

FINAL DRAFT

**BICOL INTEGRATED AREA DEVELOPMENT II  
(Bula-Minalabac Land Consolidation)**

Project No. 492-0310  
(Bula IAD II)

**PROJECT EVALUATION REPORT**

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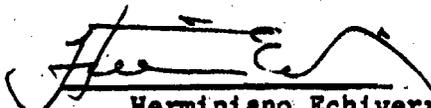
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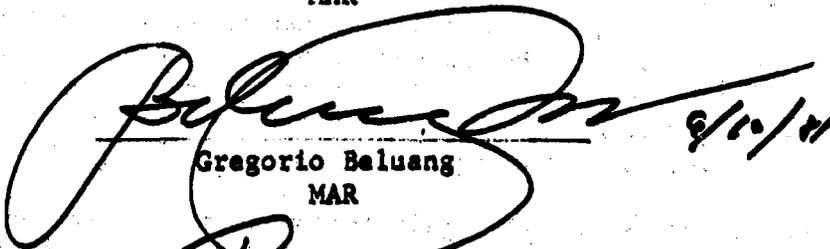
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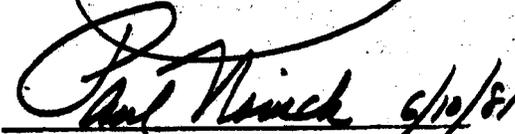
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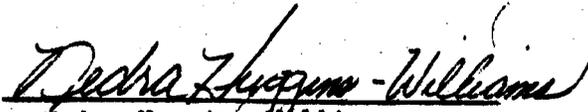
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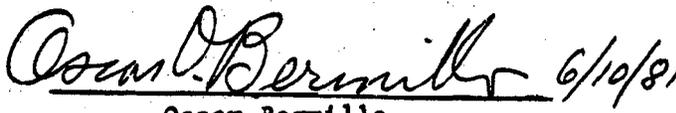
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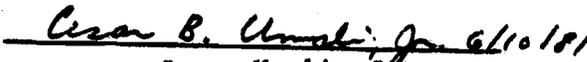
  
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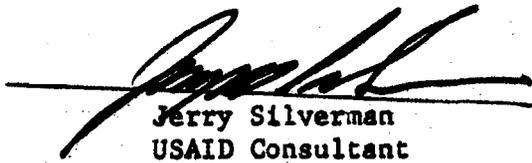
  
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**PREFACE**

Seven persons contributed written drafts on one or more sections of this Report. Jerry Silverman served as Team Leader and was responsible for integrating and editing the various contributions. Those persons who provided initial drafts for each section are identified in the Table of Contents and under the heading of each Section or appropriate subsection.

A first draft was presented to the Project Director; the Regional Directors of NIA, MOH, and NEDA; and Representatives of the Land Bank of the Philippines, Ministry of Agriculture and a Land Consolidation Promotion Committee at a meeting at the PMO on Saturday, June 6, 1981. Following discussions at that meeting, the initial draft was rewritten by a Committee composed of Jerry Silverman, Herminiano Echiverre, Gregorio Beluang, Paul Novick, Oscar Bermillo, and Cesar Umali in Manila.

Several other minor revisions were made following suggestions offered at a meeting attended by USAID representatives and MAR staff in Deputy Minister Benjamin Labayen's office on June 10, 1981.

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I. EXECUTIVE SUMMARY  
(Jerry Silverman)

OVERVIEW. Between 1951 and 1979, the U.S. Government, through AID, has obligated approximately \$132.7 million towards helping the Government of the Philippines increase agricultural production and the income of the rural poor through a wide variety of Programs (e.g., Rural Electrification, Provincial Development Assistance and Rural Roads). A major emphasis among those Programs has been, since 1974, support for a GOP integrated area development (IAD) program in the Bicol River Basin in Southern Luzon, an area characterized on the one hand by abundant natural resources and on the other hand by extreme rural poverty. To date, USAID has obligated \$28.4 million for five separate loan projects and two grant technical assistance projects in the Bicol River Basin. Obligations totalling \$46.8 million have followed from the Asian Development Bank and European Economic Community. The subject of this Evaluation Report, the Bula-Minalabac Integrated Area Development (BIAD II) Project is but one component of this overall effort.

The Loan Agreement provides for the establishment of a Pilot Land Consolidation Project; the AID financed component of which includes the construction of road access, drainage and pump irrigation facilities within the 2,400 hectare project area, as well as the procurement of O&M equipment. Related project components, including homesite development, land consolidation and tenure reform, organizational development, training, and applied agricultural research, are provided by the GOP.

COSTS. The total budget for BIAD II was originally estimated in 1977 at \$5.46 million. AID has obligated \$3 million. However, the current revised estimate in current dollars is \$9.2 million and it is expected that further increases will be necessary. As of April 30, 1981, the GOP had already spent \$2,375,380; AID has reimbursed a total of \$8,900 to date. The estimated accrued expenditures of AID loan funds against physical work accomplished is \$915,000.

DELAYS. Because of the complexity of the Project, substantial delays have occurred. An extension of the PACD from December 31, 1982 to June 30, 1984 is recommended if nine preconditions are met by June 30, 1982.

EFFECTIVENESS OF AID SUPPORT. Cash Flow problems have been experienced in part because of the design of the FAR system in use. The GOP project staff judges AID technical assistance and monitoring/evaluation efforts to have been adequate and appropriate. However, a conclusion in this Report is that USAID should have devoted some earlier attention to problems in the organization development component of the Project.

PERFORMANCE OF THE GOP. With the exception of delays due to on-going problems in the contracting approval process, GOP performance is currently adequate. Earlier problems with the budget preparation/funds disbursement process and the supervision of contractors involved in construction work have apparently been resolved.

**MAJOR RECOMMENDATIONS FOR IMMEDIATE CONSIDERATION.** A total of 28 recommendations are provided in the Report. The 8 most important of these are summarized here: (i) USAID should approve a request from the GOP for an extension of the PACD to June 30, 1984 if nine preconditions are met by June 30, 1982, (ii) at the request of the GOP, USAID should approve the use of Bicol IAD grant funds for short term technical assistance to help the PMO in the design of an effective strategy for Irrigators' Association organizational development and training, (iii) in view of project cost increases, MAR should undertake an analysis of the Project's current cost structure, (iv) MAR and USAID should discuss alternative ways of restructuring the current Fixed Amount Reimbursement Agreement; (v) USAID should assign explicit responsibility to a specific person in ORAD to provide some TA and monitoring of the Institutional Development component of the Project; (vi) MAR should approve the request for additional funds for subdivision surveys of Phases I-V; (vii) the PMO should hire one additional survey team; (viii) the PMO should submit and MAR should approve a request to hire a private contractor to provide land consolidation surveys, computations, and mapping services for Phases IV and V.

## PROJECT IDENTIFICATION FACTSHEET

1. COUNTRY: The Philippines
2. PROJECT TITLES: "Bicol Integrated Area Development II  
(Bula-Minalabac Land Consolidation)"
3. BILATERAL PROJECT NUMBER: 492-310 (Aid Loan Number 492-T-046)
4. PROJECT IMPLEMENTATION
  - a. First Project Agreement: FY 78
  - b. Final Obligation: Ongoing
  - c. Final Input Delivery: Ongoing
5. PROJECT FUNDING
  - a. A.I.D. bilateral Funding
 

\$3,000,000	(loan, FY 78-83)
(\$2,250,000)	Original; FY 78)
(\$ 750,000)	Amendment; FY 78)
  - b. Other Major Donors: None
  - c. Host Country Funding
 

Original Budget: \$2,561,000
Costs to date (April 30, 1981): \$2,375,380
Allocated Through December 31, 1983: \$6,202,264
Estimated Costs Through Completion June 30, 1986: \$6,841,730
6. MODE OF IMPLEMENTATION:
  - a. Project Loan Agreement between USAID/Manila and National Economic and Development Authority; Government of the Philippines (January 13, 1978)
  - b. Project Loan Agreement Amendment (August 18, 1978)
7. PREVIOUS EVALUATIONS AND REVIEWS:
  - a. 1979 Evaluation Bula Integrated Area Development Project (June 22, 1979), Project Evaluation Summary (PES) covering period 2/78 to 6/79 (August 30, 1979).
  - b. Memorandum Audit Report No. 2-492-81-1 (October 6, 1980).
8. RESPONSIBLE MISSION OFFICIALS
  - a. Mission Directors: Peter Cody (77/79)  
Anthony Schwarzwalder (79/present)
  - b. Responsible Project Officers: C. Stuart Callison (76/77), Design  
Ralph Bird (78/81), Implementation
9. HOST COUNTRY EXCHANGE RATES
  - a. Name of Currency: Peso (P)
  - b. Exchange Rates
 

	Planned PP
At Project Inauguration (1/78):	₱7.5 = \$1
At December 1979:	₱7.5 = \$1
At January 1980:	₱8.0 = \$1
At Evaluation (6/81):	₱8.0 = \$1
Average to date (6/81):	₱7.7 = \$1

ABBREVIATIONS

AID	Agency for International Development
ARBA	Agrarian Reform Beneficiaries' Association
BIAD II	Bicol Integrated Area Development II Project (Bula-Minalabac Land Consolidation) -- AID designation
BIDA II	Bicol Integrated Development Area II -- GOP designation
BRBDP	Bicol River Basin Development Program
CCC/IRDP	Cabinet Coordinating Committee for Integrated Rural Development Projects
CF	Compact Farm
CLT	Certificate of Land Transfer
CMG	Composite Management Group
COA	Commission on Audit (Government of the Philippines)
CON	Contract or Casual Employee
FAP	Farm Access Path
FAR	Fixed Amount Reimbursement
FARA	Fixed Amount Reimbursement Agreement
FSR	Farm Service Road
GOP	Government of the Philippines
IA	Irrigators' Association
IAD	Integrated Area Development
IADD	Institutional and Agricultural Development Division (Project Management Office)
LBP	Land Bank of the Philippines
MA	Ministry of Agriculture
MAR	Ministry of Agrarian Reform
MARCO	Ministry of Agrarian Reform Central Office
MLGCD	Ministry of Local Government and Community Development
MOB	Ministry of Budget
MOH	Ministry of Health
MPW	Ministry of Public Works
MSSD	Ministry of Social Service Development
NACIAD	National Council for Integrated Area Development
NEDA	National Economic Development Authority
NIA	National Irrigation Administration
O&M	Operations and Management
OJT	On-the-Job Training
OLT	Operation Land Transfer (The Land Reform Program)
ORAD	Office of Rural and Agricultural Development (United States Agency for International Development/The Philippines)
PAC	Private Advisory Committee
PACD	Project Activity Completion Date
PIDD	Physical Infrastructure Development Division (Project Management Office)
PIL	Project Implementation Letter
PMO	Project Management Office (Bula-Minalabac Land Consolidation)
PP	Project Paper (USAID)
RIC	Rural Improvement Club
SN	Samahang Nayon (Barangay Level Farmers' Associations)
TA	Technical Assistance
USAID	United States Agency for International Development/The Philippines

## II. CONCLUSIONS AND RECOMMENDATIONS (Jerry Silverman)

The findings and conclusions of the evaluation are summarized here. Each is followed, where appropriate, by one or more recommendations derived from the respective conclusions or "findings."

The section is divided into three (3) major categories and thirteen (13) sub-sections: an overview of the BIAD II Project; <sup>1/</sup> major conclusions and recommendations (5 sub-sections); and other conclusions and recommendations (7 sub-sections). In Section V below, sub-sections with corresponding headings provide details on which these findings and conclusions are based.

### 1. OVERVIEW: INTRODUCTION TO BIAD II

The Bula-Minalabac Land Consolidation Project is an Integrated Area Development (IAD) project that includes a major land consolidation and tenure reform program encompassing seven barangays in Southern Luzon.

#### a. Scope of Project

The project is multi-sectoral and requires a significant level of integration at the management level. This is illustrated by the fact that nine distinct sub-sector activities involve the direct participation of 15 GOP agencies.

#### b. Decentralization and Coordination

Management is decentralized vertically to the Regional and Project levels. Coordination is effected through a Composite Management Group (for policy) composed of the Regional Directors of the 15 government agencies involved and by assigning personnel from various agencies to a Project Management Office (PMO). The PMO is under the leadership of the Regional Director of the Ministry of Agrarian Reform (MAR), the lead agency, and is managed on a day-to-day basis by a Project Manager assigned by MAR.

#### c. Design Changes

The original Project Design has been modified to a significant extent on a number of occasions at the PMO level with regard to phasing and infrastructure engineering and design.

#### d. Delays

The original Project Implementation Plan is behind schedule. The original Project Activity Completion Date (PACD) of December 31, 1982 cannot be met. The GOP intends to submit an official request to USAID/Philippines, through NEDA, for an extension of the PACD to June 30, 1984. A major purpose of this evaluation is to provide a recommendation in that regard.

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<sup>1/</sup> The Project abbreviation used by AID is BIAD II. However, the abbreviation used by the GOP is BIDA II. For purposes of consistency, we shall use the designation BIAD II in this Report.

a. Costs

To date, the GOP has increased its financial commitment to the Project over the original 1978 GOP Implementation Plan estimates by 74%. One finding of this evaluation is that an additional increase will be required if completion of the entire project is extended until June 30, 1986.

MAJOR CONCLUSIONS AND RECOMMENDATIONS

2. PROPOSED EXTENSION OF PROJECT ACTIVITY COMPLETION DATE (PACD)

Due to serious delays in project implementation, two contradictory recommendations are currently "on the table" for consideration by USAID/Philippines concerning future financial support of BIAD II.

a. Pre-Existing Options

(i) Deobligation. In October 1980, an AID Audit Report<sup>2/</sup> suggested that USAID set June 30, 1981 as a date by which the Mission should determine the GOP's capacity to achieve successful completion of the Project. If the GOP could not demonstrate its capacity in that regard by that date, "all qualified project obligations should be paid, and the remainder of the loan deobligated." The amount subject to deobligation if that option is selected would be approximately \$2.4 million (80% of the total obligation).

(ii) No Extension of PACD (December 31, 1982). By December 31, 1982, current implementation planning indicates that the USAID financed construction activity in only Phase I-A will be totally completed. Thus, if no extension of the current PACD is approved, AID project obligations should equal approximately \$1.03 million; leaving approximately \$1.97 million to be deobligated.

(iii) Extension of PACD to June 30, 1984 (GOP Request). The GOP intends to request an extension of the PACD to June 30, 1984. The official request for an extension is based on the PMO's current estimate that all specified project activities could be completed during the two dry seasons between now and that date. The most probable result of approving the request would be reimbursement by AID to the GOP of the total \$3 million obligation.

b. Evaluation Team Findings

The GOP has provided convincing evidence since October 1980 that it has the capacity to resolve the problems cited in the AID Audit Report. Successful completion of the Physical Infrastructure Development component of the Project (the only component funded by AID) can be reasonably expected by June 30, 1984. However, successful completion of that component is not

<sup>2/</sup> AID/AAG/EA, Memorandum Audit Report No. 2-492-81-1 (October 6, 1980).

anonymous with completion and reasonably full operation of the Project as a whole. The Evaluation Team's current estimate is that the Institutional and Agricultural Development component cannot be completed before June 30, 1986.

### Recommendations

(i) Although USAID need be concerned only with the question of the PACD and how that relates to an estimated completion date for the Physical Infrastructure Development (PIDD) component of the Project, a decision in that regard should be based on consideration of prospects for successful completion and reasonably full operation of the Project.

(ii) The PMO should prepare a revised estimated budget and implementation plan for the completion of the Institutional and Agricultural Development (IADD) component of BIAD II for submission to MAR and MOB.

(iii) USAID should approve a request from the GOP for an extension of the PACD to June 30, 1984 if the following nine (9) preconditions are met by the GOP prior to June 30, 1982:

- A specified percentage of all scheduled irrigation and drainage construction work is completed.
- All PIDD budget requirements continue to be expeditiously released by MOB & MARCO.
- The GOP has made a final decision concerning whether or not Phase III will be deleted from the Project.
- The PMO has prepared a new revised budget (including cash flow projections) for the extension of the IADD component of the Project and for O&M of the PIDD component until June 30, 1986 and that budget has been approved by the MOB, Budget Technical Services.
- The PMO has prepared a revised implementation plan for the effective operation of Irrigators' Associations and the phasing out of the PMO by June 30, 1986.
- The PMO has prepared an estimated budget (in 1981 prices) for an adequate annual O&M subsidy by the GOP to the Irrigators' Associations following completion of the Project (i.e., June 30, 1986).
- The GOP has decided how it will finance and administer the O&M subsidy to Irrigators' Associations; including the designation of responsible agencies.
- The GOP has explicitly identified the principal agency responsible for providing long term support and backup to the farmer controlled Irrigators' Associations in the BIAD II project area following completion and operation of all phases of the Project (i.e., June 30, 1986).

