDPO and the complex and multifaceted private sector in the BRBDP area. The PAC should be a bridge that comfortably and naturally facilitates two-way communication between the PO and the private sector. That simply is not the case now. The BRBDP has a complex coordinative infrastructure which concentrates too much on administrative and political representation, and too little on private participation. We believe that this pattern might have been desirable during large-scale infrastructure development. We do not believe that this pattern can be usefully carried into the Program's next phase. The PAC is the most obvious point where the evolution in progress would appear to logically require an evolution in composition. We urge the BRBDP to take this step.
- b. The BRBDP should further strengthen its initiatives to encourage innovative combinations of private investment and development opportunities in the program area. This important issue should be a primary responsibility of a restructured Private Advisory Committee.
- c. The BRBDP needs to exercise initiative to improve the quality of project management and implementation skills among line agencies and local governments in the program area. We are convinced that "second-generation" programming will include large numbers of small projects. We are convinced that the capacity to adequately manage and implement relatively large numbers of small projects does not now exist at needed levels across the program area. There are undoubtedly relative points of strength, however. The BRBDP, working closely in this case with the Ministry of Local Government, should initiate activities which permit the relatively more skilled to upgrade the capabilities of the relatively less-skilled.
- d. More generally, the BRBDP should attempt to develop more specific plans for how the agencies participating in the Program can acquire the capabilities that their participation might imply. The BRBDPO should organize a program-wide effort to review the status of capabilities and strategies for rural institutional development in the program area in order to re-establish commitment to this strategy and to facilitate the sharing of

experiences and lessons in pursuing the strategy. The effort so organized should not have as an objective the determination of any proprietary positions among agencies (including the BRBDPO) about responsibility for rural institutional development, but rather should concentrate on orientation and capability.

3. The developmental challenge facing the program area is urgent. If the Program is going to be able to organize the response and redirection we believe is needed and which it is capable of implementing, then the BRBDP needs much clearer and stronger commitment from the Center. The commitment is required to give the Program Office the political leverage it must have. There is a significant need to clarify some of the relationships between sub-regional IAD programs like the BRBDP and the important elements of national planning, programming and budgeting processes. This need is created not by the IAD programs alone, but more predominantly by national requirements for effective and relatively consistent development planning and budgeting-- particularly in a time of budgetary constraint and policy reform. This implies the following steps.

- a. We recommend that IAD plans and budgets be adopted at the national level by the NACIAD itself. This represents an appropriate and needed level of political commitment as well as a needed supplement to the existing relationship programs have with the Office of the Prime Minister through the Office of the Cabinet Coordinator.
- b. NACIAD should initiate discussions about the issue of the sustainability of IAD programs. This discussion need not be restricted to the status of specific sub-regional organizational arrangements or the evolution of NACIAD's role as a technical assistance agency, but rather should be broadly directed to the questions: What assumptions are we making about the post-infrastructure phase of IAD programming? What are the programmatic and budgetary implications of these assumptions--in terms of resource levels and in terms of processes? Are planning, programming and budgetary procedures as compatible with what we want to be doing as they could or should be? It is our strong contention that IAD programming does not end with the utilization of foreign development finance for infrastructure projects. IAD programming really begins with the rationalization of domestic programmatic funding around productive use of infrastructure. This view, or any similar view of IADs as a domestic programmatic commitment, cannot currently be identified beyond a general mandate in the National Plan. This should at least be reassessed.
- c. In close relationship with the recommendation presented above, we recommend that the representation of the BRBDPO in the national budget be broadened to more clearly communicate the national budgetary commitment to activities in the program area.

- d. The BRBDP Director should report directly to the the Minister who occupies the position of Office of the Cabinet Coordinator.
- e. It is important for each IAD program to encourage as much sharing of capacity as possible among its own participants. However, at the national level, this invites considerable inefficiency. If management or planning skills are available in IAD X and these could be useful in helping IAD Y do its job better, then the possibility for short-term exchange should be present. We recognize the steps NACIAD is taking to develop and extend certain technical assistance in this general area. We encourage this activity. Despite this, however, a significant development resource within the IAD programs is still being underutilized nationally, i.e., the development planning and project implementation experience. The NACIAD should explore specific ways for transferring both positive and negative experience in IAD programming and implementation. We see no reason for every IAD to make the same mistakes or for only some IADs to benefit from promising solutions. Not to facilitate such transfer is to implicitly endorse a "freezing" of capacity where it is presently distributed. Planning and implementation capacity are endowments found in the regions much the same way and often in parallel relationship to other developmental endowments. Consequently, the more experienced and well-endowed regions do better. The less experienced and less well-endowed regions do worse. NACIAD should initiate steps to overcome this.
- f. The BRBDP and the NRO-RDC in Region V should initiate discussions on the relationships between the RDIP process and the BRBDP planning process as the BRBDP shifts to a more domestically funded resource base. We recognize the good personal relationships and extensive linkages that now exist in the region between the BRBDP and the NRO-RDC, but we believe that more careful discussions are still needed. Our view is that the relationship between the BRBDP and the NRO-RDC in Region V through the RDIP can be treated as "experimental." In that mode, the arrangements should be both encouraged and endorsed by NACIAD, NEDA and the OBM.

F. ISSUES AND LESSONS IN IAD PROGRAM MANAGEMENT

Four questions were addressed that provide a way of summarizing issues in IAD strategy and implementation revealed thus far by the BRBDP experience.

1. What is the Program? The full scope of IAD programs--in terms of objectives, activities, and participating agencies--is often considerably broader than what existing management systems can effectively manage or coordinate. The difference between the scope of the Program and the scope of what can actually be managed can lead to problems arising from people's expectations from a coordinating office.

2. What are the relationships of the Program with broader dimensions of the institutional and political environment? Maintaining some elements of a Program's scope requires strong support from within a Program's mission area. Maintaining other elements of a Program's scope requires strong support from the National Government. The challenge is to balance these support bases in favor of consistent goals.

3. What is integration in the context of the Program and its relationships? Extensive coordination and consultation did not prevent the BRBDP from making (or endorsing) a series of program and project decisions that are somehow associated with the mixed results reported in the impact analysis. We are not certain that organizing the BRBDP differently would have yielded a different type of programming. However, had the BRBDP's management been integrated around a more broadly representative cross-section of Basin society and a more broadly based constituency at the national level, other ideas about BRBDP programming might have been reflected in the portfolio of public investment. The challenge to diversify and alter the composition and role of public investment within the program area is still a challenge -- perhaps more now than ever.

4. What does sustaining the benefits of an integrated area development program mean? As the BRBDP redirects its attention on small projects, locally funded, many to be located in areas where the BRBDP has not previously operated, it is important to candidly acknowledge that more is at stake than expectations. For many years, some sectors have worried about rising expectations in the Basin area. The focus on expectations shifts attention to actual and potential beneficiaries and away from actual and potential levels of government performance. Parts of the project implementation experience in the BRBDP alert us to the important distinction between expectation and credibility, between administration and development. What the Program's experience seems to suggest is that the learning curves were not built for small projects, for programs, for developmental (as compared to administrative) management. Ownership and program scope were not negotiated on the premise of a small project, programmatic, domestically funded future. Steps need to be taken to accelerate, in some cases initiate, the growth of learning curves within the program for this new IAD phase.

Six general "lessons" about IAD programming and management seem to be placed in front of us by the Bicol experience.

1. Ownership. Understand the distinction between the scope of a program and the scope of the management arrangements available to mobilize and apply the skills and resources available to a program. Recognize that ownership is only partially a legal phenomenon, much more an outcome of often complex negotiation processes--processes that are episodic and subject to significant discontinuities. When the presumed scope of a program and the actual scope of the program's effective management arrangements differ, what will be feasible in a program will be closer to the management scope than the full program scope.

2. Capacity. Building program capacity requires deliberate strategies to accelerate the learning curves of participating organizations, to encourage the complementarity of these individual learning curves with program goals, and to facilitate the transfer of experience on higher parts of the IAD learning curve with other agencies on lower parts of similar curves. The Program's coordinating bodies need to build on these positive experiences. They also need to ensure that negative experiences have broad learning value.

3. Orientation. If an IAD program is going to shift from big projects to programs, efforts must be made early to integrate organization and management around the accumulation of developmental rather than administrative capacities, missions, and objectives. Failure to do this adequately can jeopardize the feasibility of ever going from projects to programs. Avoid confusing ends and means in program management, organization and strategy. Extensive reliance on coordinating arrangements without a clear understanding of what these arrangements are expected to accomplish can undermine commitment to the program and lead to negotiation around proprietary rather than facilitative issues.

4. Inflexibility. Avoid a hardening of management, participation, and coordination arrangements. Be cautious about complex management, participation and coordination arrangements, the very complexity of which tend to inhibit initiative. Be cautious about building or relying on "temporary" organizations that operate outside the institutional system that would ultimately need to accept a program if the program is to last.

5. Sustainability. A Program is many resources -- administrative, technical, and political. It is important to recognize that while administrative and technical resources are necessary, they are not sufficient. Political resources -- the capacities to secure commitments of others -- are required. There needs to be clear attention to these resources and how they can be mobilized.

6. Commitment. Integrated development takes time to implement, but more problematically it takes time to see results that justify all the administrative overhead. If an IAD strategy is going to be pursued, then there are some minimal commitments that must be made. It is important for the Center not to waiver in its basic commitment to see the Program through. It is important for the Center not to underestimate the need to ensure that Program management can actually manage the Program. There are two major difficulties that these commitments will have to withstand. First, commitment cannot be built on inflexibility. IAD programming, as already stated, needs flexibility. Second, integrated area development, as a pattern of public investment and domestic resource allocation concentrates investment on the premise that what results will have wide effects. If the Center and Program management succumb to the challenge that this pattern of concentrated investment inevitably raises and endorses a thinning-out of investment allocation, the probable consequence will be to further undermine the acceptance of IAD investments altogether and with that, support for the legitimacy of the Program itself.

INTRODUCTION

This evaluation report was completed through a Limited Scope Grant Agreement between the United States Agency for International Development (USAID) and the National Economic and Development Authority (NEDA) with the National Council on Integrated Area Development (NACIAD) as implementing agency. The purposes of the evaluation are to:

1. Examine the impact of USAID assistance on the economic and social development of the Bicol River Basin.
2. Review and assess the role of the Bicol River Basin Development Program Office (BRBDPO) in the region's development, with special emphasis on the office's performance in coordinating development resources.

Assess the integrated area development (IAD) strategy as a model for regional development.

The evaluation occurs at a time when USAID assistance to the Program is terminating. This is assistance that has covered more than ten years and totalled almost 29 million dollars--a significant proportion of about 1.5 billion pesos committed to the program thus far by AID, the Asian Development Bank (ADB), the European Economic Community (EEC), and the Government of the Philippines (GOP). The evaluation also occurs at a time when economic difficulties facing the Philippines are encouraging perhaps the most fundamental re-examination of development strategies that has been seen in many years.

The Bicol River Basin Program is one of the most well-known development programs in the Philippines. It has been a fulcrum upon which much of the country's regional development experience has been based. Beyond that, the Program has attracted international attention as an experiment in integrated area development. It is appropriate, therefore, to ask: What has happened? What has been accomplished? What has been learned? What needs to be done? To answer these questions, this report will be divided into 5 parts.

1. A review of the Bicol River Basin Program Area, the Program, and the Program Office.
2. An analysis of program impacts.
3. An assessment of BRBDP organization and strategy.
4. Recommendations relating specifically to the future of the Bicol River Basin Development Program and more generally, to integrated area development programming in the Philippines.

5. Lessons learned and issues raised by the Bicol River Basin Development Program for IAD program management.

EVALUATION METHODS

Planning for this evaluation began well before the initiation of work by the team which directly produced this report. More importantly, the joint efforts of NACIAD, NEDA, the BRBDPO, and USAID focused on considerably more than drafting terms of reference and identifying and contracting evaluation team members. A formal pre-evaluation was planned, staffed and implemented. This is an important innovation and illustrates important levels of commitment and cooperation.

The pre-evaluation phase (i) initiated impact analysis work using the Bicol Multipurpose Survey (BMS) data sets; (ii) brought together, screened, and made available in very accessible fashion a wide range of quantitative and textual material about the evolution, structure and performance of the Program; and (iii) conducted interviews and field visits to more firmly establish the foundation for evaluation and to ensure that final terms of reference would be more readily operationalized. Consequently, when the formal evaluation team began work on March 19, 1985, a large amount of the total foundation work had been completed and an organizational infrastructure to support the evaluation was not just in place--it was functioning.

For the formal evaluation phase, two sub-teams were created. One sub-team focused on program impacts while the second sub-team focused on institutional and management issues. Data analyses to support impact assessment involved extensive utilization of the BMS, and a wide range of other data sources from the Bureau of Agricultural Economics (BAEcon), BRBDPO, the Ministry of Agriculture and Food (MAF), the Ministry of Health (MOH), the Ministry of Agrarian Reform (MAR), the National Food Authority (NFA), the National Irrigation Administration (NIA), the NEDA Regional Office (NRO), rural banks and others. Several problems were confronted in using these various data sources. These problems are noted in the text of the report. Utilization of the BMS, in particular, was visualized from the outset as the primary basis for impact assessment. However, the condition of the BMS files was not as hoped, in part a product of incomplete "cleaning" of the files for both 1978 and 1983 before the pre-evaluation began, and in part a consequence of design problems in the BMS itself. Nevertheless, this very large data set, as well as the many other data sources tapped, were scrutinized by the team as best as time and resources permitted and as much as precision requirements demanded.

Analysis of institutional and management issues relied on extensive screening of program documents, assessments, and studies (of which there are literally a room-full), related legal and institutional documents, and interviews with over 200 individuals ranging from farmers in the Bicol Region to Cabinet members in Manila.

Finally, as the work proceeded and the report was drafted, highly interactive and iterative processes were employed--within the evaluation team and between the team and many parts of the Philippine system concerned with the Bicol River Basin Program, regional development, and national development policy.

I. AREA, PROGRAM, AND INSTITUTIONS: THE BASICS

The Bicol Region is one of 13 regions in the Philippines. The Bicol region consists of 6 provinces (two of which are separate islands) located on the southeastern tip of Luzon. The Bicol region is home to 8 percent (3.5 million) of the total population of the Philippines and comprises 6 percent of the total land mass. In the early 1970's, when the program was initiated, the Bicol was one of, if not the, lowest ranking region in the Philippines in terms of some basic socioeconomic indicators. For example:

1. A declining per capita income, averaging 49% of the national mean in 1974.
2. Serious income maldistribution, with the poorer half of the population living on only 25 percent of the region's average per capita income.
3. Inadequate employment opportunities, associated with one of the highest out-migration rates in the Philippines.
4. High rates of malnutrition, morbidity and mortality.

Among the chief obstacles to development in the region were:

1. poor transportation and communication facilities leaving large proportions of the population literally isolated;
2. strong susceptibility to natural hazards, most notably volcanic eruptions, typhoons and flooding;
3. unequal access to productive assets;
4. rapid rate of crude population growth; and
5. ineffective performance by government institutions.

In many eyes, the key constraint was flooding. The hydrological characteristics of the Bicol River Basin are indeed perverse. A river with shallow carrying capacity--subject to flooding that is tidally-induced and flooding that follows extensive runoffs from watershed areas after each typhoon. Volcanic eruptions and soil runoffs constantly increase sedimentation levels in the Basin's hydrologic system. All these factors dramatically inhibit the Basin's natural capacity to drain large volumes of water that episodically are present in the Basin's catchment area. Despite this, many people understood that the same water had the potential which could be developed further to become the solid basis of a productive agricultural system.

The Bicol Program, therefore, began where the water was--the Bicol River Basin. The province of Camarines Sur became the first focus of attention.

The neighboring province of Albay came next since it too was a site of both flooding and volcanic eruptions from the very active Mayon Volcano.

A. CAMARINES SUR AND THE BICOL RIVER BASIN

Camarines Sur is the largest of the six Bicol provinces. It has a land area of 526,682 hectares, embracing 1,002 barrios, 35 municipalities, and two cities, Iriga and Naga. The terrain is generally mountainous, but levels off across the center of the province into the extensive plain of the Bicol River Basin. The major portion (66 percent) of the River Basin is located in the Province of Camarines Sur with the remaining 34 percent divided between the Provinces of Camarines Norte and Albay.

As of 1971-72, there were approximately 41,000 hectares of irrigated rice land during the wet season (July-December) in Camarines Sur, most of which was located in the Bicol River Basin. During the dry season (January-April) only 25,000 hectares were irrigated. Within the Camarines Sur portion of the Bicol River Basin, there are approximately 100,000 hectares of soil suitable for irrigation with proper water resource development.

Considerable as the human, water and land resources of the Bicol River Basin are, their development was seriously hampered by several natural and human constraints. First, the structure of agricultural tenancy in Camarines Sur before 1973 was characterized by a relatively large number of landed estates, at one extreme, and, at the other, by a large number of small landowners each with a few tenants working the land. The highest share tenancy areas both in terms of absolute numbers and percentage terms were located in the northern and central portions of the River Basin. In terms of rice and corn share tenancy, which became the thrust of Operation Land Transfer, more than 25,000 rice and corn tenants were clustered in the areas defined by the Bicol River Basin watershed.

Second, as already noted, the Bicol River Basin experiences extensive flood damage in the lowlands adjacent to rivers and streams. The December 1956 flood, for example, caused heavy losses to palay, copra, livestock, and public and private property and the loss of 83 lives. The area typically inundated during flood periods is comprised of 42,000 hectares of land located mostly in Camarines Sur. These are the best agricultural lands in the province. Flood recovery is slow because of the limited drainage system within the Basin. Irrigation was therefore largely confined to areas not subject to flooding. The periodic recurrence of floods and typhoons, coupled with the underdeveloped state of infrastructure facilities--particularly flood control structures, irrigation works, secondary roads, and electrification--made small-scale agricultural production in the Basin considerably more risky than in other areas of the Philippines.

3. THE PROGRAM

1. OBJECTIVES

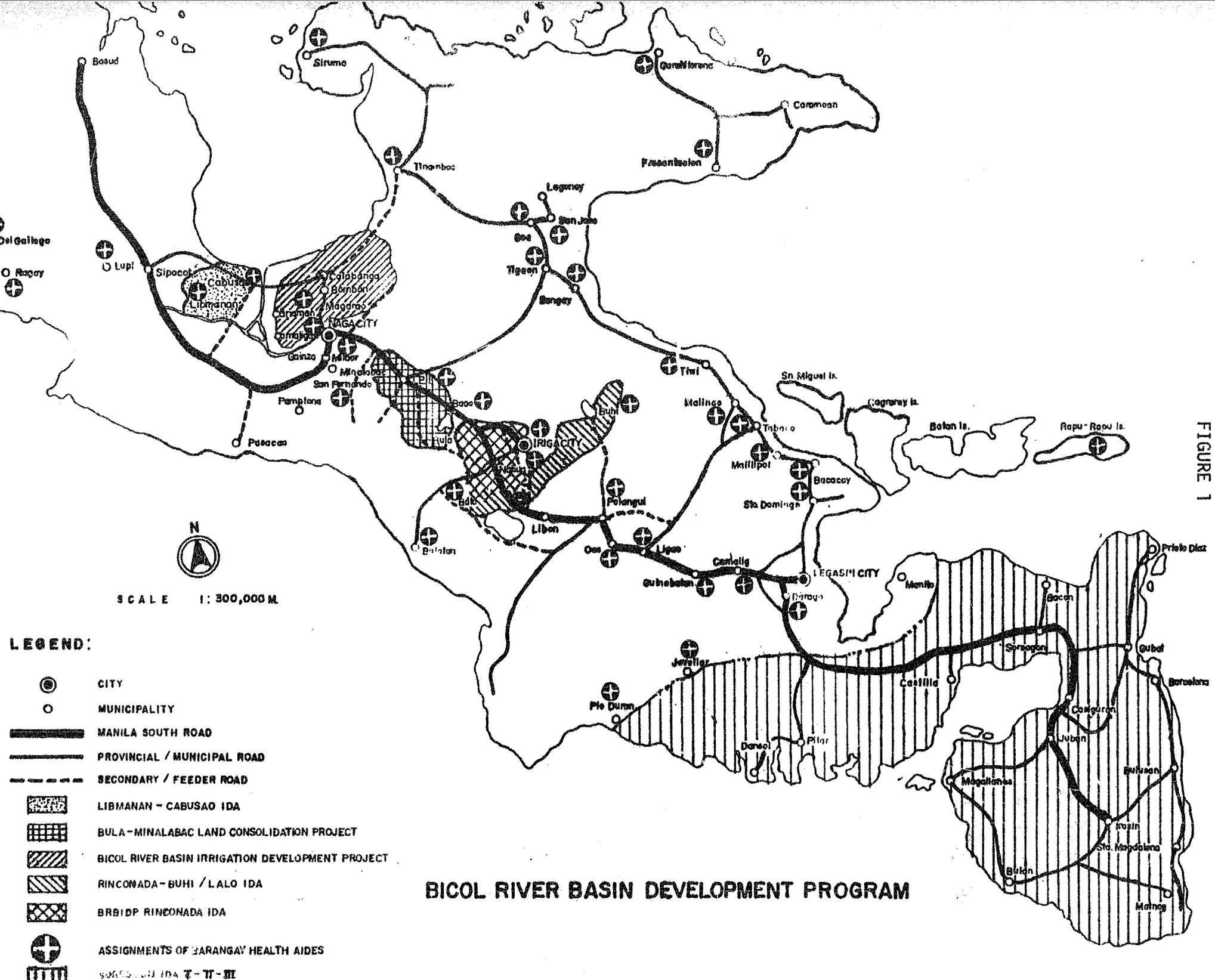
The major objective of the Bicol River Basin Development Program is to increase the per capita income of rural families. Secondary and supporting objectives are to:

- a. increase agricultural productivity,
- b. increase employment opportunities for the majority of the farm population,
- c. provide for a more equitable distribution of wealth, and
- d. promote agro-industrial and industrial development in the project area.

2. STRATEGY

The Bicol River Basin Development Program (Figure 1) emerged as an experiment in applying what were to become very fashionable development planning and administration concepts: integration, area development, decentralization, participation. Integrated Area Development became the key. This meant working from problems and constraints back to a multi-sectoral (and presumably multi-agency) strategy to address the problems and overcome the constraints. Integrated development meant a more ambitious approach to the utilization of administrative resources. It also meant, in some sense a "systems" approach to problem identification and development planning.

The area component of integrated development was another element of the program's uniqueness. A river-basin, a hydrologically-defined rather than administratively-determined area, was to serve as the boundary for the "system". This broad definition soon proved problematic given the available financial resources and the delineation of eight smaller "integrated development areas" (IDA) in Camarines Sur alone. However, these also were not one-to-one reproductions of administrative boundaries, but areas defined more in natural system terms. But whether the whole Basin was one IDA or several, there was a common assumption made about the relationship between development within the Basin and development in other parts of the Bicol region. The assumption was that if integrated development was successfully concentrated in an area with high quality growth potential, that realized potential would set in motion functional economic relationships and positive economic development throughout the region.



LEGEND:

- ⊕ CITY
- MUNICIPALITY
- MANILA SOUTH ROAD
- PROVINCIAL / MUNICIPAL ROAD
- SECONDARY / FEEDER ROAD
- ▨ LIBMANAN - CABUSAO IDA
- ▧ BULA - MINALABAC LAND CONSOLIDATION PROJECT
- ▩ BICOL RIVER BASIN IRRIGATION DEVELOPMENT PROJECT
- RINCONADA - BUHI / LALO IDA
- ▤ BRBIDP RINCONADA IDA
- ⊕ ASSIGNMENTS OF BARANGAY HEALTH AIDES
- ||||| SOURCE OF IDA I - II - III

BICOL RIVER BASIN DEVELOPMENT PROGRAM

C. OVERVIEW OF AID ASSISTANCE TO THE BICOL RIVER BASIN DEVELOPMENT PROGRAM

AID played a key supporting role in helping to initiate the Bicol Program in 1974-75 and in sustaining the expanded Program to date (Table 1). AID assistance includes one completed and one follow-on grant technical assistance project, two sub-loan feasibility studies, one completed Integrated Area Development loan project, and four on-going Bicol loan assistance projects. The following briefly describes the background and status of completed and on-going Bicol projects supported by AID.

1. GRANTS

Bicol River Basin Development Project (1974-1978) The objective was the establishment and institutional development of the broader GOP Bicol River Development Program. AID inputs included technical assistance in planning, preliminary technical and socio-economic studies, initial loan project development, third-country training and commodity procurement. In addition to the first two Bicol development loan projects, the early Bicol Program helped to induce and facilitate additional GOP and other investments in the Bicol Region (e.g., rural electrification, roads, agricultural research, drainage, national railroad improvement, etc.). A joint, in-depth Bicol evaluation in June 1977, led by Arthur Mosher, critically examined and described the status of the Bicol Program at that time. The findings indicated that the joint GOP-U.S. objectives of the early Bicol Program and AID support were achieved.

Bicol Integrated Rural Development (Support) Project (1978-83) The objective was to support the expanded and accelerated GOP Bicol Development Program. AID inputs were primarily in the form of technical assistance to support: (1) GOP line agency implementation and BRBDPO/USAID monitoring of on-going Bicol projects assisted by AID loans, and to coordinate other AID-supported projects or activities in the Bicol, (2) adequate impact evaluation of component projects and the overall Bicol Program, (3) identification, design, feasibility analyses and packaging of additional component projects primarily for external donor financing, (4) promotion of accelerated private sector investment in agribusiness and small-scale rural industry, and (5) the facilitation of institutional spin-off and spread effects from the Bicol Program. A joint evaluation of the broader Bicol Program and this support project was conducted in July-August 1979. An AID Washington sponsored Program Impact Evaluation was conducted in July 1981. A summary report of the latter was published as part of the worldwide Impact Evaluation Series by AID Washington.

2. LOANS

Libmanan IAD I Project - This project was supposed to provide for the construction of a 4,000 hectare irrigation and drainage system plus flood control, salt water intrusion protection facilities, and farm access roads in

Table 1. Financial Status Report
Foreign-Assisted Projects
December 31, 1984
(P000)

Projects	Sources of Funds	Total Estimated Cost	Programmed Amount To Date	Total Releases To Date	Total Expend To Date	Loan/Grant Availment To Date (*)
1. Bicol River Basin Irrig. Dev't Project (BRIDP)		738,622	377,718	319,924	310,771	142,473
Component A & C (NIA)		521,417	210,566	172,166	171,694	109,064
B (MPWH)	ADB 417 PHI/	123,362	94,055	88,179	84,475	9,680
D (MPWH)	ADB 628 PHI/	51,426	44,523	31,659	31,629	11,948
E (MPWH)	EEC/GOP	28,560	18,800	18,606	15,539	10,733
F (BFD)		13,857	9,774	9,314	7,434	1,048
2. Bicol Secondary & Feeder Roads Project (BSFRP) (MPWH)	USAID/GOP	436,000	412,690	398,304	398,304	73,825
3. Bicol Integrated Health, Nutrition & Population Project (BIHNPP) (MOH)	USAID/GOP/PL-480	59,586	34,241	27,638	7,960	
4. Libmanan-Cabusao Project (O&M '84)	USAID/GOP	84,028*	2,243	2,215	2,058	26,411*
5. Bula-Minalabac Land Consolidation Project (BIAD II) (MAR)	USAID/GOP	87,037	87,037	80,481	79,332	12,556
6. Rinconada-Buhi/Lalo Proj. (BIAD III)	USAID/GOP	84,637	70,594	68,872	67,431	-
Irrigation Component (NIA)		81,915	67,872	66,246	65,497	-
Watershed Dev't (BFD)		2,722	2,722	2,626	1,934	-
T O T A L		1,489,909	992,468	704,037	885,534	263,225

(*) Represents Fx Cost (Direct purchases and direct payment) + LC Cost (reimbursable cost)
* Physical Const. Cost w/ USAID Loan 492-T-037 (\$ 3.5 M)

Source: BRBDPO

an economically depressed, but high growth potential area in the lower Bicol River Basin. Institutional and agricultural support components were built into project implementation and post-project system operations. The National Irrigation Administration (NIA) was the lead implementing agency. Direct beneficiaries included 2,500 small-scale farm households. Another 10,000 households in two major towns were to be indirect beneficiaries of flood protection, access roads and secondary economic activity. Pump operation and debugging of the system began in April 1981. A three-year water management applied research and training program was initiated under the auspices of NIA and the International Rice Research Institute (IRRI). Improved extension, provision of adequate credit, post-harvest handling, marketing and related agricultural support activities were targeted to receive increased attention from Ministry of Agriculture (MA) technicians and farmers' cooperatives.

The project had numerous problems including: poor design and engineering supervision; inadequate coordination between the NIA and the BRBDP; environmental damage (significant areas subject to saline intrusion, poor drainage, or no water); poor institutional development; and very low repayment rates. Current service area estimates are approximately 1900 hectares. Of ten re-lift pumps installed in 1983, only four can be operated. At this time there is active speculation that NIA might terminate system operation.

Bicol IAD II - This project is a combination of a land consolidation and irrigation project covering 2,300 hectares in the middle Bicol Basin. The project includes construction of community buildings, improved water supply facilities, organization of farmer associations and cooperatives, and training of project area residents in agriculture and health. Irrigation water for most of the project area will be pumped from the Bicol River and the remainder from ground water sources. The Ministry of Agrarian Reform (MAR) is the lead implementing agency. Six other line agencies are involved in the institutional, agricultural and community support activities. There are an estimated 1,230 small-scale farm family beneficiaries.

The project was significantly delayed and substantial cost overruns were incurred. There were some difficulties associated with resettlement, but some of these difficulties appear to have been overcome. An irrigation association has been formed and is now in its first full year of operation. A successfully resettled village was provided a wide range of support services, a fact which undoubtedly overcame some resistance. Resettlement remains to be completed, however, and households not yet resettled are not likely to have access to as wide range of services.

Rinconada IAD III - Under the project, Lake Buhi was to be developed into a source of gravity irrigation water for an additional 8,000 hectares by constructing a control structure and regulation facilities and by excavating the outlet channel. The project was to rehabilitate irrigation facilities in the existing 1,100 hectare Lalo system and construct new facilities to expand the system to 3,000 hectares using water from Lake Buhi. Irrigation service roads built along irrigation canals would provide improved access and would

tie in with two additional links being constructed under the Bicol Secondary and Feeder Roads Project. Improved water management, farmer organizations and farm family training in the Lalo service area are also supported under the project. Additional irrigation water from Lake Buhi was to be diverted to the existing Barit Irrigation System and to the service area of the ADB-assisted Rinconada project which will rehabilitate and construct irrigation facilities in the Baao and Bula areas. NIA is the lead line implementing agency for this irrigation component. NIA adopted the Lalo system as a pilot test area for its participatory approach to irrigation development on a national irrigation system.

Another component of the project is a pilot upland development program in selected areas of the 10,000-hectare Lake Buhi watershed. This component is under the auspices of the Bureau of Forest Development (BFD), Region V Office. The objective is to assist poor upland farmers increase their productivity and to protect the watershed and irrigation water source. The pilot program was to develop and maintain 5 nursery sites, reforest 150 hectares of denuded public forested lands, and provide for the development of mixed agro-forestry orchards, firewood lots, contoured and vegetative terraces for annual crops on the farms of 95 cooperators.

Rinconada IAD III presents a substantial contrast. The Buhi-Lalo Upland Development Pilot Project (BLUDPP) has experienced serious problems. Although the project is small, virtually nothing has gone right. Upland residents hired to work for the project were periodically subject to long periods of non-payment, the most recent running for 9 months at this writing.

Upper and Lower Lalo irrigation offers a different story. Upper Lalo is now being largely operated by 3 irrigation associations and repayment rates are so high that NIA is fully recovering O&M costs. Lower Lalo is coming on stream and irrigation associations are beginning to reach contractual agreement with NIA on system responsibilities. The project essentially is finishing on-time and within budget.

Bicol Secondary and Feeder Roads Project - This project provides for the rehabilitation and improvement of 194 kilometers (kms.) of secondary roads and 241 kms of feeder roads within the Bicol River Basin. Fourteen separate road and bridge sub-project systems were constructed by the GOP through 26 separate construction contracts. The Ministry of Public Works and Highways (MPWH) was the lead implementing agency. This project increases the road density in the Bicol River Basin area by approximately 50 percent (from 0.29 to 0.59 km. per square kilometer of arable land). It was projected that average transport costs will be reduced by 42 percent for cargo and 40 percent for passengers, and travel time will be reduced by 55 percent because of improved roads. The roads generally traverse intensively cultivated lands, serve small-scale farmers and connect relatively isolated communities with existing highways and market centers. The road project is integrated into the larger Bicol Program and specifically provides secondary and feeder road access to and within the Lilmanan IAD I Project, Bula IAD II Project and the

Rinconada IAD III (Buhi-Lalo) Project. These connect with farm access roads on main canals and laterals being constructed in the IAD projects. The project also provides access in the ADB project supported areas, but additional roads are also funded by ADB.

Bicol Integrated Health, Nutrition and Population - Designed primarily by the GOP, the project emphasized social services to balance the heavy orientation towards physical infrastructure in the rest of the Bicol Program. The project deployed approximately 400 Barangay Health Aides (BHAs), funded environmental sanitation improvements (household water, waste disposal and drainage), and strengthened Ministry of Health (MOH) management and inter-agency coordination. The MOH is the lead implementing agency. Other involved regional line agencies and local governments have placed a high priority on implementation of this project. The design specifically addresses the replicability question. The project assumed that municipalities would accept responsibility for providing continuing salary support for BHAs. This is happening, although in poorer municipalities, where the need for BHA services is greatest, this is less likely. The ability of the MOH to continue to provide technical support for the BHAs--to maintain levels of expertise and possibly to increase those levels--was not so carefully considered however.

3. OTHER AID-SUPPORTED PROJECTS

Where national programs are in place, the Bicol Program functions to support and coordinate with them. This has applied to AID-assisted projects such as Rural Electrification, Provincial Development and PDAP Rural Roads, Rural Service Center (3 cities in Bicol), Agrarian Reform, Cooperative Marketing, Integrated Agricultural Production and Marketing, Small Farmer Systems (Irrigation), Real Property Tax Administration, plus population, health and nutrition project activities. The selection of Bicol as one of the four original sites for the Agricultural Research Loan Project, for example, was planned as part of the Bicol Program. The Agricultural Education Outreach Project also provides support to the Camarines Sur State Agricultural College (1 of 7), which is closely associated with the agricultural research complex and the Bicol Program.

4. OVERALL STATUS OF THE PROJECTS

The Program has been in existence for almost ten years. To date, two of its six capital projects (an irrigation and a roads project) have already been completed although the Libmanan-Cabusao irrigation project is only partially operational and is under rehabilitation. Overall, some 10,600 irrigated hectares (has.) have been generated out of the total of 26,751 hectares targetted in four irrigation projects. Also completed are 190 kms. of secondary roads, 282 kms. of feeder roads and 71 bridges. Of the total programmed 176 units of Level I water facilities for 91 barangays, 133 (76 percent) units have been installed so far. In addition, three (60 percent) of the five Level II water system has been completed although not yet turned-over to the respective water-users federation. As of December 1984, the four

ongoing capital projects under the Program were delayed with slippages ranging from -1.45 percent to -12.2 percent.

D. OTHER DONOR SUPPORT

One of the stated purposes of the Bicol grant technical assistance project was to prepare project packages and secure major financing from external donors for the Bicol Program. Sub-loan project feasibility studies, institutional and other technical assistance were provided to facilitate the entry of other donors. The first major project with another donor was signed in October, 1979. It is a \$46.8 million package which includes a \$41 million Asian Development Bank loan and a grant of \$5.8 million from the European Economic Community. The ADB-assisted project includes (a) major irrigation and related components in the Naga-Calabanga Integrated Area Development (IAD IV) area and (b) major components in the Rinconada IAD III area. The project is providing resources for irrigation, drainage, access roads, agricultural support services, and the development of community water systems.