- MAR/PMO has identified the type of additional Technical Assistance required for successful completion and operation of the project by June 30, 1986 and has submitted a request to USAID for additional grant support for that purpose.

NEDA, MAR, and USAID should negotiate suitable language for these nine preconditions.

### 3. IMPACT OF BICOL INTEGRATED AREA DEVELOPMENT II (BIAD II) PROJECT

The Project was designed as a pilot and was expected to affect the resident population and GOP policy along six dimensions: agricultural production; incomes; organizational development; health, nutrition, and education; land consolidation and tenure reform; and integrated area development. However, significant delays in project implementation to date suggests that only marginal positive impact on the local resident population can be expected to have occurred.

#### a. Agricultural Production

The extent to which noticeable increases in agricultural production within the BIAD II project area since 1978 can be directly attributed to the Project has not yet been determined.<sup>3</sup> However, there is strong evidence that the result of the project when completed will be a net increase in rice production of 11,341 tons.

#### b. Incomes

To date, data has not yet been collected upon which a definite conclusion can be made concerning the direct impact of the project on incomes. However, for the future, depending on the level and terms under which farmers will be required to amortize construction and equipment costs and pay for O&M, the Project could actually have either a significant positive or negative impact on farmers' net discretionary income.

#### c. Organization Development

The direct effects of the Project to date in this regard have been: the formal organization of a Land Consolidation Promotion Committee; a Pilot Irrigators' Association in Phase I-A; seven Agrarian Reform Beneficiaries' Associations (ARBA); and a comprehensive Women's Rural Improvement Club for the Project Area as a whole. Farmers and youth associations do exist within the seven barangays in the Project Area under normal GOP auspices.

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<sup>3/</sup> A diesel powered pump did provide modest irrigation service to approximately 30 hectares in Phase I of the project during the first half of 1981, and modest production increases might have resulted.

d. Health, Nutrition, and Education

Since mid-1978, 1,458 men, women and youth have participated in training programs which included information on health, nutrition, and family planning. In addition, 910 farmers have received some instruction in agricultural management and production techniques. A further 41 women and 37 men have received some form of skills training.

e. Land Consolidation and Tenure Reform

Lessons learned by the GOP from the escalating costs of BIAD II include the application of two criteria to future land consolidation schemes: (i) the area should be composed of not less than 1,000 contiguous hectares occupied by beneficiaries of Operation Land Transfer; (ii) the topography should be relatively flat; and (iii) the area should already have some type of pre-existing irrigation system which can be improved at substantially less cost.

f. Integrated Area Development

BIAD II was, along with the Nueva Ecija Integrated Area Development Project, a significant departure from GOP policy toward the organization of IAD projects in at least three respects: Integration of IAD into a land consolidation/tenure reform program; the application of a modified Taiwan Model of Land Consolidation; and the assignment of MAR as the Lead Agency. However, GOP policy since the commencement of project implementation has not resulted in any significant replication of the BIAD II model.

Recommendation: The PMO should write a scope of work and identify the type of technical assistance required to assess the impact of the Project on incomes through December 31, 1981. Analyses required to assess such impact should be reported to the PMO no later than June 30, 1982.

4. Physical Infrastructure Development

a. Current Status

Completion of the physical infrastructure development component of BIAD II has been substantially delayed in all phases. The pumps have been installed in Phase I and began operation on May 28, 1981. As of April 15, 1981, approximately 39% of this component has been completed in Phases I-A and 68% in Phase I-B. No substantial design changes have been made in Phase I. Substantial design changes have been made in Phase II; from a ground water to a river pump system. That has resulted in substantial delays and increased costs. The revised design plans for Phase III have not been finalized due to incomplete development of the initial three groundwater wells and analysis of the costs of alternative systems. Construction activity has only recently begun on Phases IV and V.

b. Construction

(i) The Contracting Process. The contracting system currently in force continues to cause substantial delays in project implementation. Although MAR and PMO staff have done everything in their power to solve this procedural problem and a solution to the problem was thought by MAR and USAID to have been found earlier this year, subsequent action by the Commission on Audit (COA) has added an additional, newly discovered, obstacle to speedy approval of contracts. That has resulted once again in the passing of the 1981 dry season period without completion of scheduled heavy construction work.

(ii) Specifications. Specifications prepared by Technosphere Consultants Group, Inc. are adequate.

(iii) Monitoring/Quality of Work. Monitoring of contractors' performance and the quality of work performed has improved significantly during the last six months and is now judged to be adequate.

Recommendation. The Project Loan Agreement provision -- Section 5.1 (d) -- which provides that the PMO be delegated authority to enter into contracts does not resolve the problem regarding the contract approval process. Therefore, the President of the Philippines should be requested to designate MAR as an Infrastructure Agency under the terms of Presidential Decree 1594.

5. Organizational Development and Training

The PMO does not at present have the knowledge required to design a water management plan and organize Irrigators' Associations with sufficient capability to exercise complete responsibility for the management, operation, and maintenance of the irrigation and drainage systems provided by BIAD II. This is not a criticism of the PMO nor anything for which its staff should be blamed.

A total of approximately 2,165 men, women and youth have been provided with various types of training by PMO staff since mid-1978. No serious problems appear to exist with the amount of training being provided nor in the methods of instruction used. Rather, the most serious problem is the appropriateness of content in terms of the specific farmer organizational structures to be created and the technical and managerial skills farmers will need to operate the systems for which they will be responsible.

a. Farmer-Beneficiaries. The content of farmer training to date is best characterized as providing an orientation to the Project rather than specific technical or managerial skills. Since the specific number, area scope, and structures of IAs have not yet been determined, the limitation of training to general orientation has been appropriate. The task at present is to determine the structure of farmer organizations.

(i) Compact Farms (CFs). Although it is possible to provide training to ad hoc groups of individual farmers, it is more appropriate to defer such training until specific CFs have been organized and then train their members together as a unit.

(ii) Irrigators' Associations (IAs). No decisions have yet been made concerning the number or specific management structure of IAs. Several important and complex questions should be answered before such decisions are made. The Evaluation Team's estimate is that a process including the design of training and organizational structures for adequately functioning IAs cannot be completed for all areas until June 30, 1986 at the earliest. Because activities could begin in Phase I-A during the next few months, it is important to reiterate the point that such activities should not begin before adequate design work has been completed.

- b. Rural Improvement Clubs (RIC). These groups composed of all married women within a barangay, exist in all seven barangays in the project area. A comprehensive BIAD II RIC Council was formed on March 26, 1981.
- c. Youth Clubs. Two youth clubs dividing the 11-15 year old age group and all single persons 16 years of age and older also exist in all seven barangays in the project area. However, a comprehensive BIAD II Council has not yet been formed.

### Recommendations

(i) At the request of the PMO, short term Technical Assistance should be provided to the PMO as soon as possible to help them in their effort to design an effective IA organizational development and training strategy. The initial TA input should be provided no later than November 30, 1981.

(ii) On-Farm Water Management Training should be postponed until decisions concerning the organizational structure and assessment of management and technical skill requirements of IAs are made.

(iii) The PMO as an integrated backstopping organization should remain in existence until at least June 30, 1986.

(iv) At the suggestion of some PMO staff, consideration should be given to a repetition of the Organizational Development Workshop conducted in the PMO by a team of consultants during October 1979. The reason offered by those PMO staff members for repeating the workshop, which they think was valuable, is that a majority of senior PMO staff positions are now occupied by persons who were assigned to the PMO after the workshop was conducted.

### 6. Financial Analysis

According to the initial GOP Implementation Plan (1978), the total budget for BIAD II was originally estimated to be ₱49,162,010 (=₱6,554,934).

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<sup>4</sup>/ The Project Paper (1977) estimated ₱40,957,500 (=₱5,461,000).

Of that total amount, AID has obligated \$3,000,000 in the form of a loan to the GOP. However, current revised GOP estimates are that total project costs will now reach \$9,202,264; assuming the project is completed by December 31, 1983. This represents an increase of 40% in total costs and 74% in the amount of funding provided solely by the GOP. These costs include an extremely wide range of activities, within the context of an IAD, beyond those normally associated with an irrigation system (refer to Table 2, p. 52 of this Report). As project activities are likely to extend into 1984 and beyond, additional financing will be necessary.

It is apparent to the evaluation team that the current Fixed Amount Reimbursement Agreement (FARA), which structures the disbursements of AID loan funds against completed and functional infrastructure components, has been a partial source of the cash flow problems faced by the project staff in its dealings with the MOB.

#### Recommendations:

(i) In view of project cost increases, MAR should undertake an analysis of the project's current cost structure. This analysis should determine:

- the specific elements and reasons for cost increases by item;
- the types and levels of project construction, materials, and O&M costs to be amortized by farmers in the project area and the level of future irrigation fees; and
- the amount of any possible subsidies required to ensure operation and maintenance of the irrigation facilities.

(ii) MAR and USAID should discuss alternative ways of restructuring the current Fixed Amount Reimbursement Agreement (FARA). An amended FARA should reflect recent changes in project design and facilitate disbursement against work completed by project contractors.

(iii) A new hydrological study should be conducted in order to validate present estimates of pump electricity costs.

#### OTHER CONCLUSIONS AND RECOMMENDATIONS

##### 7. Effectiveness of AID Non-Financial Support

###### a. Staffing

The number of USAID/Philippines staff residing in Naga City (with responsibilities for the six separate projects comprising the broader BIAD IAD financed program) has declined significantly since BIAD II was inaugurated in January 1978. At that time, USAID/Naga consisted of four direct-hire Americans and ten Filipinos. With the departure of the BIAD II Project Officer Engineer on May 30, 1981, current staffing consists of one American

direct-hire Development Officer, one Filipino Civil Engineer and three other Filipino support staff. For the first time, the BIAD II Project Officer is now a person residing in Manila. As a result, the Filipino civil engineer employed by USAID since 1978 in Naga City will be primarily responsible for day-to-day monitoring of the Project.

b. Technical Assistance

No long term American or Filipino technical assistance personnel have been assigned exclusively to the BIAD II project. However, the Project Officer resident in Naga City until mid-1981, a Filipino USAID civil engineer, and the USAID Development Officer have provided on-going consultation and advice to the PMO. The current judgment of PMO staff is that the TA thus provided has been appropriate and effective. However, on-site participation of USAID personnel in BIAD II has emphasized almost exclusively the Physical Infrastructure Development side of the Project. It is also true that the PMO's perception of USAID involvement is that the Mission has been "mostly concerned about their money" going into physical construction and, therefore, that it has emphasized project monitoring rather than TA.

In addition to the TA mentioned above, USAID has funded a total of approximately 6 person months of short term, intermittent assistance by foreign consultants involved in such activities as evaluation, ground water exploration, and reviews of water resources.

c. Monitoring/Evaluation

This evaluation supports the judgment of AID's Auditors that USAID's monitoring of BIAD II has been "exemplary."

However, in terms of formal interim evaluations, performance has been less than ideal. Only one interim evaluation has been conducted (June 1979) in addition to an audit report (October 1980). A deficiency in the USAID (and BRBDPO) formal monitoring and evaluation process with regard to BIAD II has been the almost total neglect of substantive assessments of the Institutional and Agricultural Development component of the Project.

Nevertheless, the Office of Rural and Agricultural Development (ORAD) of USAID/Philippines should be commended and urged to continue its current approach to joint project evaluation or monitoring which emphasizes utility to project management and OJT experience in the evaluation process by PMO staff rather than an external audit approach. That approach is described further in Annex A of this Report.

Recommendations:

(1) Following the arrival of the new AID Project Officer, a new Scope of Work should be prepared for the Filipino USAID/Naga Civil Engineer which recognizes his increased responsibilities regarding BIAD II.

(ii) With the continued involvement of the Filipino USAID civil engineer residing in Naga City and the part-time services of an additional Filipino civil engineer consultant on contract to the BRBDPO (to be financed by an AID grant), USAID TA and monitoring of the Physical Infrastructure Component should not present any serious problem. However, with regard to the Institutional and Agricultural Development Component, USAID/Philippines should assign explicit responsibility to a specific person in ORAD to provide some TA and consistent monitoring focused especially on organizational development and training aspects.

(iii) USAID should provide additional appropriate grant funded TA in such areas as water management training and organizational development.

(iv) USAID should ensure--to the extent that it has the authority to do so--that a joint "formative/process" evaluation or assessment of BIAD II takes place every twelve months until final completion of the project and the dissolution of the PMO in 1986. That activity should be directed toward developing an evaluation capacity within the PMO of use to Project Management. Care should be taken that these evaluations place equal emphasis on the activities of both the Institutional and Agricultural Development and Physical Infrastructure components of the Project.

## 8. GOP Management Structure

Organizational Charts are provided as part of the more detailed discussion in Section V, Subsection 8. In summary, the Ministry of Agrarian Reform (MAR) serves as the Lead Agency, with participation of fourteen other government agencies at the Regional level. The management structure is based on the principle of decentralization of authority vertically to the Regional level. As an Integrated Area Development (IAD) Project, coordination of the inputs of various government agencies is an equally important principle.

### a. National Level

The Minister of Agrarian Reform has responsibility for providing national level line management and support for the Project. The Bicol River Basin Cabinet Coordinator (currently the Minister of Public Works) has responsibility for coordination of national level support by various ministries and government agencies.

### b. Regional Level

The Bicol Regional Director of MAR is the designated Project Director of BIAD II. He is assisted by a Project Management Office (PMO) under the leadership of a Project Manager who is also a MAR officer. A total of 54 persons are currently assigned to the PMO on either a full or part-time basis by 8 different agencies.<sup>5/</sup> Another important mechanism for integration

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<sup>5/</sup> Another 65 persons serve full time and one serves part-time on either a contractual or casual basis.

and coordination is the Composite Management Group (CMG) consisting of the Regional Directors of GOP ministries and other agencies; plus representatives of other offices. This constitutes a sub-element of the Bicol River Basin Coordinating Committee. The CMG has been active and effective.

The Program Director of the Bicol River Basin Development Program Office (BRBDPO) is both a member of the CMG (BIAD II project specific) and has the task of coordinating all ten IAD projects in the Bicol River Basin. A Regional Bicol River Basin Coordinating Committee, chaired by the BRBDP Program Director, is the venue within which broader inter-agency concerns and issues are addressed.

#### c. Future Structural Changes

Current plans state that soon after the completion of the Physical Infrastructure Development component of the Project, complete management, operation, and maintenance of the irrigation system will be transferred to the Irrigators' Associations (IAs) and the PMO will cease to exist. The Evaluation Team believes that the simplicity of the "plan" is unrealistic. Although the IAs should have the fullest possible responsibility for the irrigation system, it will require continued GOP technical and financial support and technical assistance. Thus, some agency will be required within the GOP at the Regional level to provide that support. In addition, the transition process from PMO control to IA control and GOP support will require careful consideration and design.

#### Recommendations:

- (i) The GOP should begin as soon as possible to specify the Regional agency(ies) responsible for providing financial and technical support to the IAs following the abolition of the PMO.
- (ii) The PMO and/or CMG should begin as soon as possible to design an implementation plan for the transition from PMO control to IA control and GOP support.
- (iii) The PMO should retain ultimate authority over each irrigation system for at least two cropping seasons prior to turning the system over to an IA. Further, it should continue to monitor and assist the IA in a support position for at least one additional year following the turnover.

### 9. Effectiveness of GOP Management

#### a. National Level

The twin concepts of decentralization and coordination provide the fundamental conceptual basis for the management structure and functions of BIAD II. The evaluation team attempted to assess three dimensions of national level GOP commitment to these two concepts in the context of the project:

(i) GOP Financial Support. Current GOP allocations to BIAD II through December 1983 have risen 68% over the original estimate (1977 estimate ₦41 million; current total budget = ₦69.2 million). However, apparent cash flow problems limited the CY 1981 budget to ₦18.5 million (=-\$2.3 million) and that limit is expected to be applied in CY 1982 and 1983 as well.

(ii) Vertical Control or Support. With the exception of a very strong control orientation over the contracting process, the Central Government has practiced a remarkable degree of support for--rather than control over--the Project Director and his PMO staff. As currently operating, with the exception of the contracting process, the commitment of the GOP to a decentralized system characterized by initiative from below and support from above goes far beyond simple rhetoric. It is a model of its type.

(iii) Horizontal Coordination and Cooperation. Because of the decentralized nature of the project, this function has only marginal importance at the national level.

#### b. Regional Level

Effective functional authority has--in most respects--been decentralized to the project level. In that context, the Evaluation Team attempted to assess performance along three dimensions:

(i) Horizontal Coordination and Cooperation. The CMG operates effectively as a supportive policy coordination group. At the operational level, the PMO successfully integrates the personnel and functions of several Government agencies to a remarkable degree.