C. INSTITUTIONS

1. EARLY ORGANIZATIONAL STRUCTURE

The Bicol River Basin Council (BRBC) was created under Executive Order 412 issued on May 17, 1973 (Figure 2). Its main role was to provide coordinated leadership and direction to developmental undertakings within the Bicol River Basin by supporting plans and feasibility studies for domestic and foreign financing. The BRBC consisted of a Board of Directors with eight members. The Secretary of Public Works, Transportation and Communication was Chairman with the following as members: Director General, NEDA; Secretary, Department of Agriculture (now MAF); Secretary, Department of Local Government and Community Development (now the Ministry of Local Government); Secretary, Department (now Ministry) of Agrarian Reform; Governor of Camarines Sur; and Executive Director, BRBC-Program Office. The Program Office was headed by an Executive Director who was assisted by a Deputy Director for each of the four Departments--Physical Infrastructure Department (PID), Plans and Program Department (PPD), Social Infrastructure Department (SID), and Administrative and Finance Department (AFD). Sectoral planning and coordination were undertaken by the technical departments--PPD for the economic development sector, SID for social sector and PID for infrastructure sector.

During the period of its existence, the BRBC was highly centralized, despite the establishment of a field office. The power and authority to negotiate and pay technical contracts, hire and organize staff, and to release funds were vested in the Manila Office of the BRBC Chairman. As a result, the relationship between the Program Office (Bicol based) and the Office of the BRBC Chairman was constantly strained.

**NICOL RIVER BASIN COUNCIL
ORGANIZATIONAL CHART
(EO 412)**

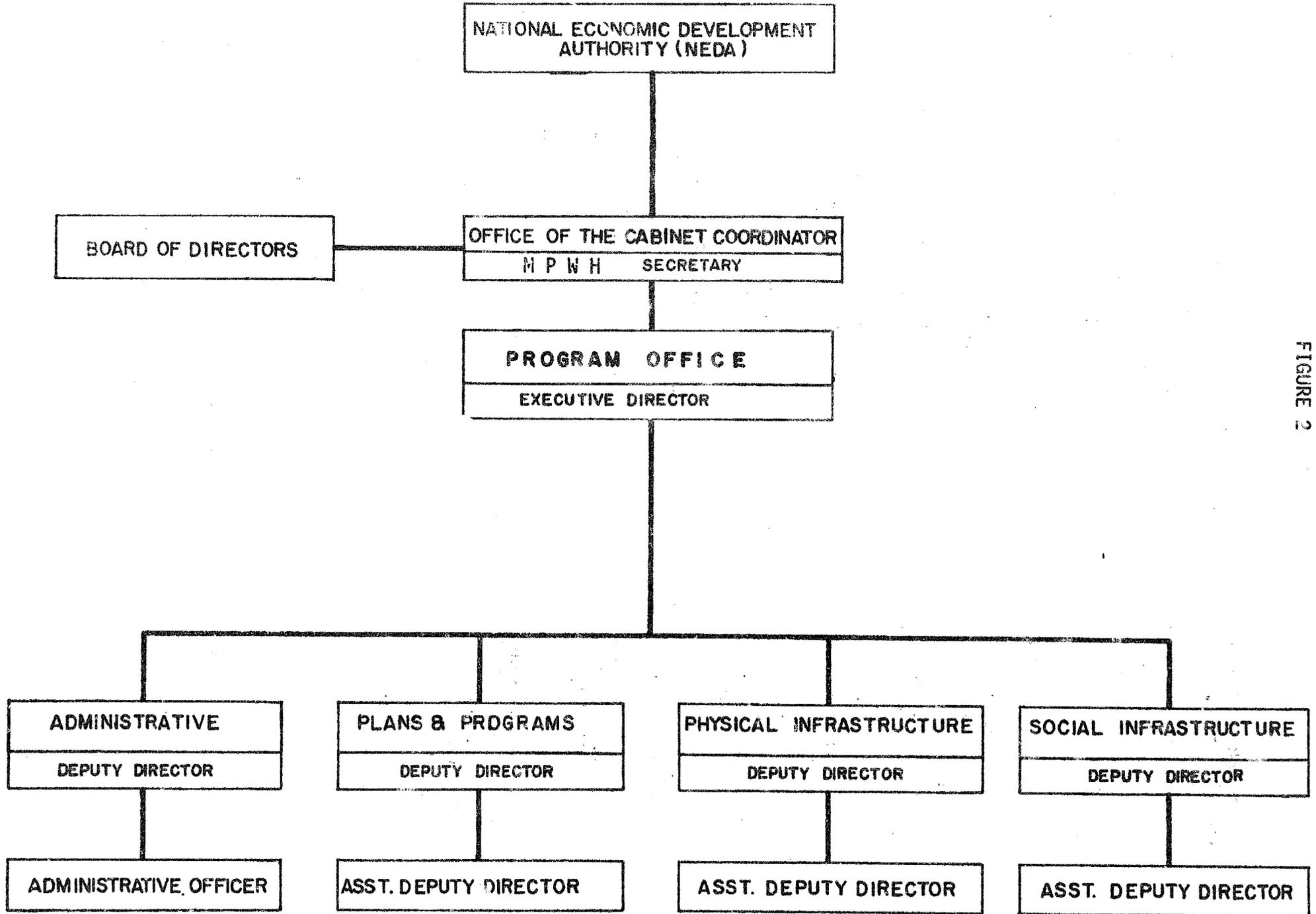


FIGURE 2

The BRBC-Program Office operated with an organizational staff composed basically of three types: a) BRBC contracted technical and administrative staff; b) joint line agency-BRBC employees with NIA, DAR, DLGCD, etc. (The Deputy Directors of the SID, PID, and AFD were concurrently Regional Directors for DAR and NIA and the Chief Accountant of NEDA respectively); and c) external technical assistance personnel from domestic and foreign consultants for specific projects. The consultants conducted training seminars and special project studies with the Basin staff.

In 1974, under a program agreement with USAID, a Special Fund Account was established under NEDA. The purpose was to simplify fund administration as all GOP funds would be coursed through this account. In practice, some agencies released their funds through the SFA while others released directly to the BRB Program Office. Funding per se was not regarded as a major problem. Although some line agencies had no line item provisions in the budgets, they were still able to meet their commitments.

The priority of the BRBC was the task of institution building. To assist in its coordination function, a Management Council was formed, composed of the regional directors of concerned line agencies. A Private Advisory Council which represented the private sector was also organized. BRBC's activities also focused on the generation of field data to be used for planning and project development primarily through the Social Survey and Research Unit (IPC-Ateneo de Manila) which was under contract with GOP and USAID. The organization advanced rapidly in developing capability for conducting feasibility studies. However, comprehensive planning was in large measure subordinated to project planning.

2. THE CREATION OF THE BICOL RIVER BASIN DEVELOPMENT PROGRAM (PD 926)

Presidential Decree 926 issued on April 26, 1976 abolished the BRBC and created the Bicol River Basin Development Program (BRBDP). This decree spelled out as its declared policy the integration of national and local government programs and projects, and the decentralization of the planning and implementation of rural development projects. The BRBDP thus was to be comprehensive, decentralized and framed within regional and national plans.

The decree created the Bicol River Basin Development Program Office (BRBDPO) to be supervised by the Cabinet Coordinating Committee for Integrated Rural Development Projects (CCC-IRDP) through a Cabinet Coordinator (then the Secretary of the Department of Public Works, Transportation and Communication, now the Minister of Public Works and Highways). A Manila Liaison Office under the Program Office was also created for the purpose of soliciting support and facilitating coordination with the various national line agencies located in Manila. At the program area level, the decree also created the Bicol River Basin Coordination Committee (BRBCC) to serve as the policy-making and coordinating body. The BRBCC is chaired by the Program Director of the BRBDPO with the NEDA Regional Executive Director as Vice-Chairman. The members of the Committee included the Governors of Albay and Camarines Sur and the

Regional Directors (or their duly appointed representatives) of the various line agencies operating in the program area (Figure 3).

The issuance of PD 926 clarified the role of BRBDP in the regional context. The decree also gave the Program Office its own line item in the national budget. After a difficult beginning, the Program Office developed working relationships with line agency regional offices, and provincial and municipal governments through ad hoc task groups, working groups and interagency teams.

Presidential Decree 1553 issued on June 11, 1978 mandated the expansion of the area coverage of the BRBDP to include all the municipalities and cities of Camarines Sur, Albay and Sorsogon. On the basis of the decree, the Governor of Sorsogon was included as a member of the Bicol River Basin Coordination Committee.

3. ORGANIZATION OF THE BRBDPO

The BRBDPO created by PD 926 is headed by a Program Director with a Deputy Director for each of its three departments.

a. Program Planning Department (PPD)

The Program Planning Department is responsible for the formulation of program and project plans, the conduct of research, and preparation of project pre-feasibility and feasibility studies. The PPD has two divisions:

(i) Research Division - responsible for the generation of data for planning, project development and evaluation; data processing and storage; and operations of the BRBDP Technical Library and Data Bank.

(ii) Project Planning and Development Division - responsible for the preparation of development plans, pre-feasibility and feasibility studies; extension of technical assistance to ADT's and the private sector; and the conduct of investment promotion activities.

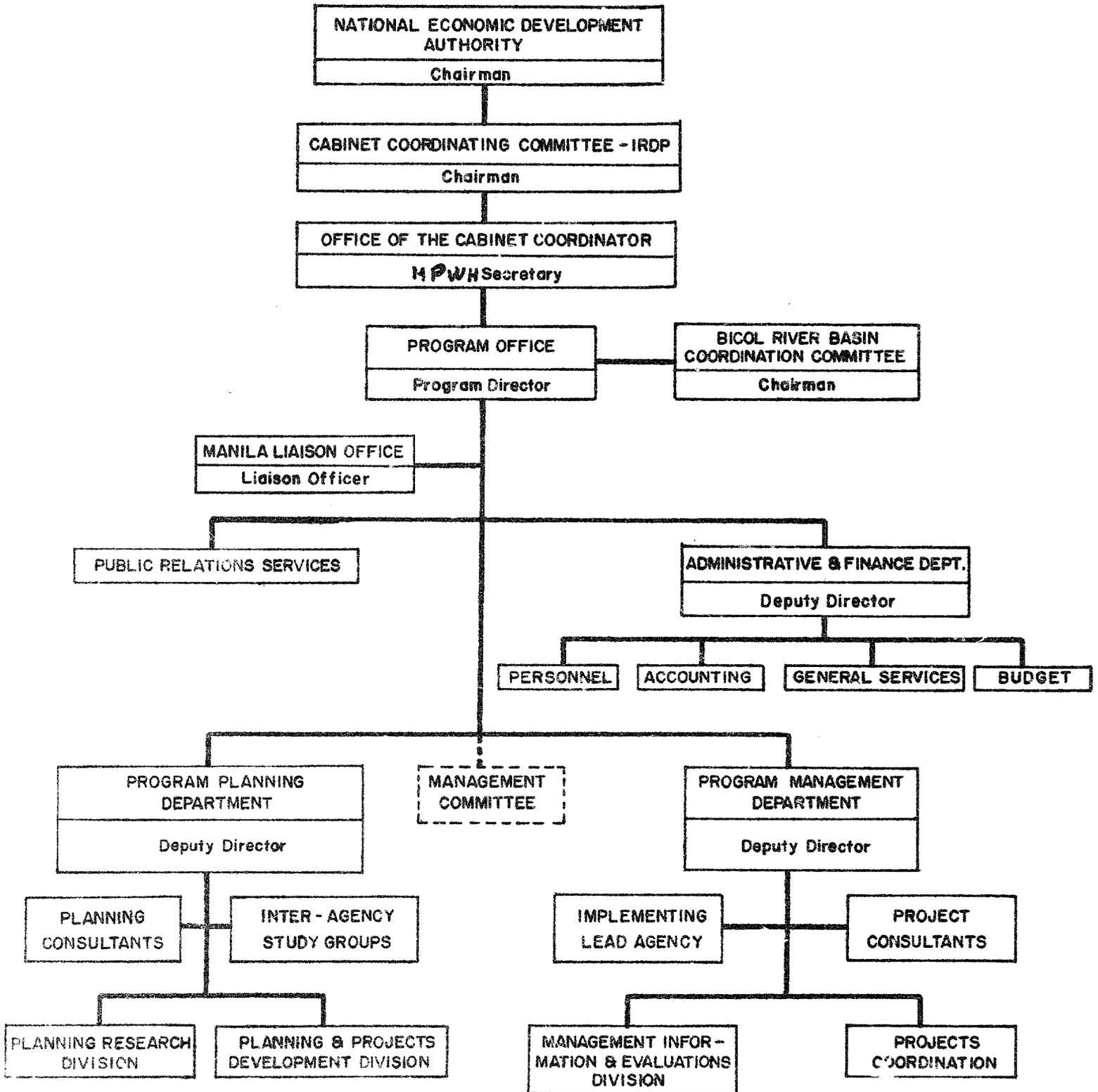
b. Program Management Department (PMD)

The Program Management Department is responsible for the development of an information feedback system and control mechanisms for BRBDP projects; the conduct of evaluation studies; and the identification of problems, potential sources of delays, solutions, and policy issues affecting program management. Presently, the PMD has two divisions:

(i) Project Coordination Division - responsible for establishing and maintaining linkages with the line agencies involved in the implementation of BRBDP projects and with socio-political institutions at the provincial and municipal levels; supervision and coordination of the Area Development Program and monitoring activities of the Area Development Teams.

FIGURE 3

ORGANIZATIONAL CHART (PER PD 926 AND IMPLEMENTING GUIDELINES)



(ii) Project Monitoring and Impact Evaluation Division - responsible for providing information on the financial and implementation status of BRBDP projects, conducting surveys and gathering information to determine project impact and effectiveness.

c. Administrative and Finance Department (AFD)

The Administrative and Finance Department provides support to the the operating departments. It has four divisions: Accounting, Budget, Personnel and General Services.

Support units under the Office of the Program Director are the Manila Liaison Office (MLO) and the Public Information Office (PIO). The former serves as the communications link between the BRBDPO in Bicol and central offices in Manila. The PIO takes charge of the development communications program of BRBDP.

4. THE CREATION OF THE PROGRAM EXECUTIVE COMMITTEE (PEC)

The coordination structure of the BRBDP was augmented in 1982 with the creation of a Program Executive Committee (PEC) through NACIAD Special Order No. 303. The PEC includes representation from the Program Office (Program Director), the regional level (RDC Chairman), the national level (Office of the Cabinet Coordinator and NACIAD) and the private sector (PAC). The PEC is the only coordination unit of the BRBDP where the NACIAD is represented and participates directly in resolving problems encountered by the Program, and in assessing the progress and accomplishments of participating implementing agencies in the Program.

5. INTERNAL REORGANIZATION OF THE BRBDP STRUCTURE

During the incumbency of Director Lorenzo B. Ballecer as Program Director (1981-83), a reorganization of the BRBDP Office structure was proposed (Figure 4). The changes proposed included: creating a new Program Research and Evaluation Department (PRED), reorganizing the existing departments, and adding upper-level program staff and management control systems. When the current Program Director assumed his responsibilities, the reorganization proposal was shelved.

**PROPOSED BRBDPO ORGANIZATIONAL STRUCTURE
(JUNE 1982)**

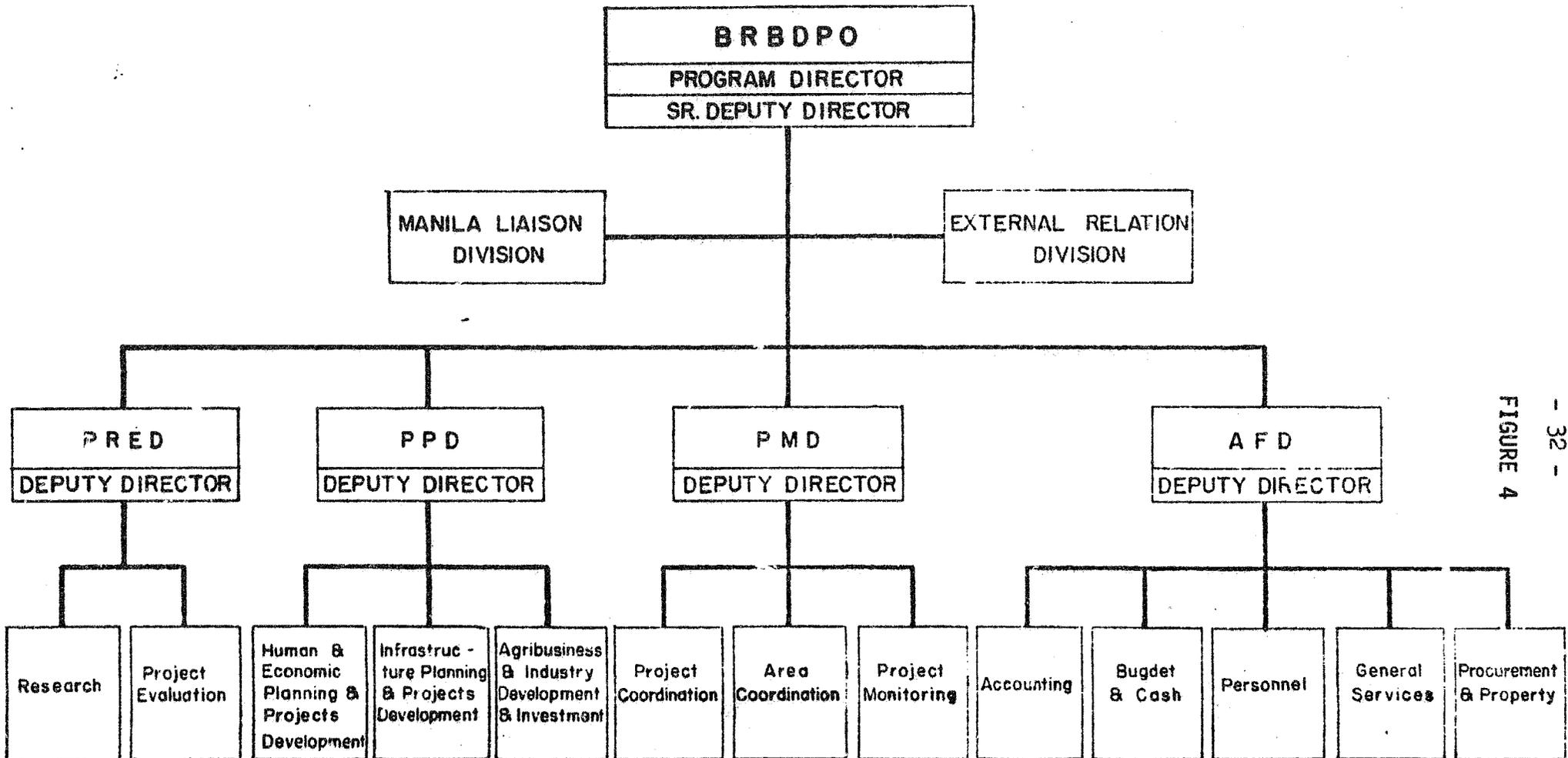


FIGURE 4

6. CURRENT ORGANIZATION

The Program Office is today only part of a complex network of vertical and horizontal relationships (Figures 5 and 6) that are all together the coordinating mechanisms of the Bicol River Basin Development Program. Some of the elements of this network have already been identified, but in the paragraphs that follow, their roles are defined more fully.

a. The National Council on Integrated Area Development (NACIAD)

The National Council on Integrated Area Development was created to oversee the operations and management of all identified integrated area development projects in the country. It is composed of the Prime Minister as Chairman, with the heads of various ministries as members. The Council functions through a Secretariat supervised by an Executive Director appointed by the Prime Minister.

The Executive Director is the executing officer of the NACIAD. He implements policies, guidelines, and orders concerning management and implementation of integrated area development activities issued by the Council. He recommends policy guidelines and submits program of work activities in consonance with the policies and plans promulgated by the Council and periodically submits financial and work accomplishment reports to the Council.

b. The Office of the Cabinet Coordinator (OCC)

The Minister of Public Works and Highways was until very recently the Cabinet Coordinator for BRBDP. The new Cabinet Coordinator is the Minister of Agriculture and Food. The OCC acts on all administrative matters in accordance with the broad policies and guidelines established by the NACIAD. He oversees the coordination of the planning and implementation of the programs, reviews the BRBDP consolidated plans, budgets and work programs; arranged and/or negotiates with local and foreign financial institutions, subject to approval by the NACIAD for funding rural development projects in the Basin; approves requests from implementing agencies for budget releases covering BRBDP projects; appoints the Program Director and heads of major organizational subdivisions of the Program Office; brings to the attention of the NACIAD matters that requires urgent consideration; and calls upon any ministry, bureau office and instrumentality of any political subdivision of the government for assistance needed to achieve the objectives of the Program.

c. Program Executive Committee (PEC)

The Program Executive Committee is headed by the Chairman of the Regional Development Council for Region V. The members are the BRBDP Program Director, the duly authorized representative of the Cabinet Coordinator, the NACIAD Executive Director, the Chairman of the Private Advisory Committee and a representative from MPWH. Functions of this committee are to periodically monitor and review program management structures and implementation

BRBDPO Organizational Structure

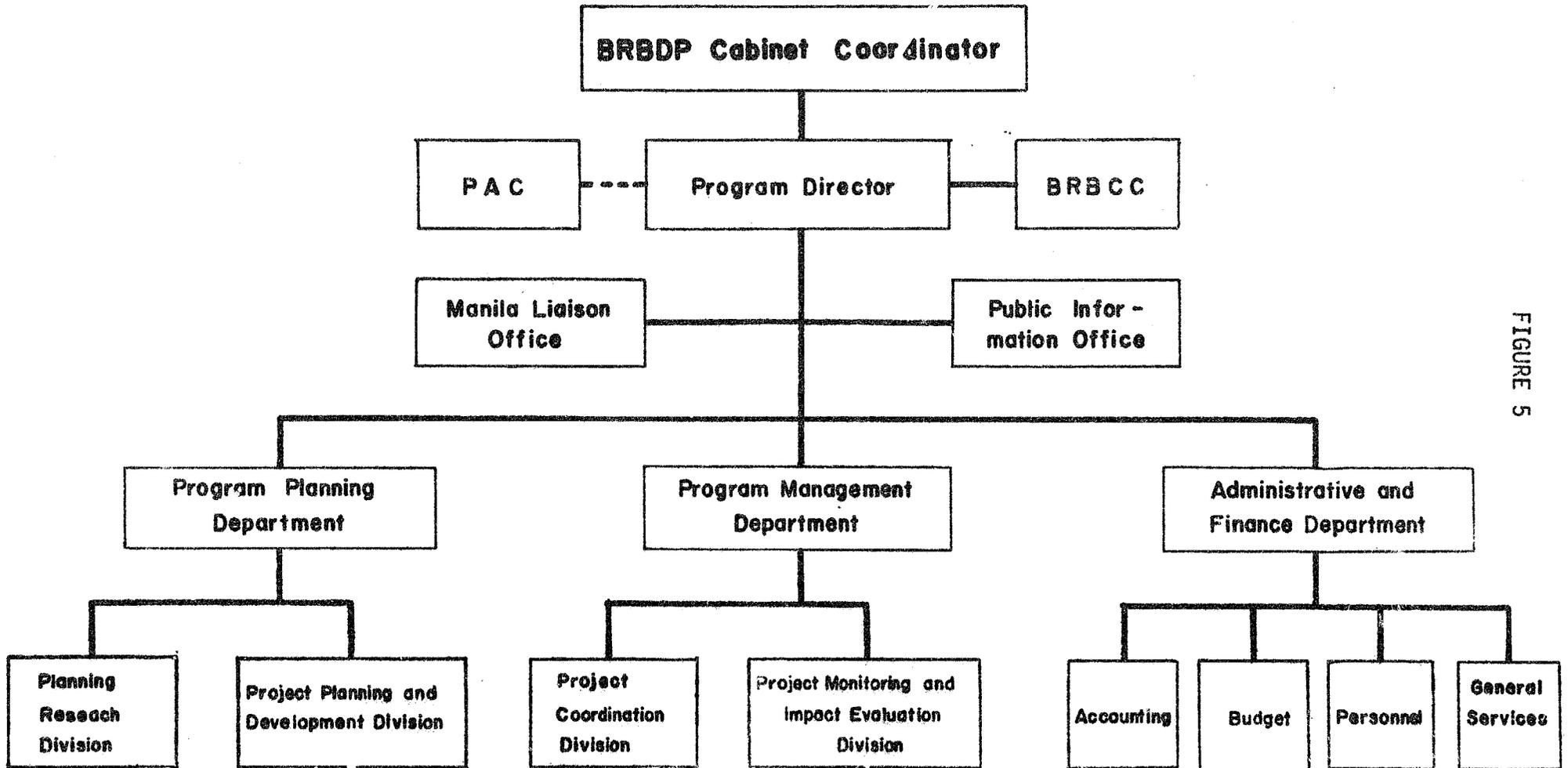


FIGURE 5

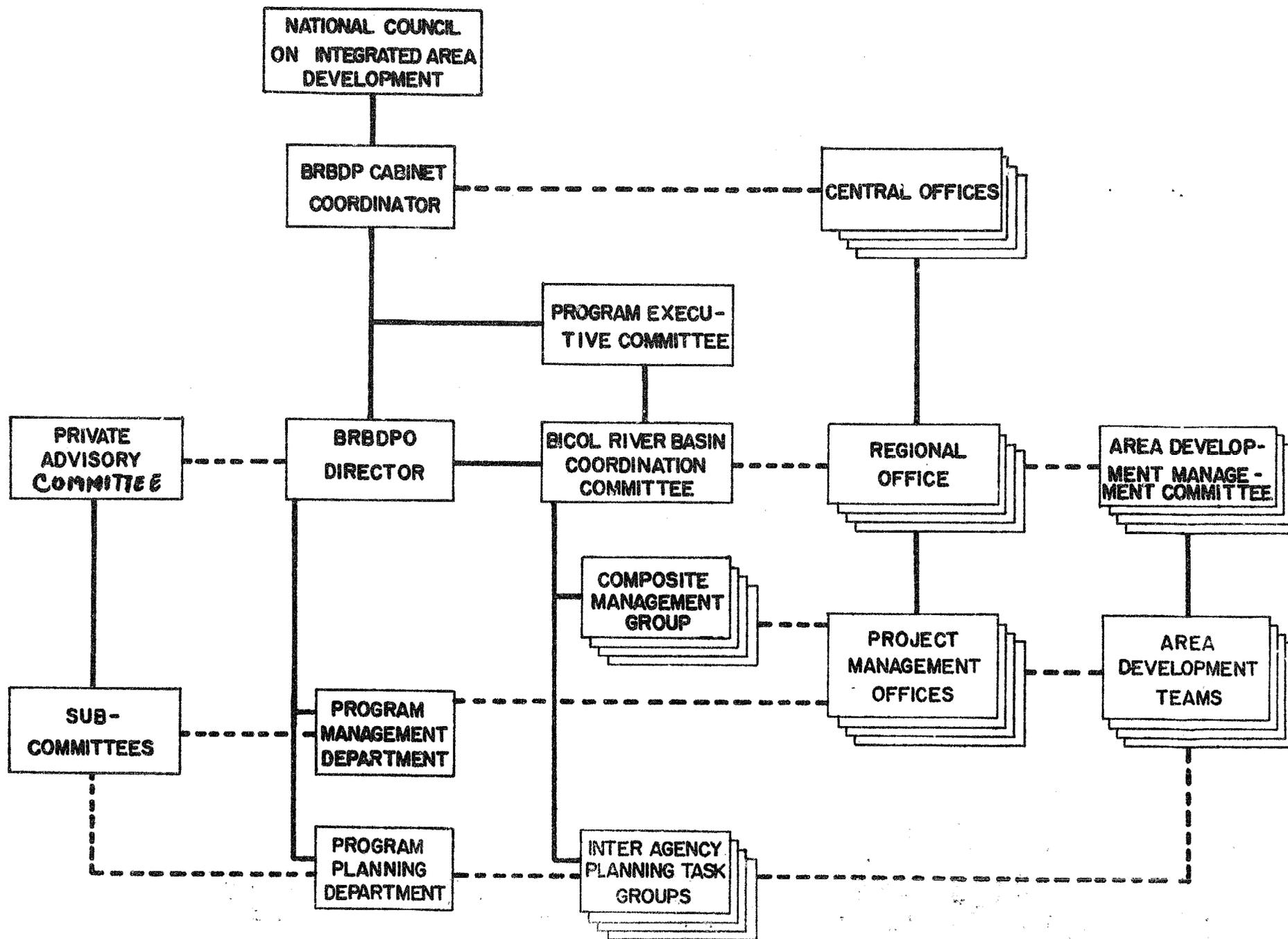


FIGURE 6
- 35 -

NOTE: PMOs of NIA and MPWH directly report to their central offices.

BRBDP
Coordination
Structure

mechanisms, evaluate the progress and accomplishments of implementing agencies as well as recommend solutions to problems and issues encountered by the Program. The committee reviews all the BRBCC resolutions.

d. The Bicol River Basin Coordination Committee (BRBCC)

The Bicol River Basin Coordination Committee (BRBCC) is a policy-recommending body that reviews all plans and assesses on-going activities. It is composed of the Governors of the three provinces covered by the program area, two representatives from the Presidential Management Staff and seventeen regional directors of line agencies: NEDA, MAR, NIA, Bureau of Plant Industry (BPI), Ministry of Health (MOH), Ministry of Public Works and Highways (MPWH), Bureau of Lands (BL), Ministry of Local Government (MLG), MAF, Bureau of Agricultural Extension (BAEx), Bureau of Fisheries and Aquatic Resources (BFAR), BFD, Bureau of Animal Industry (BAI), Ministry of Education, Culture and Sports (MECS), and the Bureau of Mines and Geo-Sciences (BMG). Two honorary members coming from the Ministry of Human Settlements and the Ministry of Trade and Industry have been added recently to the committee.

The BRBCC, chaired by the BRBDPO Program Director, provides planning and management policies which serve as guidelines for the day-to-day operations of the Program Office. It ensures that plans and programs for the Bicol River Basin area conform with the overall development plan for the Region. It also serves as a forum to resolve problems of inter-agency coordination.

e. The Project Management Offices (PMOs)

The Project Management Offices (PMOs) are set up by agencies to supervise their project implementation activities. At present, there are nine project management offices being maintained in places where projects are located. They are headed by project managers. Present PMOs are those for the Libmanan-Cabusao Integrated Development Project (BIAD I); Bicol Secondary and Feeder Roads Project; Bula-Minalabac Land Consolidation Project (BIAD II); Rinconada-Buhi/Lalo Project (BIAD III); Bicol Integrated Health, Nutrition and Population Project; and Bicol River Basin Irrigation Development Project. The last project has four PMOs.

f. Composite Management Groups (CMGs)

The Composite Management Groups (CMGs) are sub-committees of the BRBCC composed of Regional Directors of participating line agencies in an IDA project. The CMG formulates policies for the planning and implementation of projects which are then recommended to the BRBCC for adoption. It also serves as a forum for threshing out problems and issues arising from the formulation/implementation of the different project components.

g. Inter-Agency Planning Task Force (IAPTF)

The Inter-agency Planning Task Force (IAPTF) is a planning group composed of representatives from participating line agencies with different technical expertise needed in planning.

h. The Private Advisory Committee (PAC)

The Private Advisory Committee (PAC) is composed of the different sectors in the community such as the business, education, religious, print and broadcast media, agricultural, civic, youth and barangay sectors. It serves as a feedback and feedforward channel from the project beneficiaries to the Program Office to ensure their active participation in development undertakings.

j. Area Development Program Management Committee (ADPMC) and Area Development Teams (ADTs)

The BRBDP organized the Area Development Program Management Committee at the provincial level. The ADPMC is composed of the Deputy Director of the Program Management Department (PMD) of BRBDP as Chairman, the MLG Regional Director, Co-Chairman, Provincial Development Officers/ Coordinators and some specialists representing line agencies as members. At the sub-provincial level are the Area Development Teams organized in every IDA for area development administration and management. The members are the municipal mayors, line agency personnel and political leaders. They identify projects needed in their respective areas as well as oversee the implementation of projects. The project plans formulated by the ADTs are integrated into the BRBDP basinwide plans.

II. IMPACT ANALYSIS

PART 1. INTRODUCTION

This chapter will present an analysis of the impacts of the Bicol River Basin Development Program on socio-economic development in the program area. For the most part, the analysis is not directed at individual projects or the relative contributions of all projects, but rather at the overall program. By overall program, we mean the USAID-assisted projects, the domestically funded activities and other public and private investments which have occurred within the program area. Because the program to this date has concentrated primarily on the Province of Camarines Sur, we will generally use the province as the Program's impact area--comparing socio-economic development in the province to socio-economic development in other parts of the program area and the Bicol Region.

What follows is analytic, but in most cases it does not try to establish or test specific links from project and program outputs to measures of income, employment, and productivity change. However, there is a point in this connection which should be made. Although by mid-1985, virtually all the physical facilities in the AID-assisted projects have been completed and operating, this is not equivalent to saying that the full benefit stream the projects can directly generate can now be observed. Physical facilities such as irrigation and roads have the potential to set in a motion a chain of effects and impacts on patterns of resource use, investment, employment, etc. However, the chain is not instantaneous, nor do all parts of the chain happen simultaneously. Consequently, the socio-economic changes we will be reporting should not be viewed as the "final" impacts of the Program's investments and activities. They are, however, broadly indicative of impacts that are yet to come. Whether these impacts will actually come or whether existing levels of socio-economic development will even be maintained are not certainties, however. These outcomes will depend on a variety of factors including climate and nature, the country's economic recovery, and what forms and strategies the Program takes on next. The last point is a concern of the report and will be addressed in Chapters III and V. But before we ask what happens to the Program next or how the Program has been organized and managed to date, it is first necessary to learn what has been accomplished in the program area.

PART 2. THE AGRICULTURAL ECONOMY

A. AGRICULTURAL PRODUCTION AND PRODUCTIVITY

The primary focus of the Government's agricultural development investments in the region and in the program area has been on rice. This section will examine the changing indicators of agricultural performance in the region, identifying where possible the impacts of development investments. The assessment will begin at the regional level, and move from there to program and project levels.

1. REGIONAL LEVEL

The Bicol Region, in terms of crop area harvested, utilized approximately one million hectares of cropland annually from 1976 to 1983 for both food and commercial crops (Table 2)*. The proportion of land devoted to both crop categories had remained fairly stable, i.e. 58 to 59 percent for food crops and 41 to 42 percent for commercial crops during the period under review. Palay and corn dominated the food crops which accounted for a high of 47 percent in 1976 and a low of 44 percent in 1983 of the total area harvested. The downward trend in the proportion of cropland devoted to the two major staples was offset by the slight increase in the area harvested from 12 to 14 percent by the other food crops (including fruits and nuts, except citrus, rootcrops, vegetables and other minor food staples).

Coconut and abaca accounted for 40 to 41 percent of the total area harvested. Consequently, these two crops were virtually the only major commercial crops in the region. In the early 1970's, the production of sugarcane expanded and sugar became an export crop following the establishment of a sugarmill which processed the cane. Nevertheless, the area harvested for sugarcane never exceeded one per cent of the total area for all crops. On the other hand, during the period under review the area devoted to abaca declined by almost half.

More than four-fifths (85 to 87 percent) of the total production for 1976 to 1983 was accounted for by food crops, while commercial crops accounted for the rest (13 to 15 percent) of the production (Table 3). As a percentage of total production, there was a downward trend for palay from 38 percent in 1976 to 33 percent in 1983. Corn production as a percentage of the total production remained fairly stable. On the other hand, there was a slight upward trend in the production of the other food crops.

Although coconut is a permanent crop, the annual volume of processed coconut products was erratic. This can be explained by the vulnerability of coconut utilization to price movements in domestic and international markets for coconut products and the damage caused to coconut trees by droughts and typhoons. Sugarcane production showed very slight variation in production. On the other hand, abaca production showed a declining trend. By the end of 1983, the total production had gone down by almost half of its production in 1976. World prices for abaca declined after 1974, but started to recover slightly by 1979, although still below the 1974-1975 levels. Consequently, a number of the abaca plantations in the region shifted to sugarcane and other crops.