(ii) Exercise of Delegated Authority. The PMO has seized the authority delegated to it and exercises that authority to its fullest extent. The exercise of that authority at the project level is most impressive and is at the heart of effective implementation for a project as complex as BIAD II.

(iii) Level of Energy of Assigned Staff. It is evident that the majority of PMO staff members devote much more time, energy, and creative thought to the implementation of BIAD II than is normally the case among civil servants. Evidence for this conclusion is provided by the fact that the Project Manager and eighteen other members of his staff actually live in the PMO and various staff members can often be observed working into the evening on project related tasks.

#### Recommendations:

(i) Approval of an additional budget commitment sufficient to extend the construction phase of the Project through completion in June 1984 and finance the other operations of the PMO through, at the earliest, June 1986 should take place no later than June 1982.

(ii) A high priority should be given by MAR and the Cabinet Coordinator of the Bicol River Basin Development Program to continuing efforts to decentralize maximum authority to award contracts to the Composite Management Group (CMG) and/or the Project Director. This will apparently require the President to designate MAR as an Infrastructure Agency under the terms of Presidential Decree 1594.

## 10. Land Consolidation and Tenure Reform

### a. Surveys, Computations, and Mapping

Progress in surveying, computing, and mapping the entire project area has been significantly delayed. To date, the four steps required to complete these tasks have been completed only in Barangay San Ramon (300 hectares). Only the first two of those four tasks have been completed in the other six barangays. At current staffing levels, the PMO now expects that the remaining tasks can be completed for the entire BIAD II area--on a phased basis--by October 1983. However, if MAR approves a recently submitted request by the PMO for supplemental funding to increase the pace of surveys and mapping, the PMO expects to be able to accelerate the process and complete this work no later than April 1983. (i.e., 6 months earlier).

### b. Consolidation and Relocation

To date, no land has yet been consolidated in the sense of new certificates of land transfer (CLTs) or Agreements to Sell being issued nor has there been any relocation in the sense of actual occupation of new land by farmers. However, according to current PMO expectations, the first such occupation of new land should occur in San Ramon during this year. Organization of farmers into compact farms ranging in size from approximately 19-25 hectares will take place following relocation. These compact farms, consisting of ten farm households each, are expected to serve as integrated production units.

### c. Land Titling

The issuance of CLTs and/or Agreements to sell cannot occur before surveying, computing, mapping, and assignment tasks are completed and the documents required for review by the Bureau of Lands are fully prepared by the PMO staff and, in turn, are approved by the Bureau of Lands.<sup>6/</sup> In practice, it is expected that farmers will occupy their new farmlots before titles are actually issued. This might result in some reluctance by farmers to move from their old farmlots without some form of certificate guaranteeing them title to their new farmlots prior to the issuance of the CLTs.

### Recommendations:

(i) MAR should approve the requested supplemental funding required to increase the pace of surveys and mapping; and

(ii) MAR might consider issuing some type of non-official preliminary--but detailed--title description to the farmers as soon as possible following

<sup>6/</sup> Because of the different regulations under which the three large estates in the BIAD II area were expropriated, residents of San Jose and Sagrada will be issued CLTs only following a determination of the amortization costs by the Land Bank; the residents of the other 5 barangays in the area will be issued CLTs by the PMO on behalf of MAR without such review.

completion of the survey, computation, mapping, and assignment process in each phase.

## 11. Homesite Development and Relocation

### a. Improvement

As of June 1981, improvement of Home Lots has been completed only in Barangay San Ramon. Mapping and assignment of homelots has been completed in Barangay San Agustin; although physical improvements have not yet begun. Work on homesite development in Barangays San Agustin, San Isidro, and San Jose, scheduled for 1980/1981 has been delayed due to the reallocation of funds out of current budget to Phase V construction of roads, irrigation channels, and drainage.

### b. Relocation

Improvement of homelots in Barangay San Ramon was completed in 1980. Ninety percent (90%) of the farm families of San Ramon have now moved to their assigned homelots. The remaining 10% are expected to complete their move by the end of 1981. Contrary to the statement in the Project Paper that "relocation is voluntary, and if a farmer is reluctant to move no form of coercion will be used," the project design, with its comprehensive land consolidation requirements, has a built-in imperative for the relocation of family homesites. Therefore, functionally, the PMO operates as if relocation is obligatory.<sup>7/</sup> This policy that farmers are obliged to move is not, however, backed-up by any specific sanctions if they defy the policy and refuse to move. Nevertheless, PMO staff do not inform farmers that they have the option to remain where they are. The Promotions Committee in each barangay is used to apply social/peer pressure on any family which indicates any reluctance to relocate.

Farmers who have already relocated have not yet received the ₱300 (\$37.50) for the estimated expenses of repairs and replacement of parts and materials resulting from the movement of houses as originally specified in the Project Paper. The current PMO budget does not provide for such payments and none are programmed for the future. In any event, current estimates are that the real cost of such a move to the farmer has escalated to approximately ₱1,000.

### Recommendations:

(i) The PMO/IADD should conduct an objective survey of farmers' attitudes to relocation in the six barangays in which relocation has not yet been initiated. This does not mean, if negative attitudes exist, that plans for relocation should be dropped or changed to any significant extent. However, farmers' views should be ascertained for purposes of planning motivation programs and some changes in design might be warranted based on those views.

<sup>7/</sup> An exception is made for persons living in a house constructed before 1974 if its original cost exceeded ₱10,000. 1974 is the cut-off year because, from 1975, persons within the area were already aware of relocation requirements.

(ii) Promotion campaigns and instructions by PMO staff should indicate that relocation is, in fact, voluntary. If the services provided and the other advantages to farmers resulting from relocation within a developed community become manifest, recalcitrants can be expected to follow eventually.

(iii) PMO staff should determine the actual costs of relocation incurred by farmers and consider reinstituting an increased payment provided to farmers to cover those costs. The costs of implementing such a policy for the project area as a whole would be approximately ₦1.2 million (= \$160,000).

## 12. Applied Agricultural Research

The third trial season is underway and the fourth and final trial is scheduled for the 1981 wet season. These trials actually began during the 1979 wet season and were targetted for completion during the 1981 dry season. Due to lack of irrigation water, however, trials could not be conducted during the 1980 dry season.

## 13. Farm Level Income and Credit

### a. Income

A discussion of the potential impact of the Project is included in Section V, subsection 3b of this Report. The current amount of net discretionary income currently available to farmers has not yet been ascertained by PMO staff.

### b. Amortization of Land

Under the terms of land reform, the value of loans to farmers for amortization of redistributed land varies by estate. To date, most farmers have been in default on those payments for over five years. However, no sanctions have been applied to such farmers and none are planned for the future.

### c. Production and Commodity Credit

The first production and commodity loans were given during 1980. Farmers who are in default on amortization of land payments are not excluded from the production and commodity credit program. The hope is that production and commodity loans will result in an increase in incomes sufficient to induce farmers to begin repayment of the amortization costs of the land.

### Recommendations:

(i) LBP and MHS should give serious consideration to expanding the credit program to include financing of individual construction of houses on new homelots.

(ii) The PMO should undertake a household incomes survey.

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### III. THE PHILIPPINE CONTEXT (Jerry Silverman)

#### 1. Overview: Approach and Constraints to Development

The Philippines is plagued by many of the generic problems associated with the concept of underdevelopment; some of which are:

- Disparities between urban and rural areas and between outlying regions in access to and the use of modern technology, private sector capital, communications, public sector agricultural and non-agricultural infrastructure, and off-farm employment opportunities;
- A widening gap between the rich and poor in terms of income, retention of capital, health and nutrition, and occupational skills;
- Less than a critical mass of the population in a viable middle class;
- A declining real value in overall investment capital from savings, in large part due to quantum increases in energy costs;
- Out-migration from underproductive rural areas to overburdened urban centers (fueled by perceived economic and social disparities and rapid population growth);
- Uncertainty about the Government's commitment to or its ability to sustain adequate levels of financial support for the current approach to development efforts.

Nevertheless, the Government of the Philippines has made a concerted effort over the last ten years to increase personal incomes and reduce class and regional disparities by emphasizing programs which increase the number of small-holder owners of agricultural land, the production of that land, and off-farm employment in labor-intensive, regionally dispersed, and export-oriented industries.

#### 2. The BIAD II Project Area: Environment and Natural Resources

The Project Area is characterized by:

- Variable and undependable rainfall resulting in heavy rains and floods during the wet season and inadequate rainfed water reserves during the "dry" season (February through May);
- Primarily level topography with some rolling portions and sloping areas near creeks and rivers;
- Sandy clay loam to clay loam soils considered to be very good for paddy rice and highly responsive to good management practices but which make tillage for diversified crops extremely difficult;

- The Bicol River, which during the driest months discharges an average of approximately 20,000 liters of water per second per day; and
- Several varieties of grasses on the approximately 14% of the total land area not cultivated.

### 3. The Rural Poor: Society and Economy in the BIAD II Project Area

The overwhelming majority of the approximately 1,300 farm families living in the BIAD Project Area (consisting of approximately 5,200 persons) rank among the poorest members of the population in the entire country. Net out-migration (primarily to Metro Manila) is only approximately .28% which does not off-set the natural population growth rate of approximately 1.7% annually.<sup>1/</sup>

This has resulted in a decline in both the level of agricultural production and real income on a per capita basis and extremely high rates of unemployment, underemployment, and indebtedness. Within the Project Area itself, there is no manufacturing activity and savings and investment by any significant percentage of the population is, for all practical purposes, non-existent.

However, it is also evident that a significant increase in the number of small commercial activities has occurred during the last three years due to the completion of several secondary roads and the presence of large numbers of project personnel and construction crews. This commercial activity is mostly in the form of small sari-sari stores.

All but eleven (11) of the persons now farming in the designated project area are former tenants or squatters who will soon receive title to farm and home lots ranging in size from a minimum of 1 hectare to a maximum of 3 hectares. Although it will be illegal to transfer these titles to anyone other than one child following land consolidation, there are some indications that the tenants on a few of the smaller parcels (half hectare or less prior to land consolidation) are transferring functional rights to the land--although not rights to title--to some of the more prosperous farmers within the project area. Prior to completion of surveys, the current estimate is that the average size of the eleven (11) owner operators' holdings is approximately 6.5 hectares; a size which they will be allowed to retain (minus 12% for Right of Way).

There is no current data on the number of private pump irrigation schemes currently in operation nor the number of hectares being irrigated in that manner within the Project Area. In 1978, forty-nine (49) of these systems were identified. The standard organization of these schemes involves a farmer/pump owner within the Project Area selling irrigation water to his neighbors. The rated capacity of the pumps most commonly in use provides sufficient water to irrigate ten (10) hectares. However, experience

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<sup>1/</sup> For the period 1960-1970.

demonstrates that during the "dry" season, sufficient water is available to irrigate only six (6) hectares. Therefore, it is assumed that since the level of increased production resulting from participation in these schemes is significant only in the production of a second "dry" season crop, participation in the schemes is also limited to a maximum number of farmers equal to those farming land the total hectareage of which is a multiple of six times the number of pumps available.

The above discussion suggest two factors which might provoke resistance among a few farmers to irrigation and land consolidation once the full implications of it are understood by the farmers. First, informed speculation among MAR personnel within the project area suggests that some farmer/pump owners attempt to use control over their irrigation source as leverage for functional control over the land of neighboring farmer clients. Land consolidation would probably result in a disruption of those functional arrangements. Conversely, if former pump owners and private irrigation scheme clients are grouped together in the same compact farms, it might affect the functional authority relationships within that compact farm; even in the absence of the former private pump system.

Second, the assignment of farm lots under the terms of the land consolidation program might result in significant disadvantages for those who have already gained functional control over--although not title to--the extremely small parcels of other marginal former tenants. Thus, resistance to land consolidation might occur among some of the richer and, perhaps, more influential farmers.

The potential resistance to land consolidation for the reasons cited above would be in addition to any resistance which might arise on the part of poorer farmers. Such resistance could be expected as an automatic conservative reluctance to move off of familiar land with its historically derived emotional attachments; regardless of the economic benefits which would objectively result. Some of the implications of this for the information and training programs of BIAD II are discussed in Sections II and V, Subsections 5 and 10 of this Report.

#### 4. Rural Development in the BIAD II Project Area: Government and Participation

Significant efforts have been made by the GOP to mobilize the population of the Philippines. These efforts have consisted primarily of creating comprehensive mass organizations which include within their total membership every man, woman, and child over ten years of age. A major component of the Project is to assist in the development within the BIAD II project area of both standard organizations sponsored by the GOP throughout the Philippines and other organizations which are specific to the Project. However, mobilization per se is not a synonym for participation nor is participation a synonym for farmer initiative. In those terms, despite a high level of farmer participation prior to the actual design of BIAD II, the level and type of farmer initiatives since 1977<sup>2/</sup> in design and implementation has been low. The overall designs of the land consolidation scheme, physical infrastructure component, structure and function of Irrigators Associations, and content and objectives of training have been mandated by GOP officials at the Regional and PMO levels. It is currently believed by GOP officials responsible

<sup>2/</sup> For a discussion of farmer-beneficiaries initiatives prior to the design of BIAD II, refer to Section IV of this Report.

for implementation of the Project that, given the current level of development of the farmers within the Project area, they must first be mobilized within organizations and controlled through them until such time as--through training--the farmers can take over with support from GOP agencies. Thus, the process is seen--although not normally articulated this way--in terms of a sequence from mobilization by the GOP through control and training to eventual self-sufficiency and initiative by farmers supported by GOP agencies.

IV. PRE-PROJECT HISTORY  
(Herminiano Echiverre)

1. MAR Initiatives

The Land Reform Program of the GOP, as implemented in the BIAD II project area, involves a three stage process: estates acquisition, redistribution of titles to tenants (and, in some cases, squatters), and land consolidation. Prior to the initiation of BIAD II implementation, the first two of those stages had been almost fully completed. Thus, land reform had occurred; land consolidation had not yet taken place.

a. Estate Acquisition

The initial land reform program of the GOP consisted merely of acquiring the land of large estates through expropriation or negotiated sale and giving title to the land to those tenants who had actually been the tillers. The BIAD II project area had previously consisted of three large Estates: Lirag Estate (Phase I-A, I-B and III), Hernandez Estate (Phase IV-A and IV-B) and Silverio Estate (Phase II). These three Estates were acquired by the GOP at different times (Lirag in 1958; Silverio in 1965; and Hernandez in 1972). Therefore, the laws under which the land was redistributed to tenants varied for each of those areas.<sup>1/</sup> One result was that the terms under which former tenants repaid the GOP for the land and the amount farmers were required to repay varied considerably. Nevertheless, the area encompassed by the BIAD II Project had already existed as a contiguous Land Reform area for several years prior to the inception of the Project.

b. Redistribution of Titles

The transfer of land titles or Agreement to Sell certificates had been largely completed by 1977. Tenants were eligible to receive ownership of the land which they were actually tilling under the terms of tenancy agreements up to a maximum of 7 hectares. Thus, the farmlots remained essentially as they were prior to land reform. Most farmers had title to more than one parcel and most of those were irregularly shaped.

Parallel to the land reform initiatives, the GOP sent leaders from various sectors of the local society to Taiwan in order to observe their land reform program.

Following their return, they recommended that the Government consider land consolidation as an additional facet of Land Reform. In 1973, the GOP decided that transferring the ownership of the land from landlord to the farmer would not alone result in a significant improvement in the socio-economic situation of the tenant-farmers. Thus, land consolidation was a further necessary step in the Land Reform Program.

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<sup>1/</sup> Lirag Estate was acquired under Republic Act 1400; Silverio Estate under Republic Act 3844; and Hernandez Estate under Presidential Decree 24.

### c. Land Consolidation

The desire of MAR (then known as DAR) to share in the development of the Bicol River Basin encompasses the largest number of land reform beneficiaries in the Philippines. MAR (then known as DAR) inevitably had a significant role to play in any development efforts in that area. Thus, MAR accepted the responsibility of establishing a land consolidation project with the following objectives:

- To test the acceptability of land consolidation within the Bicol Region; and
- To determine the cost of such a massive undertaking in the Philippines.

MAR personnel at the local level suggested that in order to test the feasibility of land consolidation in the Philippines, the Project should encompass former estates acquired through various laws. That was a major factor in decisions concerning the definition of appropriate project boundaries.

In May 1974, the Minister of MAR invited farmer and barangay leaders residing in the barangays of San Ramon, San Isidro, San Agustin, Mataoc and San Jose to discuss a proposal that the land consolidation project be established on the land of the three former estates. The response was considered promising. Thereafter, at meetings with farmers, the project proposal continued to be discussed in order to get first-hand information and suggestions. These meetings were facilitated through coordination with local MLGCD representatives.