The data in Table 4, which were derived from the production and land utilization data in Tables 2 and 3, show the yield per hectare of selected

* All tables referenced in this chapter can be found in the Annex to this chapter, beginning on page 61.

major food and commercial crops in the Bicol Region. For comparative purposes, 1976 was used as the base year in deriving the indices. For all crops, there was a 17 percent increase in production between 1976 and 1980 or an average of approximately four percent increase per year. There was a one percent decline in 1982 and a further six percent decline in 1983. For both food and commercial crops, increments in productivity were noted between 1976 and 1980 but reduction in yields were posted afterwards. Although there were special programs for palay and corn, the recorded yields were not impressive, i.e. two tons for palay and less than one ton for corn instead of the goal of 4 to 5 tons for palay and about 3.5 tons for corn.

The data indicate that it may still take some time for the Program's impact on agricultural productivity to be fully felt at the regional level.

2. PROGRAM AREA LEVEL

Data from the program area, consisting of the provinces of Albay, Camarines Sur, and Sorsogon, were obtained from the BRBDP Office and analyzed following the procedure used in the regional level. Data from only two periods, i.e. 1975 and 1980 were used to provide insights on possible changes that have occurred in the area with particular reference to crop production (Table 5).

During the five-year period, a 7.2 percent increase in area was noted. Irrigated rice area increased by 18.1 percent which more than doubled total production. Rainfed rice production decreased by 9.3 percent. The sugarcane area had a two-fold increase accompanied by a tripled production. The abaca area, however, decreased by nearly one-third which resulted in a 10.6 percent decline in production. This may be partly explained by the shifting of some abaca lands to sugarcane and other crops.

For rice, similar trends were noted for Albay and Camarines Sur. The latter province has been the beneficiary of investments in agricultural infrastructure. Although during the period under review Sorsogon had no such investments, there were increments in both irrigated and rainfed areas with accompanying increments in rice production. There was a notable increase in upland rice cultivation, but there was a reduction in abaca and sugarcane cultivation.

The irrigation facilities financed by the Program became operational only after 1980 and were all located in Camarines Sur. These investments benefited palay primarily. The production, area and yield per hectare of this crop for CY 1981 to 1984 are shown in Tables 6 and 7. Three major points can be gleaned from this table:

- a. The irrigated area harvested increased from 54,320 hectares in 1981 to 70,120 hectares in 1984 or an increment of 15,800 hectares (29.0 percent increase) which reflected the increase in effective crop area due to the availability of water during the second rice cropping season. There was a 6.7 percent decrease in lowland rainfed areas during the same period.

b. The total production in all irrigated areas increased from 1981 to 1984 by 36.8 percent. On the other hand, the production in the rainfed lowland areas maintained its share of total production.

c. Yields in the irrigated area increased from 55 cavans to 58.3 cavans (or from 2.75 to 2.92 tons) or only a 6 percent increment.

At the provincial level, the data indicate that impacts of program investments in irrigation were reflected in the increased effective crop area for rice. The availability of water during the dry season paved the way for planting a second crop in the same fields.

3. PROJECT AREA LEVEL

Libmanan-Cabusao Pump Irrigation System (BIAD I). The project was started in 1975 and became operational in 1981. The project provided for the construction of a 4,000-hectare irrigation and drainage system including flood control, salt water intrusion protection facilities and farm access roads to economically depressed but high growth potential areas.

The data (Table 8) show that the actual irrigated areas were lower than what was programmed except for the 1982 wet season. An IRRI study indicated that one reason for the decline in the area planted was the increasing insufficiency of water supply due to either reduction in the number of pumps operating simultaneously or reduction in pump operation time. This was related to technical problems associated with the pumps.

The average yield was highest in the 1984 dry season (3.76 m.t./ha.) and lowest in 1983 (2.15 m.t./ha.). The average yields were always higher during the dry seasons and lower during the wet seasons (Table 9). The wet season plantings were affected by typhoons (two bad typhoons in 1983 and three in 1982).

An analysis was made by IRRI on the comparative yields per hectare and cropping intensity for rainfed and irrigated farms during the wet seasons of crop years 1981 to 1983. This study reported that the yield in flood-free irrigated sites, 2.6 tons per hectare, was significantly higher than the average 1.7 ton per hectare recorded on rainfed farms. On the flood prone sites, yields (1.9 tons per hectare) were only slightly higher than on rainfed sites. The significant results of the ongoing IRRI study may be summarized as follows:

a. Agricultural infrastructure, in the form of irrigation facilities introduced in the Libmanan-Cabusao Project, increased farm incomes through a combination of:

- (1) increased per hectare yields, and
- (2) increased area planted per farm when compared to farms which remained rainfed.

- b. Yields are higher in flood-free than in flood-prone areas, and higher in the second (dry) season than the first (wet) season;
- c. Mean yields of farms are three tons or less -- more than a ton lower than projected in the feasibility study;
- d. There is a small surplus left for the rice farming household in flood-free areas after deducting expenses for rice production and household consumption requirements. This surplus could become negative in flood-prone areas;
- e. Yields may be profitably increased through improved fertilizer management but the prevalence of typhoons and floods in October-November makes high input rice technology a risky venture.

The Project Management Office of the system has been confronted with management problems, among which that deserve more attention are the collection of irrigation fees and technical problems (Table 10).

Bula-Minalabac Land Consolidation Project (BIAD II). The project covers a contiguous land area of 2,300 hectares within three former landed estates in the municipalities of Bula and Minalabac. The principal thrusts of the project include the construction of necessary facilities for irrigation and drainage, farm roads, the construction of a rice drying, milling and storage complex and the provision of family planning nutrition, education and facilities and services. In project implementation, emphasis was given to a land consolidation scheme which consolidated 2,668 dispersed farm lots into single farmplots for 1,200 farmer beneficiaries.

As of December 1984, most of the infrastructure development for Phases I to V had been completed. There are, however, some remaining activities to make the whole project fully operational. They include the installation of electrical facilities and rehabilitation of typhoon-damaged portions. The issuance of CLT's and Titles is 100 percent complete. The project area farmers are using high yielding rice varieties, modern technology, and appropriate inputs. They have 90 percent payment rates for irrigation fees.

While it appears to be premature to indicate the full impact of the project, the information shows a definite increase in total production as a consequence of the provision of irrigation water and the increased productivity per unit area. Also, the consolidation of the scattered parcels of a farmer beneficiary into a single farm lot could now contribute to the lowering of intangible costs of managing separate parcels which generally were located very far apart from each other.

Rinconada/Buhi-Lalo Project (BIAD III). The project is composed of two major components involving irrigation and watershed development. The irrigation component has a target of 3,168 hectares for 2,450 beneficiaries in the municipalities of Buhi, Nabua, Bato and Iriga City. The watershed target

is 356 hectares with 245 farmer beneficiaries at barangays Ipil, Iraya, and Sta. Cruz in Buhi, Camarines Sur. The project provided for the rehabilitation of the irrigation facilities in the existing 1,100-hectare Lalo system and construction of new facilities to expand the system to a 3,000-hectare target using water from Lake Buhi. Along with the rehabilitation is the provision of irrigation service roads and links.

The upper Lalo rehabilitation started in August 1980 and was completed in December 1983. The Lalo system farms are producing yields above three tons per hectare during the dry season. After 1983, the yield increased by about one-half metric ton. The wet season crops, in general, produced yields lower than the dry season. In 1984, the yield increased to 3.75 metric tons per hectare.

B. MODERN TECHNOLOGY AND SUPPORTING SERVICES

Masagana 99 Program. This program consisting of a package of modern technology was launched in 1973 to reverse the trend of a recurring rice shortage in the country. The program inputs included high yielding varieties, fertilizers, chemical herbicides and pesticides and with supporting agricultural extension, supervised credit, post-harvest facilities and distribution services. The original targetted areas covered only provinces with irrigation facilities capable of providing water for a second crop of rice. Camarines Sur was the only province in the Bicol Region included in the M-99 program.

Table 14 shows the coverage of the M-99 Program in the Bicol Region during three five-year periods, i.e. 1973, 1978, and 1983 for comparative purposes. Consistent increases in both area harvested and total production were noted for the region and for the provinces of Albay and Camarines Sur. Likewise, an increase in productivity for the Bicol Region and the same provinces were also noted in terms of increasing yields per hectare.

The M-99 program made available institutional credit through the rural and other banks (Table 15). At the outset, nearly two-thirds of the farms were financed by credit institutions, but after a five-year period this number dwindled to one-third. Finally, only 13 percent of the number was financed for the region. Camarines Sur started in 1973 with 85 percent of the area financed and ended with only 18 percent in 1983. The percentage of supervised farmers with credit closely followed the percentages indicated for the area financed. The reduction in both the percentage of area financed and percentage of supervised farmers with credit may be explained by the more selective procedures adopted by the financing institutions. At the outset, more farmers were financed, but in view of the high percentage of non-repayment and arrearages, the banks became more selective in the latter phases of the program. Hence, there was a drop in both area and number of farmers financed via the credit institutions. Information from various informants indicated that most farmers financed their credit needs from traditional sources (i.e. stores, middlemen, and private money lenders) at

high interest rates. This type of arrangement tended to predominate in the program area since only 10 to 20 percent of both the area and number of farmers were financed through institutional credit.

Banks, particularly the network of rural banks, the Philippine National Bank and the erstwhile Agricultural Credit Administration supported the M-99 program under a supervised credit system. Table 16 shows the distribution of loans by purpose of a rural bank servicing the credit needs of farmers and other clientele in a BRBDP project area from 1980 to 1984. The loans granted were in the form of supervised and non-supervised categories distributed as follows: 50.7 to 64.7 per cent, supervised; 49.3 to 35.3 percent, non-supervised.

In 1980, under the supervised category, the bank granted a total of ₱6.2 million in loans to 1,778 borrowers and the lending activity reached its peak with loans amounting to ₱11.7 million to 2,967 borrowers in 1982. In the following year, the total loan and number of borrowers decreased, reaching the lowest mark in 1984 with the amount of ₱2.4 millions for 382 borrowers. A similar trend was noted for the non-supervised category. At its highest peak, non-supervised loans amounted to ₱8.1 million; the lowest (in 1984), ₱1.3 million. From a high of 524 borrowers, the number decreased to 162 in 1984.

Supervised loans were all agricultural in nature. The bank provided the M-99 loans for the farmers in the BRBDP project area, although some farmers obtained loans from other rural banks in nearby municipalities. The bulk of the crop loans went to palay and the next important crop financed was sugarcane since the rural bank was allowed to service the credit needs of farmers outside its geographical territory. The non-supervised loans were utilized for both agricultural and commercial purposes. The commercial loans ranged from 39.1 to 62.7 percent of the total amount of loans granted. Rice loans predominated the non-supervised category with livestock and poultry ranking as second.

The drop in the amount of loans granted and the number of borrowers may be attributed to the increased prices of fertilizers as well as its temporary shortage which occurred in 1984 and the high cost of credit resulting from monetary policy which allowed the banking system to charge interest according to prevailing market rates.

For the supervised category (Table 17), the majority of the loans granted were from the ₱1,001 - ₱5,000 and ₱5,001 to ₱10,000 categories. Since the bulk of the loans were for M-99 program participants which allowed up to ₱2,600 loan per hectare, the rice loans were of these categories. Sugarcane and livestock (including poultry and swine) loans belonged to the ₱5,000 and up category. Under the non-supervised category, the smaller loans were generally for crop and livestock loans, while the bigger loans were for commercial purposes.

Since institutional credit at reasonably lower interest rates in the early years up to 1983 was available, farmers were able to obtain purchased inputs needed with the use of low interest loans to increase their productivity. In the later years of the M-99 program, however, only 13 to 18 per cent of the farmers were able to avail of low-cost institutional credit because many farmers failed or were unable to repay their loan obligations. This means fewer farmers utilized purchased inputs particularly fertilizers. Consequently, the full impact of modern technology on farm productivity would be less effective as shown in the not so impressive yield increases (Table 4). Furthermore, the average yield for palay never reached its full targetted potential. Over a 10-year period, yields increased on the average only from 2.62 to 3.47 tons per hectare instead of attaining the targetted 4.95 ton-yields in the irrigated rice farms.

Fertilizers and Chemical Pesticides/Herbicides. Fertilizers and chemical inputs have been available through a network of distributors and dealers. Records in the FPA Provincial Coordinator Office showed that there were 90 Camarines Sur outlets in 1979. By 1981, the number increased to 100 and as of February 1985, there were 111 guano processors and fertilizer/pesticide/distributors and dealers (Table 18) in the province.

The FPA Provincial Coordinator's Office indicated that Camarines Sur utilized approximately 50 percent of the total fertilizer stocks in the Bicol region. The actual sales for the province alone ranged from 15,000 to 18,000 bags per month or about 180,000 to 220,000 per year from 1979 to 1983. The countrywide shortage due to delayed importation of fertilizer as well as the increased prices in 1984, however, drastically reduced fertilizer usage.

In the 1983 records for Camarines Sur, 60 percent of the fertilizers utilized were urea and ammonium sulfate in a two to one proportion. Complete and ammonium phosphate fertilizers made up one-third (33.1 percent) of the sales. The balance of the sales were distributed among the other types of commercial fertilizer including the organic ones (guano). Almost two-thirds (63.6 percent) of the fertilizer applied went to rice, less than one-third (28.2 percent) to sugarcane, and the rest to corn, fruit trees and vegetables.

The fertilizer utilized for rice in 1983 for Camarines Sur would mean only an average of 3.5 bags per hectare for the farms included in the M-99 program. The nitrogen application, therefore, would be less than the

recommended optimum quantity necessary to attain the full potential productivity of the rice farms.

C. WHOLESALE, RETAILING, AND RICE PROCESSING

The increased rice production in the project areas needs to be assembled, processed and distributed to consuming areas. These activities are performed by a network of grain traders and processors which include wholesalers, retailers, rice mills, warehousing facilities and transport operators.

Table 19 shows the location of rice mills in Camarines Sur, where the bulk of the investment in agricultural infrastructure has been made under the BRBDP. The data from the National Food Authority showed a decline in the number of units and milling capacity of cono rice mills as of 1984. Likewise, there was a decline in the total number and milling capacity of kiskisan rice mills. There was, however, an increase in the number of units and total milling capacity (from 1982 to 1984) of the more efficient rice mills equipped with rubber rollers. In total, there has been a substantial reduction in the total milling capacity available in the province. Millers told us there was a reduction in the milling business. Although total palay production has gone up, the milling volume has gone down, which suggests a movement of unmilled palay out of the province. The number of wholesalers and retailers went down in 1984 compared to 1981, although there was a slight increase in the number of wholesaler - retailers (Table 20). With the availability of more and better transport facilities, there could have been a faster turnover of palay trading. In the process, the business has become more competitive, thus possibly eliminating the less efficient traders (or middlemen).

In 1973, there were 72 units of warehouses in the province with a capacity of 603,260 cavans (Table 21). In 1975, the number of units was reduced to 65 with a capacity of 351,805 cavans. Six years later (1981), this number increased to 93 (or nearly 1/3 increase) with a total capacity of more than one million cavans (or a two-fold increase). Subsequently, the number increased to 106 in 1983, with total capacity of 817,920 cavans. However, the number declined to 98 units in 1984 with a 784,000 cavan capacity. The increase in warehousing capacity in the early 1980's may be related to the increased total rice production during the period. The declining number of units and warehousing capacity which was observed in later years, however, might be related to the relatively stable (controlled) prices of palay. As palay comes in from the increased effective crop area planted to palay (during the dry season), there has been no pressure to hold current stocks but rather farmers dispose of stock as new produce comes in. Due to stable prices of palay, there is no incentive to hold stocks for a longer time as the storage charges could adversely affect the limited profitability of longer storage.

PART 3. INCOME AND EMPLOYMENT

A. INTRODUCTION

The ultimate goal of the Bicol River Basin Development Program is "to raise the socio-economic level of the people to the national average by 1990 and to sustain it at that level thereafter". The extent to which this is being accomplished may be assessed through examining the socio-economic changes taking place in the program area. For the purpose of the present evaluation, the years 1978 and 1983 are used as points for comparative purposes because there are hard data available from the Bicol Multipurpose Surveys (BMS) conducted during these years.

It is interesting to note that the years 1978 and 1983 have much in common in terms of episodic events and climatic factors affecting the program area. During these years, the occurrences of droughts and typhoons brought heavy damage to crops all over the region (Tables 22 and 23). In fact, weather disturbances are normal to Bicol. Of course, the intensity of the disturbances vary considerably from year to year, but for the years 1978 and 1983, they were more or less the same. In this sense the figures for 1978 and 1983 may be considered directly comparable although the years need not be considered normal years in a strict sense. Also, the same sample households (as much as possible) were taken for the 1978 and 1983 BMS, the major sources of data used.

The primary indicators are income and employment variables. It is assumed that all projects undertaken and coordinated by BRBDP and all other development projects undertaken by other government and private agencies should result in increased income and employment of the target beneficiaries and ultimately improve their quality of life. For example, road projects should increase mobility of people and commodities and, thus, open up opportunities to improve income and employment. Irrigation projects should increase the productivity of the land and, coupled with better access to markets due to improved transportation, should also increase farmers' income.

B. HOUSEHOLD INCOME

The measurement of income has many problems, both conceptual and mechanical. For the present impact assessment net household income is used. It is defined as the sum of the net cash and non-cash incomes which accrued to the members of a household during a specified period, in this case, one year. By net income is meant the gross income received by the household minus the costs incurred in earning the income. It is assumed that net household income is a better economic development indicator than total income and per capita income. This is because the decision to consume a commodity or activity may not always come from the consuming individual himself but may be made by other individuals. For example, the decision to send young children to school are made by their fathers and mothers. It is also assumed that the income of a household determines its consumption and investment behavior.

Since development projects usually aim to affect income through specific sources (e.g., agriculture by crop, fishing, etc.), net household income is broken down by source of income as follows: (1) income from farming and fishing; and (2) income from non-farming which includes business, salaries and wages. Income from farming is further broken down by crop: rice, corn, abaca, sugar, and, all other crops. It includes income from livestock and poultry and unpaid family labor. Non-farming income includes income from manufacturing, trading and services.

1. MEAN HOUSEHOLD INCOME FROM ALL SOURCES

a. Program Level

Significant increases in the average household income from all sources between 1978 and 1983 were reported for the program area (Table 24). The unusually large increase in income should not be taken at its face value because the magnitude of the increase can be attributed to any one or all of the following: (1) the 1978 income estimates were biased downwards; (2) there were substantial improvements in the data collection and data processing and, hence, in the income estimates from BMS '83; (3) there was real increase in income brought about by the BRBDP and other government and foreign assisted programs; and (4) the consumer price index of 190% used in deflating the 1983 income estimates to the 1978 price level may be biased downwards. There are reasons to believe that all four reasons apply to the BMS data. Their combined effect probably widened the increase in income between the two reference years. Thus, the increases in income shown should not be taken in its absolute magnitudes but rather in terms of directions of the income changes occurring in the program area between 1978 and 1983.

b. Province Level

In Camarines Sur, where the BRBDP activities were concentrated, the average annual household income reported for 1983 at constant 1978 prices was highest at ₱4,134.00. In Albay, where the Program's efforts were relatively modest, the average real income was ₱3,728.00 and for Sorsogon where the Program's activities were still in the planning stage, the income average was lowest at ₱3,641.00 per household per year. However, the 1978 base figures and the mean rates of increases in income were not in the same order as the 1983 income figures. Albay and Camarines Sur had about the same rates of income increases at 26.7 percent and 26.3 percent respectively. In contrast, Sorsogon Province had the lowest rate of increase at 16.9 percent compared to those of Albay and Camarines Sur. As previously discussed, the figures should not be taken in their absolute terms but only in relative terms.

The high performance of Albay may be explained by its well developed roads network and the large proportion of its income coming from industry and service sectors. It can be seen in Table 25 that the roads density in Albay was consistently highest. Even with a large addition in roads in Camarines Sur, the increase in roads density was quite modest because of the hugeness of the area of the province compared to Albay and Sorsogon.

Another explanation why the rate of income increase in Albay was relatively high is probably because it relied less on agriculture and more on the industry and service sectors. Camarines Sur presents a different picture in that its major source of income was agriculture. Thus, it is possible that without the BRBDP, Camarines Sur could not have performed as well as Albay.

Using household income, the contribution of each province to the Program Area's total income are: Camarines Sur: 69 percent, Albay: 20 percent, and Sorsogon: 11 percent. It must be pointed out that there are some differences in these income estimates, which use household income and the income estimates reflected in the Gross Regional Domestic Product (GRDP) and Gross Sub-Regional Domestic Product (GSRDP) reported in Part 4 of this chapter. The discrepancies may be attributed to the fact that GRDP is based on the survey of establishments by NCSO while the household income estimates were derived from the BMS. In the household estimates, the large manufacturing and mining sector may not have been captured. Thus, the total income estimates for Albay, which is predominantly non-agricultural, may be biased downwards and that of Camarines Sur, which is predominantly agricultural, may be biased upwards.

c. Integrated Development Area Level

In order to be able to identify the possible sources of income changes, the income data are presented at the Integrated Development Area (IDA) level in Table 26. This way, the specific impact projects under the Program may be identified with the IDA. Table 26 also shows the intensity of the Program's efforts in each IDA as indicated by the superscripts, numbered 1 to 5 corresponding to the 5 impact projects undertaken within the Program.

It is shown that in Camarines Sur, except for IDA 21 (Bula-Minalabac) and IDA 90 (Sangay, San Jose-Goa), the magnitudes of the income increases may be considered positively related with the intensity of the program efforts in terms of the number of impact projects undertaken in the area. In general, the IDAs which had only one impact project implemented, i.e., only the Integrated Health, Nutrition and Population Project, reported relatively modest income increases. The exception is IDA 21 (Bula-Minalabac Land Consolidation Project) which registered a low income increase because of the higher income base in 1978 which could be attributed to income effects of project activities which began in 1974. There were two other studies available on the project: the benchmark survey in 1974 and the mid-survey in 1982. The two studies reported that 80 percent of the households obtained production loans from credit institutions, that the repayment rate was only 34 percent and that none of the beneficiaries had fully repaid their loans. A substantial portion of these loans must have been spent on consumption goods as evidenced by the unusually large excesses of expenditures over net income. It is possible that because of this, the 1978 BMS income estimate could be biased upwards, narrowing the income margin between 1978 and 1983.

In Albay, except for IDA 62 (Libon-Oas) which was partly covered by the Bicol Roads Project, only the Integrated Health and Nutrition Project

was implemented. The income increases in the province were highest probably because the sources of income were non-reliant on agriculture. In Sorsogon province, where no BRBDP impact projects have been implemented yet, the income increases reported for each IDA were relatively smaller.

2. HOUSEHOLD INCOME BY SOURCE OF INCOME

a. Program Level

In 1983, the percentage contributions of agriculture and fishing and the non-agriculture sector to total income were almost equal at 50.8 percent and 49.2 percent, respectively. Although we do not have the corresponding figures for 1978, there is evidence to show that the contribution of agriculture was much larger in 1978. For instance, the number of households reporting income from rice in 1978 was estimated at 82 percent. This was down to only about 40 percent in 1983. It appears that there has been a substantial shift in income source from agriculture to non-agriculture over the 5-year period between 1978 and 1983.

The percentage distribution of income for the program area by source of income in 1983 is given in Table 27. It is shown that the income from crops other than rice, corn, coconut, abaca, and sugar (16.3 percent) and the income from livestock and poultry (23.8 percent) have become highly important in 1983 but not in 1978. It was reported that the income from other crops in 1978 was probably negligible. Equally important were the contributions of business (20.6 percent) and other sources of income (20.0 percent). The income from wages (hired labor) was only 8.6 percent. It was not possible to estimate the unpaid family labor component of the income from crops within the time constraints of the present study. In terms of mean household income as reported by households who received income from each specific source in 1983, the ranking of the income by source in descending order of their magnitudes was: (1) Other crops (P4,983), (2) Wages from hired labor (P2,958.00), (3) Business (P1,883.4), (4) Fishing (P1,719.20), (5) Rice (P1,501.00), (6) Livestock and Poultry (P1,203.40), (7) Other Sources (P969.00), (8) Abaca (P370.8), (9) Corn (P327.40), and (10) Coconut (P71.60). It may be noted that the income from other crops have become important, even more important than rice in 1983. This is probably because of the typhoons and drought which brought heavy damages to crops and livestock during that year.

In terms of contributions to total income, livestock and poultry (23.6 percent) ranked first; followed by business (20.63 percent), and other income sources (19.95 percent), then other crops (13.51 percent), rice (11.35 percent), wage income (8.62 percent), fishing (2.07 percent) and corn, abaca and coconut combined at less than 1 percent. It is interesting to note that although poultry and livestock ranked 6th in mean income size per household, it has the most number of household participants and contributed the biggest share to total income at the program level.

b. Province Level

The mean household income and the percentage contribution of each income source vary widely among the three provinces within the program area. As expected, Camarines Sur exhibited an income pattern similar to that of the program area described above. The average income from other crops was highest while in terms of contribution to total income of the province, livestock and poultry ranked first. In contrast, the highest mean income reported in Albay came from wages and salaries followed by business. But in terms of contribution to total income of the province, business ranked first with other sources following closely. In Sorsogon, the highest mean income came from fishing, followed by other crops with wages and salaries ranking a good third. In terms of the contribution to total income of the province, livestock and poultry is first, followed by business. The figures are given in Tables 28 and 29.

It is now understandable why, despite the absence of BRBDP projects, Albay exhibited high income increases which were less erratic across IDAs than those in Camarines Sur. This happened because the major sources of income for Albay are the business and service sectors rather than agriculture which is the case in Camarines Sur and in Sorsogon. Even as of 1983, Camarines Sur was still predominantly agricultural with the share of farming and fishing at 61.7 percent and that of non-agriculture at 38.3 percent. The opposite picture is seen for Albay with 62.2 percent share of business, wages and salaries and other sources and 37.8 percent from agriculture and fishing. The income of Sorsogon Province was more or less equally accounted for by farming and fishing income (51.6 percent) and non-farming income (48.4 percent).

c. INCOME DISTRIBUTION

1. PROGRAM LEVEL

As may be seen in Table 30, the mean household income increased substantially for each decile but the magnitudes of the increases also increased with income class. The richer the households, the greater the income increased and the poorer the households, the less their income increased. It cannot be said, though, that the poor became poorer but rather that the rich became richer while the poor became a little richer. The overall effect was to worsen the income inequality in favor of the rich households. Tables 30 and 31 show that 20 percent of the population received only 1.88 percent of total income in 1978 which went down to 1.11 percent in 1983. Since the BRBDP efforts were not the same in the three provinces, it cannot be said that the Program induced the worsening of the income inequality in the area. For in fact, this phenomenon is not unique to the Bicol region nor to the country, as a whole, but is rather a common consequence of the process of economic development.

2. PROVINCE LEVEL

Table 32 gives the mean household income for each decile group in 1978 and 1983 together with the corresponding increases during the period for each of the three provinces within the program area. The magnitudes of the decile means and the very wide range between the means of the 1st and 10th deciles, as well as the increasing percentages of income increases with decile number, strongly indicate a highly unequal distribution of income biased in favor of the rich households and against the poor households. Although significant increases in mean incomes per decile in all the three provinces were reported, the degree of inequality worsened between 1978 and 1983 (Table 33). The income gains were greater as income levels of the households were higher. This is true for all the provinces, varying only slightly in degrees among the provinces.

In terms of percentages of income in the lowest and highest 20 percent of the households, it may be seen in Table 32 that these decreased quite substantially for the lowest 20 percent and increased even more substantially for the highest 20 percent of the households. It appears that the worsening of income inequality in the Basin area is independent of the Program's efforts in that the pattern of worsening was more or less the same in all three provinces while the program's development efforts varied greatly among the provinces.

3. INTEGRATED DEVELOPMENT AREA LEVEL

At the IDA level, the picture of the distribution of income among households and the changes in it that occurred between 1978 and 1983 was not much different from that at the program and province levels. (See Table 34). This substantiates the finding at the provincial level that the worsening of income distribution was more or less independent of the Program.

D. EMPLOYMENT

The labor force, as used here, is defined to refer to that portion of the population who are 10 years old and over. This definition was used in order to make the 1978 and 1983 labor data sets comparable. This is the old official definition. It was revised in 1980 to include only those 15 years old and over.

1. CHARACTERISTICS OF THE LABOR FORCE BY SKILLS CLASSIFICATION

The composition of the labor force by skills classification has not changed much over the period 1978 to 1983. This is shown in Table 34. Some slight increases and decreases in the proportion of the labor force belonging to both the upper and lower skills levels are noted between 1978 and 1983. The more notable of these are: (1) increase in sales workers contributed mostly by females from 5.73 percent to 8.52 percent, (2) increase in service workers from 4.95 percent to 9.03 percent, (3) increase in non-farm agricultural workers from 16.61 percent to 20.55 percent accounted for by more female participants, and (4) decrease in the proportion of farmers from 25.81 percent to 16.18 percent accounted for by larger decrease in male farmers than the increase in female farmers.

2. LABOR FORCE PARTICIPATION RATE

The proportion of the members of the labor force in the program area who worked at least one week during the year increased significantly from 48.5 percent in 1978 to 58.9 percent in 1983. The increase in employment consisted more of females than males. The pattern is similar for all the three provinces within the program area, varying only in degrees. The greatest increase was recorded in Albay from 48.27 percent in 1978 to 64.66 percent in 1983; followed by Sorsogon, from 57.74 percent to 61.10 percent, and; the least increase was in Camarines Sur from 47.95 percent in 1978 to 55.92 percent in 1983. A large portion of the increases in all the provinces were contributed by females. The change is quite dramatic in Albay where the increase in female labor force participation rate was from 34.82 percent in 1978 to 60.44 percent in 1983.

The participation rates are given in Table 35. The figures are artificially low because the sample includes members 10 years old and over who may still be going to school and therefore were not yet members of the labor force. Assuming that the school enrollment rate has not changed significantly during the period under review, the employment rates may be biased downwards but the incremental rate may be considered to be unbiased. The employment rates shown includes all those who worked as hired labor and as self-employed labor or unpaid family labor, i.e., all those who worked to earn income in cash or in kind. The labor force participation rates using data on the members of the households 10 years old and over who worked during the past two straight weeks were much lower than the rates using past one week as duration of work. Using the past two weeks, it was only 30.93 percent in 1978 and 32.37 percent in 1983 for the entire program area. There was a decrease in the proportion of males employed but an increase in female employees between the two years. It is unfortunate that there are no corresponding figures for the three provinces. But it is clear that there is a drastic reduction in the employment rate with the change in the definition of the period of employment. What this implies is that there was serious underemployment during the years between 1978 to 1983.

PART 4. REGIONAL DEVELOPMENT IMPACT

A. GROSS REGIONAL DOMESTIC PRODUCT (GRDP), BICOL REGION

In terms of GRDP valued at constant 1972 prices, the Bicol Region (Region V) ranked 9th among the 13 regions of the country during the period 1972-78. Although the GRDP in real terms has grown since then, in 1981 and 1983, Region V slid to the 10th and 11th positions respectively (Table 36) due to the vulnerability of its predominantly agricultural economy to recessionary and inflationary pressures plus the susceptibility of the region to typhoons and other natural calamities. The per capita GRDP of Bicol has expanded from ₱666 in 1972 to ₱823 in 1978 and ₱834 in 1983 (Table 37). Despite this, it continues to have one of the lowest per capita GRDP among the 13 regions (Table 38). In terms of sectoral distribution, the leading contributor to the region's GRDP is the agricultural sector, followed by the service and industrial sectors. However, from 1972 to 1983, Agriculture, Fishery and

Forestry showed declining shares to total GRDP, i.e., from 59.8 percent in 1972 to 48.8 percent in 1983 (Table 39). This decline was offset by increasing shares for both the service and industrial sectors, particularly for commerce and other services and construction.

B. GROSS SUB-REGIONAL DOMESTIC PRODUCT (GSRDP), PROGRAM AREA

The program area's GSRDP appears to have grown substantially from 1978 to 1981 (Table 40). The average annual growth for the period was 15.3 percent, much faster than the rate of growth (5.8 percent) of the region's GRDP. The 15.3 percent growth rate has to be qualified since this implies that the program area grew at the expense of the non-program area which includes the provinces of Camarines Norte, Catanduanes and Masbate. However, this is hardly the case. There is a probable overestimation in the sub-regional accounts: In estimating GSRDP, the BRBDPO primarily used the National Census and Statistics Office (NCSO) Annual Survey of Establishments (ASE). They recognized that for their purposes, the ASE yielded inadequate samples because the sampling of the ASE was done on a regional basis. To correct this, data from other sources (e.g. MAF, Bureau of Mines, etc.) were gathered. However, such data were not verified for possible distortions. In this case, the overestimations in the ASE were carried over to the Gross Value Added (GVA) estimates. This is particularly so for the industrial sector where the GVA estimates are not consistent with the regional accounts data from the National Accounts Staff of NEDA. However, since our concern are trends rather than absolute values, it is in this light that the following numbers should be interpreted.

The program area's GSRDP in constant 1972 prices grew from ₱1.866 billion in 1978 to ₱2.723 billion in 1981, expanding its contribution to the Region's GRDP from 67.3 percent to 83.6 percent for 1978 and 1981 respectively. In terms of per capita gross sub-regional domestic product (GSRDP), this has grown from ₱803 in 1978 to ₱1137 in 1981 representing a 13.9 percent average annual growth. Again, these high numbers may be attributed to the overestimations in the GSRDP. When analyzing the sub-regional domestic product by sectoral contribution, the largest contributor is agriculture followed by services and lastly, the industrial sector. However, unlike the regional trend, agriculture exhibited a rising share to total GSRDP. In agriculture, agricultural crops have been the major contributor to the total gross value-added of the sector. In 1981, out of a total of ₱1.535 billion in constant 1972 prices, the share of agricultural crops was 65.2 percent, fishery 28.7 percent, livestock and poultry 6.0 percent and forestry 0.1 percent. The industrial sector's share decreased between 1978 and 1981 primarily because of the significant drop in manufacturing activities. Such drop may be attributed to the decline in export demand particularly for fiber handicrafts, the high cost of power, the increase in the interest rate charged against available credit, the relatively poor communication facilities and the peace and order conditions. For the same period, the service sector registered unimpressive growth due to the rising cost of fuel and uncertainties in the business environment brought about by recessionary conditions.

Within the program area, comparing 1978 to 1981, Camarines Sur registered the highest average annual growth rate of gross value added (GVA) in agriculture with 36.8 percent (Table 41). Sorsogon is next with 28 percent, and Albay 17.6 percent. Albay leads the rest in terms of GVA in industry and services with 28.0 percent and 15.7 percent respectively. In the industrial sector, Albay experienced notable gains in construction and mining, but suffered a set-back in manufacturing. In the service sector, Albay had significant growth in commerce and other services. Both Camarines Sur and Sorsogon registered negative growth rates for the industrial and service sectors, the case being more severe for Sorsogon than for Camarines Sur. Based on the 1981 figures, Camarines Sur contributed 50.3 percent of the gross sub-regional domestic product of the program area, followed by Albay with 38.9 percent and Sorsogon with 10.8 percent.

C. HEALTH, NUTRITION AND POPULATION IMPACTS

The Bicol Integrated Health, Nutrition and Population Project (BIHNPP) is being implemented in 400 barangays in Albay and Camarines Sur. It commenced in 1980 and has been extended to December 1985. The aims of the project include the following:

1. To induce a significant decline in the annual birth rate;
2. To bring down mortality rates due to communicable diseases;
3. To reduce malnutrition cases among pre-school children in the program area; and
4. To increase the access of the population to safe water supply and sanitary toilet facilities.

As of December 31, 1984, there were 400 barangay Health Aides (BHAs) deployed in the provinces of Albay and Camarines Sur including the cities of Legaspi, Naga and Iriga. The BIHNPP complements the Barangay Health Worker (BHW) Program of the MOH, and to some extent, improves on it inasmuch as BHAs have undergone more extensive training than BHWs, and are working full-time. Also under this project, physical health infrastructure was constructed or upgraded. This includes main health center extensions, barangay health stations (BHS) and regional/provincial hospital laboratories. As part of the environmental sanitation component, 32,732 water-sealed toilet facilities were constructed for the use of the households while 139 community school toilet facilities have been set up. Regarding the provision of safe water supply, 320 of the 400 target barangays have been provided with communal water supply facilities.