In the latter part of May 1974, however, the project proposal was almost rejected at the national level because of a critical publication issued by an independent research group.<sup>2/</sup> Nevertheless, local representatives of MAR and MLGCD continued to meet with farmers and collect data which indicated to them that land consolidation would resolve various problems following the land reform program. Those problems included: low levels of farmer interest in new development efforts; boundary conflicts; and a high default rate on land amortization payments. It was believed that, because farmers' participation in those meetings during which land consolidation had been discussed was high and land amortization payments had increased, although only marginally, during the period of time those meetings had occurred, a land consolidation program would serve as a catalyst for the achievement of broader development objectives.

## 2. USAID Involvement

USAID assisted MAR by participating in the preliminary study of the land consolidation proposal and the drafting of a development plan. As part of that

<sup>2/</sup> Frank Lynch, S.J. and Robert Salazar, "Farmers of the River Basin Land Consolidation Project Area: Nowhere to Go But Up - - - and in No Hurry To Get There," SSRU Research Series No.6, SSRU and BRBDP.

assistance, they provided grant financing used to send eight GOP professionals to study various aspects of land consolidation in Taiwan for 45 days. That training was coordinated by the Land Reform Lincoln Institute of the Republic of China.

The most significant conclusions those GOP officials brought back from Taiwan concerned the functions and responsibilities of Land Consolidation Promotion Committees; Marketing Systems and Irrigation Association Credit facilities; Records Systems, and an approach to the design of roads, irrigation, and drainage networks which deeply involved farmer participation. Those same GOP officials participated in the preparation of a semi-final plan, created a Land Consolidation Promotion Committee in the project area, formalized the establishment of a Project Management Office, and initiated the development process within a 100 hectare pilot area.

When the preliminary plans were finalized, AID invited a group of Consultants from Taiwan to review the plans and guidelines and design an on-the-job training course for a larger group of GOP professionals. The end result of this training was the adoption of a slightly modified Taiwan model for the Bula-Minalabac Land Consolidation Project.

### 3. Beneficiary Participation

The early pre-SIAD II accomplishments of the Project Management Office involved significant participation by farmer-beneficiaries. That participation included:

- Organization of a Land Consolidation Promotion Committee within one months time;
- Joint participation by government technicians, farmers and youth organizations in data-gathering activities;
- Settlement of Land title and boundary disputes, which normally drag through the courts or other judicial bodies for a decade or more, by the Land Consolidation Promotion Committee (at a rate of two or three cases per meeting);
- Responsibility for describing the concept and intent of land consolidation by the Land Consolidation Promotion Committee through a regular meeting or assembly among the farmers themselves;
- Consultation about the formulation of guidelines for project implementation; and
- Voluntary unpaid labor twice a week for the construction of the 9 kilometer main road from Sitio Galewan to San Ramon.

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**NO.** 28

## V.

DISCUSSIONS  
OF  
FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

1. Overview: Introduction to BIAD II  
(Jerry Silverman)

The Bula-Minalabac Land Consolidation Project is a project level component of the Philippine Government's Bicol Integrated Area Development Program (BIAD). It is, in effect, an Integrated Area Development (IAD) Project which includes a major land consolidation and tenure reform effort within seven barangays of the Bicol Region in Southern Luzon. The project is designed to integrate activities across a wide range of sectors and line agency responsibilities horizontally and decentralize planning and implementation responsibility vertically. It is a large, comprehensive, ambitious, and exceedingly complex project; the objective of which is to increase rice production while improving the living conditions and income of the rural poor.

a. Scope of the Project

The multi-sectoral nature of the project and the need for integration is evident from a listing of major project tasks:

- Construction of a large-scale pump irrigation and drainage system capable of irrigating 2,060 hectares of land for rice production;
- Installation of electric turbine and other type pumps and construction of pump houses;
- Construction of all-weather service roads and farm access paths;
- Construction and staffing of an elementary school and seven multi-purpose community buildings;
- Consolidation of 2,668 dispersed farmlots into 1,230 single farmlots plus an additional 23 farmlots from currently uncultivated land and redistribution of them among approximately 1,200 current tenants and squatters;
- Creation of seven new barangay residential communities and relocation of all existing farm houses within those communities;
- Provision of assistance for the creation of several local organizations (e.g., irrigation users' associations, homemakers' clubs, and youth clubs);
- Provision of training and extension activities to transmit modern agricultural and irrigation technology and some basic principles of cooperative organizations, leadership, preventive health, nutrition, family planning, and backyard garden and livestock project possibilities; and
- The conducting of applied agricultural research to determine optimum rice production packages for the Project Area.

Fifteen different government agencies<sup>1/</sup> are directly involved at the Regional level in the implementation of the Project under the leadership of the Ministry of Agrarian Reform (MAR). Since the inputs provided by each of these agencies are interrelated with those provided by all of the others, the need for effective coordination and integration is acute.

b. Decentralization and Coordination

The project design provided for a planning and management structure which is decentralized vertically and coordinated horizontally. In practice, this has resulted in primary policy setting responsibility exercised at the regional level by a Composite Management Group<sup>2/</sup> and operational decision authority exercised by a Project Management Office staffed by personnel seconded from various GOP agencies. While that is a typical design in projects of this sort, it very seldom operates well in practice. However, BIAD II is an exception in that regard; the management system operates--in management process terms--exceptionally well.

c. Design Changes

One indicator of the flexibility and positive orientation towards revision in project plans based on learning experience is the significant extent to which the PMO has changed the original project design. These changes have occurred in sequencing of phases and the design and specifications of infrastructure components.

d. Delays

On the negative side, these changes have contributed to delays in the implementation plan.<sup>3/</sup> However, to the extent that such changes were judged to be necessary, the resultant delays are better than inappropriate adherence to a schedule for its own sake.

One consequence of these delays has been a verbal request by the GOP to USAID to extend the Project Activity Completion Date (PACD) from December 31, 1982 to June 30, 1984. A major purpose of this Evaluation is to provide a recommendation in that regard.

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1/ The Ministries of Agrarian Reform, Local Government and Community Development, Health, Agriculture, Social Services Development, Education and Culture, Public Highways, and Public Works; plus the Office of the Governor (Camarines Sur), National Economic and Development Authority (NEDA), Area Development Team, National Irrigation Administration (NIA), Land Bank of the Philippines, Bicol River Basin Development Program (BRBDP), and the National Food Authority.

2/ Composed of the relevant Regional Directors.

3/ Other factors contributing to delays have been the retention of centralized national level control in the contracting process and delayed disbursement of funds to Project Management.

e. Costs

A major consequence of delays and some of the design changes made has been a dramatic escalation in the cost of this Project. To date, the GOP has increased its total allocation to this Project over initial 1978 estimates by 40%.<sup>4/</sup> One finding of this Evaluation<sup>5/</sup> is that an increase of 42% above the current budget will be required prior to final completion of the Project in 1986.

2. PROPOSED EXTENSION OF PROJECT ACTIVITY COMPLETION DATE (PACD)  
(Jerry Silverman)

Due to serious delays in project implementation, two contradictory recommendations are currently "on the table" for consideration by USAID/Philippines concerning future financial support of BIAD II. In a Memorandum Audit Report dated October 6, 1980, AID auditors included the following recommendation:

We suggest that the AID Mission establish a time limit for MAR to turn the project around, with June 30, 1981 being a reasonable target date. At that time, if the current impasse situation still exists with reference to the contracting process and performance of construction contractors, all qualified project obligations should be paid, and the remainder of the loan deobligated.<sup>6/</sup>

Subsequently, at a meeting in Deputy Minister Labayen's office on May 21, 1981, the GOP verbally requested an extension of the PACD from December 31, 1982 to June 30, 1984 based on their current estimates and revised Implementation Plan.<sup>7/</sup> Thus, three options had been clarified prior to the commencement of this Evaluation: (i) deobligation; (ii) no extension, but continued AID support until December 31, 1982; or (iii) approval of the GOP request for an extension of the PACD until June 30, 1984.

<sup>4/</sup> The original GOP estimate of total costs in the initial 1978 Implementation Plan was ₱49,162,010 (= \$6,554,934) as compared with 1977 Project Paper estimates of ₱40,957,500 (= \$5,461,000). The current commitment, represented by the budget approved by the MOB (Technical Services Bureau) in 1980, is ₱69,016,982 (= \$9,202,264), assuming completion by December 31, 1983. In this Report, the Evaluation Team estimates a total cost, to June 30, 1986 of ₱98,242,500 (= \$13,099,000).

<sup>5/</sup> Sections II/V, subsections 6.

<sup>6/</sup> AID/AAG/EA, Memorandum Audit Report No. 2-492-81-1 (October 6, 1980), p. 10. Discussion of these problems is included in Section V, Subsection 4 of this Report.

<sup>7/</sup> The original request at that meeting was for an extension of 12 months; to December 31, 1983. However, discussion during the meeting between GOP Project Staff and USAID representatives resulted in agreement that, under conditions existing on the date of the meeting, a more realistic estimate for the completion of all Physical Infrastructure construction is June 30, 1984.

a. Pre-Existing Options

(i) Deobligation. The effect of deobligation as of June 30, 1981 would be AID reimbursement to the GOP for qualified project obligations of approximately \$594,600 (including \$8,900 already reimbursed).<sup>8/</sup> Thus, a total of approximately \$2.4 million would be deobligated.

(ii) No extension of PACD (December 31, 1982). By December 31, 1982, the current implementation plan indicates that USAID financed construction activity in only Phase I-A will be totally completed. Since the terms of the Project Agreement as currently written provides for reimbursement of only work acceptable to USAID by total completion in each phase, plus costs of A&E design work and imported equipment, USAID obligations at the time the current PACD expired should equal approximately \$1.03 million; leaving approximately \$1.97 million to be deobligated.<sup>9/</sup> However, if the FAR provisions in the Project Agreement were amended, as recommended in Section II, Subsection 6 of this Report, total USAID obligations for reimbursement to the GOP could equal as much as \$1.6 million; possibly leaving only \$1.4 million to be deobligated.<sup>10/</sup>

(iii) Extension of PACD to June 30, 1984 (GOP Request). As of May 21, 1981, the PMO's estimate for completion of all specified Project activities was June 30, 1984. It is now believed that the completion and operation of all Physical Infrastructure Development can be accomplished by the new PACD requested. Since that aspect of the Project is the only part for which AID has obligated funds, the most probable result of approving the request would be reimbursement by AID to the GOP of the total \$3 million obligation.

b. Evaluation Team Findings

In spite of the AID Auditors' belief that in October 1980 implementation problems appeared to preclude the Project's successful conclusion,<sup>11/</sup> the GOP has, since that time, been remarkably successful in demonstrating its ability to resolve most of those problems.<sup>12/</sup> Evidence now exists to support a reasonable expectation that the Physical Infrastructure Development component can be fully completed and operational by June 30, 1984.

<sup>8/</sup> That amount assumes immediate deobligation. Thus, the only amounts that AID would be obligated to reimburse to the GOP would be as follows: \$193,606 for A&E design; \$356,000 as the maximum amount budgeted for pumps and spare parts; and \$45,000 for vehicles, spare parts, and typewriters (= \$594,606).

<sup>9/</sup> That amount assumes that construction in only Phase I-A would be completely finished by December 31, 1982. Thus AID would have the further obligation to reimburse \$13,219 for A&E construction supervision and \$421,124 of actual construction costs (\$594,606 + \$434,343 = \$1,028,949).

<sup>10/</sup> Refer to Section V, subsection 6a of this Report.

<sup>11/</sup> Memorandum Audit Report, p. 3.

<sup>12/</sup> Discussed in subsection 4 of this Report.

However, both the GOP and USAID should be aware that successful completion of that component is not synonymous with successful completion of the Project as a whole. The Evaluation Team's current estimate is that the Institutional and Agricultural Development Component<sup>3/</sup> of the Project cannot be completed before June 30, 1986. Although that need not affect the AID PACD, this finding has serious implications for the process whereby the responsibilities of the PMO are transferred to farmer controlled Irrigators' Associations and the nature of the transition process towards the eventual phasing-out of the PMO. These implications are discussed further below in subsections 5 and 8 of this Section.

3. IMPACT OF BICOL INTEGRATED AREA DEVELOPMENT II (BIAD II) PROJECT  
(Jerry Silverman, Herminiano Echiverre, and Gregorio Beluang)

The Project was designed as a Pilot and was expected to affect the resident population and GOP policy along six dimensions:

- Increased agricultural production;
- Increased incomes among small agricultural producers;
- Organizational development among small agricultural producers;
- Improved health, nutrition, and education among farm families;
- GOP policy towards land consolidation and tenure reform; and
- GOP policy towards IAD.

However, significant delays in project implementation to date, as described in other subsections below, suggest that only marginal positive impact on the local resident population can be expected to have occurred. With that in mind, the evaluation team attempted to assess the current situation in the Project Area along each of those six dimensions.

a. Agricultural Production

The extent to which noticeable increases in agricultural production within the BIAD II project area since 1978 can be directly attributed to the project has not yet been determined. However, results on land irrigated by private small pump irrigation schemes within the Project Area do indicate that increases in rice production resulting from the project should equal 110 cavans (5.5 tons) of wet padi per hectare per annum; an increase of 220%. Results of that magnitude should equal a total net annual increase in wet padi of 226,820 cavans (11,341 tons) for the project area as a whole.

b. Incomes

To date, data has not yet been collected upon which a definite conclusion can be made concerning the direct impact of the Project on incomes.

<sup>13/</sup> Discussed in subsections 5, 10, 11, and 12 of this Report.

Due to the completion of secondary and feeder roads, it is estimated that transportation costs from farm to market have been reduced from ₱4.50 per cavan to ₱1.50 per cavan; a net savings of 67%. However, under current marketing conditions, in which most farmers sell wet padi to middlemen at the farm site, that savings accrues primarily to middlemen/brokers and it is not clear to what extent such savings are passed on to the farmer.

Also, the completion of roads has provided increased access to modern technology on the open market and the provision of GOP extension services has been made easier. This, in combination with increased PMO managed extension services and provision of production credit has had positive impact on incomes. However, no statistics are currently available to determine the extent to which such access to extension and credit services have resulted in increased production and resulting increases in farm income throughout the Project Area. Data from the 100 hectare Pilot Project Area in San Ramon suggests that a 70% increase in the use of fertilizer and high yielding rice varieties (HYV) has occurred there and it is reasonable to assume that the new roads and increased extension and credit services have contributed to that dramatic improvement.

Following completion of the Physical Infrastructure Development component of the Project, the estimated increase in yields should result in an increase in farmers gross income per hectare per year (at the current normal farm door price) of ₱65. Depending on how much of the construction and O & M costs of the Project the farmers are expected to pay and the loan period for amortization, the net discretionary income retained by the farmer might or might not be increased. No farm household budget surveys have yet been conducted in order to determine the financial or economic consequences for the farmer of alternative repayment schemes. It is clear that the GOP must make an early decision about the extent and terms of farmer financing of the system.

One group of farmers whose income position should definitely improve are those among the approximately 21% of the area population currently occupying a total of less than one hectare. Under the terms of land tenure and consolidation reform within the Project Area, their minimal landholding will be increased to one hectare, which should have an additional direct positive affect on income.

### c. Organizational Development

The only direct affect of the Project to date in this regard has been: The formal organization of a Land Consolidation Promotion Committee, a pilot IA, seven ARBAs and the very recent (March 26, 1981) formal organization of a comprehensive Women's Rural Improvement Club for the Project Area as a whole. Due to the delays in construction of irrigation and drainage systems and in land consolidation, the PMO believes that it is still premature to attempt any formal organization of compact farm units or larger Irrigators' Associations. Thus, no project specific farmers organizations--with the exception of the pilot IA--have yet been formally created by the Project<sup>14/</sup> nor has a comprehensive project wide youth organization been created<sup>15/</sup>

<sup>14/</sup> At the Barangay level, Samahang Nayon (Farmers Associations) have been organized.  
<sup>15/</sup> Chapters of the Youth Organization Anak Bukid have been organized at the Barangay level in the Project Area.

d. Health, Nutrition, and Education

Since mid-1978, 1,485 men (263), women (718), and youth (504) have participated in training programs which have included information on health, nutrition, and family planning under the auspices of the Project. In addition, 910 farmers have received instruction in the basic organization of compact farms and improved techniques of agricultural production and management in the context of BIAD II. Further, 41 girls and women have been provided with training in dressmaking and 37 boys and men have received training in tailoring. All of the training listed above is limited to approximately 40 hours.