Table 42 provides data for a comparison of some selected health, nutrition and population indicators for the years 1979 and 1982. In the Bicol region, crude birth rate (CBR), crude death rate (CDR) and infant mortality rate (IMR) have declined while the levels of 2nd degree (moderate) and 3rd degree (severe) malnutrition have decreased significantly (23.1 percent for 2nd degree and 41.3 percent for 3rd degree malnutrition). Despite the decline in

CBR and CDR, the wide gap between the two indicates that population will still continue to grow at relatively high rates unless population control measures are implemented to the fullest. In the program area, CBR has risen due to the increase experienced in Camarines Sur. CDR has fallen while IMR and maternal death rate (MDR) have decreased to a substantial extent, 33.5 percent and 34.9 percent respectively. The levels of 2nd and 3rd degree malnutrition have also declined.

In Albay and Camarines Sur, where the BIHNPP is being implemented, the figures reveal that IMR and MDR have fallen significantly since 1979 indicative of the greater number of target clients who are now being serviced by the rural health personnel. For 2nd and 3rd degree malnutrition levels, Albay has shown a more impressive improvement than Camarines Sur. The data on Sorsogon, which is excluded from the BIHNP project area, show that MDR has risen. It is a common practice in the province to have births attended by untrained "hilots" rather than the appropriate health personnel.

In Albay and Camarines Sur, the leading causes of mortality continue to be communicable diseases such as pulmonary tuberculosis. The leading causes of morbidity are gastro-enteritis, upper respiratory infection and influenza. Although illnesses due to gastro-enteritis are still high, deaths due to this disease have decreased due to greater utilization of available health services as well as the introduction and effectivity of oresol packets which are now being distributed to households.

Despite its limited years of implementation, the Bicol Integrated Health, Nutrition and Population project as a whole has already gained some benefits in the program area. To continue in this direction, it is necessary to sustain the delivery of health services particularly in the areas of family planning, maternal and child health, nutrition and control of communicable diseases. The extension of such services to the province of Sorsogon is also a necessity owing to its high death rates. In the future, it is the allocation of adequate resources particularly from the local government funds, especially in support of the continued deployment of barangay health aides (BHAs), which will ensure the widespread improvement of the health status of the region's population.

D. ROAD IMPACT

During 1979-84, the roads built under the Bicol Secondary and Feeder Roads Project (BSFRP) were substantial when compared with all other similar roads projects simultaneously undertaken in the region (Table 43). In physical terms, the project constructed or upgraded 194.77 kms. of secondary roads or 83.3 percent of all secondary roads, 241.329 kms (68.2 percent) of feeder roads and bridges totalling 1953.538 (86.3 percent) linear meters. The BSFRP was implemented in the provinces of Camarines Sur and Albay, the former having the bulk of the road development.

Interviews conducted in the influence areas of some of the road links reveal that the people view the roads positively. The benefits identified by

the respondents included the following: greater mobility as evidenced by a higher level of inter and intra-municipal travel and travel time savings; improved access to markets as well as to medical, educational and recreational facilities; greater profit margins due to expanded trading activities, and higher real estate values. In some municipalities, the number of market days has risen as in the cases of Pasacao and Libmanan which now have daily markets as against 2 market days per week in the past. The increase in market activities has contributed to higher revenues for affected municipalities. Some of the negative effects of roads include the following: the increase in squatter settlements particularly in areas close to Naga City, the failure to generate additional manufacturing activities despite the accessibility gains, and the lament of a rice miller in Libmanan that the supply of palay is now unstable since this is brought out of the municipality to more distant places. A look at available statistics supports some of the positive and negative effects described above. Table 44 reveals that for all the affected road links, a comparison of the BRCP 1981 and 1983 traffic counts show that there have been increases in the average daily traffic on all road sections with the exception of Naga-Carolina. In some of these, the increases have been substantial, i.e., from two to as much as five times the 1981 counts. The number of tricycles plying these routes have also risen dramatically. In the case of manufacturing establishments, Table 45 shows that when comparing 1978 and 1983 figures, both Albay and Camarines Sur experienced a decline in the number of manufacturing establishments. For Albay, from 2849 establishments in 1978, these decreased to 1266 establishments in 1983 representing a 55.6 percent drop. In Camarines Sur, from 1706 in 1978, the number for 1983 is 1180 or a 30.8 percent decline. This adverse development may be attributed to the instability in the business environment in the latter part of the 1970's and in the 1980's.

PART 5. SUMMARY

1. AGRICULTURAL PRODUCTION AND PRODUCTIVITY

At the regional level, the data suggest that it may take some time for program impacts on agricultural productivity to be fully felt. Impacts at the project level have been promising, but have not occurred on a scale large enough to influence region-wide agricultural performance indicators. At the program/provincial level, the data indicate that the Program's investments in irrigation increased the effective crop area with a corresponding increase in total production. The availability of irrigation water enabled the program beneficiaries to plant during the dry season.

The project level had mixed results. In the Libmanan-Cabusao (BIAD I) Project, the project targets could not be attained due to technical and management problems. Farmers in flood-free areas with sufficient irrigation were able to increase the effective crop area planted and with modern technology along with appropriate water management were able to increase both total production and farm productivity. In the flood-prone areas, the use of high input rice technology became a risky venture. In the Bula-Minalabac Land

Consolidation Project (BIAD II), the initial indications show positive impacts in both increased total agricultural production and productivity. In the Rinconada/Buhi-Lalo Project (BIAD III), the rehabilitation of the system has improved the reliability of irrigation water. This has contributed to moderate increases in total farm production and productivity.

2. MODERN TECHNOLOGY AND SUPPORTING SERVICES

Although rice production in the project areas have shown a high level of the adoption of high yielding varieties (HYV's), the provision and utilization of fertilizers and institutional credit showed a declining trend.

3. WHOLESALE, RETAILING AND RICE PROCESSING

Initially, there was an increase in the number of warehousing units to meet the needs of the increased volume of the cereal. There was a decrease later in the number of warehouses and mills. The decline can be related to a faster turnover and more efficient handling of the cereal.

4. HOUSEHOLD INCOME

Significant increases in average household income were reported for the program area and for each of the three provinces included under the Program. In Camarines Sur, where BRBDP activities were concentrated, the average annual household income reported for 1983 was highest at ₱7,855. In Albay, average household income was ₱7,083 and in Sorsogon, ₱6,918. Rates of change in average household income between 1978 and 1983 were about the same in Camarines Sur and Albay and lower in Sorsogon. It appears that income increases were positively related to BRBDP efforts. In the Integrated Development Areas where more projects were implemented, the average household income levels were higher.

Sixty-two percent of total income in Albay in 1983 came from outside agriculture. In sharp contrast, 61.7 percent of total income in Camarines Sur was from agriculture. Sorsogon's picture was more balanced with 51.6 percent of total 1983 income coming from farming and fishing. The strong performance of Albay despite very limited BRBDP activities in that province can be attributed in part to the relatively good road network as well as its non-traditional income bases.

5. INCOME DISTRIBUTION

Income distribution became more unequal from 1978 to 1983. The degrees of inequality, however, are approximately the same in each of the three provinces. Increase in income between the two survey years was found to be positively related to household income levels.

6. EMPLOYMENT

The composition of the labor force in terms of skills classification by sex has changed somewhat from 1978 to 1983. The most notable change was that more females were entering the labor force, both in agriculture and non-agriculture occupations. Significant increases in labor force participation rates were reported for each of the three provinces and the program area as a whole. However, serious underemployment was quite evident in that the proportion of the labor force who had a wage job in the past week (i.e., the week before the survey) was much smaller than the proportion who had a job for at least the past two weeks. Clearly, there is a problem of underemployment and low productivity. This can be seen in the age composition of the labor force which shows that children are a significant proportion of the employed. It could not be that there were so many employment opportunities available that even school-aged children chose to work. Rather, many households cannot afford to invest in human capital.

7. REGIONAL DEVELOPMENT

Regional disparities in economic growth continue to persist. The Bicol Region still has one of the lowest per capita Gross Regional Domestic Product (GRDP) among the 13 regions of the country. In fact, in 1982 and 1983, per capita GRDP of Region V registered negative growth rates.

The gross sub-regional domestic product (GSRDP) of the program area has increased over the years, but still not sufficiently enough to pull itself out of the depressed region category. This may be due to the following factors: its over reliance on agriculture, the inputs of which are highly sensitive to foreign exchange fluctuations, to availability of credit and to changes in the cost of money; the susceptibility of the region to typhoons, droughts, volcanic eruptions and other natural calamities; and the difficulties encountered by the region in its drive to expand its industrial base such as the high cost of power, poor communication facilities, lack of sufficiently attractive business incentives, unstable demand for some of its manufactured products, and the prevailing peace and order conditions.

On a provincial basis, in 1981, Camarines Sur contributed 50.3 percent of the GSRDP of the program area, followed by Albay with 38.9 percent, and Sorsogon with 10.8 percent. Comparing 1978 and 1981 figures, Camarines Sur registered the highest average annual growth rate of gross value-added (GVA) in agriculture while Albay had the highest growth rates in industry and services. Since the agriculture-related projects under the BRBDP have been largely concentrated in Camarines Sur, it may be inferred that these may have been partly contributory to the increases in the GVA for agriculture during the given periods. Since projects like irrigation, flood control, and roads have long gestation periods, as may be expected, the positive effects are only beginning to trickle in now. It is only with continuing support particularly in the areas of maintenance and management can we hope to attain the full benefits from such capital-intensive infrastructure development.

On health, population and nutrition, in the program area, infant mortality rate (IMR) and maternal death rate (MDR) have declined significantly. However, crude birth rate (CBR) has continued to rise particularly in Camarines Sur, thus causing a wider gap between CBR and crude death rate (CDR). Our failure to reverse this trend will cause the population of the region to grow at continuously high rates thereby putting additional stress on the region's resources. A decrease in the 2nd and 3rd degree levels of malnutrition have been observed. In terms of morbidity, communicable diseases still remain as the principal causes of illnesses. From the above indicators it may be said that the BRBDP thru its Integrated Health, Nutrition and Population Project has contributed to the improvement of maternal and child health, and to some extent to the upgrading of the nutritional levels of the population. In terms of infrastructure, for the 400 target barangays, the program has assisted considerably in the provision of communal water systems and environmental sanitation facilities. Greater attention, however, will have to be given to family planning and to the control of communicable diseases. In terms of area coverage, it is necessary to include Sorsogon which historically has exhibited high death rates.

Regarding the road impact, greater mobility, travel time savings, improved access to markets as well as to medical, educational and recreational facilities, and higher levels of trading activities have been realized. On the negative side, despite the improved roads, new economic activities are not entering the respective zones of influence. For some existing businesses like rice milling and warehousing, some indicators point to the decline in the volume of business generated inasmuch as the palay is directly brought out of the affected municipalities. This development reminds us that road construction is the minimum requirement for inducing significant economic progress to flow into a given area. Having utilized a more expensive road surface type as in the case of the Program may prove to be a costly mistake if present negative economic trends continue in the future.

ANNEX A

Supporting Statistical Tables
(Tables 2 - 45)

Table 2. Agricultural Land Utilization (Crop Area Harvested) by Selected Crop.
Bicol Region, by Crop Year, 1976, 1980-83

(In Hectares)

CROPS	LAND UTILIZATION: CROP AREA HARVESTED				
	1976	1980	1981	1982	1983
ALL CROPS	<u>1,075,000</u>	<u>1,082,620</u>	<u>1,086,290</u>	<u>1,022,070</u>	<u>973,727</u>
<u>Food Crops</u>	<u>630,500</u>	<u>629,280</u>	<u>627,280</u>	<u>600,020</u>	<u>564,420</u>
Palay (rough rice)	347,550	329,420	307,930	301,750	275,060
Corn (shelled)	155,780	163,660	179,040	164,210	155,160
Other Food Crops	127,170	136,200	140,310	134,060	134,200
<u>Commercial Crops</u>	<u>444,500</u>	<u>453,240</u>	<u>459,010</u>	<u>422,050</u>	<u>409,307</u>
Coconut (products)	320,620	353,070	352,470	329,940	334,980
Sugarcane	9,850	8,880	9,410	10,620	11,677
Abaca	113,980	91,270	96,100	81,450	62,610
Other Commercial Crops	50	20	30	40	40
			PERCENT	DISTRIBUTION	
ALL CROPS	100	100	100	100	100
<u>Food Crops</u>	<u>59</u>	<u>58</u>	<u>58</u>	<u>59</u>	<u>58</u>
Palay (rough rice)	32	30	28	30	28
Corn (shelled)	15	15	17	16	16
Other Food Crops	12	13	13	13	14
<u>Commercial Crops</u>	<u>41</u>	<u>42</u>	<u>42</u>	<u>41</u>	<u>42</u>
Coconut (products)	30	33	33	32	34
Sugarcane	a/	1	1	1	1
Abaca	11	8	9	8	6
Other Commercial Crops	a/	a/	a/	a/	a/

Source of basic data: Bureau of Agricultural Economics, MAF, Quezon City.

a/ less than one percent

Table 3. Crop Production, Bicol Region, by Crop Years, 1976, 1980-83
(In Metric Tons)

CROPS	CROP PRODUCTION				
	1976	1980	1981	1982	1983
ALL CROPS	<u>1,688,875</u>	<u>1,982,045</u>	<u>1,989,843</u>	<u>1,861,817</u>	<u>1,671,116</u>
Food Crops	<u>1,468,714</u>	<u>1,656,887</u>	<u>1,632,844</u>	<u>1,568,437</u>	<u>1,412,998</u>
Palay (rough rice)	642,085	672,590	629,385	625,790	546,900
Corn (shelled)	97,320	111,765	108,045	99,855	97,780
Other Food Crops	729,309	872,532	895,414	842,692	768,318
Commercial Crops	<u>220,161</u>	<u>325,158</u>	<u>356,999</u>	<u>293,380</u>	<u>258,118</u>
Coconut (products)	105,850	224,467	249,486	185,030	161,569
Sugarcane	45,164	44,830	51,746	55,749	59,711
Abaca	69,122	55,851	55,754	52,587	36,827
Other Commercial Crops	25	10	13	14	11
	PERCENT DISTRIBUTION				
ALL CROPS	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Food Crops	<u>87</u>	<u>84</u>	<u>82</u>	<u>84</u>	<u>85</u>
Palay (rough rice)	38	34	32	34	33
Corn (shelled)	6	6	5	5	6
Other Food Crops	43	44	45	45	46
Commercial Crops	<u>13</u>	<u>16</u>	<u>18</u>	<u>16</u>	<u>15</u>
Coconut (products)	6	11	12	10	8
Sugarcane	3	2	3	3	4
Abaca	4	3	3	3	2
Other Commercial Crops	<u>a/</u>	<u>a/</u>	<u>a/</u>	<u>a/</u>	<u>a/</u>

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Source of Basic data: Bureau of Agricultural Economics, MAF, Quezon City.
a/ Less than one percent

Table 4. Agricultural Productivity: Yield per Hectare by Selected Major Crops, Bicol Region, 1976, 1980-83
(Metric Tons Per Hectare)

CROPS	1976	1980	1981	1982	1983
ALL CROPS	<u>1.57</u>	<u>1.83</u>	<u>1.83</u>	<u>1.82</u>	<u>1.72</u>
<u>Food Crops</u>	<u>2.33</u>	<u>2.63</u>	<u>2.60</u>	<u>2.61</u>	<u>2.50</u>
Palay (rough rice)	1.85	2.04	2.04	2.07	2.00
Corn (shelled)	0.62	0.68	0.60	0.60	0.63
<u>Commercial Crops</u>	<u>0.50</u>	<u>0.72</u>	<u>0.78</u>	<u>0.70</u>	<u>0.63</u>
Coconut (products)	0.33	0.64	0.71	0.56	0.48
Sugarcane	4.59	5.05	5.50	5.25	5.11
Abaca	0.61	0.61	0.58	0.65	0.59
YIELD INDEX: 1976 = 100					
ALL CROPS	<u>100</u>	<u>117</u>	<u>117</u>	<u>116</u>	<u>110</u>
<u>Food Crops</u>	<u>100</u>	<u>113</u>	<u>112</u>	<u>112</u>	<u>107</u>
Palay (rough rice)	100	110	110	112	108
Corn (shelled)	100	110	97	97	102
<u>Commercial Crops</u>	<u>100</u>	<u>144</u>	<u>156</u>	<u>140</u>	<u>126</u>
Coconut (products)	100	121	215	170	145
Sugarcane	100	110	120	114	111
Abaca	100	100	95	107	97

Source of basic data: Bureau of Agricultural Economics, MAF, Quezon City

Table 5. Crop Production (Selected Crops) in BRBDP Area, by Province
Bicol Region, 1975 and 1980

PROVINCE/CROPS	1975		1980		PERCENT CHANGE	
	Area (ha)	Production (m.t.)	Area (ha)	Production (m.t.)	Area	Production
<u>A. Program Area</u>	<u>539,064</u>	<u>516,513</u>	<u>577,872</u>	<u>1,041,273</u>	7.20	101.6
Rice						
Irrigated	122,878	199,792	145,074	495,307	18.1	147.9
Rainfed	43,377	48,262	33,548	43,759	(22.7)	(9.3)
Upland	13,691	12,925	12,001	13,599	(12.3)	19.2
Corn and Feedgrains	32,745	38,429	35,276	52,977	7.8	37.9
Other Crops						
<u>Plantation/Industrial</u>						
<u>Crops</u>						
Abaca	30,773	7,173	21,310	6,411	(29.8)	(10.6)
Cane Sugar	5,368	15,122	16,534	62,257	204.7	311.7
Coconut	252,866	91,521	259,427	153,265	2.6	(67.5)
<u>B. Albay</u>	<u>119,895</u>	<u>138,105</u>	<u>137,968</u>	<u>268,629</u>	<u>15.1</u>	<u>94.5</u>
Rice						
Irrigated	38,843	62,020	38,606	136,665	10.8	120.4
Rainfed	7,792	8,571	6,246	4,609	(19.8)	(46.2)
Upland	4,971	4,822	4,228	4,947	(14.9)	(2.6)
Corn and Feedgrains	11,022	13,363	13,660	19,944	23.9	49.2
Other Crops						
<u>Plantation/Industrial</u>						
<u>Crops</u>						
Abaca	11,483	2,986	9,077	2,723	(20.9)	(8.8)
Cane Sugar	43	104	76	268	76.7	158.9
Coconut	38,053	12,557	46,458	26,016	22.1	107.2
<u>C. Camarines Sur</u>	<u>332,478</u>	<u>312,976</u>	<u>350,646</u>	<u>641,149</u>	<u>5.5</u>	<u>104.9</u>
Rice						
Irrigated	76,951	120,813	90,984	306,616	18.2	153.8
Rainfed	33,535	37,559	24,948	35,925	(25.6)	(4.4)
Upland	8,594	7,992	6,013	6,734	(30.0)	(15.7)
Corn and Feedgrains	19,080	22,132	20,505	31,578	(7.5)	(42.7)

Table 5, continuation

PROVINCE/CROPS	1975		1980		PERCENT CHANGE	
	Area (ha.)	Production (m.t.)	Area (ha.)	Production (m.t.)	Area	Production
<u>Other Crops</u>						
<u>Plantation/Industrial</u>						
<u>Crops</u>						
Abaca	8,244	1,979	7,285	2,549	11.6	28.9
Cane Sugar	4,836	13,879	16,186	21,669	234.7	344.3
Coconut	163,067	60,335	159,720	97,429	(2.1)	(61.5)
D. <u>Sorsogon</u>	<u>86,691</u>	<u>65,432</u>	<u>89,258</u>	<u>131,495</u>	<u>2.9</u>	<u>100.9</u>
<u>Rice</u>						
Irrigated	11,084	16,958	15,484	52,026	39.7	2.1
Rainfed	2,050	2,132	2,334	3,224	14.8	51.3
Upland	126	110	1,760	1,918	1,296.8	1,630.2
Corn and Feedgrains	2,643	2,933	1,111	1,455	(57.9)	(50.4)
<u>Other Crops</u>						
<u>Plantation/Industrial</u>						
<u>Crops</u>						
Abaca	11,046	2,209	4,948	1,138	(55.2)	(48.5)
Cane Sugar	489	1,139	92	320	(81.2)	(71.9)
Coconut	51,746	18,628	53,249	29,819	2.9	60.1

Source: BRBDPO- compiled data from various regional and provincial offices

Table 6. Agronomic Field per Hectare
of Selected Major Crops, by Province
BRB Program Area, 1975 to 1980

(in metric ton)

C R O P S	1 9 7 5			1 9 8 0			PERCENT INCREASE		
	Albay	Cam. Sur	Sorsogon	Albay	Cam. Sur	Sorsogon	Albay	Cam. Sur	Sorsogon
Rice									
Irrigated	1.78	1.57	1.53	3.54	3.37	3.36	98.87	114.64	119.61
Rainfed	1.10	1.12	1.04	1.42	1.44	1.37	29.09	28.57	31.73
Upland	0.47	0.93	0.88	1.17	1.12	1.09	20.62	20.43	23.86
Plantation/Industrial Crops									
Abaca (dried fiber)	0.36	0.24	0.24	0.30	0.35	0.23	15.38	45.83	15.00
Cane Sugar	2.41	2.87	2.33	3.53	3.81	3.48	46.47	32.75	49.36
Coconut (copra)	0.33	0.37	0.36	0.56	0.61	0.56	69.70	64.56	55.55

Sources: Socio-Economic Profile Documents; Albay, Camarines Sur and Sorsogon, Provinces: 1975 and 1982.
Provincial Offices, Ministry of Agriculture, 1980.
Regional Office, AIDA, Daraga, Albay, 1980.
Comprehensive Development Plan, 1975-2000; BRBDPO.

Table 7. Palay: Production, Area Harvested, and Yield Per Hectare of Irrigated and Rainfed Crops, Camarines Sur, by Variety Groups, CY 1981-84

VARIETIES	P R O D U C T I O N				A R E A				Y I E L D P E R H E C T A R E			
	1981	1982	1983	1984	1981	1982	1983	1984	1981	1982	1983	1984
	<u>Sacks of 50 kgs (Thousands)</u>				<u>H e c t a r e s</u>				<u>M e t r i c T o n s</u>			
<u>Irrigated</u>												
High yielding varieties	2,902.6	3,015.1	2,975.9	3,830.4	52,450	54,690	60,560	64,850	2.77	2.76	2.46	2.96
Other varieties	84.1	83.5	25.7	256.5	1,870	1,940	550	5,270	2.25	2.15	2.34	2.44
<u>Rainfed</u>												
<u>Lowland</u>												
HYV	1,752.8	1,321.4	973.4	1,655.3	47,660	41,910	29,380	42,540	1.84	1.58	1.66	1.95
OV	107.9	132.0	133.3	167.1	3,650	4,360	5,740	5,330	1.48	1.52	1.16	1.57
All lowland	1,860.7	1,453.4	1,106.7	1,822.5	51,310	46,170	35,120	47,870	1.82	1.57	1.58	1.91
<u>Upland</u>												
HYV	6.3	10.6	0.6	45.9	320	480	30	1,570	0.85	1.11	1.00	1.46
OV	81.0	96.4	52.9	102.3	4,290	5,000	3,110	5,070	0.95	0.97	0.85	1.01
All upland	97.3	107.0	53.5	148.2	4,610	5,480	3,140	6,640	0.95	0.98	0.85	1.12
All Rainfed	1,948.0	1,560.4	1,160.2	1,970.7	55,920	51,750	38,260	54,510	1.74	1.84	1.52	1.81
ALL PALAY	4,934.7	4,659.0	4,161.8	6,057.8	110,240	108,380	99,370	124,630	2.24	2.15	2.10	2.43

Source of basic data: Bureau of Agricultural Economics, MAF, Quezon City

Table 8. Programmed and Actual Irrigated Areas, LCPIS, Libmanan, Camarines Sur, 1981 to 1984

(In Hectares)

Year	Program Area		Irrigated Area	
	Wet Season	Dry Season	Wet Season	Dry Season
1981	3427	-	1742.9	-
1982	3427	3427	2995.2	1665.2
1983	3427	2659	1492.3	1052.1
1984	3427	2749	1492.9	1386.8

Percent Irrigated

1981	51.0	-
1982	87.4	48.6
1983	43.5	77.2 (59.9)*
1984	43.6	50.4 (40.5)*

Source of basic data: LCPIS-PMO, Libmanan, C.S.

*Figures in parenthesis based on 1982 dry season program area.

Table 9. Average Yield Per Hectare, LCPIS, Libmanan, Camarines Sur, 1982 to 1984 Wet and Dry Seasons

(Metric tons per hectare)

YEARS	DRY SEASON	WET SEASON
1981 <u>a/</u>	-	3.26
1982 <u>a/</u>	3.63	2.94
1983 <u>a/</u>	2.82	2.15
1984 <u>b/</u>	3.76	2.80

Source of basic data: a/ IRRI, Unpublished Report, June 1984
b/ LCPIS-PMO, Libmanan, Camarines Sur

Table 10. Status of Irrigation Fee Collection, LCPIS,
Libmanan, Camarines Sur, 1981 to 1984

(In Pesos)

YEAR	COLLECTION TARGET	ACTUAL COLLECTION	PERCENT OF TARGET
1981	375,840	48,311	39.46
1982	2,000,000	470,412	23.52
1983	2,793,834	630,027	22.77
1984	1,977,751	757,101 <u>a/</u>	38.28

a/ As of March 29, 1985

Source: LCPIS-PMO, Libmanan, Camarines Sur

Table 11. Service Areas and Actual Areas Irrigated,
BIAD II, Camarines Sur, 1985

(In Hectares)

Phases	Barangay	Service Area	Actual Area		Remarks
				Irrigated	
Phases I-A & -B	San Ramon	510	510	100% Irrigated	
Phase II	Mataoroc	184	None	Pumps not yet installed	
Phase III	San Isidro & San Agustin	327	None	Pumps not yet installed	
Phase IV	San Jose & Sagrada	939	845	90% Irrigated	
Phase V	Baliuag Viejo	246	148	60% Irrigated	
All Phases		2206	1503	68% Irrigated	

Source of basic data: BRBDPO & BIAD II PO, Camarines Sur

Table 12. Total Mean Production per Year per Hectare by Season
BIAD II, Camarines Sur, 1985

YEAR	MEAN TOTAL PRODUCTION Per Hectare	S E A S O N	
		Wet Season	Dry Season
1981	7.68	4.00	3.68
1982	7.68	4.00	3.68
1983	9.39	4.50	4.89
1984	9.39	4.50	4.89

Source of basic data: BRBDPO, Camarines Sur

Table 13. Upper Lalo Project: Service Area, Area Harvested and Rice Yield per Hectare, 1981-1984

YEAR	SERVICE AREA	AREA PLANTED		AREA HARVESTED		YIELD PER HA.	
		DRY	WET	DRY	WET	DRY	WET
1980							
		<u>Hectares</u>					
						<u>Metric Tons</u>	
						3.06	2.99
1981	1,154.7	1,100.8	1,149.4	998.8	964.5	3.12	3.02
1982	1,135.9	1,135.9	1,135.9	998.8	1,013.7	3.28	2.60
1983	997.1	997.1	997.1	885.2	924.6	3.31	3.12
1984	1,092.0	1,037.4	1,043.3	997.4	1,035.1	3.85	3.75

Source of basic data: NIA Field Office, Iriga City, Camarines Sur
BRBDPO, Camarines Sur.

Table 14. M-99 Program in Selected Bicol Provinces, Region V, Phase I (1973), Phase XI (1978), and Phase XXI (1983)

	AREA HARVESTED			PRODUCTION			YIELD PER HECTARE		
	Phase I 1973	Phase XI 1978	Phase XXI 1983	Phase I 1973	Phase XI 1978	Phase XXI 1983	Phase I 1973	Phase XI 1978	Phase XXI 1983
	<u>Hectares</u>			<u>Metric Tons</u>			<u>Metric Tons</u>		
Albay	19,734	20,683	23,284	50,525	66,703	76,401	2.60	3.22	3.28
Camarines Sur	28,965	33,550	38,767	70,985	103,252	136,031	2.45	3.08	3.51
Camarines Norte	6,430	4,851	5,433	21,619	16,796	18,114	3.36	3.46	3.33
Sorsogon	6,601	5,565	7,601	17,498	18,296	29,763	2.65	3.29	3.92
All Provinces	61,369	64,649	75,085	160,627	205,047	260,309	2.62	3.17	3.47

Source of basic data: MAF, Region V
BRBOPD

Table 15. Financing of M-99 Program in Selected Bicol Provinces, Region V
Phase I (1973), Phase XI (1978), and Phase XXI (1983)

PROVINCES	AREA PLANTED			AREA FINANCED			SUPERVISED FARMERS WITH CREDIT		
	1973	1978	1983	1973	1978	1983	1973	1978	1983
	Hectares			Percent			Percent		
Albay	19,734	22,215	23,284	32.9	34.6	7	71	18	6
Camarines Sur	28,965	33,550	38,767	85.0	34.9	18	64	32	17
Camarines Norte	6,430	6,193	5,433	36.3	13.4	4	59	11	3
Sorsogon	6,601	5,565	7,601	57.4	1.6	10	57	10	7
All Provinces	61,370	67,523	75,085	60.5	31.0	13	57	22	10

Source of basic data: MAF, Region V
BRBDPO

Table 16. Distribution of Loans Granted by Purpose of a Rural Bank Located in a BRBDP Project Area, 1980-84

ITEM	PERCENT DISTRIBUTION (AMOUNT)				
	1980	1981	1982	1983	1984
SUPERVISED					
<u>TOTAL NUMBER OF BORROWERS</u>	1,778	2,257	2,697	1,810	382
<u>Agricultural</u>					
Palay	50.4	40.6	40.8	34.0	32.6
Sugarcane	7.5	36.0	39.3	44.0	19.6
Corn	0.8	0.4	2.8	2.0	1.8
Coconut	2.1	-	-	-	-
Other Crops	5.7	0.2	0.6	-	6.8
Cattle	1.0	0.5	0.2	a/	-
Carabao	4.0	2.9	0.1	a/	12.4
Swine	22.9	14.4	10.7	13.5	20.3
Chicken	5.4	4.0	4.6	6.4	6.4
Others	0.2	1.0	0.9	a/	0.1
TOTAL	100.0	100.0	100.0	100.0	100.0
NON-SUPERVISED					
<u>TOTAL NUMBER OF BORROWERS</u>	524	377	313	288	162
<u>Agricultural</u>					
Rice	35.8	27.0	20.5	41.7	51.3
Sugarcane	0.2	6.1	6.5	1.9	0.6
Corn	-	-	0.5	a/	0.2
Coconut	-	-	-	0.6	-
Abaca	0.2	-	-	-	-
Other Crops	-	-	0.1	-	-
Livestock & Poultry	9.9	12.7	8.9	3.8	8.8
Fishery	0.3	-	0.7	0.5	-
Others	-	-	0.1	-	-
Commercial	53.6	54.2	62.7	51.3	39.1
TOTAL	100.00	100.0	100.0	100.0	100.0
SUMMARY:					
<u>TOT. AMT. OF LOANS GRANTED</u>	P12.190M	P17.687M	P18.518M	P17.977M	P3.656M
Percent Distribution:					
Supervised	50.7	60.0	63.2	54.4	64.7
Non-Supervised	49.3	40.0	36.8	45.6	35.3
TOTAL	100.0	100.0	100.0	100.0	100.0

Source of Basic Data: Rural Bank of Libmanan (C.S.)

a/ less than 0.1 percent

Table 17. Distribution of Loans Granted by Size in a Rural Bank
Located in a BRBDP Project Area, 1980-84.

ITEM	PERCENT DISTRIBUTION (AMOUNT)				
	1980	1981	1982	1983	1984
SUPERVISED					
<u>TOTAL NO. OF BORROWERS</u>	1,778	2,257	2,697	1,810	382
₱1,000 and less	5.4	3.5	3.0	-	0.4
₱1,001 - 5,000	38.6	24.4	32.8	36.2	29.1
₱5,001 - ₱10,000	29.3	22.6	22.2	13.8	19.2
₱10,001 - ₱25,000	26.7	11.3	8.3	-	16.2
Over ₱25,000	-	<u>38.2</u>	<u>33.7</u>	<u>50.0</u>	<u>35.1</u>
	100.0	100.0	100.0	100.0	100.0
NON-SUPERVISED					
<u>TOTAL NO. OF BORROWERS</u>	524	377	313	288	162
₱1,000 and less	0.4	0.2	0.4	a/	0.6
₱1,001 - ₱5,000	8.2	3.2	40.1	1.6	13.4
₱5,001 - ₱10,000	33.6	7.2	9.2	4.4	7.3
₱10,001 - ₱25,000	41.1	32.6	21.0	14.6	22.5
Over ₱25,000	<u>16.6</u>	<u>56.8</u>	<u>69.3</u>	<u>79.4</u>	<u>56.2</u>
	100.0	100.0	100.0	100.0	100.0

Source of basic data: Rural Bank of Libmanan (C.S.)

a/ less than 0.1 percent

Table 18. Number of Guano Processors, Fertilizer and/or Pesticide Distributors, Fertilizer and/or Pesticide Dealers, Camarines Sur, Region V, February 1985

MUNICIPALITY CITY	PROCESSOR	DISTRIBUTOR		DEALER		Total	
	GUANO	Fertilizer	Pesticide	Pesticide / Fertilizer	Pesticide		
1. Naga City	1	4	5	9	1	1	21
2. Pili	1			15		2	18
3. Milaor	1						1
4. Baao				4		1	5
5. Iriga City				8	3		11
6. Nabua				8	1	2	11
7. Buhi				4	2		6
8. Ocampo				6			6
9. Tigaon				5			5
10. Goa				5			5
11. San Jose				2			2
12. Lagonoy				1		2	3
13. Pasacao						1	1
14. Caramoan				1			1
15. Magarao				1	1		2
16. Calabanga				1		1	2
17. Minalabac						1	1
18. Sipocot				2		1	3
19. Libmanan				3	1	3	7
TOTAL	3	4	5	75	9	15	111

Source of basic data: FPA Provincial Coordinator, Naga City

Table 19. Rice Mills: Number of Units and Milling Capacity,
37 Towns/Cities, Camarines Sur, CY 1974, 1982-84

Type of Rice Mill	1974		1982		1983		1984	
	Milling		Milling		Milling		Milling	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity
Cono	87	11,199	103	2,620	99	2,171	77	1,292
Kiskisan	365	16,688	379	1,942	331	1,795	249	1,362
Rubber Roller	-	-	90	1,194	128	1,774	116	1,653
TOTAL	-	27,887	-	5.756	-	5.740	-	4,307

Source of basic data: NFA, Camarines Sur, April, 1985

Table 20. Grain Wholesalers, Retailers, Wholesalers/Retailers:
Number and Capitalization, 37 Towns/Cities,
Camarines Sur, CY 1981, 1983-84

Type of Business	1 9 8 1		1 9 8 3		1 9 8 4	
	Number	Capitalization	Number	Capitalization	Number	Capitalization
		Pesos		Pesos		Pesos
Retailer	1029	3,902,566	1148	7,821,448	953	9,734,475
Wholesaler	223	11,307,801	127	8,669,074	74	8,808,620
Retailer/ Wholesaler	556	n.d.	587	n.d.	627	n.d.