Current plans are to provide additional training during the remainder of 1981, as follows: 240 farmers in the techniques of on-farm water management, 190 farmers in the techniques of leadership, 50 boys and men in basic automotive repair, and 25 to 40 young women in cosmetology.

The content and utility of the training programs listed above is discussed in more detail in subsection 5 of this Report.

e. Land Consolidation and Tenure Reform

Experience gained in the implementation of BIAD II to date has had a direct effect on GOP policy concerning land consolidation and tenure reform projects elsewhere. Lessons learned by the GOP from the escalating costs of BIAD II include the application of three criteria to future land consolidation schemes: (i) the area should be composed of not less than 1,000 contiguous hectares occupied by beneficiaries of Operation Land Transfer; (ii) the topography should be relatively flat; and (iii) the area should already have some type of pre-existing irrigation system which can be improved at substantially less cost.

f. Integrated Area Development

BIAD II was, in itself, a significant departure from previous GOP policy toward the organization of large-scale integrated area development projects. This was true in three respects:

- It was one of the two experiments in which an IAD project included a major land consolidation and land reform project;<sup>16/</sup>
- It was one of the two initial experiments with the application of a modified Taiwan model of land consolidation, requiring massive physical transformation of the topography and construction of large-scale pump irrigation and drainage systems, to the Philippines; and
- It was the first time that MAR was designated as the Lead Agency in an IAD project.

However, GOP policy since the commencement of BIAD II implementation has not resulted in the duplication of any of the three departures from prior GOP policy listed above.

<sup>16/</sup> The other is in Talavera, Nueva Ecija (Nueva Ecija Integrated Area Development Project).

4. PHYSICAL INFRASTRUCTURAL DEVELOPMENT  
(Oscar Bermillo and Nedra Huggins-Williams)

a. Current Status

What follows is a summary of the current construction status of the Project's irrigation, drainage and road access components by phase.

(1) Phase I (610 Has)  
Pilot Project (100 Has)

Construction has been implemented as planned. This project is incomplete. This is a wholly GOP-funded portion of Phase I.

Phase IA (200 Has)

Construction is being implemented as originally planned. NIA is at present undertaking physical implementation. The construction contract of the first contractor, R.B. Barbers, was terminated for non-performance. The project is approximately 39% complete.

Phase IB (310 Has)

Construction is being implemented as originally planned. AGNO Construction is the contractor. To date, accomplishment is approximately 68%.

(ii) Phase II (207 Has)

The development of an irrigation system in Phase II was originally based on the availability of reliable groundwater sources. From January thru February 1977 a resistivity survey conducted in Phase II confirmed that groundwater was available, but at depths ranging from 80 to 120 meters. Therefore, it was decided to use the Bicol River as the source of irrigation water for this phase of the project.

The primary reason for selecting the Bicol River over groundwater sources was its lower cost of development. This was recognized after public bidding in February 1979 for drilling and construction of three exploratory/production wells resulted in bids at too high a cost. Thus, the PMO rejected all the bids. Another disadvantage was the high cost of maintaining electricity-driven deepwell pumps.

Following the decision to use the Bicol River, the contractor for A&E design began preparing a new design. Phase II is now to be irrigated by pumping water from the Bicol River at the Phase IV pump site and delivering the water to the Phase II area by using a series of booster pumps. Phase II will be served by two booster pumping stations, one composed of two electric pumps and the other composed of two additional electric pumps. The discharge from the booster pumps will go into supply canals in which it will flow by gravity to the farm ditch network.

**(iii) Phase III (327 Has)**

Based on a groundwater study conducted in December 1977, six wells were to be drilled in Phase III. A contract for drilling and construction of the first three exploration/production wells was awarded in 1979 and the drilling of all three wells was completed. However, the drilling was completed without complementary and essential development of the wells. The design of irrigation plans has not yet been prepared pending redevelopment, test pumping, and evaluation of the initial three production wells. That evaluation will determine whether the drilling and construction of the other three production wells should proceed.

**(iv) Phase IV (894 Has)**

Bidding for the construction of the irrigation system in Phase IV was held at the Project Management Office (PMO) in November 1979. After bids were opened, the lowest bid was more than three times the estimate in the Project Paper. The PMO Bidding and Awards committee rejected all the bids. An alternative design which would not affect the irrigation requirement was decided upon by the PMO.<sup>17/</sup>

For simplicity in redesigning, Phase IV was subdivided into Phase IV-A and Phase IV-B. The redesign of both phases was based on prioritizing project components; such as (1) irrigation (2) drainage, (3) access, and (4) land levelling. The following revisions were incorporated into the new design:

- Elimination of paddy fill;
- Reduction of the width of the farm service roads from 4-meters to 3 meters;
- Reduction of the number of farm access paths;
- Elimination of gravel surfacing for the farm service roads; and
- Reduction of the number of irrigation ditches and road crossings resulting from changing the Farm Access Paths.

**(v) Phase V (248 Has)**

The geographical location of Phase V with respect to the Bicol River dictates that surface water is the most logical source of irrigation water for the area. A water pumping station was, therefore, designed for Phase V. However, the proximity of Phase V to Phase IV made the construction of a separate pumping station in Phase V unnecessary. The Phase IV pumping station pumps and main canal were redesigned to include the water needs of Phase V in order to lower costs.

<sup>17/</sup> The Project Manager's perception of this process is somewhat different. His recollection is that the lowest bid was accepted, but that when USAID became aware of the cost, it insisted on a new design.

b. Construction

(i) The Contracting Process. The situation described in the 1979 Evaluation Report has not been substantially changed; except for the holding of joint review meetings by the PMO and MAR/Manila representatives. After USAID and MAR earlier this year thought it had simplified the process, most recent experience indicates that contracts are still subject to the following procedures:

- All contracts are made and reviewed at a joint meeting of the PMO Bidding and Award Committee and MAR/Manila;
- Contracts above ₱1 million must be signed by the Minister of MAR; and
- Contracts above ₱2 million are subjected to a further review by a Presidential Review Committee.

This sequential and extremely time consuming procedure continues to be enforced by the Commission on Audit (COA) despite the following:

- Section 5.1(d) of the Project Loan Agreement explicitly states that--as a Condition Precedent to first disbursement by AID--MAR would provide the PMO "with authorities and responsibilities to enable the PMO to effectively carry out assigned functions, including necessary delegations of authority from the Department of Agrarian Reform (DAR)...to...enter into contracts..."
- The 1979 Evaluation Report recommended that the authority of the Project Director and PMO "to negotiate and enter into contracts be affirmed based on the highest amount prescribed by GOP regulations and that MAR issue a clarifying communication on procedures to consolidate the now separate sequential PMO-MAR/Manila contract reviews where feasible into one joint simultaneous review."
- The AID Audit Report of October 1980 cited delays in the contracting process as one of the two major reasons why USAID should consider terminating financial assistance to BIAD II.
- Delays in the awarding of contracts beyond the beginning of the limited five month dry season in January dramatically magnifies delays caused by other factors. Each month lost beyond the beginning of each dry season in January results in a ripple effect due to the inability to carry out construction activities during the prolonged wet season beginning in June.

Although much is made of the fact that the Project Loan Agreement requires MAR to delegate authority to the PMO to enter into contracts, the primary problem is that DAR/MAR does not itself have the authority to delegate to the PMO. It is COA which is primarily responsible for enforcing the procedure outline above.

Having missed the dry season of 1981 once again, some action by the GOP to accelerate the contract approval process is imperative. The situation as of April 15, 1981 is illustrated in Figure I on pages 40 and 41.

(ii) Specifications

The Ministry of Agrarian Reform (MAR) contracted the services of Technosphere Consultants Group, Inc. to provide detailed engineering designs, prepare specifications, and perform engineering supervision. Technosphere prepared a set of technical specifications for each phase. The specifications are adequate. Each section clearly conveys to the reader the section's intent to furnish high-quality materials and workmanship.

(iii) Monitoring/Quality of Work

Improvements in the quality of work are evident in recently started construction. This is primarily the result of the assignment of new field engineers to the Project Management Office (PMO). Three civil engineers and a geodetic engineer (Surveyor) from the MAR Central Office have been seconded to the PMO in order to assist in the physical implementation of the project. An electrical engineer, also from MAR Central Office, has been assisting in the installation and testing of the newly installed pumps in Phase I. Technosphere Consultants Group, Inc., the A&E firm contracted by MAR to supervise the physical implementation, has also increased its personnel.

The construction quality in Phase I could have been better. There was a problem with indecision on the part of the Supervisors. The change of contractors, the lack of appropriate equipment and skills, and management problems also contributed to deficiencies in the attainment of desired quality of work.

Current PMO management has been effective in promoting improved working relationship within the PMO and between itself, Technosphere and MAR Central Office personnel. This has resulted in better quality control and a quality of work which is now judged to be adequate.

**FIGURE 1**  
**STATUS OF CONSTRUCTION AND CONTRACTS**  
**(April 15, 1981)**

PHASE	CONTRACTOR	DATE BID	STATUS
<u>I. Irrigation, drainage and roads</u>  I-A	a. R.B. Barber Construction  b. NIA	a. May 16, 1978  b. December 1980 (Memo of Agreement)	a. Approximately 15% completed before contract cancelled July 31, 1980. b. Began construction February 1981. Approximately 39% completed.
I-B	a. Agno Construction  b. -	a. Nov. 23, 1978  b. -	a. Contract expired May 27, 1981, at which time approximately 68% was completed. b. IFB for new contractor not yet issued.
II	a. -  b. F.R. Ignacio Construction	a. June 15, 1979  b. Jan. 28, 1981	a. For production wells. All bids too high; resulted in design change. b. Approximately 1.2% completed. Work halted March 1981, pending approval of contract, Office of the President.
III	a. AGB Construction	a. Nov. 23, 1979	a. Drilling of investigation/production wells completed; development incomplete.

PHASE	CONTRACTOR	DATE BID	STATUS
IV-A	a. -  b. Marosa Enterprises	a. Nov. 23, 1979  b. Nov. 11, 1980	a. All bids for Phase IV as whole too high; resulted in design change.  b. Approximately 8% completed. Work halted March 1981 pending approval of contract, Office of the President.
IV-B	a. -  b. J.P. Romero Enterprise	a. Nov. 23, 1979  b. Jan. 28, 1981	a. All bids for Phase IV as whole too high; resulted in design change.  b. Not yet begun, pending approval of contract, Office of the President.
V	a. HG & B Construction	a. Jan. 28, 1981	a. Completed approximately 2% pending approval of contract, Office of the President.
<u>II. Pumping Stations</u>  No. 1: Phase I  No. 2: Phases II, IV-A, IV-B, V	B.L. Cervantes Construction  LGH Construction	?  Nov. 11, 1980	Completed January 1981.  Approximately 24% completed (approved by Office of the President April 13, 1981; approval received by MAR May 14, 1981).

5. ORGANIZATIONAL DEVELOPMENT AND TRAINING  
(Jerry Silverman and Gregorio Beluang)

The attempt to create and develop organizations for Farmers, Women, and Youth is the responsibility of the Institutional and Agricultural Development Division (IADD) of the PMO. Although AID loan funds are not provided in support of that effort, both the Project Paper and Project Loan Agreement give explicit recognition to the fact that effective use of the physical infrastructure to be provided depends almost exclusively on the success of that organizational development and training effort. As designed, the Project envisions that Irrigators' Associations -- composed entirely of farmer beneficiaries -- "will be given complete responsibility for managing, operating and maintaining the irrigation, drainage, and road systems ... including ... the collection of water fees and the repayment of construction costs /emphasis added/."<sup>18</sup>

The complexity of the physical infrastructure systems to be completely turned over to the farmers has been described in Section V, Subsection 4 above. One obvious consequence of that intention -- if implemented -- is that the entire GOP and AID investment in the system will provide a return equal only to the farmers' capacity to maintain and operate it.

There is nothing simple, routine, nor inexpensive in any attempt -- which has any hope of success -- to develop that kind of capacity at the farmer-beneficiary level. The current state of world-wide knowledge concerning how best to accomplish an organizational objective of that kind is not well developed nor does experience elsewhere provide much comfort in that regard. For example, experience in the United States indicates that it takes at least twenty years -- and often longer -- to develop capacity among American farmers sufficient to turn the management of an Irrigation District over to them.

It is difficult enough to determine objectively how such organizations should be structured, how managed, what specific responsibilities they should exercise, and so forth. Designing specific training programs for farmers and specifying appropriate processes for organizational development is also difficult. But it is infinitely more difficult to implement such programs and carry through such processes in a manner which actually results in the creation of appropriate and adequate levels of farmer level capacity. No exaggeration is involved in the statement that the difficulty of such an effort dwarfs that of designing and constructing the physical infrastructure component of the Project. The wish alone is not sufficient to the task.

It is no criticism of, nor insult to, the PMO staff to find that they do not alone, at present, have the knowledge required to design such an effort nor the skills to implement it. The degree to which the PMO currently lacks that knowledge and those skills is recognized by the PMO leadership and it worries them. They should be commended -- rather than criticized -- for that. Further, they should be assured that the inadequacy identified

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<sup>18</sup>/ Project Loan Agreement (January 13, 1978), Conditions Precedent (g), p. 9 and 10.

here in that regard is general among implementation agencies at their level and, most importantly, that it is not too late to assist them to develop their own capacity to a sufficient level.

With that in mind, the Evaluation Team attempted an assessment of current PMO efforts in the organizational development and training sector. The purpose was to assist the PMO in identifying a strategy it might pursue for the further specification of organizational structures and development processes and the structure, content, and methodology of training programs.

Unfortunately, the scope of the problem and the limited time available to the Evaluation Team prohibited any detailed specification of content for the PMO. However, the outline of the problem for further specification by others can be provided.

A significant amount of training has been provided by the PMO to beneficiaries since project implementation began.

A total of approximately 2,165<sup>19/</sup> men, women, and youth<sup>20/</sup> above the age of 10 years have participated in seven distinct types of training programs<sup>21/</sup> which offered a total of 35 sessions equivalent to five days each<sup>22/</sup> since mid-1978. Five more training sessions for 505 additional persons in four subject areas<sup>23/</sup> are scheduled for the latter half of this year. That is an impressive record of activity.

Because of limited time and the fact that no training was scheduled during the period of the Evaluation Team's visit, no assessment can be made of the quality of instruction provided by PMO and associated staff. Nevertheless, we have no reason to doubt the judgment of the 1979 Evaluation Team that the training program is "well presented."

Thus, no serious problems appear to exist with the amount of training being provided nor in the methods of instruction used. Rather, the most serious problem is the appropriateness of content in terms of the specific organizational structures to be created and the technical and managerial functions that farmers will need to perform in order to operate the systems for which they will be responsible.

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- 19/ The total could not be precisely determined because trainees could have participated in more than one type of training.
- 20/ Youth are sub-divided into two age groups: 11-15 years and 16 until such time as they marry.
- 21/ Farmers, Mothers, Youth, Compact Farming, Samahang Nasyon Pre-Membership, Dressmaking, and Tailoring.
- 22/ Some sessions were extended over a period of more than five days by conducting them in afternoons or evenings. However, the total time of each was equivalent to 40 hours (5X8).
- 23/ Cosmetology, Basic Automotive Repair, Farmer Leadership, and On-Farm Water Management.

(a) Farmer-Beneficiaries.

The content of farmer training to date is best characterized as providing an orientation to the Project rather than specific technical or managerial skills. Given the fact that the specific number, area scope, and structure of the Irrigators' Associations has not yet been determined and that the specific members of specific compact farms have not yet been identified, the limitation of training to general orientation has been most appropriate. Moving into specific skills training prior to identification of functions to be re-formed and creation of an organization context for the application of those skills would be "putting the cart before the horse" and, thus, a mistake.

The initial task, therefore, is to determine the functions and structure of farmer organizations. Two different -- but interrelated -- farmer organizations are specific to the Project: Compact Farms and Irrigator's Associations.<sup>24/</sup>

(i) Compact Farms (CFs): Production<sup>25/</sup>

The entire project area is scheduled to be subdivided into CFs. Each CF will consist of the land tilled by ten farmer-beneficiaries. Thus, each CF will consist of approximately 19-25 contiguous hectares and will serve as a simple integrated Production Unit. A Coordinator will be elected by the ten farmer members from among themselves. The members of the CF will agree on an integrated production program for their CF; including a determination of what crop varieties and production methods to use and the scheduling of tasks among themselves within the agricultural cycle. The Coordinator will be responsible to the group for communicating with the Manager of the Irrigators' Association and for the application to the Land Bank of the Philippines (LBP) for production and commodity loans.<sup>26/</sup> Because the identification of specific members for each CF cannot be accomplished until specific individuals are assigned to their new consolidated farmplots and the boundaries of each CF are drawn, the organization and functioning of CFs is not yet possible in any part of the Project Area.<sup>27/</sup>

Although it is possible to provide training to ad hoc groups of individual farmers in the techniques of CF management, cooperation, and improved agricultural practices prior to the actual organization of CFs, it is much more appropriate to defer such training until such time as specific CFs have been organized and then provide training to their members together as an integrated production unit.