Source of basic data: NFA, Camarines Sur, April 1985

Table 21. Warehouses: Number of Units and Capacity
37 Towns/Cities, Camarines Sur,
CY 1973-75, 1981, 1983-84

Years	Number of Units	Capacity in Cavans
1973	72	603,260
1974	72	520,000
1975	65	351,805
1981	93a/	1,048,743
1983	106	817,920
1984	98	784,296

Source: NFA, Camarines Sur, April, 1985

a/ includes 3 without data on capacity

Table 22. Typhoons and Tropical Disturbances that Affected Bicol Region, 1978-84

<u>Name</u>	<u>Date of Occurrence</u>	<u>Maximum Wind</u>
Weling	Sept. 24-28, 1978	145 KPH
Asiang	Feb. 12-14, 1980	55 KPH
Biring	Mar. 23-25, 1980	55 KPH
Konsing	Apr. 28-May 1, 1980	55 KPH
Ditang	May 10-18, 1980	110 KPH
Gloring	May 22-29, 1980	95 KPH
Juaning	June 22-25, 1980	55 KPH
Isang	June 30-July 2, 1980	55 KPH
Maring	July 16-19, 1980	55 KPH
Nitang	July 19-22, 1980	150 KPH
Osang	July 22-26, 1980	130 KPH
Semiang	Aug. 30-Sept. 5, 1980	55 KPH
Aring	Nov. 1-7, 1980	240 KPH
Dorang	Dec. 15-21, 1980	95 KPH
Atring	Feb. 15-18, 1981	45 KPH
Delling	June 28-July 2, 1981	75 KPH
Elang	July 3-5, 1981	85 KPH
Garing	July 8-12, 1981	55 KPH
Rubing	Sept. 16-21, 1981	85 KPH
Unding	Oct. 12-14, 1981	55 KPH
Yeyeng	Nov. 17-22, 1981	85 KPH
Anding	Nov. 22-25, 1981	140 KPH
Dinang	Dec. 23-27, 1981	95 KPH
Ruping	Sept. 5-11, 1982	110 KPH
Bebeng	July 12-16, 1983	130 KPH
Herming	Sept. 4-6, 1983	110 KPH
Pepang	Oct. 10-11, 1983	55 KPH
Warling	Nov. 17-23, 1983	165 KPH
Yayang	Nov. 23-26, 1983	85 KPH
Krising	Dec. 16-18, 1983	85 KPH
Nitang	Sept. 1-3, 1984	185 KPH

Note: 1979 - No Weather Disturbance Affecting Bicol Region

Table 23. Summarized Episodic Event Data on Reported Climatic and Non-Climatic Factors Having Adverse Impact on Crop Conditions and Food Security in the Bicol and Visayas Regions (1973-83)

<u>Year</u>	<u>Month</u>	
1973		Drought over Bicol and Visayas Regions caused heavy crop failures
1978		Crop damages reported due to drought over Eastern and Central Visayas and the Bicol Regions
	Sept.-Oct.	Typhoons affected Bicol and Eastern Visayas Regions. Severe damages to crops due to floodings and strong wind.
1979	April	Typhoon Bebang crossed Eastern Visayas and North of Central and Western Visayas Regions causing severe damages to crops
1982	Oct.-Dec.	Severe drought affected seasonal crops over Bicol and Visayas Regions
1983	January	The severe drought extended during the first four months caused crop failure to major crops in Bicol and Visayas Regions
	July	Crop damages in Bicol and Visayas Regions reported due to Typhoon Bebang

Source: Climate Impact Assessment for Agriculture in the Philippines
by. A. M. Jose and M. C. Bonjoc

Table 24. Average Household Income Estimates from All Sources, By Province, BRBD Program Area, 1978 and 1983

(in pesos per year)

Program Area	(At Current Prices)		(At 1978 Prices)		Annual & Percent Increase ^{3/}
	AVERAGE HH INCOME : 1978 ^{1/}	AVERAGE HH INCOME : 1983 ^{2/}	AVERAGE HH INCOME : 1978	AVERAGE HH INCOME : 1983	
	1,785	7,285	1,785	3,834	22.96
Camarines Sur	1,786	7,855	1,786	4,134	26.29
Albay	1,596	7,083	1,596	3,728	26.72
Sorsogon	1,973	6,918	1,973	3,641	16.90

Source: 1/ BMS '78 as reported in the CAMS Studies which are probably biased downwards because of non-inclusion of income from other crops which was found to be significant in 1983.

2/ Using Basic Data from BMS '83

3/ The absolute values are probably biased upwards due to the downward bias in the 1978 data.

Table 25. Road Density, Bicol River Basin Development Program
Area, 1971, 1976, 1980 and 1982

	<u>1971</u>	<u>1976</u>	<u>1980</u>	<u>1982</u>
Program Area	0.39	0.42	0.44	0.57
Camarines Sur	0.37	0.44	0.50	0.58
Albay	0.55	0.51	0.60	0.64
Sorsogon	0.25	0.27	0.36	0.47

Source: BRBDPO

Table 26. Comparative Average Household Income Estimates
from All Sources, by Province and IAD, BRBD Program
Area, 1978 and 1983
(In Pesos Per Year at 1978 Prices)

PROVINCE/CITY AND IAD	: IAD : : CODE : : NO. :	AVERAGE HH INCOME : 1978 : : 1983 :	AVERAGE : ANNUAL PERCENTAGE : INCREASE*
CAMARINES SUR		1,786 4,134	26.29
Naga City ^{5, 4}	1	1,884 3,323	15.28
Iriga City ^{4, 5}	2	2,093 3,705	15.40
Libmanan-Cabusao ^{1,4,5}	10	1,554 4,590	39.07
Bula-Minalabac ^{2,4,5}	21	2,124 3,367	11.70
Pili-Ocampo ^{5,4}	22	1,783 3,414	18.30
Bato-Buhi-Baao**	30	1,810 7,651	64.54
Canaman-Camaligan ⁵	41	1,526 3,897	31.07
Calabanga-Tinambac ^{5,4}	42	1,528 3,658	27.88
Milaor-Gainza-Libmanan- Pamplona ^{4,5}	51	1,792 3,803	22.44
Minalabac-Pasacao ⁴	52	1,829 4,139	25.26
Del Gallego-Sipocot ^{5-Ragay}	80	1,973 3,986	10.41
Sangay-San Jose-Jose-Goa ⁵	90	1,535 4,078	33.13
ALBAY			
Legaspi City ⁵	3	1,378 3,714	33.90
Pio Duran-Guinobatan ⁵	61	1,510 3,133	21.50
Libon-Oas ^{4,5}	62	2,271 3,725	12.80
Tiwi-Tabaco-Malilipot ⁵	71	1,299 3,554	34.72
Camalig-Daraga	72	1,522 4,515	39.33
SORSOGON		1,973 3,641	16.91
DonsoI-Sorsogon-Castilla	100	1,912 3,261	14.11
Irosin-Juban-Magallanes	200	1,955 4,115	22.10
Gubat-Bulusan-Prieto Diaz	300	2,051 3,547	14.59

* The absolute values are probably biased upwards due to the downward bias in 1978 data and improvement in the 1983 estimates.

** Bato-Buhi-Baao IAD is an exceptional case. The high income level may be attributed to the tilapia fishpens which mushroomed around the Bato Lake in the early 1980's.

1/ Irrigation and water system projects and training on improved agricultural and health practices were undertaken.

2/ Construction of community buildings, improved water supply facilities, organization of farmer's associations.

3/ Rehabilitation and construction of irrigation structures and upland development.

4/ Construction and rehabilitation of secondary and feeder roads.

5/ Integrated Health, Nutrition and Population Project.

Table 27. Mean Household Income by Source of Income
Bicol River Basin Development Program¹, 1983

(in pesos per year, at 1978 prices)

Sources of Income	: No. of HHs : Reporting	: Mean HH : Income	: Percentage Contribution : To Total Income	
				Sub-Total
Agriculture				
Abaca	48	370.8	0.22	
Coconut	26	(21.6)	0.06	
Rice	560	1501.0	11.35	
Corn	80	327.4	0.53	
Other Crops	260	4983.1	13.51	
Livestock/Poultry	1328	1203.4	23.06	
Fishing	66	1719.2	2.07	50.80
Wages and Salaries	211	2958.0	8.62	
Business	802	1883.4	20.63	
Other Sources	1391	969.0	19.95	50.20
Total			100.00	100.00

¹ Includes Camarines Sur, Albay and Sorsogon

Source of Basic Data: BMS '83

Table 28. Mean Household Income by Source of Income and Province,
BRBD Program^{1/}, 1983

(in pesos per year, at 1978 prices)

Sources of Income:	No. of HHS Reporting			M E A N I N C O M E		
	Camarines Sur:	Albay :	Sorsogon:	Camarines Sur:	Albay :	Sorsogon
Agriculture						
Abaca	10	26	12	476.7	251.8	383.8
Coconut	19	5	<u>2/</u>	241.5	203.3	-
Rice	374	122	64	1491.5	1415.5	1596.0
Corn	50	28	<u>2/</u>	645.1	240.3	<u>2/</u>
Sugarcane	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
Other Crops	148	74	38	5254.6	1499.6	1564.9
Livestock/ Poultry	609	337	186	1421.1	934.3	1254.7
Fishing	45	<u>2/</u>	13	2611.1	<u>2/</u>	2808.4
Wages & Salaries	136	49	26	2942.7	3392.7	2538.5
Business	460	218	241	1882.6	1925.0	1842.8
Other Sources	786	383	222	1138.9	1095.2	672.9

1/ Includes Camarines Sur, Albay and Sorsogon

2/ Inadequate number of samples

Source of basic data: 1983 BMS data

Table 29. Percentage Contribution to Total Income by Source of Income, By Province, BRED Program Area, 1983

(in pesos per year, at 1978 prices)

SOURCES OF INCOME	PERCENTAGE CONTRIBUTION TO TOTAL INCOME		
	Camarines Sur	Albay	Sorsogon
Agricultural Income	55.02	37.88	51.63
Abaca	0.10	0.40	0.50
Coconut	0.10	0.06	-
Rice	11.61	10.68	11.12
Corn	0.67	0.42	-
Sugarcane	-	-	-
Other Crops	16.29	6.86	10.61
Livestock/Poultry	23.81	19.46	25.42
Fishing	2.44	-	3.98
Non-Agricultural Income	44.98	62.12	48.37
Wages and Salaries	8.33	10.27	7.20
Business	18.02	25.93	24.90
Other Sources	18.63	25.92	16.27
Total	100.00	100.00	100.00

Source of basic data: BMS '83

Table 30. Mean Household Income and Cumulative Percentage Distribution in Deciles, Program Area, 1978 and 1983

(in pesos per year at 1978 prices)

	MEAN HOUSEHOLD INCOME		Percent Increase	Cumulative Percentage Distribution	
	1978	1983	1978-1983	1978	1983
1	60	92	53.33	0.3	0.2
2	249	341	36.94	1.7	1.1
3	465	638	37.20	4.3	2.8
4	694	1,019	46.83	8.2	5.4
5	1,014	1,471	45.07	13.9	9.2
6	1,430	2,109	47.48	21.9	14.6
7	1,870	2,981	59.41	32.4	22.3
8	2,471	4,363	76.57	46.2	33.5
9	3,478	6,580	89.19	65.7	50.5
10	6,113	19,216	214.35	100.0	100.0

Sources: BMS '78, CAMS Report
BMS '83 basic data

Table 31. Average Household Income
and Income Inequality by Province,
BRBD Program Area, 1978 and 1983

(in pesos per year at 1978 prices)

Area Province	AVERAGE HH INCOME		Percent of Income Lowest 20%		Percent of Income Highest 20%	
	1978	1983	1978	1983	1978	1983
Program	1785	3834	1.88	1.11	50.57	66.59
Camarines Sur	1786	4134	1.88	0.94	50.82	68.91
Albay	1596	3728	1.80	1.39	49.48	62.03
Sorsogon	1973	3641	2.04	1.48	51.34	62.76

Source of Data: (1) 1978 data from Montes, Manuel, "Household Income in the Bicol River Basin: Estimates and Correlates," Council for Asian Manpower Studies, August 1983.

(2) 1983 data estimated from BMG '83.

**Table 32. Comparative Mean Household Income in Deciles
By Province, BRBCP Area, 1978 and 1983**

(In pesos per year at 1978 prices)

Decile	Camarines Sur		Albay		Sorsogon		Percent Increase 1978-1983			
	1978	1983	1978	1983	1978	1983	Cam.	Sur	Albay	Sorsogon
1	59	91	51	96	73	90	54.24	88.23	23.29	
2	241	335	231	347	253	350	39.00	50.22	38.34	
3	449	628	458	644	446	640	39.87	40.61	43.50	
4	667	1012	668	1016	666	1046	51.72	52.10	57.06	
5	961	1474	959	1473	945	1453	53.38	53.60	53.76	
6	1381	2093	1371	2123	1331	2153	51.56	54.85	61.76	
7	1772	2996	1826	2984	1791	2897	69.07	63.42	61.75	
8	2320	4367	2129	4382	2287	4314	88.23	88.15	88.63	
9	3227	6544	3218	6577	3220	6788	102.79	104.38	110.81	
10	4886	19902	4511	18524	5001	17002	307.33	310.64	239.97	

Table 34. Percent of Household Members Ten Years Old and Over Who Worked and Did Not Work During the Past Week, By Sex and Province, BRBD Program Area, 1978 and 1983

Area/Province	M A L E				F E M A L E				B O T H S E X E S			
	With Job		Without Job		With Job		Without Job		With Job	Without Job		
	1978	1983	1978	1983	1978	1983	1978	1983	1978	1983	1983	
Program Area <u>1/</u>	58.51	63.76	41.49	36.24	27.53	54.08	72.47	45.92	48.48	58.88	51.52	41.11
Camarines Sur	58.82	61.57	41.18	38.43	25.23	50.42	74.77	49.58	47.95	55.92	52.05	44.08
Albay	55.03	68.99	44.97	31.01	34.82	60.44	65.18	39.56	48.27	64.63	51.73	35.37
Sorsogon <u>2/</u>	71.10	63.81	28.90	36.19	22.73	58.21	77.27	41.79	57.74	61.10	42.26	38.90

1/ Program Area includes the provinces of Camarines Sur, Albay and Sorsogon

2/ Sorsogon includes one (1) IAD only, 1978.

Sources: BMS '78, CAMS Rep. rt
BMS '83, basic data

Table 35. Number and Percentage of Household Members 10 Years Old and Over Who Worked and Did not Work During the Past Two Straight Weeks: By Sex and Province, BRBD Program Area, 1978 and 1987

Area/Province	M A L E				F E M A L E				B O T H S E X E S			
	With Job		Without Job		With Job		Without Job		With Job		Without Job	
	1978	1983	1978	1983	1978	1983	1978	1983	1978	1983	1978	1983
Program Area ^{1/}	48.24	38.82	51.76	61.18	10.22	27.31	89.78	72.69	30.93	32.37	69.07	67.63
Camarines Sur		42.65		57.35		31.49		78.51		36.33		63.67
Albay		33.06		66.94		20.45		79.55		25.86		74.14
Sorsogon ^{2/}		30.71		69.29		17.67		82.33		24.0		76.0

^{1/} Program Area includes the provinces of Camarines Sur, Albay and Sorsogon

^{2/} Sorsogon includes one (1) AID only, 1978.

Sources: BMS '78, CAMS Report
BMS '83, basic data

Table 36. Gross Regional Domestic Product, by Region
1972, 1975, 1978, 1981, and 1983

(at constant 1972 prices in million ₱)

Region/Year	1972	1975	1978	1981	1983
PHILIPPINES	56464	68538	82784	96209	100067
NCR Metro Manila	16690	21527	25729	30521	32359
I. Ilocos	2392	2710	3021	3645	3787
II. Cag. Valley	1805	1788	2332	2699	2585
III. Central Luzon	4824	5777	6943	8517	8731
IV. S. Tagalog	7666	9348	11886	13240	13872
V. Bicol	2040	2354	2773	3257	3087
VI. W. Visayas	5552	6464	7066	7970	8288
VII. C. Visayas	4013	4900	5921	6990	7098
VIII. E. Visayas	1687	2009	2097	2392	2327
IX. W. Mindanao	1437	1765	2584	3259	3323
X. N. Mindanao	2583	2984	3903	4382	4492
XI. S. Mindanao	3817	4768	5813	6358	6564
XII. C. Mindanao	1958	2144	2716	2979	3555

Source: NAS, NEDA

Table 37. Gross Regional Domestic Product/Per Capita GRDP
Philippines and Bicol Region, 1972, 1975, 1978, 1981 and 1983

(at constant 1972 prices)

<u>GRDP/Per Capita GRDP</u>	<u>1972</u>	<u>1975</u>	<u>1978</u>	<u>1981</u>	<u>1983</u>
A. GRDP:					
Philippines (MillionP)	56464	68538	82784	96209	100067
Region V-Bicol (MillionP)	2040	2354	2773	3257	3087
% Share of Bicol to total	3.6	3.4	3.3	3.4	3.1
Region V: %Inc./Dec.)	-	15.4	17.8	17.4	(5.2)
Region V: Ave. Annual Growth (%)	-	5.1	5.9	5.8	(2.6)
B. Per Capita GRDP:					
Philippines (P)	1450	1622	1808	1943	1924
Region V - Bicol (P)	666	735	823	915	834
Region V: %Inc./Dec.)	-	10.4	12.0	11.2	(8.8)
Region V: Ave. Annual Growth (%)	-	3.4	4.0	3.7	(4.4)

Source: NAS, NEDA

Table 38. Per Capita Gross Regional Domestic Product, by Region,
1972, 1975, 1978, 1981, and 1983

(at constant 1972 prices in million ₱)

Region/Year	1972	1975	1978	1981	1983
PHILIPPINES	1450	1622	1808	1943	1924
NCR	3816	4306	4631	4971	4978
I. Ilocos	770	827	878	1010	997
II. Cag. Valley	1007	921	1106	1183	1077
III. Central Luzon	1249	1366	1517	1724	1679
IV. S. Tagalog	1607	1783	2060	2085	2070
V. Bicol	666	735	823	915	834
VI. W. Visayas	1447	1554	1612	1719	1691
VII. C. Visayas	1261	1441	1629	1800	1774
VIII. E. Visayas	682	771	770	835	776
IX. W. Mindanao	739	856	1104	1253	1231
X. N. Mindanao	1229	1282	1509	1533	1497
XI. S. Mindanao	1584	1744	1876	1828	1823
XII. C. Mindanao	981	1032	1237	1283	1422

Source: NAS, NEDA

Table 39. Gross Regional Domestic Product, by Sector,
Bicol Region, 1972, 1975, 1978, 1981, 1983
(at constant 1972 prices in million P)

Sector/Year	1972		1975		1978		1981		1983	
	Value	% Share								
GROSS REGIONAL DOMESTIC PRODUCT (GRDP)	<u>2040</u>	<u>100.0</u>	<u>2354</u>	<u>100.0</u>	<u>2773</u>	<u>100.0</u>	<u>3257</u>	<u>100.0</u>	<u>3087</u>	<u>100.0</u>
1. Agriculture										
Fishery & Forestry	<u>1221</u>	<u>59.8</u>	<u>1348</u>	<u>57.3</u>	<u>1435</u>	<u>51.8</u>	<u>1713</u>	<u>52.6</u>	<u>1505</u>	<u>48.8</u>
2. Indus'l Sector:	<u>173</u>	<u>8.5</u>	<u>226</u>	<u>9.6</u>	<u>414</u>	<u>14.9</u>	<u>494</u>	<u>15.2</u>	<u>452</u>	<u>14.6</u>
a. Mining & Quarrying	28	1.4	5	0.2	4	0.2	31	1.0	35	1.1
b. Manufacturing	60	3.0	68	2.9	81	2.9	98	3.0	99	3.2
c. Construction	76	3.7	138	5.9	309	11.1	336	10.3	279	9.0
d. Electricity, gas & water	9	0.4	15	0.6	20	0.7	29	0.9	39	1.3
3. Service Sector:	<u>646</u>	<u>31.7</u>	<u>780</u>	<u>33.1</u>	<u>924</u>	<u>33.3</u>	<u>1050</u>	<u>32.2</u>	<u>1130</u>	<u>36.6</u>
a. Trans., Communication and Storage	61	3.0	77	3.3	101	3.6	116	3.5	120	3.9
b. Commerce	320	15.7	382	16.2	446	16.1	495	15.2	551	17.8
c. Services	265	13.0	321	13.6	377	13.6	439	13.5	459	14.9
PER CAPITA GROSS REGIONAL DOMESTIC (P)	666	-	735	-	823	-	915	-	834	-

SOURCE: NAS, NEDA

Table 40. Gross Sub-Regional Domestic Product by Sector
Program Area^{1/}, 1978 vs 1981

(at constant 1972 prices in million P)

Sector/Year	1978		1981		% Inc/ Dec)	Average Annual Growth (%)
	Value	% Share	Value	Share		
GROSS SUB-REGIONAL DOMESTIC PRODUCT (GSRDP)	<u>1866</u>	<u>100.0</u>	<u>2723</u>	<u>100.0</u>	<u>45.9</u>	<u>15.3</u>
1. Agriculture, Fishery and Forestry	<u>810</u>	<u>43.4</u>	<u>1535</u>	<u>56.4</u>	<u>89.5</u>	<u>29.8</u>
2. Industrial Sector:	343	18.4	391	14.4	14.0	4.7
a. Mining and Quarrying	<u>17</u>	<u>27</u>	<u>14</u>	<u>0.5</u>	<u>600.0</u>	<u>200.0</u>
b. Manufacturing	103 ^{3/}	5.5	76 ^{2/}	2.8	(26.2)	(8.7)
c. Construction	223	12.0	276	10.2	24.3	8.1
d. Electricity, gas and water	16	0.9	25	0.9	56.2	18.8
3. Service Sector:	<u>713</u>	<u>38.2</u>	<u>797</u>	<u>29.2</u>	<u>11.8</u>	<u>3.9</u>
a. Transportatio, Communication and storage	96	5.1	103	3.8	7.3	2.4
b. Commerce	368	19.7	396	14.5	7.6	2.5
c. Services	249	13.4	298	10.9	19.7	6.6
PER CAPITA GROSS SUB-REGIONAL DOMESTIC PRODUCT	803	-	1137	-	41.6	13.9

Source: Sub-Regional Accounts Project, BRBDPO

^{1/} Includes Albay, Camarines Sur and Sorsogon

^{2/} Negligible

^{3/} Unadjusted value which accounts for the inconsistency with the figure appearing under manufacturing (1978) on Table 37.

Table 41. Gross Sub-Regional Domestic Product, By Sector,
Program Area and Province, 1978 vs. 1981

(At Constant 1972 Prices in Millions Pesos)

Sector/Year	1978				1981				Average Annual Growth (%), 1978-81									
	Albay Value	Albay % Share	Cam. Sur Value	Cam. Sur % Share	Sorsogon Value	Sorsogon % Share	Program Area	Albay Value	Albay % Share	Cam. Sur Value	Cam. Sur % Share	Sorsogon Value	Sorsogon % Share	Program Area	Albay	Cam. Sur	Sorsogon	Program Area
Gross Sub-Regional Domestic Product	675	100.0	932	100.0	259	100.0	1866	1060	100.0	1369	100.0	294	100.0	2723	19.0	15.6	4.5	15.3
1. Agriculture, Fishery and Forestry	245	36.3	458	49.1	107	41.3	810	374	35.3	964	70.4	197	67.0	1535	17.6	36.8	28.0	29.8
2. Industrial Sector	145	21.5	165	17.7	33	12.8	343	267	25.2	113	8.3	11	37	391	28.0	(10.5)	(22.2)	4.7
a. Mining and Quarrying	1	1	1	0.1	1	1	1	12	1.1	2	0.2	17	17	14	2708.0	33.3	-	2007.0
b. Manufacturing	71	10.5	28	2.8	8	2.3	103 ^{1/2}	18	1.7	76	5.5	40	3	1.0	(24.9)	37.2	(16.7)	(8.7)
c. Construction	68	10.1	130	14.0	25	9.7	223	224	21.2	45	3.3	7	2.4	2.76	76.4	(21.8)	(24.0)	8.1
d. Electricity, gas & water	6	0.9	8	0.8	2	0.8	16	13	1.2	11	0.8	1	0.3	25	38.9	12.5	(16.7)	18.8
3. Service Sector	285	42.2	309	33.2	119	45.9	713	419	39.5	292	21.3	86	29.3	79.7	15.7	(1.8)	(9.2)	3.9
a. Trans. Com. & Storage	43	6.7	37	4.0	14	5.4	96	45	4.2	37	2.7	21	7.2	103	-	-	16.7	2.4
b. Commerce	137	20.3	171	18.4	60	23.1	368	175	16.5	185	13.5	36	12.2	396	9.2	2.7	(13.3)	2.3
c. Services	105	15.2	101	10.8	4	1.7	249	199	18.8	70	5.1	29	9.9	298	31.0	(10.2)	(11.9)	6.6

Source: Sub-Regional Accounts Project, SRSOPD

^{1/} Negligible.

Table 42. Selected Health, Nutrition and Population Indicators
Bicol Region, Program Area, Province, 1979 vs. 1982

INDICATORS	Bicol Region			Program Area			Albay			Camarines Sur			Sorsogon		
	1979	1982	% Inc/ (Dec)	1979	1982	% Inc/ (Dec)	1979	1982	% Inc/ (Dec)	1979	1982	% Inc/ (Dec)	1979	1982	% Inc/ (Dec)
	1. Crude Birth Rate (CBR) per 1000 population	41.4	37.1	(10.4)	33.98	35.35	4.0	34.67	32.72	(5.6)	32.11	38.86	21.0	36.90	31.51
2. Crude DeathRate (CDR) per 1000 population	9.1	8.5	(6.6)	7.32	6.81	(7.0)	6.63	6.88	3.8	6.94	6.20	(10.7)	9.28	8.12	(12.5)
3. Infant Mortality Rate (IMR) per 1000 live births	66.3	62.4	(5.9)	45.54	30.27	(33.5)	42.75	31.90	(25.4)	46.48	26.40	(43.2)	48.14	38.71	(19.6)
4. Maternal Death Rate (MDR) per 1000 live births	1.52	N.A.	-	1.49	0.97	(34.9)	1.24	0.79	(36.3)	1.56	0.66	(57.7)	1.72	2.18	26.7
5. Malnutrition Rates per 100 population of pre- school children aged 0-6 years:															
a) 2nd degree	25.27	19.42	(23.1)	23.67	18.61	(21.4)	22.14	16.33	(26.2)	26.19	22.58	(13.8)	27.52	17.91	(34.9)
b) 3rd degree	5.59	3.28	(41.3)	4.00	3.22	(19.5)	3.23	2.32	(28.2)	5.33	4.84	(9.2)	6.13	2.86	(53.3)

SOURCE: MOH, Region V

Table 43. Actual Road/Bridge Construction & Upgrading
BSFRP vs Other Projects in Albay and Camarines Sur, 1979-84

<u>Area/ Administration</u>	<u>Secondary Roads (Kms.)</u>	<u>Feeder Roads (Kms.)</u>	<u>Bridges (Linear Meter)</u>	<u>Access Roads (Kms.)</u>
<u>1979</u>				
A. BSFRP (BRBDPO)	5.15	10.03	309.46	-
B. Others	<u>8.871</u>	<u>8.6</u>	<u>170.80</u>	-
Albay (PEO)				
Albay (HDEO)				
Naga City (CEO)				
Iriga City (CEO)	4.071	8.6		-
Camarines Sur (PEO)	4.80		170.80	
Camarines Sur (HDEO)				
C. % BSFRP/Total	<u>36.7%</u>	<u>53.8%</u>	<u>64.4%</u>	-
<u>1980</u>				
A. BSFRP (BRBDPO)	22.89	23.977	138.20	-
B. Others	<u>2.0</u>			
Albay (PEO)				
Albay (HDEO)				
Naga City (CEO)				
Iriga City (CEO)				
Camarines Sur (PEO)	2.0			
Camarines Sur (HDEO)				
C. % BSFRP/Total	<u>92.0%</u>	<u>100%</u>	<u>100%</u>	-
<u>1981</u>				
A. BSFRP (BRBDPO)	17.866	32.138	294.49	-
B. Others	<u>2.0</u>	<u>73.666</u>	<u>78.6</u>	-
Albay (PEO)				
Albay (HDEO)				
Naga City (CEO)				
Iriga City (CEO)		73.666	16.0	
Camarines Sur (PEO)	2.0		62.6	
Camarines Sur (HDEO)				
C. % BSFRP/Total	<u>89.9%</u>	<u>30.4%</u>	<u>78.9%</u>	-

Table 43, continuation

<u>Area/ Administration</u>	<u>Secondary Roads (Kms.)</u>	<u>Feeder Roads (Kms.)</u>	<u>Bridges (Linear Meter)</u>	<u>Access Roads (Kms.)</u>
<u>1982</u>				
A. BSFRP (BRBDPO)	<u>93.01</u>	<u>111.092</u>	<u>757.788</u>	-
B. Others	<u>10.557</u>	<u>1.000</u>	<u>43.600</u>	-
Albay (PEO)				
Albay (HDEO)				
Naga City (CEO)				
Iriga City (CEO)	7.317			
Camarines Sur (PEO)	3.24	1.0	43.600	
Camarines Sur (HDEO)				
C. % BSFRP/Total	<u>89.8%</u>	<u>99.1%</u>	<u>94.6%</u>	-
<u>1983</u>				
A. BSFRP (BRBDPO)	<u>51.643</u>	<u>64.092</u>	<u>453.60</u>	<u>.310</u>
B. Others	<u>8.405</u>	<u>11.873</u>	<u>8.00</u>	-
Albay (PEO)				
Albay (HDEO)				
Naga City (CEO)				
Iriga City (CEO)		9.873	8.00	
Camarines Sur (PEO)	8.405	2.000		
Camarines Sur (HDEO)				
C. % BSFRP/Total	<u>14.0%</u>	<u>84.4%</u>	<u>98.3%</u>	<u>100.0%</u>
<u>1984</u>				
A. BSFRP (BRBDPO)	<u>4.211^{1/}</u>	-	-	<u>.40</u>
B. Others	<u>7.274</u>	<u>17.57</u>	<u>10.0</u>	
Albay (PEO)				
Albay (HDEO)				
Naga City (CEO)				
Iriga City (CEO)	.274	16.57	10.00	
Camarines Sur (PEO)	3.000	1.000		
Camarines Sur (HDEO)				
C. % BSFRP/Total	<u>36.7%</u>	-	-	<u>100.0%</u>
<u>1979-84</u>				
A. BSFRP	<u>194.77</u>	<u>241.329</u>	<u>1953.538</u>	<u>.710</u>
B. Others	<u>39.107</u>	<u>112.709</u>	<u>311.0</u>	-
C. % BSFRP/Total	<u>83.3%</u>	<u>68.2%</u>	<u>86.3%</u>	<u>100.0%</u>

Sources: BRBDPO

Provincial Engineer's Offices, Albay and Camarines Sur
City Engineer's Offices, Naga City and Iriga City
Highway District Engineer's Offices, Albay and Camarines Sur

^{1/} Supplemental Contract for Upgrading of Gravelled Surface Section.

Table 44. Average Daily Traffic (ADT)
Program Area, 1981 vs. 1983

Road Link	ADT (all vehicles ^{1/} excl. tricycles)			ADT (tricycles)			ADT (all vehicles) incl. tricycles		
	1981	1983	% Inc/Dec.	1981	1983	% Inc/Dec.	1981	1983	% Inc/Dec.
1. Cabusao-Libmanan - San Isidro:									
San Isidro-Libmanan	330	487	47.6	6	70	1066.7	336	557	65.8
Libmanan-Cabusao	78	163	109.0	66	248	275.8	144	411	185.4
2. Davao - Pasacao	326	491	50.6	53	112	111.3	379	603	59.1
3. Calabanga - Tinambac	273	341	24.9	121	441	264.4	394	782	98.5
4. Minalabac - Hubo	114 ^{2/}	122	7.0	30 ^{2/}	57	90.0	144 ^{2/}	179	24.3
5. Pili - Mataoroc	34	142	318.0	41	64	56.1	75	206	174.7
6. Palestina-Minalabac:									
Palestina - San Antonio	35	110	214.3	-	7	-	35	117	234.3
7. Bula - Ombao:									
Sto. Domingo - Bula-Ombao	144	220	52.8	40	22	(45.0)	184	242	31.5
8. Bula - Tupaz	42	158	276.2	41	183	346.3	83	341	30.8
9. San Agustin - Nabua	30	123	310.0	114	204	78.9	144	327	127.0
10. Naga - Carolina	220	199	(9.5)	227	172	(24.2)	447	371	(17.0)
11. Nabua - San Juan - Libon									
San Juan - Tandaay	109	121	11.0	10	7	70.0	119	138	16.0
Tandaay - Nabua	370	409	10.5	236	267	13.1	606	676	11.6
12. Iriga - Salvacion	20	171 ^{2/}	755.0	102	248 ^{2/}	143.1	122	419 ^{2/}	243.4
13. Buhí - Lidong	59	189	220.3	12	261	2075.0	71	450	533.8
14. Polangui - Nasisi-Ligao	-	138	-	-	511	-	-	649	-
Polangui - Nasisi									

Source: BREP Traffic Counts, 1981, 1982, 1983

1/ Includes cars, jeepneys, mini and large buses, medium and large trucks, trailers and semi-trailers.
2/ 1982

Table 45. Number of Manufacturing Establishments
Albay and Camarines Sur, 1978 vs. 1983

Province/City/Municipality	Number of Establishments		
	1978	1983	% Inc/Dec.
I. Albay	<u>2849</u>	<u>1266</u>	(55.6)
1. Legaspi City	139	78	(43.9)
2. Bacacay	167	16	(90.4)
3. Camalig	335	114	(66.0)
4. Daraga	129	67	(48.1)
5. Guinobatan	70	62	(11.4)
6. Jovellar	9	5	(44.4)
7. Libon	325	202	(37.8)
8. Ligao	188	113	(39.9)
9. Malilipot	143	27	(81.1)
10. Malinao	24	16	(33.3)
11. Manito	88	2	(97.7)
12. Oas	526	303	(42.4)
13. Pio Duran	59	30	(49.1)
14. Polangui	191	164	(14.1)
15. Rapu-rapu	29	3	(89.6)
16. Sto. Domingo	143	0	(100.0)
17. Tabaco	263	47	(82.1)
18. Tiwi	21	17	(19.0)
II. Camarines Sur	<u>1706</u>	<u>1180</u>	(30.8)
1. Naga City	214	145	(32.2)
2. Iriga City	134	91	(32.0)
3. Pili	94	53	(43.6)
4. Baao	57	47	(17.5)
5. Balatan	12	8	(33.3)
6. Bato	30	15	(50.0)
7. Bombon	6	16	167.0
8. Buhi	93	25	(73.1)
9. Bula	65	54	(16.9)
10. Cabusao	14	10	(28.6)
11. Calabanga	140	96	(31.4)
12. Camaligan	31	11	(64.5)
13. Canaman	77	12	(84.4)
14. Caramoan	12	7	(41.7)
15. Del Gallego	18	18	-
16. Gainza	16	16	-
17. Garchitorena	8	3	(62.5)
18. Goa	50	36	(28.0)
19. Lagonoy	36	15	(58.3)
20. Libmanan	110	97	(11.8)
21. Lupi	15	5	(66.7)
22. Magarao	28	36	28.6

Table 45, continuation

Province/Municipality	Number of Establishments		
	<u>1978</u>	<u>1983</u>	<u>% Inc/Dec.</u>
23. Milaor	9	11	22.2
24. Minalabac	44	28	(36.4)
25. Nabua	142	105	(26.1)
26. Ocampo	26	40	53.8
27. Pamplona	12	21	75.0
28. Pasacao	21	14	(33.3)
29. Presentacion	3	1	(66.7)
30. Ragay	49	32	(34.7)
31. Sagnay	4	8	100.0
32. San Fernando	28	17	(39.3)
33. San Jose	23	21	(8.7)
34. Sipocot	29	29	-
35. Siruma	4	2	(50.0)
36. Tigaon	31	23	(25.8)
37. Tinambac	21	12	(42.8)
III. Total: Albay & Camarines Sur	<u>4555</u>	<u>2446</u>	<u>(46.3)</u>

Source: NCSO, Reg. V.

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III. ORGANIZATION AND STRATEGY

A. INTRODUCTION

The Bicol River Basin Development Program has been a testing ground for regionalizing planning and implementation of national development programs and projects. However, as the impact assessment reported earlier indicates, while much has already been accomplished, and considerable promise for future program impacts is present, a very large agenda remains to be addressed if the Program's original goals are to be attained. The natural question at this point is to ask: can the BRBDP do what needs to be done? Parts of this question have been discussed at considerable length in prior evaluations and academic studies. The general conclusion appears to be that, within the context of the essentially centralized Philippine administrative system, the BRBDP can perform a role of managing a development planning process and coordinating the implementation of projects related to that process. We will not repeat the material that is readily accessible in these sources. This chapter will review (1) the evolution of the BRBDP, noting the continuing search for workable relationships between planning and implementation functions in the regional development context; (2) the current administrative arrangements of the Program, identifying some of the primary strengths and weaknesses in these arrangements; and (3) key issues in IAD programming that now face the BRBDP and are likely to occupy the Program in the future.

B. BACKGROUND TO THE BRBDP

The BRBDP is not the country's first or only effort to institutionalize a regional or sub-regional development planning and implementation capacity. To put the BRBDP in proper perspective, it is important to briefly review the country's recent efforts to find workable strategies for institutionalizing the growth, support, and linking of regional development planning and implementation functions.

1. REGIONAL DEVELOPMENT AUTHORITIES

During the 1960's, Regional Development Authorities or RDAs were created for particular regional and subregional areas. The RDA's were created through special legislation of the Philippine Congress and were either general purpose organizations (such as the Mindanao Development Authority, Mountain Province Development Authority, Northern Samar Development Authority) or special purpose authorities (such as the Hundred Islands Conservation and Development Authority and the San Juanico Strait Tourist Development Authority) depending on the scope of their concerns. As corporate entities, they performed various tasks for the geographical areas covered by their authority, ranging from plan formulation to project implementation. Some were vested with very strong authority, such as the Bicol Development Company (or BIDECO), which had the power to review and pass upon all private projects and investments to be located in the region. However, these laws did not provide

adequate fiscal incentives or legal sanctions to enable the RDAs to enforce their authority. Consequently, their powers remained available mainly on paper.

Part of the regional development thrust during the 1970's was the separation of regional development planning functions from regional implementation. The Integrated Reorganization Plan of 1972 which was adopted by Presidential Decree No. 1 provided that regional planning functions would be performed by Regional Development Councils (RDC's) and that regional planning implementation would be undertaken by Regional Development Agencies (RDAs) that would be activated only when the NEDA authorizes it and when funds are available. While all the RDCs are now in place, no regional development agencies have yet been created. Periodically, this has led to the revival of proposals for the creation of sub-regional development corporations. The proposals have not received support, primarily because they have serious political, administrative and financial implications.

However, it should be noted that while strictly speaking, there are no RDA's as envisaged in the Integrated Reorganization Plan, there have been numerous provincial and sub-regional offices created for the purpose of planning and implementing national development programs. Foremost among these are the IAD programs coordinated by NACIAD. For the most part, these provincial and sub-regional offices are assumed to have lifespans that are co-terminous with project completion. The RDC's themselves have become much larger bodies than originally anticipated, reflecting change that has occurred in the political and administrative environment. In some places, the RDC's have taken responsibilities close to project implementation, but they have done this in a coordinative capacity that fundamentally is consistent with the RDC mandate. Similarly, regional budgeting and regional budget hearings have evolved to the point where the RDC is acquiring a limited role in program rationalization and review within the framework of regional plans.

2. REGIONAL DEVELOPMENT AGENCIES IN BICOL

The Bicol Region has seen a succession of regional development bodies created to engage in development activities for the area. On July 27, 1965, the President created the Bicol Development Planning Board (BDPB) through Executive Order 159. The BRDP was mandated to act as technical advisor to the provincial and city executives of the Bicol Region on matters concerning regional planning. It was empowered to formulate guidelines and objectives for the coordination of plans and activities in support of regional socio-economic development programs and to make recommendations to the President on any matter concerning Bicol regional planning. It had no power to engage in commerce, industry or agriculture. Thus, as its name suggested, its broad powers covered only planning but not implementation.

In 1966, a law was passed (Republic Act 4690) creating the Bicol Development Company (BIDECO) empowered to implement the approved plans and programs of the National Economic Council for the agro-industrial development

of the Bicol region. The BIDEDEC was vested among others with the authority to (1) extend technical assistance to investors in the area; (2) recommend to the proper agencies the type of financial, technical or physical assistance and level of priority to be accorded to projects; and (3) engage in industry, agriculture and other enterprises within the region as may be necessary for socio-economic development. The BIDEDEC also had the additional power to act as a holding company to supervise and coordinate the activities of the subsidiary corporations that it might create.

Considered at the time as a regional development authority with very strong powers, the BIDEDEC did not live up to the high expectations it generated. It was not able to exercise its extensive functions effectively primarily because of lack of funds and coercive powers. It was not able to influence investment to any significant degree through the extension of technical assistance to investors because it lacked incentives to offer and because its powers were considered to be only persuasive. Except for the rice crash program in 1967, it was not able to engage in any major development project as authorized by its charter. Most of the appropriations it received were channeled to its operation and maintenance, rather than to development projects.

The Bicol Development Planning Board co-existed for some time with the BIDEDEC even though both had planning-related functions. However, the Integrated Reorganization Plan sought to consolidate regional planning functions in Regional Development Councils. It therefore recommended the merger, transfer, or abolition of existing planning boards. It also proposed the attachment to NEDA of the BIDEDEC, including the Catanduanes Development Authority which although legislated into existence, had remained a paper organization.

In 1973, seven years after the BIDEDEC was created and during which time it was almost moribund, the President created the Bicol River Basin Council (BRBC) under Executive Order 412. The main role of the BRBC was to provide coordinated direction to developmental undertakings within the Basin through support given to plans and feasibility studies for domestic and foreign financing. The Council was headed by the Secretary of Public Works, Transportation, and Communication and had a multi-agency membership consisting of the Secretaries (now Ministers) of Agriculture (now Agriculture and Food), Local Government and Community Development (now Local Government), Agrarian Reform, Natural Resources, the Director General of NEDA, and the Governor of Camarines Sur and the Executive Director of the BRBD Program Office.

Much of the BRBC's power was vested in the Manila Office of the BRBC Chairman. Assisting the Chairman in the coordination function was a Management Council composed of the regional directors of the concerned line agencies. A Private Advisory Group which represented the private sector was also organized. The BRBC advanced rapidly in developing capability for conducting high quality feasibility studies, although comprehensive planning was, in large measure, subordinated to project planning in the short run. BRBC's activities also focused on the generation of field data used for planning and project development. BRBC generated enthusiasm, but experienced several problems doing what it wanted it do. Among the problems a 1975

evaluation identified were: inadequate authority over line agencies granted to the BRBC Director, insufficient budgetary support for the BRBC, and ambiguous linkages with the National Government. BRBC was abolished three years after its creation and replaced by the Bicol River Basin Development Program (BRBDP).

This brief overview of the historical roots of the BRBDP illuminates two points.

- (1) Experiences with and expectations from essentially extra-ordinary development entities has some history in the Bicol area. It is a history that predates the creation of the BRBDP, but in some ways is carried forward by the BRBDP. This is especially important in understanding expectations that have grown about what the BRBDP would be able to do.

A closely related point is that various predecessors to the BRBDP exhibited sensitivity to administrative centralization and inadequate forms of national commitment to regional and sub-regional initiatives.

- (2) The BRBDP has evolved in a context in which other strategies for institutionalizing growth, support and linkages among regional development planning and implementation functions have also evolved.

C. THE BRBDP TODAY: ADMINISTRATIVE ARRANGEMENTS AND ISSUES

Between its establishment in 1976 under PD 926 and the present, the BRBDP has undergone some evolution in internal organization. This evolution was summarized in Chapter I and need not be repeated here. The important points to note are that (1) the BRBDP has undergone some organizational change, most notably the addition of the Program Executive Committee on which NACIAD itself is represented; (2) the BRBDPO has also undergone some internal change, particularly in the organization of its planning, management and evaluation functions and in the support staff directly assigned to the Office of the Director; and (3) there have been continuing changes in the Program's administrative environment, especially the creation of NACIAD, the steps taken to regionalize the Ministry of Agriculture and Food, and the further evolution of the Regional Development Councils.

The Program Office operates and undertakes its functions within an administrative framework that includes the Office of the Prime Minister under which the NACIAD is attached; the Cabinet Coordinator who has been specified in the charter of the BRBDP as the Minister of Public Works and Highways (but who is now the Minister of Agriculture and Food); the BRBDP Coordinating Committee; and the Program Office proper, with all the coordinative mechanisms created in support of it.

The NACIAD, the umbrella organization to which the Program Office is attached, is a subcommittee of the Cabinet whose chairman is the Prime Minister with members coming from several ministries (Agrarian Reform, Agriculture, Finance, Human Settlements, Local Government, National Defense, Natural Resources, Public Works and Highways, Trade and Industry), the

Director General of the National Economic and Development Authority (NEDA), Director of the Office of Budget and Management and the Executive Director of the Council. The Prime Minister may designate other members coming from the cabinet.

Within the administrative framework of the Program Office are various committees, sub-committees, task forces and groups. These Committees include the Bicol River Basin Coordinating Committee (BRBCC), the Program Executive Committee (PEC) the Composite Management Groups (CMG), the Private Advisory Committee (PAC) and the Area Development Teams (ADT). Its horizontal linkages include those with the various regional offices operating in the Basin, the National Economic and Development Authority Regional Office (NRO) and the Regional Development Council(RDC). Its vertical linkages are those with the Office of the Prime Minister, the NACIAD, the Cabinet Coordinator, the line ministries, and local governments.

1. NACIAD-BRBDPO RELATIONS

Early in its history, the Program was placed under the supervision and direction of the Cabinet Coordinating Committee on Integrated Rural Development (CCC-IRD) of the National Economic and Development Authority. The Secretary of Public Works, Transportation and Communications (now Minister of Public Works and Highways) was designated as the Cabinet Coordinator of the Program, attending to all administrative matters in accordance with the broad policies and guidelines established by the Cabinet Committee (P.D. 926, Sec. 2).

Executive Order 835 transformed the CCC-IRD into a National Coordinating Council on Integrated Development (NACIAD) and converted it into a subcommittee of the Cabinet under the Office of the Prime Minister. Under this amendment, the NACIAD could, at its discretion, assume supervision and control of integrated area development projects not currently under its present jurisdiction.

As part of its supervisory function over IAD Program Offices, the NACIAD institutionalizes an implementing mechanism for integrated area development through formal planning, monitoring and budgetary controls, and mobilizes multi-sectoral resources for integrated rural development projects. The Prime Minister, as Chairman of the Council and as its chief executive officer, appoints the Project Directors of the various integrated area development projects, arranges and/or negotiates for funding from local and foreign financial institutions and approves requests of implementing departments and agencies for budget releases for projects in accordance with the integrated plan of action, budgets and work program approved by the Council.

The ties of the BRBDPO with the national level of the government through the NACIAD appear more clearly delineated than when the Office was placed under the CCC-IRD. The NACIAD membership, which includes almost the whole cabinet, gives it an aura of strength in addition to the political support embodied in the person of the Prime Minister. The link of the NACIAD

with the NEDA is maintained through the vice-chairmanship of the Prime Minister in the latter organization. The kind of "invisible clout" that the Office of the Prime Minister lends to the BRBDPO through the NACIAD is based on the fact the Prime Minister shares with the President the overall management of the government. While the President is concerned principally with major policy and decision-making processes, the Prime Minister is responsible for the day-to-day supervision and details of administration of the government.

The significance of the attachment of the BRBDPO Office to the NACIAD is that there is a clear identification of the Program Office with the Office of the Prime Minister (OPM) even if what in fact exists is that it is the Prime Minister and not his Office that is directly involved in the coordination of IADs. While it is the perception of some concerned officials that this important connection with the Prime Minister, or in a loose sense with the OPM, has been used to good advantage, it is also the thinking of many that the use of this channel has not been maximized to the fullest to solve many of the problems that confront the Program Office, such as inter-ministerial conflicts. While the Prime Minister has taken a very serious interest in the various IAD projects-- conducting site-visits, formulating policies and resolving problems and issues confronting IAD programs, it has been observed that the Program Office has not been able to take full advantage of its functional proximity to the Prime Minister's Office or the fact that the NACIAD is a sub-committee of the cabinet. As will be noted below, one reason for this may be ambiguities in the legal relationships among NACIAD, the Office of the Cabinet Coordinator (OCC) and the BRBDP.

2. ROLE OF THE CABINET COORDINATOR

The BRBDP charter (both P.D. 926 and 1553) designates the Secretary of Public Works, Transportation and Communications (now the Minister of Public Works and Highways) as the Cabinet Coordinator of the Bicol River Basin Development Program. The original rationale for this choice was that the major projects conceived for the BRBDP, from the outset, were infrastructure projects. The fact that the Cabinet Coordinator was the Infrastructure Minister does appear to be related to the strong interest (past evaluations have implied an overconcern) with the physical compared to the social, economic and institutional aspects of project development.

The legal role of the Cabinet Coordinator vis-a-vis the NACIAD and the BRBDPO needs to be clarified--particularly in view of the fact that the Cabinet Coordinator's role could be considered modified to the extent that his functions under PD 1553 are incompatible with the functions of the Chairman of the NACIAD under the revised charter of the NACIAD, Executive Order 835. Under P.D. 1533, the amended charter of the BRBDP, the OCC performs the same functions enumerated above for the chairman of the NACIAD, such as to appoint the Program Director and heads of major organizational subdivisions of the Program Office, to arrange and/or negotiate with local and foreign financial institutions subject to approval by the Cabinet Committee and to approve requests of the implementing departments and agencies for budget releases for

projects. The BRBDP's statutory existence precedes NACIAD. When NACIAD accepted supervisory responsibilities for the BRBDP, some matters were not completely clarified. As the BRBDP moves possibly into stronger reliance on domestic funding, it is important for the relationships between NACIAD, the OCC and the BRBDP to be fully clarified--if only to permit the BRBDPO to make better use of the political status which its connections with NACIAD and the OPM represents.

3. COORDINATIVE MECHANISMS SUPPORTING THE PROGRAM OFFICE

The BRBDP Coordination Structure shows the Program operating within a maze of five committees, namely the Program Executive Committee (PEC) which integrates national and local development policies and priorities and recommends solutions to problems and issues encountered by the Program; the Bicol River Basin Coordination Committee (BRBCC) which provides planning and management policies and guidelines for program operations; the Private Advisory Committee (PAC) which provides feedback to project implementation and provides advice on program directions and activities; and the Area Development Program Management Committee which coordinates programs for Integrated Development Areas (IDAs). In addition to these, there are also Composite Management Groups (CMGs) which review project progress and resolve inter-agency coordination problems. These various coordinative mechanisms were created and institutionalized to assist the Program in its function of "coordinating the implementation" of projects. They have been made necessary since there are many participants to the planning and implementing functions of the Program such as line ministries on the national, regional and provincial levels; local governments; and the private sector.

While there are known advantages to inter-agency committees and task forces, Philippine experience has shown that they carry their own seeds of diminishing effectiveness. Many of these entities suffer from absence of quorum, inability to take up substantial matters because of sheer size of membership and the tendency to lapse into a forum for exchange of information and experiences rather than sustaining a role as an effective mechanism for decision-making and problem-solving. The various committees of the BRBDP may reach a stage of diminishing importance unless efforts are exerted to enable them to take stock of their present status and redirect their objectives and activities.

There are several steps that can be and ought to be seriously considered.

a. Standards for Committee Participation

An important step to improve the quality and contribution of coordinating committees within the BRBDP is to establish minimum standards for committee participation. Why? Reliance on coordinating bodies to manage multi-sectoral undertakings is practically taken for granted. It is quick and convenient, where the only guiding principle is that "everybody joins in and nobody is excluded who has even the slightest reason to be included." The

problem is that because of uneven levels of participation in the committees and uneven performance by agency representatives in moving information exchanged in coordinating committees back through appropriate parts of their own organizations, coordination outcomes from coordination committees are often less than we hope for. This failure to transfer information reflects a common fact: most coordinating bodies do not prescribe minimum standards for the meaningful participation of the member agencies. Minimum standards would include a regular and rational reporting system of the members to their home agencies, to ensure that coordination exists not only between the member and the coordinating body. Minimum standards for participation in BRBDP committees should be developed, based on a realistic appraisal of what responsibilities the committees actually have and what is an appropriate level of participatory behavior commensurate with meeting those responsibilities. We are well aware, however, that what will constrain this step is that (1) sanctions to enforce the minimum standards may be neither credible or even feasible; (2) as long as the committees are operating in gray areas where the Program Office has more accountability than responsibility, it might be counterproductive for the Program Office to try to exclude an agency it depends on for achieving program goals; and (3) since regional offices of line agencies have different degrees of power and authority, developing meaningful standards of participation may prove difficult because of variance in the management and communication environments of committee participants. Nevertheless, at the least, all the committees and consultative arrangements in the Program should be collectively assessed to determine: (1) what their formal responsibilities are; (2) what they are actually doing; and (3) what, in the light of program evolution since committees were first established, they should be doing.

b. Strengthening the Authority of the BRBDPO

Successful implementation of inter-agency programs such as the BRBDP depends on the managerial, technical and financial capabilities of their major participants, namely, the regional offices of line ministries, local governments and the BRBDPO. Many of these capabilities are derived from powers that they are vested with as well as the technical and financial resources that support them. In the BRBDP what this means is that the BRBDPO, which is not vested with as much authority as the agencies it is expected to coordinate, will face some problems in how well it can actually influence what these agencies do. To the extent that the BRBDPO is held responsible for the performance of activities under the Program's umbrella, it follows that the BRBDPO is dependent on the agencies actually implementing the activities.

All this may seem obvious, but it has not prevented the growth of many misperceptions of who could actually do what. The issue acquires new and different importance, however, when we consider the sort of programming that the BRBDP may be addressing in the future. It may be a programming strongly characterized by many small, locally-funded projects. The capacity to manage and implement such projects may not be present at the levels desired. Certainly experiences such as the Buhi-Lalo Upland Development Pilot Project do not convey the impression that either the agencies or the BRBDPO can easily

accept responsibility for effectively implementing small projects. In this context, both in Bicol and in other IAD programs nationally, the call is sometimes made to "strengthen" the coordinating office. The case is made, albeit implicitly, that if the Program Office were given more authority for project management and implementation, it would by virtue of that authority be in the position to upgrade the quality of project management and implementation in the program.

There are two problems with this strategy. First, assessing only the capabilities of the coordinative agency is not enough. Strengthening the technical and financial capabilities of the coordinating office can not guarantee the effectiveness of its performance unless matched by similar efforts by the other participating agencies. Second, this approach appears to be prompted by an optimism that required changes in capacity which are brought into existence by the promulgation of legislation that endorses the exercise of these capabilities. What is needed instead is a collaborative commitment by the BRBDP for collective efforts to improve the capacity of the Program Office, the regional offices of the line agencies and local government units to more effectively participate in the development and implementation of small, locally funded projects and programs. A good place to start is from the points of strength within the Program, wherever those points are, building from there to share capability and skills across the Program. The Program Office can take initiative in organizing this process.

4. THE ROLE OF THE PROGRAM DIRECTOR

The role of the Program Director is one which requires both technical and political skills. The "political" nature is inherent in the primary role, which is to "coordinate" implementation efforts. Coordination involves synchronization and harmonization of efforts of all parties concerned towards common policy and program orientation and perspective, and in some cases, mediation and conflict resolution. The political character of the position of the Program Director is reinforced by the fact that it has to "liaise" with agencies and officials, both horizontally (regional offices, RDC, etc.) and vertically (central offices, NACIAD, Cabinet Coordinator); from the highest level (Office of the Prime Minister) to the lowest (grassroots level). In fact, the Program Director is expected to exercise political skills in a greater if not equal degree as administrative skills. Keeping the Program Office visible at all times and projecting its image to Program beneficiaries in order to increase (sometimes to maintain) the Program's credibility, thereby eliciting more cooperation, and matching this by increasing its visibility to top decision makers.

The position of the Program Director needs to undergo a change which would enable it to more effectively perform the delicate balancing act of coordination. To effectively coordinate, the Program Director needs to be able to show that he occupies a position of either formal or informal "superiority" above those he coordinates. On many occasions, the "informal" manifestations of superiority become even more important than the formal--such as easy access to top decision makers, clearly showing political support to

himself and his organization, and his ability to break bureaucratic bottlenecks.

The Program Director has to rely on political skills because the authority which is actually granted to him is really not enough to do the job he is supposed to do. This being the case, the issue is whether anything should be done either to increase the Director's quotient of administrative authority or enhance his political influence--in either case to better expedite program implementation. In both cases, what we are looking at are increments, not absolutes. This means that we cannot realistically suggest that the Program Director be given full authority over all aspects of line agency operations that fall within the scope of the Program's mandate. But we could consider supervisory roles, somewhat similar to those assigned to Governors in Executive Order 803. On the political side, there are steps that can be taken which have the potential to enhance the Program Director's political standing vis-a-vis those he is asked to coordinate in the Region. Two steps in particular come to mind. First, as previously suggested, NACIAD, as a sub-Cabinet entity, can adopt (and endorse) IAD plans and budgets. It does this for other IADs. It does not now do this for the BRBDP. This imprint would make the Program Director more clearly what, in fact, he is: the Coordinator of a national program. Second, but for essentially the same reason, the Program Director should report directly to his Cabinet Coordinator.

D. THE IAD APPROACH IN BICOL

There is no single definition of integrated area development that would apply with equal precision to all the IAD programs in the Philippines. Different definitions and different strategies have unfolded since the early 1970's--each offering a special nuance for the operational meaning of "integrated" and "area." However, at a general level we can state that IAD approaches mark a shift from the traditional piecemeal and sectoral approach to development planning and project implementation to a more systematic and multisectoral approach, in which the coordinated implementation of projects appears to be a common objective.

The Bicol River Basin Development Program Office was the first to actually implement an IAD approach in the Philippines. The IAD approach of the BRBDP as a planning strategy has been built on the following premises:

- (1) Development efforts targeted on the rural sector should focus on delimited geographic areas of high growth potential and recognized socio-economic need, where incremental public investments in infrastructure, agriculture and social services will yield maximum social and economic benefits.
- (2) Development planning within the defined geographic areas of high growth potential should be integrated at the cross-sectoral and inter-agency levels.
- (3) Project planning and management should be decentralized to the greatest extent possible in order to maximize participation from all sectors in the development of an area.

The area the BRBDP chose to concentrate on was a river basin. Actually, the river basin as a target for intensive area development in Bicol had been identified in the early 1960's. However, Executive Order 412, which created the Bicol River Basin Council, gave formal recognition to the "river basin" as a planning entity. The river basin can serve as a logical geographical focus for development planning purposes because it is a naturally integrated ecological system, consisting of a lowland and surrounding mountains drained by a river. A river basin offers an intuitively understandable focus for a developmental strategy that would integrate production-oriented activities with social welfare activities in one program package. In the case of the Bicol River Basin, the thought was that development of the Bicol River Basin sub-region would serve as a growth center for a larger functional economic area comprising the entire Bicol region.

The original intention was to pursue the planning and project development process basin-wide through sectoral task groups. Instead, the Basin program area was subdivided into sub-areas where integrated area development planning would focus, namely the integrated development areas (IDAs). This was probably more of an innovation than the river basin focus itself and therefore merits some discussion. The IDAs are edaphically determined. They are based on what are thought to be homogeneous patterns of land use and natural resources. This natural homogeneity was hypothesized to present common problems and potentials for development planning purposes. To date, the BRBDP is composed of 13 IDAs--8 in Camarines Sur, 2 in Albay, and 3 in Sorsogon. In all 13 cases, the IDAs comprise more than one municipality. In several cases, particularly in Camarines Sur, the IDAs not only comprise more than one municipality; they include only parts of some municipalities. Planning is oriented around the IDAs, each of which is supposed to have an Area Development Team (ADT) to help plan, coordinate and monitor BRBDP activities within that IDA. In fact, plans have been developed for each IDA, in some cases supported by feasibility studies undertaken by or through the Program Office. Once project implementation begins in an IDA, responsibility for project management is assigned to a lead implementing agency (LIA). The Program Office, in conjunction with the ADT and the LIA, is then supposed to play an overall coordinating and monitoring role.

How well has all this worked? Better than many would have expected, but not as well as many might have hoped. There are really three points to review: the IAD premise as applied in the Bicol; the IDA strategy; and the ADT/LIA process.

1. INTEGRATED AREA DEVELOPMENT

Nothing that has happened in Bicol has weakened the basic validity of the river basin as a planning unit. However, the BRBDP's own conception of what river basin planning includes has broadened somewhat from the earlier days of the Program. Earlier conceptions of the river basin were primarily hydrological. The significance of upper and lower watershed relationships--in both natural as well as socio-economic terms--was recognized, but the emphasis understandably was on water resource management and flood control. The BRBDP

has discovered, as have others who have tried to work within a river basin planning unit, that the river basin is perhaps the most complex natural system planning unit that there is. It is our judgement that the BRBDP has made sensible progress in expanding its concepts of river basin development to include lowland-watershed linkages. The Bicol Secondary and Feeder Roads Project and the Integrated Health, Nutrition and Population Project are the most visible examples of BRBDP activities which span the lowland-watershed distinction. The results reported in the impact analysis on changing patterns of agricultural land use suggest that the BRBDP will need to continue refining its concept of linkages within the River Basin area (f the whole program area.

Is development of the River Basin (or more precisely of rice-growing areas of Camarines Sur) serving as a growth pole for economic development within the larger Bicol region? These types of relationships take time to unfold and many of the infrastructure investments made through the BRBDP have only recently become operational. Consequently, any picture here must be described as preliminary. The picture that we can see in the impact analysis is mixed. Socioeconomic change is underway in the program area. However, in some respects it is not certain that the change is what IAD promised. Worsening income distribution could be associated with economic development--a transitional stage that appears in many economic development situations. However, we must acknowledge that worsening income distribution may also be symptomatic of less promising processes. It is encouraging in this regard that the absolute incomes of the poorer residents of the program area are not declining. However, the essential independence of the income distribution process from what the Program did and did not do suggests that we should be careful about assessing the Program's actual role. The same would have to be said about other macro features of socio-economic change in the program area. Established trends of economic diversification appear to be continuing. However, the Program's strong emphasis on agriculture, and particularly rice, does appear in retrospect to be slightly off the mark. The impact analysis suggests that the proportions of households who receive income from rice production as well as the overall contribution of rice-derived income to provincial income are declining. This, along with several other indicators of the fragile nature of rice production in the Bicol (such as declines in the utilization of institutional credit and inputs and continuing low productivity outside the project areas themselves) is symptomatic of a broader possibility--that the rice production sub-system of the program area may not be the most dynamic point from which to expect wider economic development dynamics to accelerate. This in no way ignores the indications of significant impacts directly within the irrigation influence areas (especially for new irrigation), but if we hold to the IAD rationale then we have to look for what is happening outside these areas. The impacts that are reported from roads appears to be more positive from an IAD perspective.

In sum, the IAD impacts are mixed, but positive. One question Bicol's interpretation of integrated area development raises, a question that the BRBDP is itself actively addressing, is whether the water resource management perspective on river basin development slants programming too strongly towards controlling water (in the BRBDP this was rice) rather than

using water efficiently (which would not be restricted to rice or to lowland settings and which would direct attention more to profitability rather than aggregate production). We need to be careful about too much second-guessing here. Prior evaluations have speculated about biases in the planning itself--bias towards engineering, infrastructure, etc. We are less concerned about that than about what the Bicol experience thus far tells us about where the best points for developmental intervention are and what sequence of effects we should anticipate. The BRBDP's interpretation of integrated area development is at a critical point. It is close to completing most of what it wanted to do for its "first-generation" projects. What does it do next that can accelerate linkages from the rice-growing sub-system to broader parts of the program area?

The Sons of Bula

Mr. Santos is a farmer who has lived most of his life in Bula. He has four sons who have grown up helping their father plant, cultivate and harvest palay. Several years ago, Mr. Santos and his family were part of an important BRBDP project: the Bula Land Consolidation Project. Before Landconsol, as the project is called by local residents, Mr. Santos and his neighbors had small parcels they cultivated scattered widely around the Bula area. For the most part they were tenants. Landconsol was dramatic in its vision. It brought land reform to Mr. Santos, gave him the chance to become the owner of the land he worked. It also offered him something very unusual. He and his neighbors would see their fragmented land consolidated into orderly and more accessible parcels. Now they wouldn't have to spend so much time just going from parcel to another. Better still, roads and irrigation facilities could better serve their parcels. And they would literally get a new village--with schools, electricity, a market, etc. Things have worked out nicely, but now Mr. Santos and many of his neighbors have a problem every parent can understand: What will become of his sons, or more precisely, what will become of three of his four sons? Only one child of a land reform beneficiary is permitted to inherit the land. Of course, the others could still work the land, but Mr. Santos knows that harmony even among brothers can be difficult to come by. Beyond that, he can't really see how four families could be built on the basis of 3 hectares of palay production. Mr. Santos is worried because neither he nor his sons know where the boys will have to go to find employment. The city of Naga is close by. It is active and busy. But there is not much there. The boys, like their father, love Bicol. But they have their lives to build and for that, they need a place to work. From their neat parcel in Bula, they cannot see any beacons of employment in Bicol.

As the results of the impact analysis suggested, the employment situation presents a serious and possibly worsening problem. It is an example of the second-generation problems that are not likely to be reduced by more irrigated rice production alone. Problems such as these constitute a challenge for BRBDP's development planning. Steps in these directions have

been taken by the Program. For instance, as early as 1977, the Program Office was actively involved in the establishment of a Bicol-wide Chamber of Commerce and Industries and started contracting feasibility studies in various agribusiness lines. Pre-investment studies, technological and feasibility studies were prepared. Promotional seminars were held in Bicol and Manila before bankers and potential investors. Interest faded for a time, but now with the country's economic crisis well into its second year, recognition of the importance of agribusiness, aquabusiness and non-agriculturally based economic growth has become more acute among development planners. This recognition is very visible among BRBDP planners.

However, the full range of institutional resources in the region that might be helpful have not yet been tapped. These include the rural and commercial banks, not necessarily for credit schemes but for identifying the most promising pockets of business opportunities within the BRBDP's area of responsibility. The fuller challenge for the BRBDP is to determine whether its strategies, its repertoire of programmatic measures, its manpower and other institutional capabilities are adequate or effective to address second-generation development challenges and to determine how these could be made more adequate and effective. A good place to start is the Private Advisory Committee (PAC). The Private Advisory Committee is a BRBDP innovation. Its function is to provide "feedback from and feedforward to" the private sector. It is an innovation because most development agencies do not have private individuals sitting in a committee to advise and give feedback. However, present methods of selecting and replacing PAC members do not guarantee independence of monitoring, nor adequacy of feedforward or information dissemination. Members are recommended by the PAC chairman and appointed by the Program Director. However, most members are not really private individuals but government officials and officers in government agencies (e.g. Samahang Nasyon and Kabataang Barangay). Important sectors like rural and commercial bankers, doctors, lawyers, workers, etc. are not represented. More critically, we found many important members of Bicol's private sector to be aware of the BRBDP and the BRBDPO, but to be unaware of the PAC. The committee could be dramatically improved by making it more representative of the private sector. One way to do this is to accept recommendations for membership directly from private sector groups such as the Chamber of Commerce. The Committee should have responsibility for guiding the BRBDP in innovative programming directions that bring together local capital, community resources and investment opportunities.

2. THE IDA AND PROJECT PACKAGING

The case for the IDA--natural system homogeneity--has to be weighed against the problems of crossing municipal boundaries and particularly of only including parts of municipalities. Actually there are no real problems if the municipalities in this instance are simply project sites. However, if the municipalities are expected to participate in the process that yields and implements the projects, we should not be surprised by some coordination difficulties that surface. What about the IDA as a planning unit? If there is any problem with the IDA, as such, it is that it has the potential to lock

the BRBDP into the basic development perspective that defined the IDA in the first place. This would be especially the case in Camarines Sur where the IDA definitions are so closely related to actual project influence areas. Is that actually the case? Not necessarily. In fact, the BRBDP uses, but is not limited to, the IDA as a planning and project development mechanism. What we would say, however, is that it might be useful to reassess the existing IDA definitions, at least in Camarines Sur, in light of what has been accomplished, what has been learned, and what now needs to be done.

The IDA is perhaps better understood through its relationship to the project packaging process. This process has been reviewed in prior evaluations. Here we will reproduce a conclusion from the 1979 Biennial evaluation which we believe remains fundamentally accurate.

"The evaluation team recognizes the success of this project packaging system which includes (1) project identification, (2) project development through feasibility analysis, (3) project promotion for funding, and (4) project execution, including construction and implementation. It attributes this success to the capacity of the BRBDPO to (1) assemble a team of competent professionals for planning, (2) devise an integrating and coordinating system which includes involving line agency directors and local leaders in both planning and policy roles, (3) identify the need for coordinating project support activities (such as research relevant to project objectives and meteorological and hydrological networks to provide more reliable information for project planning), and (4) exhibit a willingness to revise the system in the face of difficulties encountered in meeting objectives. The importance of (4) in achieving past success and meeting the inevitable difficulties now apparent and yet to be revealed cannot be over-emphasized."

3. THE ADT/LIA ARRANGEMENT FOR PROJECT IMPLEMENTATION

The ADT/LIA arrangement needs to be seen as part of the BRBDP's approach to the problem of coordination. Two basic issues have arisen. First, the BRBDPO has not been as closely involved in project implementation as it has wanted to be. This is the LIA side of the question. Second, the BRBDP has attempted to develop institutional mechanisms for improving cooperation between the BRBDP and local government, particularly at the municipal level. This is the ADT side of the question. In recent years, this side of the question has received increasing attention in terms of the BRBDP's approach to participation. Is the ADT an adequate institutional channel for organizing popular participation in BRBDP projects?

The future of the BRBDP is closely intertwined with the future of local government. The role of local government is crucial in the Program's evolution to smaller and more locally-funded projects. If the BRBDP is going to maintain its standing in the eyes of local government, then it needs to identify ways to improve the quality of local government's participation in the Program, particularly at municipal levels and below. This will not

overcome some of the difficulties inherent in the LIA arrangement, but as programming moves away from larger infrastructure to smaller, more service-oriented activities, the LIA problem may diminish on its own.

a. The Program Office and Project Implementation

Coordination problems can be detailed at great length, but perhaps the real question is: have the varying levels of coordination achieved in the course of implementing different BRBDP projects made any substantial difference in how the projects were actually implemented? The Evaluation Team believes that had the overall coordination process operated more effectively, project implementation would have been more effective in the sense that implementing agencies would have been under greater pressure to implement effectively and other agencies would have been more inclined to become involved in auxiliary programming. What has happened is that, for the most part, lead implementing agencies view themselves very much more as operating a project management office for their own agencies, accountable to their own agencies, than as extensions of the BRBDPO. It is our view that within that constraint, one that is characteristic of the broader administrative environment, the Program Office did as well, and probably better, than might have been expected. That conclusion might be disputed by some of the line agency Project Management Offices (PMOs) who questioned what the actual role of the BRBDPO was in relation to themselves. We don't deny the experiences which might lead to that conclusion, but we believe that the matter has to be seen from the perspective of the whole program, not specific projects or specific agency-BRBDPO relationships.

b. The ADTs, Rural Institutional Development and Popular Participation

The ADT brings development planning down to the sub-regional level and increases local government participation--if not grassroots participation--in development planning. The ADT is an important innovation and the experience of the Basin with ADTs suggests that the ADTs may be doing more than participating in the BRBDP programming process. For example, why is the Quinali ADT very active, when relatively little has happened in their IDA compared to many Camarines Sur IDAs? The ADTs offer a forum, an opportunity for organization and participation which need not be limited to reviewing BRBDP projects. Where BRBDP activities are being implemented, the ADTs provide opportunities for local leaders to exert influence on line agencies' actions, as well as on the policies of the Program Office. We note however that mayors who place more importance on immediate results tend to shy away from ADT meetings in IDAs where little or no project activity is taking place.

A Fire in the Mountains

Upland Buhi is a lovely area, but relatively remote. People living there have not had extensive contact with government services. They know some things are happening to their Lake Buhi because of irrigation work in the

lowland areas, but relatively speaking, government services don't go much further than what the Municipality can do.

The Buhi-Lalo Upland Development Pilot Project is the BRBDP's first effort to explicitly address an upper watershed issue. The pilot was to be a small project, a chance to see how some things might work and possibly serve as a basis for something more ambitious later on. If the objective of the project was to demonstrate something, it has been an enormous success. Unfortunately, however, what it demonstrates is low credibility of government services.