<sup>24/</sup> A third organization -- Samahang Nayon (i.e., Farmers' Association) -- has been organized in Barangay's throughout the Philippines. Thus, one SN exists in each of the seven barangays in the Project Area.

<sup>25/</sup> Experience with the Libmanan-Cabusao IAD Project (BIAD I) suggests, as informally reported by David Korten and George Honadle, that Compact Farms may be dysfunctional. This Evaluation did not have sufficient time to address that issue in the context of BIAD II.

<sup>26/</sup> However, credit will continue to be extended to farmers as individuals; loans will not be extended to the members of CFs as a group.

<sup>27/</sup> It would be possible to organize CFs in Phase I-A since mapping of new consolidated farmplots and assignment of specific farm families to them has been completed. However, since relocation has not begun, the CFs in Phase I-A could not begin functioning even if they were organized. Refer to Section V, Subsection 10 of this Report.

**(ii) Irrigators' Associations (IAs): Water Management**

The Project Paper specifies that five separate IAs will be created; one for each Irrigation system (Phases I-V). The Project Loan Agreement does not specify an absolute number, but the principle that one IA will be formed for each irrigation system is specified: "a farmer-controlled Irrigators Association will be formed for each separate irrigation system constructed .... [emphasis added]." <sup>28/</sup> As mentioned in the introductory paragraphs of this Subsection, these IA's were expected to assume complete responsibility for the operation, maintenance, and management of the irrigation and drainage systems constructed by BIAD II.

Notwithstanding the terms of the Loan Agreement cited above, no decisions have, in fact, been made concerning the number, functions, or specific management structure of IAs.

- Should there be only one Comprehensive IA for the whole BIAD II area; or one each for Bula (Phase I-A, I-B, and III) and Minalabac (Phases II, IV-A, IV-B, and V); or one each for Phase I, Phase III and Minalabac?
- Further, if only one Comprehensive IA is formed should it or should it not have sub-IAs organized according to the boundaries of the discrete irrigation systems within the entire Project Area?
- If two IAs are formed, should one or both of them have sub-IAs organized on that same principle and/or should a more comprehensive IA integrate their activities within the project area as a whole?
- Depending on which organizational structure is adopted, what should be the internal structure of the IA and its sub-IAs?
- Finally, again depending on the overall structure adopted, what should be the division of responsibility between IAs and their subordinate units? Each of these questions raises additional questions. The point to be made here is that no decisions have been made concerning answers to any of them.

Because of the limited amount of time available to the Evaluation Team, it is not possible to recommend specific decisions for the resolution of those issues now. However, some of the important prior questions which must be answered before proper decisions concerning the number and structure of IAs can be made are suggested below:

- What specific O&M functions will the IAs be expected to perform?
- Will irrigation fees be uniform throughout the Project Area or vary by system or some combination of systems?

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<sup>28/</sup> Project Loan Agreement (January 13, 1978), Condition Precedent (g), p. 9 and 10.

- Is it necessary for each system to be managed as a discrete unit?
- What is the optimal size of an IA policy-making group composed of farmers for effective policy setting?
- What is the optimal size of an IA management team composed of farmers and hired staff for effective control over operations and maintenance of a system?
- What is the optimal span of control burden that a management team of farmers and hired staff can be expected to exercise?
- What types of skills are required for how many and which persons in order to manage, operate, and maintain the systems under the conditions which would exist in each of the alternative IA structures?
- Should IAs be viewed as another, separate, organization of farmers or should they be viewed as a comprehensive farmers association which integrates and absorbs the functions of such organizations as the Samahang Nayon?

The questions listed above only begin to illustrate the complexity and nature of the problem. A comprehensive list would be much longer.

Given the complexities which must be considered as part of the process leading towards an appropriate decision and the current capacity of the PMO, it is most appropriate that such decisions have not yet been made. At the same time, it should be understood that until such decisions are made and appropriate IAs are organized, On-Farm Water Management training should be postponed.<sup>29/</sup>

It is expected to take several years before the complete process of designing the structure and determining the appropriate functions of IAs, designing appropriate agricultural technology and management training programs, conducting training, and developing sufficient farmer capacity can be completed. The Evaluation Team's current estimate is that such a process cannot be completed for all areas until June 30, 1986 at the earliest. That estimate assumes that Irrigators' Associations will be fully organized and initial training provided no later than June 30, 1984. Because activities could begin in Phase I-A during the next few months, it is important to reiterate the point that such activities should not begin before adequate design work has been completed. At the same time, however, even if IAs can be organized and initial training provided before that date, the capacity of the IAs will not be sufficiently developed until they receive on-the-job (OJT) training in the context of their completed and operating irrigation and drainage systems. Because those systems will not be totally operational until June 30, 1984, the OJT aspects of the training cannot begin prior to that date. Further, assuming a major systems-wide OJT training effort during the year

<sup>29/</sup> A pilot IA has recently been organized in Phase I-A. The current intention of the PMO is to use that smaller IA as a learning experience and a base upon which a larger IA can be formed. The Evaluation Team commends that approach, but does not believe it will be sufficient by itself to resolve the issues raised above.

following June 30, 1984, the earliest possible date which might be appropriate to turn the systems over to the IAs is June 30, 1985. Nevertheless, the PMO as an integrated backstopping organization should remain in existence for no less than one additional year beyond June 1985 in order to monitor the performance of IAs and provide OJT follow-up where and when required.

The total additional cost of maintaining the PMO between December 31, 1983 until June 30, 1986, following completion of physical construction, is estimated to be ₱4,796,000 (=₱639,466);<sup>30/</sup> that represents an increase above the GOP's estimate of the costs required through December 31, 1983 of 5%.

Table I

Additional Funds Required Jan. 1984-June 1986  
(In ₱ 000)

I.	PMO Administration & Supervision				₱1,268
	a. Personal Services		690		
	b. Operation & Maintenance		462		
	c. Office Equipment & Furniture		-		
	d. Miscellaneous		115		
II.	Physical Infrastructure Development				250 <sup>a/</sup>
III.	Institutional/Agricultural Development				
	a. Applied Agricultural Research		-		24
	b. Tenurial Development		7		
	c. Organizational Development & Training		17		
					₱1,542/year
		<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>Total</u>
	Sub-Totals	1,542	1,542	771	3,885
	Cost Escalation <sup>b/</sup>	<u>0</u>	<u>154</u>	<u>162</u>	<u>316</u>
		1,542	1,686	933	4,171
	15% Contingency	<u>231</u>	<u>254</u>	<u>140</u>	<u>625</u>
	Total	1,773	1,950	1,073	4,796

a/ For repair and maintenance.

b/ @ 10% compounded annually with 1984 as base year.

<sup>30/</sup> That figure was derived from the currently approved BIAD II Budget for CY 1983 according to the following table:

b. Rural Improvement Clubs (RIC).

These groups are already organized in each of the seven barangays in the project area as part of a general GOP program throughout the Philippines. Their membership consists of all Mothers resident in those Barangays. These groups are the channel through which the PMO provides training for women in preventive health, nutrition and family planning matters. On March 26, 1981, a comprehensive project specific RIC Council was organized for the BIAD II area as a whole. Although this type of organizational development among women is viewed by the PMO as useful for social and training purposes, it intends to integrate the RIC's more technical programs directly into the functions of the more comprehensive Irrigators' Associations.

c. Youth Clubs.

As in the case of the RICs, youth clubs have been formed in each of the seven barangays as part of a general GOP program throughout the Philippines. Two clubs are organized in each Barangay. One for those aged 11-15 years; another for those over 16 years until married. No project specific youth organizations have yet been created under the auspices of BIAD II. However, the PMO provides leadership, nutrition, and preventive health training to their members. Also, as in the case of the RICs, the current intention of the PMO is to integrate any technical functions performed by or through youth clubs into the structure and activities of the more comprehensive Irrigators' Associations.

d. Single-Purpose versus Multi-Purpose IA's.

Although at an abstract level multi-purpose organizations would appear to provide a more simplified and efficient model than a multiplicity of single-purpose organizations comprising essentially the same membership, history elsewhere suggests that, at least in the initial stages of the water management experience, single purpose IA's have a much better chance of successful operation than do multi-purpose farmer associations which have water management as only one of several functions. Thus, extreme caution should be exercised lest the IAs in Bula-Minalabac are too rapidly transformed into multi-purpose farmers organizations.

6. FINANCIAL ANALYSES (Paul Novick, Cesar Umali, and Jerry Silverman)

According to the initial GOP Implementation Plan (1978), the total budget for BIAD II was originally estimated to be ₱49,162,010 (= \$6,554,934)<sup>31/</sup> Of that amount, AID has obligated \$3 million in the form of a loan to the GOP. AID financial support, therefore, was equal to 42.8% of the originally estimated project cost. However, current revised GOP estimates are that total Project costs will now reach \$9,202,264; which means that the total AID contribution would equal only 32.9%. The data presented below and in the Revised (Recommended) Project Design Summary Logical Framework (Annex F) suggest that total costs will rise still further before the Project is finally completed; further reducing the percentage of total costs financed by AID.

<sup>31/</sup> The Project Paper (1977) estimated ₱40,957,500 (= \$5,461,000). Thus, the Project Paper's estimated was that AID would finance 54.9% of the total cost.

a. AID Financial Support

AID financial assistance is limited by the terms of the Project Loan Agreement (as amended on August 18, 1978) to a maximum of \$3 million. All additional funds required are to be provided by the GOP. Although the Project involves funding of six distinct major sub-components, AID loan funds are provided for support of only two of them: imported equipment and construction costs of physical facilities; and vehicles, spare parts, and typewriters in support of Project operations and management.

Within the two broad limits placed on the use of the AID provided loan, disbursement of those funds are under the terms of a Fixed Amount Reimbursement Agreement (FARA) between AID and the GOP. According to the BIAD II Project specific FARA, AID is obligated to reimburse the costs of specific components of the Project on a predetermined percentage basis only AFTER physical completion of certain tasks are certified as adequate by AID and the system is in operation.<sup>32/</sup>

Thus, because of the dual prerequisites that work be completed and acceptance certified by AID, there is always some time lag between the date a loan is authorized and actual AID disbursements occur under the FAR system. Such a system is particularly advantageous to AID because:

- since reimbursement can be withheld for substandard work, AID can exert maximum influence on the quality of work performed; and
- there is no "cost of capital" to aid because no funds are drawn down until those two conditions are met.

Unfortunately, that same system is often particularly disadvantageous for the government of the host country.

As expressed by a PMO staff member, the FAR system results in "Ginigisa sa sariling mantika" ("frying in our own lard"). That unpleasant experience results because:

- No matter how well the government and its subcontractors perform under the terms of the Project Loan Agreement, it must advance all initial costs associated with the project and pay the "costs of capital" until such time as it is reimbursed; and
- if, for whatever reasons, AID reimbursement is delayed beyond expectations, a project's "cash flow" position can be affected, which might result in reductions in the amount of funds actually disbursed by the Host Country at certain stages of implementation, and which, in turn, can result in a vicious cycle of further delays in completion and further decreases in funds available ad infinitum.

32/ Payment of the costs of imported equipment is an exception insofar as AID approves the specifications of equipment to be purchased and/or purchases the equipment itself.

Delays in AID reimbursement are most often the result of delays in completion of specified project activities and/or a determination by AID that adequate standards of performance have not been met.

Ironically, in the context of projects which emphasize decentralization, project level host country managers are often afraid to make decisions without first obtaining approval from the USAID Mission. Thus, although the control of their own government's national level bureaucracy might be substantially decreased, USAID retains or is perceived to retain that type of control. That places a heavy burden on the USAID Mission to issue guidelines as early as possible clearly specifying what criteria will be used to judge acceptable work performance. That is much easier to do with reference to the construction of physical infrastructure than with reference to other social and institution-building efforts. It is particularly difficult to do in the context of an experimental or pilot project in which both negative and positive lessons learned from on-going implementation experience is itself an important objective.

The specification of terms under which a specific Project's FAR System will operate can, in and of itself, be an important factor affecting project success or failure.

The importance of specifying terms for a particular system which supports rather than hinders appropriate implementation behavior is one aspect of project design most often overlooked.

In the case of BIAD II, the FAR agreement was executed in late 1978. By requiring total completion of all construction work within each of seven "phases" or subsystems prior to reimbursement of any discrete part, the FARA has resulted, to date, in total AID reimbursements of only \$8,900 against total expenditures by the GOP (as of April 30, 1981) of \$2,375,380.<sup>33/</sup> That does not mean that the FAR system should be abandoned. However, it does suggest that more attention should be given to the case by case design of a specific FAR system which conforms to the overall design objectives of specific projects.

For example, the PMO staff's recollection is that the decision to dramatically redesign phase IV was made by USAID; but not until after bids were received from private contractors indicating that the costs of the original specifications would be prohibitive.<sup>34/</sup> It took more than one year to redesign

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<sup>33/</sup> ₱17,815,353 at ₱7.5 = \$ 1.

<sup>34/</sup> At ₱7.5 = \$1, the amount budgeted was \$667,950; the lowest bid submitted was ₱3,200,000 (representing an estimation error of 479%). Apparently, the reason for the dramatic increase in cost, as compared to the original estimate, was the result of increasing construction demand in the Bicol Region compounded by rises in fuel costs and other inflationary factors due to previous delays.

Phase IV and issue new invitations for bids.<sup>35/</sup> That delay in turn was a serious contribution to the postponement of the project's construction completion date and, hence, a postponement of the date by which the GOP could expect reimbursement for any costs accrued in the construction of Phase IV. Although it is also true that most expenditures by the GOP for Phase IV construction were also deferred for an equivalent amount of time, the problem for Project Management is not tied simply to the need for reimbursement of expenses for each discrete item. Rather, the problem is how that delay affects cash flow. For Project Management, and the MOB, the important question is how much money is coming in from whatever source to meet overall financial requirements. If, as the Project Manager believes, the PMO performed well in terms of the original USAID approved Phase IV design until USAID insisted it be changed, why should the GOP alone be required to pay the full cost of capital and suffer the cash flow problems resulting from the subsequent delay?

The solution to the problem illustrated above is not to either proceed with an improper design in order to avoid delays or provide funding in advance and abdicate USAID's proper role in determining the adequacy of performance under the terms of the Loan Agreement. Rather, the solution is to design a FAR system which will provide sequential reimbursement for discrete sub-activities within each phase as they are completed in order to ease overall cash flow constraints. For example, up to a maximum of approximately \$800,000<sup>36/</sup> could already have been legitimately reimbursed prior to April 30, 1981 if the FAR system designed for BIAD II permitted sequential reimbursement for acceptable completion of discrete sub-activities within each phase rather than total completion of all activities within each Phase as a whole.

Therefore, USAID should give serious consideration to amending the Fixed Amount Reimbursement Agreement (FARA) so as to allow for reimbursement upon acceptable certified completion of designated discrete sub-activities on a sequential rather than total completion basis. That would require a specification of discrete elements identified in the implementation plan. The PMO should be responsible for that identification and definition. Amending the FARA in that manner would result in the more expeditious reimbursement of funds to the GOP without in any way abdicating USAID's proper role in determining the adequacy of performance under the terms of the Loan Agreement. In fact, at least two additional project specific benefits would result from such an amendment: (i) PMO management and staff would gain additional planning experience by identifying and defining new and proper benchmarks for reimbursement in terms of the implementation plan; and (ii) the operation of such a new FAR system would provide many more occasions

<sup>35/</sup> On November 23, 1979, the PMO received and opened bids for the construction of Phase IV irrigation system. The first and second lowest bids were disqualified as both were more than the lower limit of 25% below the government estimate. Based upon this criteria, the winning bidder was Marosa Construction. AID did not approve of the proposed contract award to Marosa Construction as AID concluded that it was too expensive compared with the estimate in the project paper. On December 7, 1979, AID recommended to the PMO that Technosphere be authorized to redesign Phase IV so as to reduce cost of development without affecting the irrigation requirement.

<sup>36/</sup> Use of the phrase "up to a maximum of approximately" is required here because any number of variations are possible in specifying the boundaries of each discrete sub-activity.

for inspection and certification of the various steps in the implementation process. This latter point could be important now that the Project Officer will be located in Manila.

**b. GOP Funding**

Given the constraints on cash flow discussed above and significantly increased costs over original estimates, the GOP has certainly met its financial obligations to BIAD II as originally conceived. The Table below summarizes the budget under the terms of which project implementation is proceeding.

Table 2:  
BIAD II BUDGET  
(Current)

<u>Item No.</u>	<u>Project Components</u>	<u>Project Cost (₱)</u>	<u>Wt. %</u>
I	PMO ADMINISTRATION & SUPERVISION	6,954,031	10.08
II	PHYSICAL INFRASTRUCTURE DEVELOPMENT COMPONENT	61,806,111	
	a. A&E Detailed Eng'g. Design	3,328,633	4.82
	b. A&E Const. Supervision	1,728,258	2.50
	c. Irrigation, Drainage & Roads	41,216,930	59.72
	d. Imported Pumps	7,296,530	10.57
	e. Multi-purpose & School Bldgs.	1,282,510	1.86
	f. Homesite Development	4,376,600	6.34
	g. Farmlot Subdivision Survey	685,650	1.00
	h. R.O.W. & Damages	410,000	0.59
	i. Test-Run	1,481,000	2.15
III	INSTITUTIONAL & AGRICULTURAL DEVELOPMENT COMPONENT	256,840	
	a. Applied Agricultural Research	71,000	0.10
	b. Tenurial Development	46,920	0.07
	c. Organizational Development & Training	138,920	0.20
	<b>T O T A L</b>	<b>69,016,982</b>	<b>100</b>

However, the costs estimated in that budget were based on the assumption that all work, of whatever kind, would be completed by December 31, 1983 and that no funding would be required for the continued existence of the PMO beyond that date. Various findings and conclusions of the Evaluation Team described elsewhere in this Report indicate that no such condition can possibly exist by the last day of 1983. Therefore, it will be necessary for the GOP to increase its total allocation above the current budget figure. Nevertheless, it should be noted that, in terms of cash flow, the disbursement of total funds allocated will occur over a much extended period of time (i.e. until 1986).

It should be noted that in 1978, 1979, and 1980, releases of first quarter funds were delayed until April and May. Earlier release was needed to ensure the start of construction activities which could take advantage of the Bicol dry season (January-June). This problem was resolved in late 1980 as a result of joint MAR, Ministry of Budget, and Presidential Management Staff discussions. Subsequently, the first quarter release for 1981 was provided in January.

c. Amortization and O&M Costs

The Project Loan Agreement required, as a condition precedent, the Bicol River Basin Development Program Office to provide USAID with assurance that a "farmer-controlled Irrigators Association will be formed for each separate irrigation system constructed... and that they will be given complete responsibility for the collection of water fees and the repayment of construction costs." <sup>37/</sup> Thus, as originally designed, the financial viability of BIAD II was assumed to rest on the farmer-beneficiaries' ability to amortize the costs of equipment and construction and pay the annual costs of operation and maintenance.

The Evaluation Team assessed the financial viability of the Bula-Minalabac Project from two perspectives: that of the Irrigators' Associations' (IA's) financing requirements and, complementarily, from the financial capacity of farmer-beneficiaries. On the cost side, the most recent readily available information has been utilized; particularly with respect to cost of electricity. Some team members felt these electrical costs, which are based on earlier project studies about evaporation and absorption rates, have been overestimated. Thus, a recommendation has been made that another study be done to test the accuracy of these calculations. On the other hand, farm-level financial projections (i.e., yield, production costs, and net returns) were obtained from the Project Paper in view of the current absence of more recent surveys and data. Given doubts about the accuracy of the data used for the computations which follow, the method illustrated in the following pages for calculating an irrigation fee is more important for project management to understand than is an acceptance of the data itself. Understanding of the method should provide the PMO with knowledge concerning what new data must be collected and how it should be used and analyzed.

This discussion is primarily intended to serve as a systematic guide for the determination of an appropriate irrigation fee, based on both financial requirements of IA's and beneficiaries' capacity and willingness to pay. With this end in view, the report presents alternative groupings of phases (referred to as "subsystems") from which the best combinations may subsequently be selected. Phase III, however, has been excluded from the present analysis because the pump system design for this phase is not yet available.

Tables 3 and 4 provide a summary of estimated annual costs and projected benefits which suggest an appropriate level of irrigation fee.

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<sup>37/</sup> Project Loan Agreement (January 13, 1978, p. 9 and 10)

The basic assumptions used in these computations are:

- Selected physical infrastructure development costs will be amortized over a 40-year period at an interest rate of either 6% or 3% annually.
- The average inflation rate will be 10% compounded annually.
- Large pumps (200 HP) have an economic life of twenty-five (25) years while small pumps (less than 200 HP) have a useful life of twelve (12) years.
- Vehicle replacement will be required every ten (10) years.
- A sinking fund can earn 12% interest compounded annually.
- The potential service area is 2,102 hectares (excluding Phase III)<sup>38/</sup> disaggregated as follows:

Table 3:  
Service Area

<u>Phase</u>	<u>Area</u>	
	<u>Hectares</u>	<u>Percent</u>
I	610	25%
II	207	9
IV	1,037	43
V	248	10

For each subsystem, operation and maintenance expenditures make up the biggest portion of total costs. In turn, pump electricity costs comprise the largest share of O&M costs.

A comparative review of these two sets of figures suggests that, in general, an irrigation fee based on estimated total cost of the system will be too high; particularly considering the fact that beneficiaries will also have to pay annual amortization payments on homestead and farmplot.

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<sup>38/</sup> Phase III has been excluded from the analyses because the design specifications have not yet been established.

Table 4:  
Comparative Summary of Estimated Annual Costs  
(In cavans of palay per hectare)<sup>39/</sup>

Subsystem	Amortization <sup>40/</sup>		Operation and Maintenance	Sinking Fund	Total	
	6%	3%			6%	3%
Phase I	22	14	26	9	57	49
Phases II, IV, & V	28	18	34	10	72	62
All Phases, Except III	26	17	32	10	68	59

Table 5:  
Projected Net Return Before Water Fee & Amortization  
(In Cavans of Palay Per Hectare)\*

Years after Construction	Wet Season	Dry Season	Total
1	31	40	71
2	33	43	76
3	34	97	81
4	36	50	86
5	38	54	92

\* Using the Project Paper assumption of ₱55/cavan.  
Sources of Basic Data: Tables 4 & 5, BIAD II PP Annex B.

Consequently, the following alternatives are available to help reduce the gap between costs and the projected capacity of beneficiaries to pay:

- Extend the repayment period and/or change the lowest interest rate possible on the amount of physical infrastructure to be amortized; and/or
- During the first few years of system operation, defer payment of physical structure amortization, sinking fund, and, to some extent, subsidize part of the operation and maintenance costs.

(1) Amortization:

Physical Infrastructures Development

The five items which might be included in the amount to be amortized are shown, by phase, in Table 6. Based on estimates made by the BIAD II PMO

<sup>39/</sup> Using the Project Paper assumption of ₱55/cavan; these costs do not include homestead and farmlot annual amortization (ranging from one to ten cavans) which the beneficiaries must also pay.

<sup>40/</sup> Based on 1979 estimates of BIAD II Project Management Office.

in 1979, these items amount to approximately ₱46 million (excluding Phase III).

**Table 6:**  
**Breakdown, By Subsystem of Project Cost To Be Amortized**  
**(In ₱000)**

<u>Type of Cost</u>	<u>Phase I</u>	<u>Phase II</u>	<u>Phase IV</u>	<u>Phase V</u>	<u>All Phases</u>
					<u>(Except III)</u>
A&E Detailed Eng'g Design	817	379	1369	307	2872
A&E Construction Supervision	354	158	789	190	1491
Irrigation, Drainage, & Roads	8295	4396	20258	3597	36547
Imported Pumps	1422	817	2431	-	4660
Farmlot Subdivision Survey	<u>142</u>	<u>62</u>	<u>309</u>	<u>74</u>	<u>588</u>
<b>T O T A L</b>	<b>11030</b>	<b>5802</b>	<b>25156</b>	<b>4168</b>	<b>46157</b>

Note: Figures might not total exactly due to rounding.

Estimated annual total amortization in thousand pesos and per hectare payment, by subsystem, is presented in Table 7. It has been assumed that the repayment period is 40 years and alternative interest rates are either 6 or 3 percent.

**Table 7:**  
**Breakdown, by Subsystem, of Estimated Annual Amortization Payments**

<u>Subsystem</u>	<u>Project Cost to be Amortized (In Pesos)</u> <sup>1/</sup>	<u>Total Amount Amortization (In ₱000)</u>		<u>Per Hectare Amortization Payment (In Pesos)</u> <sup>2/</sup>	
		<u>6%</u>	<u>3%</u>	<u>6%</u>	<u>3%</u>
		Phase I	11,030	733	477
Phases II, IV, & V	35,126	2335	1520	1565	1019
All Phases, Except III	46,157	3068	1997	1460	950

<sup>1/</sup> From Table

<sup>2/</sup> Based on hectarage provided in Annex D, Table D-1.

Note: Figures might not total exactly due to rounding.

**(ii) Operation and Maintenance**

This category includes the following items: cost of electricity to run irrigation pumps; personnel expenditures; and vehicle operation and maintenance. Table 8 summarizes the computations of annual total O&M costs in thousand pesos, as well as per hectare figures.

**Table 8:**  
**Breakdown, by Subsystem, of Estimated Annual Operation & Maintenance Costs**

Subsystem	Total O&M Cost (in ₱000)	Per Hectare O&M Cost (in Pesos)
Phase I	876	1,436
Phases II, IV, & V	2,786	1,867
All Phases, Except III	3,667	1,744

**Note:** Figures might not total exactly due to rounding.

**Pump Electricity**

A cost breakdown by subsystem is given in Table 9. These estimates are made on the basis of what appears to be the best available information at this time. As previously mentioned, some members of the team feel that the costs computed are too high and that some of the assumptions, particularly on the amount of water diversion requirement, need to be validated. Consequently, it is recommended that a new study be conducted in order to test the accuracy of these estimates.

**Table 9:**  
**Breakdown, by Subsystem, of Estimated Annual Electricity Cost\***

Subsystem	Total Cost (in ₱000)	Per Hectare Cost (in Pesos)
Phase I	744	1,220
Phases II, IV, & V	2,464	1,651
All Phases, Except III	3,208	1,526

**Note:** Figures might not total exactly due to rounding. Power rates used in estimating electricity cost are shown in Annex D, Table D-3; derivation of average annual diversion requirement per hectare is shown in Annex D, Table D-4.

\* Derived from Annex D, Table D-2. There are recent reports that the fuel adjustment cost will no longer be charged in Bicol. Depending on implementation guidelines, this new policy could mean a decrease in electricity costs of about 3 cavans/hectare annually.

Personnel

Staffing requirements as well as relevant cost estimates (salaries, fixed charges, and travel/per diem) are shown in Annex Table D-5. Total estimated annual expenditure of ₱326 thousand have been allocated on the basis of each subsystem's area relative to total. The resulting figures are tabulated below.

**Table 10:**  
**Breakdown by Subsystem, of Estimated Annual Personnel Expenditures\***

Subsystem	Total Expenditures (in ₱000)	Per Hectare Expenditures (in Pesos)
Phase I	82	134
Phases II, IV, & V	199	133
All Phases, Except III	284	135

\* Derived from Annex D, Table D-5.

Note: Figures might not total exactly due to rounding.

Vehicle Operation and Maintenance

This item is comprised of fuel, lubricants, and spare parts costs. As in the case of personnel expenditures, the ₱201 thousand estimated total annual O&M expenditures for ten (10) Isuzu vans has been allocated on the basis of each subsystem's relative size. Shown below in Table 11 is a cost breakdown by subsystem.

**Table 11:**  
**Breakdown, by Subsystem, of Estimated Annual Vehicle O&M Costs\***

Subsystem	Total Cost (in ₱000)	Per Hectare Cost (in Pesos)
Phase I	50	82
Phases II, IV, & V	123	82
All Phases, Except III	175	83

\* Derived from Annex D, Table D-6.

Note: Figures might not total exactly due to rounding.

**(111) Sinking Fund**

The four items under this category are: pump replacement; vehicle replacement; major repairs; and cost escalation based on the previous year's total O&M costs. Estimated annual sinking fund requirements in thousand pesos and per hectare cost are provided in Table 12 below.

**Table 12:  
Breakdown, by Subsystem, of Estimated Annual Sinking Fund**

Subsystem	Total Amount (in P000)	Per Hectare Amount (in Pesos)
Phase I	292	478
Phases II, IV, & V	835	560
All Phases, Except III	1129	537

**Note:** Figures might not total exactly due to rounding.

**Pump Replacement**

Table 13 provides estimates of annual sinking fund for pump replacement. These figures were derived on the basis of the following assumptions:

- Large pumps (i.e., 200 horsepower) have an economic life of 25 years while small pumps (i.e., those less than 200 horsepower) have 12 years.
- Price of pumps escalates at an average rate of 10% compounded annually.
- The sinking fund can earn an average of 12% interest compounded annually.

**Table 13:  
Breakdown, by Subsystem, of Estimated Annual Sinking Fund for Pump Replacement\***

Subsystem	Total Amount (in P000)	Per Hectare Amount (in Pesos)
Phase I	116	190
Phases II, IV, & V	342	229
All Phases, Except III	457	217

**\*Derived from Annex D, Table D-7.**

**Note:** Figures might not total exactly due to rounding.

### Vehicle Replacement

The estimate of an annual sinking fund intended for vehicle replacement rests on the following premises:

- Vehicles to be used have an economic life of 10 years.
- Price of vehicles rises at an average rate of 10% compounded annually.
- The sinking fund can earn an average of 12% interest compounded annually.

Table 14:  
Breakdown, by Subsystem, of Estimated Annual Sinking  
Fund for Vehicle Replacement\*

Subsystem	Total Amount (in ₱000)	Per Hectare Amount (in Pesos)
Phase I	25	41
Phases II, IV, & V	61	41
All Phases, Except III	87	41

\* Derived from Annex D, Table D-8.

Note: Figures might not total exactly due to rounding.

### Major Repairs

This item is intended to build-in funds which can be readily utilized to repair damages brought about by typhoons and other natural phenomena. In view of the absence of information on which to base this estimate, an annual requirement of ₱250 thousand is arbitrarily assumed. As soon as more accurate data is available, this assumption should be changed (as appropriate).

The total was allocated on the basis of each subsystem's area relative to total. This breakdown is provided below.

Table 15:  
Breakdown, by Subsystem, of Estimated Annual Sinking Fund  
for Major Repairs

Subsystem	Total Amount (in ₱000)	Per Hectare Amount (in Pesos)
Phase I	63	103
Phases II, IV, & V	153	103
All Phases, Except III	218	104

### Cost Escalation

To be able to live with inflation, it is estimated that about 10% of the previous year's total O&M costs should be set aside in anticipation of upward movements in the cost of critical inputs (especially electricity; which comprises a significant part of estimated annual O&M, fuel, and lubricants).

At current prices, the estimated total amount for cost escalation is ₱694 thousand.

**Table 16:  
Breakdown, by Subsystem, of Estimated Annual Sinking Fund  
for Cost Escalation**

Subsystem	Total Amount (in ₱000)	Per Hectare Amount (in Pesos)
Phase I	88	144
Phases II, IV, & V	279	187
All Phases	694	286
All Phases, Except III	367	175

### (iv) Farm Financial Projections

The BLAD II Project Paper contains projections on farm production and budget per hectare. The following table is derived therefrom:

**Table 17:  
Projected Annual Yield, Cost of Production, & Net Returns  
(In Cavans Per Hectare)**

<u>Years After Construction</u>	<u>Annual Yield</u>	<u>Cost of Production*</u>		<u>Total</u>	<u>Net Return Before Water Fees &amp; Amortization*</u>
		<u>Fixed</u>	<u>Variable</u>		
1	148	31	46	77	71
2	156	31	49	80	76
3	163	31	51	82	81
4	171	31	54	85	86
5	180	31	56	87	93

\*Cash values were converted to cavan-equivalents at ₱55/cavan.

The above statistics can serve as useful indicators of farmer-beneficiaries' capacity and willingness to pay a specific amount as an irrigation fee. A comparison with computed costs on which the fee might be based does not provide much encouragement. The gap between benefits and costs would be even bigger if we consider that beneficiaries will also have to budget funds for amortizing their homestead and farmlot and, while the farmgate price of palay is assumed to remain constant at ₱55/cavan, the cost of production (particularly of petroleum-based inputs) will increase (thereby further reducing net returns).

With respect to beneficiaries' willingness to pay, it might be worthwhile to note that random interviews have indicated that farmers are willing to pay considerably less than what system costs would require. Existing private irrigation systems, though less dependable than the proposed system, normally charge a maximum fee of only 14 cavans per hectare per year.