BLUDPP, the unweildy name for the Buhi project, was going to reforest about 60 hectares, reproduce and distribute some orchard seedlings and livestock, and improve a trail through the mountains to the project area. What went wrong can be partially listed:

1. Very poor project design including a premise that people from outside the project area would know more about land use and cultivation practices in the uplands of Buhi than the people living there.
2. Rather than getting local residents involved in the project on the basis of the benefits they would get from the project, an important point since the sustainability of the reforestation efforts would depend on residents maintaining the tree stands, the project decided to pay residents for work residents would do, especially trail clearing.
3. Very poor project management and supervision, such that normal budget delays became abnormally long. This was exacerbated by a turnover of staff, poor supervision of the primary subcontractor, and deterioration of relations between the regional office of the implementing agency and BRBDPO such that the communication channels which the BRBDPO coordination process depends on became fundamentally non-operative.
4. An approach to beneficiary participation that included training, but never seemed to determine what participation actually meant. Worse, the project residents were not invited to help clarify what participation meant, how it would be implemented, or the like. As one evaluation put it: "No specific guidelines for implementing 'participation' were prepared and followed other than implementors' ad hoc feelings and reactions to the situations as they saw it."

What is disturbing about BLUDPP is that everyone who needed to know that something was going wrong, knew. But no one seemed to be able to do anything about it, or at least anything that worked. The CMG couldn't do much because the implementing agency would not participate. The ADT could communicate its concerns, but to whom? The BRBCC discussed the matter and authorized the Program Director to communicate concerns to the implementing agency's central office. He did, but nothing seemed to change. Even after a COA audit, problems in budget management continued.

Down the road from Buhi is an example of participatory development that has had a string of visitors since it began. This is the Upper Lalo Irrigation System. Upper Lalo was the national pilot project for the National Irrigation Administration's program in participatory development for national irrigation systems. Community organizers began work in the Upper Lalo area and, until farmers were organized and ready, construction planning was stopped. When planning resumed, farmers were actively involved--in canal siting, in construction, etc. Once the system was operational, farmers, now organized into three Irrigation Associations, reached contractual agreements with NIA and assumed increasing responsibility for operating and maintaining the system. As part of that responsibility, the leaders of the irrigation associations co-manage the system along with NIA. Today, NIA does not have any water management technicians in Upper Lalo. The farmers take care of canal maintenance and water distribution. They also take care of fee collections. The project was finished essentially on-time and within-budget, almost unheard of for irrigation projects. Fee collection is running 100% which means that NIA is meeting its Operations and Maintenance costs and the Associations are getting some rebates.

But Upper Lalo is part of a hydrological system that includes irrigation areas almost twenty times larger than itself. NIA is thinking it would be easier to talk with just one Irrigation Association in Upper Lalo instead of three. They ask: why not combine the three that are there now? Why not indeed? Nobody can say for certain what might happen, but intuition tells you that the farmers could see this as another example of operating within someone else's terms of reference. In fact, around the BRBDP, there are several cases of irrigation associations having been developed in the course of BRBDP projects. Will any of them last?

The difference between Buhi and Lalo is almost too stark to be so close to each other. But there they are, within the same IDA. An earlier evaluation concluded: " 'Participation' means different things to different people. To some it means carrying out tasks specified by others. To others it means participating in purely advisory dialogue. Yet to others, it means having a role in decision-making. 'Participation' does not just happen simply by holding meetings or paying people for their labor nor can effective participation--of whatever kind--be achieved without some structural process specifically directed towards it." A few days after we visited the main project facilities and heard impassioned pleas from area residents about not having been paid for nine months and longer, we returned to Manila. There we were informed that on Good Friday, the project headquarters were burned down. Now there was a new item on the agenda for the BRBDP's numerous committees: a fire in the mountains.

The BRBDP's record in rural institutional development is not unblemished, but it is very promising. Individual line agencies participating in the Program have become more interested in participatory strategies in recent years, particularly approaches which institutionalize participation, i.e., organize it and ensure that it continues. Participation as an explicit development strategy for the BRBDP as such was not given much attention in the first comprehensive sub-regional program plan, the 1975-2000 Comprehensive Development Program. Participatory development does receive more attention in the 1983-1987 BRBDP Five Year Development Plan in the form of a subgoal "to maximize people's participation in planning and implementation." In operational terms, the Program Office has undertaken the following activities along the above sub-goal:

- (1) ADTs were involved, through the Area Development Program, in project planning in their respective IDAs, including the process of project identification and data generation for socio-economic physical profiles (SEPPs) in coordination with relevant line agencies.
- (2) When complaints arise during project implementation from the people affected, the Program Office has acted as advocate in their behalf and coordinated with the lead implementing agency concerned in pursuing solutions or corrective courses of action.
- (3) Prospective beneficiaries have been involved directly in project identification through barangay consultations. In Calabanga, project priorities formulated by planners had to be revised after barangay consultations. Although it is reported that barangay leaders and municipal officials

dominate the discussion during such meetings, this is clearly an improvement over the use of the ADT as the sole channel for "popular participation" in planning at the local level. A past evaluation noted the lack of correspondence between issues discussed in the ADT and issues raised by farmers in personal interviews.

- (4) Employment of local people in labor-intensive construction processes was attempted but abandoned by PMOs for road and irrigation construction in BIAD I and II. The reason given was poor and unreliable quality of work and too much time consumed.

Participation has taken numerous forms. Each might be consistent with completing a specific project, but the BRBDP's experience is suggesting that some are more consistent than others with successful maintenance and utilization of a project. This latter point, what is sometimes called the issue of project sustainability, is becoming more important in the program area precisely because projects are being completed and expectations are being expressed that beneficiaries will be able, in some manner, to maintain project facilities. In the case of roads, there are established turnover arrangements. For irrigation, there is a national experiment in progress in which the National Irrigation Administration is attempting to more thoroughly implement its corporate goal of building sustainable (i.e., financially self-supporting) irrigation systems. These examples can be seen in the program area, but they are not unique to the Program as such.

The link between participation and project sustainability does not seem to just happen. Experience in the Philippines and from many other places suggests quite strongly that infrastructure tends to be overused and under-maintained unless some form of "institutional" infrastructure develops to accept responsibility for the "hard" infrastructure. Sustaining the benefits that a project can generate needs to be institutionalized in some way. The BRBDP has institutionalized certain channels--notably the ADT's--for organizing the participation of local governments and rural communities in BRBDP project development and implementation as noted earlier. Now, where projects have been completed, attention is turning to the role the ADT's might be able to play in the sustainability of projects.

Beyond this, there is an additional and very promising possibility. Are the ADT's prepared to act with more initiative in organizing participation for project sustainment. Are the ADT's prepared to act with more initiative in developing and funding their "own" activities? Is the BRBDPO prepared to work through such arrangements? The decision of some ADT's to set up a common ADT fund from PD 144 proceeds is an encouraging step in these directions. So is the step of the Program Office to adopt the Land Bank model of the "village corporation" (which requires 20% equity counterpart from members) for enterprise development among land reform farmer beneficiaries. The counterpoint is provided by the honoraria paid to farmer-cooperators in the Buhi Upland Development Project. Donation of part- or full-time labor by

farmer cooperators, in exchange for future project benefits may stretch out project completion time, but could result in greater chances of ending with a self-sustaining project.

There is realization in the Basin that failure in institutional development could negate potential benefits from large infrastructure investments. Major projects of the BRBDP establish facilities and systems the continuing operations of which mainly depend on the presence of initiative or will on the part of beneficiaries and local governments. Surveying the human and institutional development components of the BRBDP's projects, and tracing their conception, inception and implementation in recipient communities during the last 12 years, one observes a variety of approaches, a mosaic of successes and failures. Rural institutional development could be, as it generally is elsewhere in the country, a limiting factor in the overall mix of development inputs. The 1981 biennial evaluation team observed that:

"The weak point in the institutional chain is a critical one: The farmers, in whose behalf the whole program is conducted, have not participated in anything but a passive sense. Although participation was a widely heralded part of the original plan, it is only recently that experimental efforts have begun to engage them in activities beyond the various meetings to which they were summoned in the past to hear officials talk of project plans and exhort farmers to help." ("Philippine BIAD: Report No. 28 - BRBDP Impact Evaluation." GOP/USAID, January 1982)

We believe that within the Program there are good examples of continuing progress to build a stronger institutional chain between program and beneficiary. There is good work, but it could be better. Progress is sometimes made by falling down, as in Buhi, provided that the capacity is present to learn why. The Buhi case illustrates several weaknesses in strategy, management, and monitoring/coordination functions. It is essential for the Program to learn from a case like this.

We believe that what needs to be done now is to take stock, to begin to convert a diverse participatory experience into a more coherent strategy. There is more than enough experience and insight already generated in the Program, both positive and negative, to provide the starting points for more operational strategies for rural institution building. Institution building takes a long time, usually longer than anticipated during project design. If engineering and infrastructure projects suffer unexpected delays due to technical reasons, how much more for organizational development and attitudinal/value reorientations which involve people. The institutional development "component" should ordinarily begin well before initiation of the physical construction until well after completion of such construction. What is called for are programmatic procedures and capabilities to effect continuity of commitment to institution building: a gap in the region which could be addressed by the BRBDP. The rich fund of development experience which the BRBDP had accumulated in its 12 years of existence carry definite potentials for a breakthrough in rural institution building in the region.

This can be effectively actualized if there is a shared recognition of its importance and shared commitment to "do something" by line agencies and local governments in the region. The BRBDP can be the advocate in this direction. The BRBDP should take the lead and organize a serious inter-agency program planning effort in the region to shape an agreement on how to address, in their own perceptions and using capacities at their disposal, the issue of rural institution building.

E. CAN THE BRBDP DO WHAT NEEDS TO BE DONE?

The developmental challenge in the Bicol Region continues. The basic goals that motivated the creation of the BRBDP, and its predecessors, remain valid, important, and pressing. The River Basin and the broader Bicol Peninsula have progressed--but not enough of the region and not at a quick enough pace. The fundamental strategy of the BRBDP--an interpretation of integrated area development that packaged projects for inter-agency implementation on the basis of sub-regional areas--has been a limited success, limited by what could reasonably be done in an administrative environment not fully supportive of either sub-regionally coordinated programs or inter-agency implementation and by the very scope of the mission the Program defined for itself.

Today, the BRBDP is approaching a turning point. On the horizon there appears a reduction in foreign development assistance and a necessarily greater proportional reliance on a domestic resource base--this at a time which is least propitious for such reliance. While some larger infrastructure projects, particularly irrigation and roads, will undoubtedly continue to be built, what appears to be ahead is more programmatic and less project-oriented:

- making productive use of physical infrastructure already completed,
- embarking on innovative co-relationships with local government and the private sector to identify and facilitate combinations of local capital, community resources, and entrepreneurial opportunities,
- working together to improve the level and credibility of government services,
- working together also to enhance processes of rural institutional development that brings the people of the region more fully into control of development processes affecting their lives.

The agenda is perhaps most notable for how different it is from where the Program started.

Can the Program address this agenda? We believe it can, but not as a simple extension of what the Program has been or what the Program Office has sometimes wanted to be. What lies ahead is not an executive challenge, but a coordinative challenge. However, this is coordination as cooperative and shared learning, as leading "through" rather than attempting the leading

"of." Certain things will have to happen, however, if the BRBDP can comfortably evolve to meet this challenge.

1. In the Program's national environment, some aspects of relationships with NACIAD and through NACIAD with the OBM need to be clarified. These center around generating a fuller picture of what the national commitment, in political and budgetary terms, is to the program area and developing appropriate administrative mechanisms. The team notes some very positive steps already taking place in this direction.

2. Within the Program, there is a need to make the committee structure work. This means reassessing committee responsibilities, and composition to determine if needed interests are represented, needed functions are covered, needed commitments are forthcoming, and needed latitude for management is present.

3. Between the Program and the region, three important things would need to happen. First, commitment to rural institutional development is needed. This, along with a further strengthening of initiatives to encourage innovative private sector activities, should be the centerpiece of a programmatic shift from an administrative to facilitative emphasis. Second, dialogue is needed with the NEDA Regional Office on two matters.

(1) The RDIP. As the Program moves more into service-oriented programming built on a domestic resource base, it will become essentially indistinguishable from the Regional Development Investment Program. On the other hand, the BRBDP, should it pursue the challenge of facilitating innovative combinations of private capital and investment opportunities, would, in effect, be pushing the RDIP towards being a more complete picture of development resource mobilization. It could represent another step in the evolving relationships between planning and implementation in a regional development context. If the Program is going to move in these directions, then the BRBDP and the NRO should be more explicit about the innovation that might be unfolding and should work together to achieve it.

(2) Program Monitoring. We have to be somewhat concerned that the impact assessment reported here represents the first major use of the full BMS data sets. This points to a broader problem, namely that while the BRBDP has developed a capacity to generate data, it has not developed a matching capacity to as effectively utilize data analysis for program management and development purposes. Both the BRBDP and the NRO share a need to more effectively monitor program and plan implementation. This will become more important as programs move into areas of concern where the benefits and effects are less self-evident. Finally, as some of the results in the impact analysis illustrate, there is a need to understand what is happening at the system level, to know when things are not going in desired directions, and to know

these things in a time frame that facilitates better program management and plan formulation. The BRBDP and the NRO share these concerns and the capacities to address them. They should work together accordingly.

All these things are needed to help the evolution of the BRBDP to continue. If these things happen, then we believe the Program can play the role needed in the times ahead. The challenge to the Program Office in this context will be to maintain and expand its identity with the full program. This is at the core of an important notion Director Villacorta communicated to us--the idea of co-responsibility. If the Program and the Program Office accept this, then we believe other aspects of Program Office organization will evolve without any evaluation team having to recommend it. It is much more important to clarify broad directions first, to stabilize the keel of the program before adjusting the masts.

The Program needs to commit itself to new directions--to be relentless in evaluating the appropriateness of all its arrangements--from the IDAs to the PAC--to ensure that everything is capable of efficiently and effectively addressing new directions. The capacity of the Program, as a network of public and private agencies, to implement new directions is much more than the capacity of the Program Office alone. The capacities the Program Office can bring are technical support, familiarity with the coordinative role, the ability to see the bigger picture, and the expectations of people in the region--the latter nourished not just by the BRBDP, but inherited from the predecessors to the BRBDP. These capacities the Program has.

IV. RECOMMENDATIONS

The recommendations are built on six fundamental premises.

1. For the Bicol River Basin area, the real challenge of integrated area development is only now beginning. This challenge is precisely to facilitate full productive utilization of core infrastructure through a pattern of public and private investment that realizes the potential the infrastructure offers.

2. The broader challenge facing the program area is a product of the deeper patterns of development revealed by the impact analysis. Patterns reflect factors which are endogenous to the BRBDP area, as well as factors which are external -- most notably the macroeconomic environment, national development policy, and the level and quality of government services available. Taken together, however, the picture painted is that of a second-generation of development challenges. For the BRBDP, the first generation development challenges were based on water. In many ways, water is the Father of the BRBDP. But the second generation cannot be limited to water, to palay, or even to agriculture. The focus will need to shift to agribusiness, non-agricultural enterprise formation and expansion, and rural institutional development.

3. Looming on the horizon is a reduction in the role of foreign development assistance and finance to support the BRBDP. This means that the BRBDP faces new challenges in project design, funding and implementation. It means new challenges for cooperation between public and private investment. And it means new very basic challenges for the BRBDP itself--how it functions and what it does.

4. It is important to recognize the BRBDP as part of an "experiment" in regionalization. An important dimension of this experiment, which is national in scope, is that there is not necessarily only "one" way; only a single path that if followed by one must somehow be followed by all. In fact, different paths are being taken, and the travellers who have embarked on these paths, have almost all had to acknowledge, in one way or another, the BRBDP. For all intents and purposes, BRBDP was out there first. But if the several paths are to contribute to any more general understanding and improvement of regional development planning and implementation, two things must happen in a more intensive manner: (a) the different sub-regional and regional IAD programs must participate in a broader sharing of experiences and lessons learned from what has occurred thus far, and (b) political commitment at the national level to the value and purpose of the whole experiment must be reaffirmed.

5. In this whole challenge, it is essential that we recognize that the Bicol River Basin Development Program is much more than the Program Office. The Program is the full range of technical, administrative, financial, social, and political resources in the region. The composition of the Program is not limited to public institutions and representatives, but rather includes the wide variety of private actors and agencies.

6. In a word, the BRBDP and the BRBDPO are evolving to develop and embrace a new orientation. We now ask of the Program, of the Program Office and of the broader institutional and political context--what should be done? To answer this question, it is imperative that we do not have feet of clay. We have to stand on a firm foundation of existing and reasonably expected capacities of the Program network, of the Program Office, and of the broader environment.

We have three broad recommendations, affecting the direction and content of the Program; the organization and management of the Program; and the broader institutional and political context in which the Program functions.

1. The impact analysis and the public sector fiscal outlook point to complex second-generation problems confronting the Region and the Program. Issues of underemployment, unemployment, worsening income distribution, capital flight, low productivity, inadequate economic diversification and possibly declining public investment resources all require a systematic and credible response--particularly in the light of the Region's socio-political problems. The Bicol River Basin Development Program needs to begin a significant shift in the content and orientation of its programming to more clearly reflect the "second-generation" problems now characterizing the region. This implies the following steps:

- a. Optimize the productive potential contained in the infrastructure investments already made. The real challenge of integrated area development does not lie in the completion of infrastructure, but in the facilitation of the economic and social externalities the infrastructure can support. Unfortunately, there is evidence that in regions such as the Bicol, most of the productive potential the infrastructure can stimulate either does not appear, or appears too little and too late to have the impact we desire. Optimizing productive potential means investing a bit more to get the full returns on the large investments already made. Optimizing productive potential also is a fundamentally programmatic challenge, in large part related to the allocation of existing government services. We acknowledge that the implication of what we are saying here is to continue some "bias" in the allocation of resources, precisely within the influence areas of existing infrastructure investments. However, the impact analysis offers support for the key IAD assumption: that IAD areas can generate patterns of trade and exchange that extend well beyond the IAD areas.
- b. The BRBDP will need to diversify its project interests beyond palay production to other agricultural and agricultural-related pursuits. In particular, the BRBDP will need to consider more strongly than it already has, issues related to the formation and expansion of cottage, small and medium enterprises. There is a significant programmatic component to this challenge that concentrates on the financing of innovative enterprise

development and natural resource management and utilization efforts. The BRBDP needs to become more actively oriented to a developmental strategy, helping to design and negotiate innovative incentive systems that can link development financing to the kinds of needed productive investment and entrepreneurship that are required.

- c. The BRBDP will need to address an important infrastructure issue that has not been adequately recognized to date: communication. Until the region is capable of more reliable and extensive communication with the rest of the country, the vision of private investment is going to be constrained.
- d. The BRBDP will need to continue, and in fact, to increase its attention to problems of family planning, health and nutrition in the BRBDP area. While we have reported positive significant impacts from the BIHNPP, it is essential not to confuse a good start in addressing the most basic dimensions of human welfare--health itself--for having made any sustainable breakthrough. As noted in the impact analysis, health and mortality conditions in Sorsogon generally, and still in many other parts of the BRBDP area, are simply not acceptable. The BRBDP should not take a proprietary view and conclude, even if only implicitly, that these matters are the responsibility of a specific line agency. The problem is more complex than that. The BRBDP should act accordingly.

2. Program organization must change to be more compatible with and supportive of the programmatic challenges that will be increasingly addressed. It serves little purpose to adopt new directions if program organization is not fully oriented to implement those directions. The management, organization, and activities of the Bicol River Basin Development Program need to reflect more directly the changing needs in the region and the changing environment of the Program. This implies the following steps.

- a. The Private Advisory Committee needs to be restructured in order to permit it to perform the role that is now urgently needed, namely a full and broad interaction between the BRBDPO and the complex and multifaceted private sector in the BRBDP area. The PAC should be a bridge that comfortably and naturally facilitates two-way communication between the PO and the private sector. That simply is not now the case. Too many people in the private sector who should know about the PAC do not. Too many interests in the program area which should be part of the BRBDP's dialogue are not. While the BRBDP has a complex coordinative infrastructure, the infrastructure concentrates much too heavily on administrative and political representation than it does on private participation. We believe that this pattern might have been desirable during large-scale infrastructure development. We do not believe that the pattern can be usefully carried intact

into the Program's next phase. The PAC is the most obvious point where the transition in progress would appear to logically require a transition in composition. We urge the BRBDP to take this step.

- b. The BRBDP should further strengthen its initiative to encourage innovative combinations of private investment and development opportunities. This function should be a primary responsibility of a restructured Private Advisory Committee.
- c. The BRBDP needs to exercise initiative to improve the quality of project management and implementation skills among line agencies and local governments in the program area. We believe that "second-generation" programming will include large numbers of small projects. We are convinced that the capacity to adequately manage and implement relatively large numbers of small projects does not now exist at needed levels across the program area. However, there are undoubtedly relative points of strength. The BRBDP, working closely in this case with the Ministry of Local Government, should initiate activities which permit the relatively more skilled to upgrade the capabilities of the relatively less-skilled.
- d. More generally, the BRBDP should attempt to develop more specific plans to enable the agencies participating in the Program to acquire the capabilities that their participation implies. The BRBDP should organize a program-wide effort to review the status of capabilities and strategies for rural institutional development in the program area in order to re-establish commitment to this strategy and to facilitate the sharing of experiences and lessons in pursuing the strategy. The effort so organized should not have as an objective the determination of any proprietary positions among agencies (including the BRBDP) regarding responsibility for rural institutional development, but rather should concentrate on orientation and capability.

3. The developmental challenge facing the program area is urgent. If the Program is going to be able to organize the response and redirection we believe is needed and which it is capable of implementing, then the BRBDP needs much clearer and stronger commitment from the Center. The commitment is required to give the Program Office the political leverage it must have. There is a significant need to clarify some of the relationships between sub-regional IAD programs like the BRBDP and important elements of national planning, programming and budgeting processes. This need is created not by the IAD programs alone, but more predominantly by national requirements for effective and relatively consistent development planning and budgeting--particularly in a time of budgetary constraint and policy reform. This implies the following steps:

- a. Sub-regional programs are not simply administrative artifacts. They are also expressions of political commitment. If the programs are to have a reasonable opportunity to achieve their administrative goals, it is important that there be a commensurate level of political commitment. We recommend that IAD plans and budgets be adopted at the national level by the NACIAD itself. This represents an appropriate and needed level of political commitment as well as a needed supplement to the existing relationship IAD programs have with the Office of the Prime Minister through the Office of the Cabinet Coordinator.
- b. NACIAD should initiate discussions about the issue of the sustainability of IAD programs. This discussion need not be restricted to the status of specific sub-regional organizational arrangements or the evolution of NACIAD's role as a technical assistance agency, but rather should be broadly directed to the questions: What assumptions are we making about the post-infrastructure phase of IAD programming? What are the programmatic and budgetary implications of these assumptions--in terms of resource levels and in terms of processes? Are planning, programming and budgetary procedures as compatible with what we want to be doing as they could or should be? It is our strong contention that IAD programming does not end with the utilization of foreign development finance for infrastructure projects. IAD programming really begins with the rationalization of domestic programmatic funding around productive use of infrastructure. This view, or any similar view of IADs as a domestic programmatic commitment, cannot currently be identified beyond a general mandate in the National Plan. This should at least be reassessed.
- c. In close relationship with the recommendation presented above, we recommend that the representation of the BRBDP in the national budget be broadened to more clearly communicate the national budgetary commitment to activities in the program area.
- d. We believe that the BRBDPO Director should report directly to the Minister occupying the Office of the Cabinet Coordinator. The IADs are national programs and as such, this would be a more appropriate relationship between a Program Office and an OCC.
- e. It is important for each IAD program to encourage as much sharing of capacity as possible among its own participants. However, at the national level, this invites considerable inefficiency. If management or planning skills available in IAD X could be useful in helping IAD Y do its job better, then the possibility for short-term exchange should be present. We recognize the steps NACIAD is taking to develop and extend certain technical assistance in this general area. We encourage that activity. Despite this, however, a significant development resource

within the IAD programs is being under-utilized nationally, i.e., the development planning and project implementation experience. The NACIAD should explore specific ways for transferring both positive and negative experience in IAD programming and implementation. We see no need for every IAD to make the same mistakes or for only some IADs to benefit from promising solutions. Not to facilitate such transfer is to implicitly endorse a "freezing" of capacity where it is presently distributed. Planning and implementation capacity are endowments found in the regions much the same way and often in parallel relationship to other developmental endowments. Consequently, the more experienced and well-endowed regions do better. The less experienced and less well-endowed regions do worse. NACIAD should initiate steps to overcome this.

- f. The BRBDP and the NRO-RDC in Region V should initiate discussions on the relationships between the RDIP process and the BRBDP planning process as the BRBDP shifts to more domestically-funded resource base. We recognize the good personal relationships and extensive linkages that now exist in the region between the BRBDP and the NRO-RDC, but we believe that more careful discussions are still needed. Our view is that the relationship between the BRBDP and the NRO-RDC in Region V through the RDIP can be treated as "experimental." In that mode, the arrangements should be both encouraged and endorsed by NACIAD, NEDA and the OBM.

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V. ISSUES AND LESSONS IN IAD MANAGEMENT

Integrated rural development, integrated area development--these have acquired some notoriety in development circles. The glow has certainly dimmed. We can't be certain that the complexities these strategies seem to require are efficient, effective, or even feasible. There is widening suspicion that we really haven't yet seen an integrated development program--at least not in terms of what we expected to see. It may also reflect a type of cynicism that integrated development simply cannot be done. Probably, where we really are is that we are uncertain whether the knife is dull or the steak is tough -- we just know we're having a hard time slicing through it.

The Bicol experience is a good teacher--not for the marvelous examples of integrated development it can (it cannot) show--but rather for what it has told and what it may continue to tell about how complex the job is, how long it may take, how difficult it may be to make the results relatively durable, and yes, whether and what is actually possible. Along the way, there are many issues.

The discussion will be organized around 4 questions.

1. What is the Program?
2. What are the relationships of the Program with broader dimensions of the institutional and political environment?
3. What is integration in the context of the program and its relationships?
4. What does sustaining the benefits of an integrated area development program mean?

A. WHAT IS THE PROGRAM?

This is a question about scope, capacity, resources, and learning curves. In an elementary sense, the program is composed of the agencies and relationships mandated in EO's, PD's, LOI's, etc. At best, however, the legal mandates describe the formal infrastructure of a program -- assuming that there are no significant inconsistencies among these various legal instruments, an assumption often not supported. But the formal infrastructure is not the full building. The scope of a program is broader. It incorporates and reflects the distribution of power and influence, of capacity and aspiration, of resources and resourcefulness. From this more multi-dimensional perspective, the Bicol River Basin Development Program is not one organization, the BRBDPO, but a complex network and aggregation of organizations and relationships that range from Mayors and religious leaders to water-users in an irrigation system to Cabinet Ministers in NACIAD. This

network and aggregation certainly includes the BRBDPO, but what, in fact, are the roles of the BRBDPO, need to be understood from the bird's eye view of the overall program, not the worm's eye view of the Program Office alone.

1. CAPACITY AND LEARNING CURVES

If we consider the range of functions that can be associated with program management and development (including the full project development and management cycle), then for each of these functions, how is capacity formally distributed across institutions in the Program and any other institutions whose participation will at any point be important for successful completion of a functional objective? What is important to recognize is that each of these capacity "points" are points on discrete learning curves, curves which describe the accumulation (or erosion) of capacity and skill to perform specific tasks. What is also important to recognize is that where individual agencies are on their capacity learning curves is not forever fixed. The agencies change and the relative distribution of capacities among agencies changes.

What are the characteristics of learning curves for program management and development among institutions in the Program? What processes are operating, both within and outside the Program, to support modification and change in these learning curves? For example, how are financial and personnel management procedures and skills changing? Why? What can be said, in particular, about transmission of capacities from agencies in the Program that are higher on a learning curve to agencies that are lower on a similar learning curve? Does this occur? How? Under what conditions and terms of reference? What factors limit the process? What factors enhance the process?

What is the role of the Program Office in the learning curve for the whole Program (not just the learning curves for individual agencies) for Program development and management? For project development and management? Does the Program Office (or any other institution) have any role which we might characterize as building bridges to link the peak learning curves from within the Program? Stated differently, is the BRBDPO's learning curve somehow built on these peaks or is it essentially independent? What about the learning "valleys" -- negative program and project experiences or deterioration of capacities? When things go wrong, what capacities are present anywhere in the program to know? To act? Does every agency have to march through the same valley to "learn" or are there processes and roles which minimize that possibility? Can a Program Office play an important role in the enhancement of technical or managerial capacities among agencies participating in an interagency program? For example, is this part of coordination? Probably no, at least not as coordination is conventionally and glamorously defined. But that kind of coordination, providing direction or taking charge, may not be the most important program management function a Program Office can actually perform. The more important coordinating functions for a Program Office may be what it does to accumulate planning, management and implementation experience throughout a program -- codifying that experience, evaluating innovations and shortcomings, and disseminating lessons learned.

When the NEDA Regional Office trains people from the BRBDPO to generate and maintain a sub-regional income accounts system, this is an example of a deliberate attempt to reproduce some level of capacity from one point to another within the Program. When agency representatives sit around a table once a month and go through some summary documents on project operations, it is more difficult to assess what form of capacity reproduction is underway. Yet, how often are such consultative arrangements assumed to be primary vehicles for capacity transfer and improvement? What needs to be understood is how learning curves that individual agencies will experience can be made convergent with Program goals. This means understanding Program goals as goals in the Program for levels of capacity to do certain things, not just as goals of the Program, end results of the Program having done certain things. What capacities do the individual agencies actually now have to behave this way? What capacities do the individual agencies need to have? A program expects with more or less explicitness - that agencies can and perhaps will behave in a way that precludes the objectives of the overall program. What factors encourage or constrain the types of agency behavior we seek?

When issues like these are raised, certain caveats should be considered. First, don't move any agency that is part of a program, including the program office, into functions, roles and responsibilities for which it lacks the capacity, orientation, or external relationships. Second, don't hold an agency responsible or accountable for performance when effective control of capacity development and utilization for that performance is not with that specific agency. For example, what can an Area Development Team actually do - given the clear lead-responsibility assumed by a line agency for project implementation, given the vague nature of roles in this particular inter-agency format, and given the limited and essentially inferior levels of technical skills available within an ADT compared to the line agency directly responsible for project implementation? What should we expect a Composite Management Group to do if individual members can miss meetings where problems in activities they are implementing might be discussed?

What role can a Program Office play in helping agencies acquire needed capacity? If we are talking about simply completing one job for one time in a program, these questions will diminish in importance - largely in direct relation to our ability to otherwise "force" performance. The problem, as we know too well, is that pushing ahead with whatever you have can get the job done, but what kind of job? Moreover, what if our concerns go beyond construction and establishment - where virtually all IAD experience is - to maintenance, utilization, and augmentation of facilities earlier constructed? This kind of learning situation may not be the best candidate for a "let it be" strategy. Quite the reverse, we need to have some ideas about what levels of capacity are needed to effectively perform given functions or, at the minimum, to be in a position to improve or acquire that capacity in the course of given program experience.

2. CAPACITY AS RESOURCE

Capacity can be seen in some other ways and these shed some additional light on the scope of the Program and the distribution of capacity

within the context of this scope. Capacity can be seen as a resource. Thinking about capacity as resources and asking who controls how these resources are used can shed different light on the scope of program. In this perspective, capacity is not simply something to be applied. It is also something to be controlled. A program will consist of many resources - technical, financial, and political capacities, for example. In theory, these are resources for the entire program. They are resources for the Program Office (even if they are not direct capabilities of the Program Office) if the Program Office has access to and in some unambiguous way can direct the application and utilization of these resources--wherever in the Program they are located. If the Program neither has nor can access such resources on terms of reference compatible with its presumed role in the Program, then clearly the resources would not be capabilities of the Program Office. Finally, even if the office "has" technical or political capability X or Y, but to use these resources, depends on utilization being initiated elsewhere in the Program, then the capabilities are resources of the Program Office, but not necessarily for the Program Office. Why all these distinctions? If we are going to assess capacities in a program and particularly capacities of any agency within the program, we need to determine: Under what conditions are these capacities considered resources for the program? For an agency in the program that needs to utilize these resources to support its role in the program?

3. OWNERSHIP

Focusing on the relationships between scope and resources also leads to a basic, but very important issue: Who owns a program? This question will never be absolute, but it provides especially valuable insight about whether there really is "a" program -- in the sense of a unified and intertwined set of commitments and activities. The question helps us understand whether and to what extent there is a "core" program, clearly and continuously "owned" and a larger "peripheral" program that effectively expands and contracts according to issues, resources, and the objectives and skills of the "owner". The question of ownership can also be applied to organizations that in some sense are the children of the program -- most notably the Program Office.

For both Program and Program Office, ownership is not simply designated. Ownership is also accepted, expected, assumed and granted. We need to understand some of the fundamental bases of program ownership. Understanding these bases will tell us about important dimensions of a program's support system and a program's potential continuity and coherence. Program ownership and the foundations of program ownership are closely linked to the issue of sustainability, a topic to be discussed below. Here we can note that if the scope of the foundations on which program ownership is built is too narrow, then there are aspects of program development which are, in fact, not owned. If a program office achieves or occupies certain ownership roles, but builds that position on its close association with the provision of external financial resources, ownership may be essentially coterminous with the flow of foreign financial resources. Saying aspects of a program are not owned, as for example the future of a program after foreign financial

resources disappear, is another way of saying that no fundamental coalition of responsibility and influence exists to identify, mobilize and apply the full repertoire of technical and political resources that will be needed to effectively achieve program functions in those areas. Sustainability, involving as it does, issues of recurrent costs, looms as the largest example. What may be an effective basis for program ownership from one perspective (e.g., nationally 'coordinating' line agency inputs) may not necessarily be an effective basis for inducing local governments to take responsibility later. The Bicol has done more than most to try and "involve" local governments, but we need to ask: How does local government assess ownership of the Program when there is foreign money? How does local government assess ownership when that well runs dry?

4. A PERSPECTIVE ON PROGRAM SCOPE

Who owns a program is a complex question about the relationships between the scope of resources that are available for mobilization in a program and the bases on which specific mobilization and allocation processes are built. The question illustrates that program scope is not simply a listing of objectives and activities, nor even of formal agency participants and their roles, nor even of capacities and skills; program scope is the relationships, processes and conditions which govern the definition and application of resources to program purposes. It is within the context of this broader understanding of scope of program that key elements of program management, organization and performance should be developed. This is true even within a single line agency - between bureaus, between central office and field. But it is even more important in virtually any multi-agency program -- certainly for any of the national IAD programs. It forces us to understand the associations between ends and means in a program and, if necessary, to assess "performance" in relationship to what performance was actually possible. In Bicol, we heard many stories from line agency people about how "little" the BRBDPO had done. They volunteered less often the information that the, in some cases, line agencies would only permit marginal BRBDPO participation. When implementation problems arise in such cases, who can do something about it? When the scope of program management is narrower than the scope of program operations or effects, what can be done? In the Buhi/Lalo Upland Development Pilot Project, these questions are as graphically present as is possible: The project went very bad. Everyone seemed to know. No one seemed able to act. To this day, nobody is certain who "owns" the project. Consequently, to this day nobody is certain who can correct the project's problems.

B. WHAT ARE THE RELATIONSHIPS OF THE PROGRAM WITH BROADER DIMENSIONS OF THE INSTITUTIONAL AND POLITICAL ENVIRONMENT?

The issues of resources and ownership can be applied beyond the question of what the Program "is" to the Program's external relationships. A very direct way to illustrate this is the still much-discussed change in Program leadership that took place in 1978.

In one sense, the leadership crisis was the placement into the role of Program Director of an individual who was probably not competent to be in that role. But in another perspective, the leadership change in 1978 was a price the Program Office paid for seeking central action to formalize its role. With the benefits that came with PD 926 came the stronger possibility that something going on in the Basin would become a resource for parties outside the Basin in ways that were not clearly foreseen. This has to be put in the context of the times. In the year surrounding the leadership change, the Interim Batasang Pambansa was convened, regional elections for IBP members held, and a Bicolano was selected into the Cabinet. Project implementation was underway in several places and line agencies were showing strong signs of "ownership" for the activities they were implementing -- so much so that some problems in relationships with the Program Office and its coordinative arrangements were beginning to surface.

The more general point here is that institutional and political change were constantly underway. In a sense, the Program rode that tiger to gain some of the "powers" and "recognition" local leaders and the major donor (USAID) wanted. However, once the Program got on the tiger it did not seem clear that the Program's supporters in the region fully understood the many signals that in retrospect seemed to have been said clearly: some more fundamental change in the Program's relationship with the Center was coming. The ownership of the Program was going to become a contestable resource. It was either inadequate recognition or regional supporters of the Program saw change coming, but were not inclined or able to prevent the change or moderate what turned out to be some unfortunate consequences of the change (staff turnover at higher levels, centralization of BRBDPO decision-making, weakening Bicolano influence on the Program's direction and purpose).

This is not to suggest that the Program should have mobilized resources to prevent broader change from reaching it. That would be an unrealistic lesson to draw. More realistic, however, is the lesson that regional leaders of the Program underestimated the Program's political scope and thereby underestimated the need to ensure that support for that broader scope - in the region and in Manila - was cultivated. The issue here is not historical. Today, the Bicol River Basin Development Program covers an area for opposition parties that is notably politically plural - from apparently significant support in at least one province to growing dissident activities throughout the Region. Local elections are coming in about a year. And the Basin is about to officially have its first native Cabinet Coordinator. These are all examples of change in the institutional and political environment of the Program that spills right over into the broad scope of the Program itself. If the Program has established itself as a developmental resource, and has developed a commensurate ownership infrastructure, its fundamental continuity as a program may be possible. To the extent that the Program has not done these things, or stated differently, to the extent that expectations have proceeded faster than the Program's recovery from 1978, the Program could encounter some difficulties.

Institutional and political change in the broader environment shows itself in several other ways. At the regional level, the NEDA is responsible for regionalizing the national investment plan through the Regional Development Investment Program (RDIP). In a period of significant budget constraints, managing the relationship between the RDIP and the national budget may well become a more pressing task. As NEDA experiments with how to institutionalize the RDIP -- a matter that it understands to be as much a central question as a regional question -- it can work from significant institutional and legislative foundations, including the RDC, PD 1200, EO 803, etc. For the BRBDP, only now beginning to see a time when foreign assistance and associated KBI's no longer carry the Program, the relationship to domestic public investment planning has not really been confronted. The outcomes here could enhance the Program and strengthen its support. The outcomes could also be problematic for the Program.

If national budget deficits have to be reduced, then budget cuts will impact BRBDP projects in ways similar to the impacts on projects in most other regions. If structural adjustment means that NIA has to assume greater responsibility for amortizing foreign loans acquired to finance irrigation construction, then irrigation fees may rise--in the BRBDP area and other areas as well. Again, what happens to the Program as the total real financial resources available to the Program decline will in part be a product of external factors and in part a product of what kind of commitment the Program has built and could, if necessary, evoke. The term "Program" is used here deliberately. We view the Program Office as a distinct but fundamentally derivative issue.

In the case of the BRBDP, an elaborate set of coordinative arrangements are in place that get different combinations of local, regional and national leadership - both administrative and political - in close proximity to the Program and the Program Office. The next few years will tell whether the loose coordination cum "participation" all this has implied can be translated into some of the political support the Program may need.

C. WHAT IS INTEGRATION IN THE CONTEXT OF THE PROGRAM AND ITS WORKING RELATIONSHIPS?

In the context of the BRBDP (and most IAD programs anywhere else), integration has come to mean many different things -- with different levels of specification and explicitness. Here, we wish to examine integration as a general theme that guides expectations about program organization and management. Within that framework, we can then address the issue of integration as a substantive theme for program development.

1. INTEGRATION AS CONSULTATION

Integration, as a theme guiding expectations about program organization and management, is a perspective on patterns of communication within the Program. Integration, applied to this pattern, conveys and encourages expectations that if principal actors in the Program are involved

enough, in at least a consultative mode, to know what the Program is trying to do, cooperative efforts to support these objectives are more likely to be forthcoming. The earlier in any program development cycle that such consultative arrangements operate, the more likely it is that those participating in the arrangements will acknowledge the utility of mutually cooperative efforts to facilitate successful program completion. The various consultative arrangements and management strategies in the Program, especially involving the Program Office have already been discussed in the report. What we now need to understand are some additional key issues this process has revealed, about integration as a strategy for improving the actual capacity of agencies in a program to optimally associate means and ends for program purposes.

Consultative management is strongly sensitive to patterns of representation in the consultative process. Who are in the consultative process? Who do they "represent"? Frequently, restricted and essentially self-selected consultative arrangements are partially justified by presumed representativeness of those included. Whether any of the individuals actually see themselves as representative, what they actually see themselves as representing and how these self-assessments compare to the criteria underlying their selection are rarely tested -- at least against the participatory rhetoric. Here we can admit that political realities will very strongly influence participation in consultative forums, perhaps so much so that issues of participation and representation assume meanings not conveyed by rhetoric. For example, the PAC appears on the surface to be a valuable and constructive link between the Program Office and the private sector. In practice, it has evolved into something else - quite narrowly based, not well-known by private sector leaders and seemingly committed more to a form of political oversight over the Program Office than to a role as a bridge between Program Office and private sector.

It is also important to consider the questions of who are excluded? Who are not represented? What is the significance of excluding explicit representation from beneath the more elite layers of Basin Society? Examples would include landless laborers, upland cultivators, workers in urban service sectors, etc. In the case of the BRBDP, consultative mechanisms, in principle, are available to cover all parts of the program area, but it is difficult to conclude that all have the opportunity to play equivalent roles -- to influence the directions and emphasis of Program development; to be equally integrated as an "interest" into the Program management process. The lesson would appear to be that maintaining some elements of a program's scope require strong support and ownership from within the program's mission area. But maintaining other elements of a program's scope require strong support from the Center. The challenge is to balance these support bases in favor of consistent programs goals.

2. INTEGRATION AS NEGOTIATION

Integration is not simply proximity: that would be a much too static concept of consultative process. Integration is also negotiation, the process

through which the terms of reference which shape the content and impact of particular consultative relationships are, in fact, established. Legal provisions will provide some guide to these terms of reference of course, but as the report has already implied at several points, formalization of relationships established by EO's, PD's and the like are rarely the last word. This is an important point. Much of the BRBDP experience is a story of the ebb and flow of willingness by different actors in the Program, including the Program Office, to explore, assert -- ultimately to negotiate -- modifications in the largely tacit terms of reference guiding who can and cannot do what in or with the Program.

What is the framework for negotiation of relationships within a program and between a program and important parts of the external institutional and political environment? Clearly, the framework for negotiation is a multi-layered arena with one very strong characteristic: the framework for negotiation at horizontal levels (i.e., within the region) is significantly influenced by the framework for negotiation at vertical levels (i.e., between the region and the center). In fact, there are at least three dimensions of the arena for negotiating consultative relationships: center-region; region-region; and region-local. The Program involves negotiated relationships along all these dimensions -- more in some dimensions than others. As an organization becomes more effective in negotiating on all dimensions, it can translate that effectiveness into significant influence within the Program. It is important to understand, however, that influence of this sort can be used to limit the Program's role, to insulate something from Program influence. Bicol provides several examples of this phenomena (as do virtually all national IAD programs):

- line agencies paying only minimal attention to program offices, using the offices where they can, but making sure the offices don't use them. This reflects the ability of the agencies to reach all 3 dimensions without having to rely on the intercession of a program office.
- some local governments, particularly at municipal levels, are able to frustrate the program -- building on their abilities to establish relationships on all three dimensions which again do not depend on the program office.

The Program Office's project and area coordinators illustrate some of the issues. With the PMO's strongly dominating project implementation, many of the Program's add-on's appear to be just that. What is the actual role of a BRBDPO project coordinator? This is as much a product of negotiation as anything, but it's crucial to remember what position the Program Office negotiates from in relation to a PMO. Take it a step farther. With the strong emphasis on physical infrastructure in most BRBDP activities, and the strongly project-oriented character of that work, what is the role of a BRBDPO area coordinator?

Where formalized assignment of consultative relationships is important is to the degree that the formalization is sufficiently accepted to permit and support a negotiation process that for at least some of the involved parties, might not otherwise include them or allow them to start negotiating from where they do. There are many things a Program Office can do to manage its role in this context - ranging from cultivating local, regional and national political and administrative resources to acquiring an essentially foreign patron. All these have risks for the durability of what is negotiated; for the vulnerability of what was negotiated to sometimes dramatically change. Often IAD programs have what amounts to a foreign patron - directly or indirectly. For a time, this does seem to confer a halo-effect and other resources seem to be subject to call. But neither the foreign patron or even the desired Presidential Decree will guarantee what most program directors seem to want: some kind of significant and in some sense "final" authority over line agency activities in their program areas with rapid and appreciative support from the center.

In practice, if integrated development is going to follow the infrastructure, the primarily foreign-supported work, then it is initiative that will be a key. Irrigation systems, roads, bridges -- these are just engineering works. They become developmental when they are used for productive purposes, when additional investments designed to expand the productive possibilities flow, when public investment identifies catalytic roles it can play to facilitate these kinds of activities. Often, this will be opportunistic. This will be judgmental. It will be more program-oriented than project-oriented. This means continuing negotiation, continuing attempts to organize program administrative, technical, financial, and political resources to solve specific problems, to capture specific opportunities. The Program Office and its consultative arrangements certainly provides a forum for all this. But an important key is initiative -- initiative built on capacity. Here we need to acknowledge that one topic that is tacitly but definitely negotiated is precisely this, initiative -- who can exercise it? Under what conditions? For what purposes? We have to look carefully at the organization of initiative in a program. It will tell us whether and to what extent the program can, with continuity, move to a developmental or facilitative emphasis as against a preoccupation with an administrative or proprietary emphasis. Integration can serve either of these orientations equally well.

The BRBDP contains a more complex inventory and arrangement of administrative and political resources than would appear to be the norm. There are opportunities and pitfalls in that very complexity. The big infrastructure is almost finished--at least in Camarines Sur. Much of the foreign assistance is about to end. Local elections are coming. Relationships with a fundamentally program-oriented Ministry of Agriculture and Food (MAF) as OCC are beginning to be established. Government finances are now and will likely remain in difficult straits for some time. It's an auspicious time for the Program. It is a time when ownership is somewhat ambiguous and when the scope of ownership seems destined to be different than other ways of measuring program scope. Nevertheless, the resources are there to be integrated. Where will the initiative come from?

3. INTEGRATION AS DEVELOPMENT

We can now ask more directly than we have: what are the relationships between the form and content of integration as an issue of management and organization and the pattern and substance of integration as an issue of strategies and activities? There is a chicken and egg quality to this question, of course. The broad claims made for integrated area development as a strategy would appear to require substantial levels of organizational integration. However, experiences such as those in the Bicol suggest also that different levels and types of integration in management may be quite appropriate for different phases of an IAD program cycle. We can visualize integrated area development, in very simple terms, as having three phases:

- (a) Program Formulation. concentrates on problem identification and program planning.
- (b) Project Development concentrates on project identification (usually large infrastructure) and implementation.
- (c) Program Development concentrates on project utilization and program sustainability.

In fact, we know much more about the first, we are learning about the second, and we have only begun to learn about the third. Even where programs are evolving under the aegis of an established political-administrative entity (e.g, a Governor's Office) rather than specially created program entities, we can see that management relationships change and adjust from phase to phase. However, the road hasn't been easy. Multilateral and bilateral development assistance agencies are expressing their own frustrations about even getting through phases one and two. Common reactions that we now hear include:

- (a) Expand the mission and capabilities of a line agency so that it can internalize the coordination challenges. This doesn't erase integration difficulties, but negotiation within a line agencies is thought to be a different and perhaps more palatable cha^r than negotiation with other line agencies. In practice, the NIA's Agricultural Development Coordinating Committees have approximated this path. Not accidentally, NIA was encouraged to travel this route by external donors.
- (b) Strengthen the role of local government, particularly in financial management and project administration. This implies backing away from attempting to give special entities this role. This is the path NACIAD has begun to explore.
- (c) "Coordinate" at the top, but allow line agencies to individually and more or less routinely, implement projects in their areas of capability and responsibility. This implies pulling back from subregional or even regional coordination bodies.

These are all strategies borne out of desire to improve phase two operations, project development, in particular. But where do we really see efforts into the third phase -- building the program that uses the projects? What, in fact, is the third phase? In this question we are really addressing the issue of how the national budget, as a development plan, can somehow accommodate and reflect on a recurrent basis, the strategy of integrated area development? In the Philippines, this is partially the question of how the RDIP can be institutionalized and implemented, given that integrated area development is declared as the preferred strategy for implementing the National Plan. A sub-regional program that makes headway in going from phase two, the project phase, to phase three, the program development phase, will inevitably be attempting to draw the sub-regional program into the ongoing activities of government agencies in a program area. In a real sense, this step will represent an example of an RDIP implementation. But program development, the third phase of Integrated Area Development, is an evolution of many small activities which together build the bridge from major infrastructure to specific patterns of productive use of infrastructure. Here, we need to recognize a major issue that has arisen in the Bicol and in many other IAD experiences. Has project management capacity improved enough and been diffused enough throughout the Program that the planning and implementation of small projects can actually and effectively proceed? Contrary to what many might have thought, it is becoming clear that successfully designing and implementing small projects may not be "easier" than big projects, but the reverse -- more difficult. Why? There are two reasons.

First, many phase three projects in an integrated area development program are not physical projects, but institutional and natural resource management projects. However, skills in these areas are not simple extensions of skills honed during major infrastructure projects. Projects will involve closer and more repeatedly negotiated relationships with beneficiaries. Shortfalls and management errors will show-up sooner and be clearer to beneficiaries sooner than what is often experienced in large projects.

Second, and closely related, management skills available for small projects will generally not be from the cream of a program's experience. In fact, a different learning curve is involved and the starting points may be quite far down the curve.

Integration as a management strategy here refers to transmitting selective project management experience from one part of a program to other parts. Traditionally, this is a difficult process even within a single agency. Organizing a process that transfers experience across participants in a program is considerably more difficult. Screening those experiences in an attempt to determine which elements are transferable only to fundamentally similar projects, which facets of existing management experience have broader applicability, and which aspects can with appropriate modification have broader applicability are all functions which we rarely, if ever, see in an IAD program. Instead, what we more typically confront as project implementation proceeds is increasing doubt about the management capabilities

of the primary line agency and even stronger (if often misplaced) doubts about the management capabilities of the Program Office. This may not be the best environment for moving to an IAD program based on small projects. An IAD program moving in this direction, as is the Bicol program, will need to carefully ask what kind of management capacity it has accumulated, where that experience has accumulated, and what would need to happen to avoid the construction of a small-project portfolio on a foundation of weaker parts of management capacity in the program. Similarly, roles and resources carefully negotiated to support major project implementation will have to be carefully assessed to determine if the roles and resources are appropriate for small projects. We are concerned about signs that excessive administrative superstructure, but inadequate management infrastructure, may characterize the evolution of IAD programs from phase two to phase three. In these cases, integration shows signs of hardening, a development that does not bode well for developing IAD programs from component infrastructure projects.

Beyond all this there appears to be a very simple but powerful point. Whatever integrated area development is as a development strategy, translating the strategy into actual effort means that a management structure for integrated development must be present. The point seems almost too obvious, but it merits stating because as IAD programs evolve, we often lose any point within the program's management where the fuller vision of the program is actually institutionalized -- reflected not simply in briefing rooms but in patterns of program ownership, negotiation, and management. In the BRBDP, the vision is there, but is it where the ownership is, does it somehow underlie the negotiation, is it a premise of management in the program?

D. WHAT DOES SUSTAINING THE BENEFITS OF AN INTEGRATED AREA DEVELOPMENT PROGRAM MEAN?

Whether the benefits from any project will be sustained or will continue is a question that has received surprisingly little attention, at least until the last few years. For IAD programs, the question is potentially and significantly more complex. Certainly there are assumptions -- the roads will be used, the irrigation system will deliver water, etc. But in practice, there is a strong tendency to conclude that when the foreign finance ends, when the infrastructure is complete, the work is over, the benefits will continue unless facilities are actually misused. Bicol is proving to be important because we see a mixture of attention to how benefits will be sustained, continued, maintained in some cases and in other cases, no real confidence in how the benefits of investments already made can reach hoped-for levels and stay there. One place to start looking for an answer is to ask: who will take responsibility for sustaining the benefits of an integrated area development program? Two answers are generally offered. One answer keys on the continuing need for some form of coordination or management that ensures that public investment and government activity are in some sense, consistent with and hopefully synergistic with the basic infrastructure and institutional initiatives taken by a program. A second answer is that sustaining a program's benefits requires beneficiaries to accept responsibility for maintaining, using and further developing public investments made by a

program. This means institutionalizing beneficiary participation in the program. Both answers should not begin after a program is complete, but have rather clear implications for management and organizational strategies during the program. It is in that perspective, that we now want to further examine these two answers.

1. INSTITUTIONALIZING PROGRAM MANAGEMENT

Since the management of an IAD program is institutionally committed to the IAD investments, the case is made that program management is in the best continuing position to support the sustainability of overall IAD investments. This strategy is often translated to mean "institutionalize the program or project." That in turn, is often given an additional special meaning, namely, give the program office implementing responsibilities, i.e., give the Program Office the authorities and responsibilities needed to ensure that the pieces of the IAD puzzle come together.

Institutionalizing the coordinating office (e.g., make a project office into a program office; delink a program office's budget allotment from foreign assistance levels) has to be assessed in relation to functions the institutionalized office is expected to perform. Usually, four broad types of functions are advocated: planning, financial supervision, program coordination, and project implementation. In any context, certainly in the Philippine context, creating or endowing new entities, especially at sub-regional levels, to play these roles inserts some significant potential for inter-agency conflict, duplication, and even increased inefficiency in affected functional areas. We emphasize "potential" because much will depend on the distribution and support of related capacity elsewhere in the program's region. In the case of planning and possibly program coordination, the RDC and associated arrangements need to be considered. For all four functions, local government as well as line agencies need to be considered. Sustainability is a longer-term question and while we don't need to have a specific and detailed vision of the ultimate institutional dimensions of a sustained area development program, we do need to establish some preference for the general course of institutional evolution that might unfold. We have to be cautious that short-term institutional strategies don't significantly erode the possibilities for the longer-term course of preferred institutional evolution.

Given the pace and apparent direction of change in the organization and management of development administration and political hierarchies, it would appear that local governments - particularly at the provincial level - have some longer-term enhanced role. A similar momentum appears to be underway at the regional level as well. Clearly, institutionalizing any entities between these two levels - with functions that each level is already evolving to assume, is a matter that would need to be very carefully weighed. We would want to be reasonably confident that in the short-term, enhancing the sub-regional entity will actually facilitate the function's performance - rather than making that less likely--possibly in both the short and medium term. That might happen, for example, if the

sub-regional entity drew resources away from local government, but never itself developed appropriate capacities.

Perhaps the clearest example of this is the proposal sometimes made to give program offices long-term activity management roles. What is most likely in such an eventuality is that existing line agencies would view the office as just another line agency, thereby weakening the office's ability to play a coordinating role. Could the office function effectively in this domain if it had to rely on its own administrative and possibly even its own political resources? Of course, if the office is supported by significant budgetary resources, it can extract certain resources and cooperativeness, but one should not go too far in expecting that capacity and cooperation can simply be extracted through financial control. The current and ongoing experience in Region VII would appear to illustrate this point. Another option is for local Government to support the acquisition of a long-term management and implementation role by a Program Office. This is possible, especially when the program area coincides with a province. When the area is larger, however, difficulties can arise. Feasibility would appear to rest on what the provinces and a sub-regional Program Office could do for each other and whether provinces actually need the overhead of a sub-regional Program Office to sustain IAD investments they believe to be in their mutual interests.

2. ENCOURAGING BENEFICIARY RESPONSIBILITY

This is primarily the issue of participation by beneficiaries in the project development and implementation cycle to a degree that enhances the willingness and interest of beneficiaries in maintaining a project's facilities. Beneficiaries can be farmers - as would be the case for irrigation projects; they can be barangays and municipalities - as would be the case for road projects, and they can be specific groups in social terms as would be the case for paramedical health projects.

The Bicol has accumulated considerable experience in this area - of both a positive and a negative sort. Many of the earlier project and program evaluations have also examined participatory development within the BRBDP in depth. Here, we are talking about a special example of the learning curve issue. We need to understand that several learning curves are present: of line agencies involved in leading project implementation, of other line agencies expected or expecting to play complementary or subsequent roles in the same project area; of beneficiary groups and local leaders who are expected to assume increasing responsibility, of local governments which may need to accept financial responsibilities for project and program continuation; and of the BRBDPO and its associated consultative arrangements which need to consider how best to adjust their coordinating and resource sequencing functions in a manner that is compatible with the participation process. Synchronizing all these curves so that learning toward some common or at least compatible objectives is going on, is a very subtle and complex matter -- one which ironically can obscure participation in a maze of administrative "innovations" that relegate intended beneficiaries to a distinctly marginal role.

Participation is not purely a zero-sum game between the center and the regions, or between bureaucracies and people. Bicol illustrates that participation that shows promise of working is a juxtaposition of interests in which the survival of participatory initiative requires support and commitment from the center. This appears to be true whether we are speaking of irrigation associations assuming responsibilities in national irrigation systems or regional offices having wider scope in personnel and financial matters -- as the BRBDPO and NIA learned in Libmanan. But there is a more general principle that applies to the fate of local initiative in many forms. Establishing the "forms" for participation do little good and possibly more harm if (1) the content of what local initiative can do is only what has been described for it and (2) if relatively more powerful interests can bypass the organization of local initiative and seek a better arrangement directly with the bureaucracy, the center, etc. In the latter case, the powerful remain powerful while local organization is left with the "responsibilities". There is an apt saying among irrigation specialists that summarizes the point: problem farmers are not the farmers with problems.

The earlier discussion on the elements of integration, consultation and negotiation is fully appropriate here. What are the terms of reference and what are the processes which are yielding, refining and supporting the terms of reference for specific participatory strategies? The NIA experience in Bicol illustrates how these terms can change -- from a vision of essentially administered participation to a vision increasingly shaped by a more beneficiary-supported mode of participation. NIA's record in this area - of institutionalizing a capacity to accommodate water-user organizational work leading to substantial assumption of organization and management (O and M) responsibilities - is in many ways the model for many other countries in the region. But even here, NIA, like the BRBDP, is not outside broader economic factors. In this case, it can force an agency back into some positions it might have been in the process of leaving. Whether in Libmanan, a relatively non-participatory case or in Upper Lalo, a relatively high participatory case, there appear to be some common terms of reference. NIA is measuring the effectiveness of participation by levels of repayment and reductions in NIA O and M costs. In some ways, it is being forced to do this by changing budget management strategies within the government. In other ways, there is no change but rather a restatement of corporate objectives for the sustainability of sponsored irrigation systems. In this context, sustainability is financial. It means systems pay their own way - at least for O&M.

Throughout the BRBDP, there are a range of promising examples of institutionalizing beneficiary participation. In the Integrated Health and Nutrition project, many municipalities are demonstrating the hoped-for willingness to assume financial responsibility for many, although not all 400, of the Barangay Health Aides. In the irrigation projects, as already noted, and the Bula Land Consolidation Project, we have promising examples of irrigation associations, some more viable than others, but associations nevertheless. We see all these associations as fragile, just beginning to develop social roots. Can they last past their first leadership turnover? Can they survive the factionalism that is purely internal and the factionalism

that may be a nondeliberate outcome of all the other organizational affiliations they are expected to maintain -- such as Samahang Nayan, Agrarian Reform Beneficiaries Association, etc. Can they outlast the stress of the current economic crisis? Can they maintain their credibility as water service in the wider Lalo system, for example, deteriorates because of extended construction work or excessive consumption across a broader service area?

Can institutional development strategies designed to support program sustainability actually do that? It will do little good and it can do greater harm if we attempt to "protect" local organizations by forms of paternalism. The case can be made, e.g., that the BRBDPO should somehow prevent any additional local organizational innovations from reaching communities where BRBDP institutional development work has occurred. At one level, this seems like a good idea--at least until results of the institutional development efforts are strong enough to be left alone. But who will make that decision? Will a Program Office actually yield "ownership" or will it try to maintain itself? Is any role of this sort politically unwise, possibly putting the Program Office on the wrong side of local government?

Throughout the BRBDP's experience, there have been calls and advocations for participation. In some cases, what resulted appeared to approximate what was desired (although we know this more from the administrative than the beneficiary side), but in other cases the advocations were vague and possibly even inconsistent. In some places, participation referred to beneficiaries with the exclusion of local government. In other cases, we see the reverse. In both cases, we have to be concerned about representativeness, about whose participation is being institutionalized; about the durability of what is being negotiated by some, often for others.

Suppose we turn the participation question directly on the BRBDPO. Does the question mean the same thing for the Program Office as it does for the NIA? The argument can be made that there are distinct differences. The BRBDPO occupies a role that locates it one-step and in some cases two-steps removed from direct relationships with beneficiaries. The PO operates through its consultative committees and with the implementing agencies. Direct contact with beneficiaries is the domain of line agencies and local governments. There appears to be little support--and possibly significant opposition--for the Program Office to institutionalize direct relationships. Why? A variety of reasons ranging from the fundamentally political nature of direct contact and relationship-building to the historical prerogatives of many agencies which associate technical capacity to respond to beneficiary problems with established channels for response to occur. Can a Program Office out-flank these agencies and their relationships? Should it?

A more positive way to address this issue is to ask: Who are the direct beneficiaries of a program office? Who should be the direct beneficiaries of a program office? At one level, the answer is programs and projects. At a more institutionalized level, the answer would appear to be precisely the agencies involved in the program at both horizontal and vertical scales. This is based on the assumption that the program office as a

coordinator, serves to facilitate the program. This means that the Program Office has two objectives with participatory overtones: (1) administrative development - i.e., facilitating the growth of capacities in the region to plan, finance, and manage projects which are ultimately developmental; and (2) socio-economic development - i.e., facilitating broader participation in socio-economic growth through the first objective.

Experience in Bicol and other IADs suggests that if the BRBDPO had other functions, it would be assuming political or executive roles. If the BRBDPO were an existing political-administrative entity that already had some of these functions, then we might look at the matter differently. But in Bicol, it doesn't and consequently, we once again have to ask whether aspiring to do or perform these functions is either appropriate or desirable. We do better to ask: Where is the foundation now for the needed amount of political and executive resources? How can we mobilize these resources? Here we go back to a point raised earlier--the importance of political resources in institutionalizing and sustaining program benefits. Sustaining benefits means resource mobilization and commitment by beneficiaries. It also means defining and maintaining specific support roles for external agencies. These are matters for periodic negotiation--negotiations that become difficult as time from facility completion grows; as pressures for other uses of scarce resources accumulate. We should be as careful about advocating additional, fundamentally external, claimants on political resources in the barangay as we are about cautioning against attempting to give an administrative entity a political base that potentially competes with the political base of local government and even community organization itself.

E. CONCLUSION

This chapter has reviewed 4 questions that provide at least one way of summarizing IAD issues revealed thus far, by the Bicol experience. Here we can take one more pass through each question.

1. What is the Program? The full scope of IAD programs--in terms of objectives, activities, and participating agencies--is often considerably broader than what existing management systems can effectively manage or coordinate. The difference between the scope of the Program and the scope of what can actually be managed can lead to problems in what people expect from a coordinating office.

2. What are the relationships of the Program with the broader dimensions of the institutional and political environment? Maintaining some elements of a Program's scope requires strong support from within a Program's mission area. Maintaining other elements of a Program's scope requires strong support from the National government. The challenge is to balance these support bases in favor of consistent goals.

3. What is integration in the context of the Program and its relationships? Extensive coordination and consultation did not prevent the BRBDP from making (or endorsing) a series of program and project decisions

that are somehow associated with the mixed results reported in the impact analysis. We are not certain why some of these developmental patterns are there. Neither are we certain that organizing the BRBDP differently would have yielded a different type of programming. Still we maintain a lingering speculation that had the BRBDP's management been integrated around a more broader representative cross-section of Basin society and a wider based constituency at the national level, other ideas about BRBDP programming might have been reflected in the portfolio of public investment. The challenge to diversify and alter the composition and role of public investment within the Program area is still a challenge -- perhaps more now than ever. How can the vision this represents and the strategy it implies be institutionalized within a BRBDP integrated around a substantially different vision?

4. What does sustaining the benefits of an integrated area development program mean? As the BRBDP evolves its emphases on small projects, locally funded, many in areas where the BRBDP has not previously operated, it is important to candidly acknowledge that more is at stake than expectations. For many years, commentators have worried about rising expectations in the Basin area. Besides being remarkably imprecise for an idea that has survived so long, the focus on expectations shifts attention to actual and potential beneficiaries and away from actual and potential levels of government performance. Parts of the project implementation experience in the BRBDP alert us to the important distinction between expectation and credibility, between administration and development. What the Program's experience seems to suggest is that the learning curves were not built for small projects, for programs, for developmental (as compared to administrative) management. Ownership and program scope were not negotiated on the premise of a small project, programmatic, domestically funded future. What can be done to accelerate, in some cases initiate, the growth of learning curves within the program for this new IAD phase?

We can't really say that we have lessons to tell here because the whole process is still not at the point where we can categorically state--at the program level--this worked because, that could have worked if. More than that, we can't say how idiosyncratic some of the possible lessons might be. Nevertheless, six general "lessons" seem to be placed in front of us by the Bicol experience.

a. Ownership. Understand the distinction between the scope of a program and the scope of the management arrangements available to mobilize and apply the skills and resources available to a program. Recognize that ownership is only partially a legal phenomenon, much more an outcome of often complex negotiation processes -- processes that are episodic and subject to significant discontinuities. When the presumed scope of a program and the actual scope of the program's effective management arrangements differ, what will be feasible in a Program will be closer to the management scope than the full program scope.

b. Capacity. What a program can do is not the simple summation of what participants in a program can do: it will often be less. Building program capacity requires deliberate strategies to accelerate the learning curves of participating organizations, to encourage the complementarity of these individual learning curves with program goals (stated as capacities to achieve certain results, not simply the results alone), and to facilitate the transfer of experience on higher parts of the IAD learning curve with other agencies on lower parts of similar curves. The Program's coordinating bodies need to build on these positive experiences. They also need to ensure that negative experiences have broad learning value.

c. Orientation. If an IAD program is going to get from big projects to programs, efforts must be made early to integrate organization and management around the accumulation of developmental rather than administrative capacities, missions, and objectives. Failure to do this adequately can jeopardize the feasibility of ever going from projects to programs. Avoid confusing ends and means in program management, organization and strategy. Extensive reliance on coordinating arrangements without a clear understanding of what these arrangements are expected to accomplish can undermine commitment to the program and lead to negotiation around proprietary rather than facilitative issues.

d. Inflexibility. Avoid a hardening of management, participation, and coordination arrangements. Be cautious about complex management, participation and coordination arrangements, the very complexity of which tend to inhibit initiative. Be cautious about building or relying on "temporary" organizations that operate outside the institutional system that would ultimately need to accept a program if the program is to last.

e. Sustainability. A Program is many resources -- administrative, technical, and political. It is important to recognize that while administrative and technical resources are necessary, they are not sufficient. Political resources -- the capacities to secure commitments of others -- are required. There needs to be clear attention on these resources and how they can be mobilized.

f. Commitment. Integrated development takes time to implement, but more problematically it takes time to see results that justify all the administrative overhead. If an IAD strategy is going to be pursued, then there are some minimal commitments that must be made. It is important for the Center not to waiver in its basic commitment to see the Program through. It is important for the Center not to underestimate the need to ensure that Program management can actually manage the Program. There are two major difficulties that these commitments will have to withstand. First, commitment cannot be built on inflexibility. IAD programming, as already stated, needs flexibility. Second, integrated area development, as a pattern of public investment and domestic resource allocation, is concentrated. It concentrates investment on the premise that results will have wide effects. If the Center and Program management concede the challenge that this pattern of concentrated investment inevitably raises and endorse a thinning-out of investment allocation, the probable consequence will be to further undermine the acceptance of IAD investments altogether and with that, the withdrawal of support for the legitimacy of the Program itself.

ANNEX B

Summary of GOP Agencies' Comments on Draft Evaluation Report

AGENCIES' COMMENTS ON THE BICOL PROGRAM
IMPACT EVALUATION DRAFT REPORT

Comments on the draft report from agencies involved in the BRBDP were solicited subsequent to the presentation of the report to a Committee of GOP and USAID officials held on May 7, 1985.

The following officials responded on behalf of their agencies: Minister Escudero (MAF), Deputy Minister Medina (MAR), Assistant Administrator del Rosario (NIA), Director Daguinsin (MOH-Region V), and Director Olaguer (NEDA-Region V). All expressed general agreement on the findings of the evaluation team.

Briefly summarized below are some highlights of the agency's comments on the draft report.

1. Ministry of Agriculture and Food

Institutional development should be a major focus of the Program to assure continuity of the Program's achievements even beyond the Program's physical life. The Program Office should closely coordinate with MAF both at the Regional and Central Offices level in addressing the second generation problems, particularly the need to diversify project interests beyond palay production.

2. National Irrigation Administration

- a. On Impact of the BRBDP

The impact of the BRBDP on the agro-socio-economic development of the area may not be so significant at this time considering that some of the just completed components are still undergoing the build-up period and could not be expected to generate the full benefits.

- b. On the Libmanan-Cabusao IDA Project

The project as implemented has five (5) major features. Aside from the pumping and irrigation facilities, drainage system, O & M and farm-to-market roads, the project was also provided with a 9.0 kilometer long flood interceptor channel to intercept storm flood run-off from a 23-square kilometers watershed area north-west of the project area and two (2) protection dikes with an overall length of 15.3 kilometers for flood protection and prevention of saline intrusion. Efficient performance of these facilities, however, are greatly affected by the degree/level of O & M that NIA could possibly afford and the adverse local conditions in the area. With the financial problems currently being experienced by the NIA

coupled with the very low collection of irrigation service fees, the level of O & M may further deteriorate. It is, therefore, recommended that O & M of roads, protection dikes, flood interceptor channel and main drainage system be turned over to the MPWH who has the capability and jurisdictions over these facilities.

c. On the Libmanan-Cabusao IDA Project's Technical Problems Associated with Pumps

Queries were made with NIA designers who have assisted in the installation of the pumps and O & M personnel and according to them, no further technical problems are attributable to the pumps after some operational problem. However, the four (4) pumps could not be operated at the same time because the cut-and-cover and tunnel sections of the main canal are practically half-filled with silt deposits and could not accommodate the full supply discharge of 6.0 cubic meters per second. Continued full operation of all the pumps will cause overtopping of the main canal embankments and will result to serious damage to the main canal. It is imperative that the said affected area be desilted and sections where the siltation emanate be rectified.

3. National Economic and Development Authority

a. On the Project Monitoring System

Effective project monitoring system and strong coordination and linkage between BRBDPO and implementing units should be installed. Appropriate power and authority should be accorded to BRBDPO in line with said functional concern.

b. On Beneficiary Awareness and Participation

Beneficiary awareness and participation should be strengthened through the Area Development Team (ADT). Coordination, monitoring and negotiation capabilities of ADT should be enhanced.

c. On Reliance on Foreign Financing

The BRBDP programs and projects should not fully rely on foreign financing but should likewise consider tapping local financial institutions both from the local government units and private voluntary organizations as well.

- d. On the Improvement of Management Capabilities of Local Government Units, etc.

Programs and projects of the BRBDP should likewise include approaches to improve the management capabilities of local government units, line ministries and local institutions and beneficiary groups within the project area.

4. Ministry of Health

Certain issues should be clarified before any expansion of the coverage of the Bicol Integrated Health, Nutrition and Population Project is undertaken. Questions on the scope of expansion and on the sustainability of the local government support to the barangay health workers should first be addressed.