## 7. EFFECTIVENESS OF AID NON-FINANCIAL SUPPORT (Jerry Silverman)

### a. Staffing

In addition to personnel assigned to its Manila Office, USAID has maintained an Office in Naga City since 1976. That office has been responsible for the six separate projects comprising the broader BIAD financial program. At the time implementation of the Project began (January 1978), USAID/Naga consisted of four full-time direct-hire American personnel plus a Filipino support staff of ten persons. The Project Officers assigned to BIAD II were all resident in Naga City until May 30, 1981.<sup>41/</sup> Current staffing of USAID/Naga consists of one direct-hire American Development Officer, a Filipino Civil Engineer, and a Filipino support staff of three persons. The USAID/Naga office is located in the Regional headquarters of the GOP's Bicol River Basin Development Program (BRBDP). With the departure of the most recent USAID Project Officer in mid-1981, current plans are to assign a direct-hire American Engineer in the Manila Office as the new Project Officer when he arrives on or about August, 1981. In Naga, a Filipino Civil Engineer and employee of USAID in Bicol since March 1978, will have his responsibilities increased so as to provide on-going technical and monitoring support for BIAD II.

The nature of Manila staffing in support of BIAD II is currently undergoing a change with the assignment of a Project Officer located there rather than in Naga City. The Filipino Civil Engineer and the Development Officer in Naga City will receive backstopping support from both the Office of Capital Development and the Rural Agricultural Development Office.

It is too early to assess the effect of the current change in the USAID staffing pattern on the monitoring and technical assistance functions of USAID support to BIAD II.

<sup>41/</sup> At the time that the most recent Project Officer departed Naga in mid-1981, he was responsible as Project Officer for two other projects besides BIAD II.

**b. Technical Assistance**

No long term American or Filipino technical assistance personnel have been assigned exclusively to the BIAD II project. However, the Project Officer resident in Naga City from 1976 until May 30, 1981 and the Filipino USAID civil engineer have engaged in technical discussions and participated in decision-making processes with the staff of the PMO. The current judgment of the PMO staff is that the TA provided in that manner has been appropriate and that there has not been any inordinate interference in their work. Clear evidence exists in USAID files that USAID personnel have provided extensive on-going technical advice to PMO staff throughout the 3½ years of project implementation.

However, it is also true that the technical assistance provided in that manner has emphasized activities related almost exclusively to the Physical Infrastructure Development component of the Project. There are at least three reasons for that:

- AID financing is limited to that component;<sup>42/</sup>
- The Project Officer and his Filipino assistant were both Civil Engineers;
- Long-term irrigation system operational considerations, including the role of the proposed IAs, received lower priority than physical infrastructure by MAR itself.

In addition to the Technical Assistance provided by USAID personnel, approximately 6 person months of intermittent short-term TA was also provided.

Given this modest Technical Assistance, it should be noted that the PMO's perception of USAID involvement is that the Mission has been "mostly concerned about their money" and, therefore, that USAID involvement has emphasized Project Monitoring rather than technical assistance.

**c. Monitoring and Evaluation**

USAID monitoring of BIAD II implementation on a day-to-day basis has been primarily the responsibility of the Project Officer. USAID files support the judgment in the AID Audit Memorandum of October 6, 1980:

USAID/Philippines is doing an exemplary job of monitoring the grant and loans. This is particularly evidenced by its frequent interventions, and constant monitorship of BIAD II implementation problems....(p. 3)

The quality of USAID monitoring has been facilitated by the assignment of the Project Officer to the USAID Regional Office in Naga City rather than Manila, assisted by a resident USAID Filipino civil engineer. As reported above, that situation recently changed.

<sup>42/</sup> Refer to Input Table in Appendix F: Revised Logical Framework.

The Project Loan Agreement<sup>43/</sup> specified that "The Parties agree to establish an evaluation program as part of the Project." It is clear from the Critical Performance Indicator (CPI) description in the Project Paper that USAID planned on conducting formal evaluations of BIAD II jointly with BRBDP and MAR on an annual basis; beginning in June 1978. Therefore, the evaluation reported herein should have been the fourth in a series.

Actual performance has been short of that ideal. Only one joint evaluation has preceded this one; conducted during June 1979<sup>44/</sup>. In addition, AID Auditors conducted an audit during 1980,<sup>45/</sup> which can also be viewed in terms of the evaluation function.

A deficiency in the USAID and BRBDPO formal monitoring and evaluation process for BIAD II has been the almost total neglect of substantive assessments of the Institutional and Agricultural Development (IADD) Component. As reported above, USAID concern has been almost exclusively focused on the Physical Infrastructure Development (PIDD) component. The 1979 evaluation report devoted two paragraphs of a ten page report to the IADD component and not one recommendation was made in that regard. The 1980 Auditors' memorandum limited its remarks about the IADD component to 38 words in one sentence. In a total of approximately 36 monthly reports written by the Project Officer to date, almost no references to the IADD component can be found. Further, it is important that the few references to the IADD component mentioned above were invariably complimentary; the combined message was that no significant problems were being experienced nor were any expected with reference to that component.

The findings of this Evaluation Team, reported in Sections II/V, subsections 5, 10, 11 and 12 of this Report, suggest that earlier attention to the IADD component by USAID was necessary and might have resulted in appropriate changes in strategic direction and the provision of appropriate technical assistance in order to improve performance in that most crucial aspect of BIAD II.

Finally, the Office of Rural and Agricultural Development (ORAD) should be commended and urged to continue its current approach to joint project evaluation or monitoring. That approach is described in Annex A of this Report.

<sup>43/</sup> Project Loan Agreement between the Republic of the Philippines and the United States of America for Bicol Integrated Area Development II (Bula-Minalabac Land Consolidation) (January 13, 1978), p. 11.

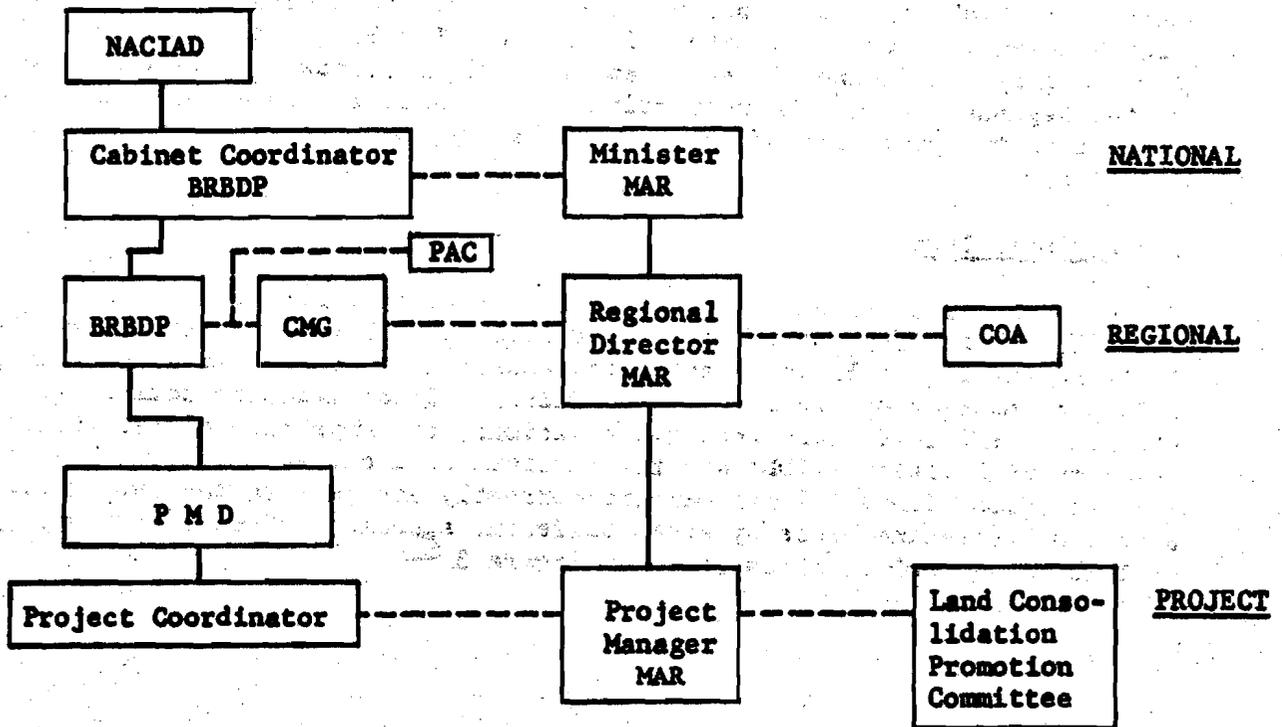
<sup>44/</sup> 1979 Evaluation Bula Integrated Area Development Project (June 22, 1979); Project Evaluation Summary (PES) (August 30, 1979).

<sup>45/</sup> AID/AAG/EA, Memorandum Audit Report No. 2-492-81-1 (October 6, 1980).

## 8. GOP MANAGEMENT STRUCTURE (Jerry Silverman)

The structure of GOP Management for BIAD II is illustrated in Figure 2 below:

FIGURE 2  
ORGANIZATIONAL CHART:  
BIAD II



The Ministry of Agrarian Reform (MAR) serves as the Lead Agency, with the participation of fourteen other Government agencies at the Regional level.<sup>46/</sup>

The management structure is based on the principle of decentralization of authority vertically to the Regional level. This is an important consideration in the assignment of management responsibilities. As an integrated Area Development Project (IAD), coordination of the inputs of various government agencies is an equally important principle.

<sup>46/</sup> The Ministries of Agrarian Reform, Local Government and Community Development Health, Agriculture, Social Services Development, Education and Culture, Public Highways, and Public Works; plus the Office of the Governor (Camarines Sur), National Economic and Development Authority (NEDA), Area Development Team, National Irrigation Administration (NIA), Land Bank of the Philippines, Bicol River Basin Development Program (BRBDP), and the National Food Authority.

a. National Level

The Minister of Agrarian Reform (MAR) has responsibility for providing national level line management support for the Project. The Chairman of the Bicol River Basin Cabinet Committee (currently the Minister of Public Works) has responsibility for coordinating national level support by various Ministries and Agencies for the Project. In practice, the most important management link vertically between the National and Regional levels is the link between the Deputy Minister of MAR and MAR's Bicol Regional Director. Since policy and financial review and control is supposed to be delegated to the Regional level, the responsibility of National level agencies is limited to the provision of support to, rather than control over, subordinate agencies.

b. Regional Level

The Bicol Regional Director of MAR is the designated Project Director of BIAD II. He is supposed to have MAR's full authority to manage the Project. He is assisted by a Project Management Office (PMO) under the leadership of a Project Manager who is also a MAR officer. In addition to administrative staff, the PMO is divided into two divisions; the Physical Infrastructure Development Division (PIDD) and the Institutional and Agricultural Development Division (IADD). Personnel are currently assigned to the PMO on either a full or part-time basis by seven different agencies. The current staffing pattern of the PMO is illustrated in Figure 3.<sup>47/</sup>

<sup>47/</sup> The current staffing pattern is somewhat different from that presented in the Project Paper, p. 80.

**FIGURE 3  
ORGANIZATION CHART:  
PROJECT MANAGEMENT OFFICE  
(PMO)**

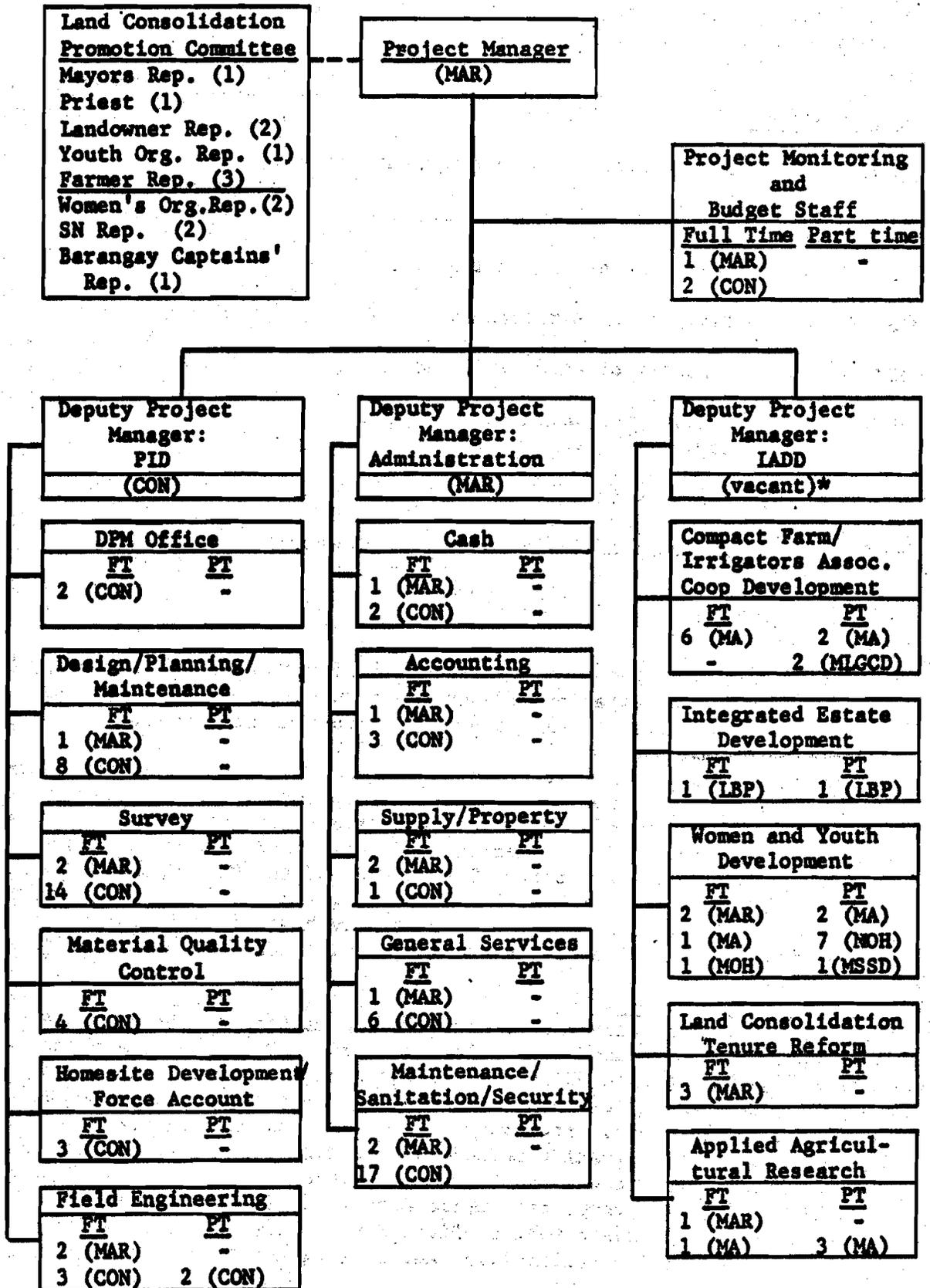


FIGURE 3  
(continued)

\* The Deputy Project Manager, Jordan Chavez (MLGCD), was killed in an automobile accident in May , 1981.

<u>Abbreviations</u>		<u>Total Staff Contribution</u>	
		<u>Full Time</u>	<u>Part Time</u>
BRBDP	Bicol River Basin Development Program	-	2
CON	Contract with PMO or Casual	65	1
LBP	Land Bank of the Philippines	1	1
MA	Ministry of Agriculture	8	7
MAR	Ministry of Agrarian Reform	20	-
MLGCD	Ministry of Local Government and Community Development	-	2
MDH	Ministry of Health	1	7
MSSD	Ministry of Social Service Development	-	<u>1</u>
TOTALS		95	20

Thus, by integrating personnel from seven different agencies directly within the PMO, internal integration of both conceptual perspectives and multi-sectoral project inputs is maximized at the operational level.

Another important organizational mechanism for integration and horizontal coordination is the Composite Management Group (CMG). The CMG consists of the Regional Directors of the various ministries and other line agencies, plus representatives of the Governor's Office (Camarines Sur), the Area Development Teams, and so forth. The purpose of the CMG, which is chaired by the Regional Director of MAR/BIAD II Project Director, is to set policy guidelines and facilitate coordination among the members of their staff who, although involved in BIAD II implementation activities, are not seconded as PMO staff.

48/ Paul Novick and Jerry Silverman observed a CMG meeting at the PMO on May 26, 1981. The Agenda contained the following items: Project Status Report (as of April 30, 1981) presented by the Project Manager; Nomination of a new Deputy Project Manager for IADD; and an open discussion of implementation problems and constraints. Attending the meeting, in addition to selected PMO staff, were the Regional Directors of the Ministries of Agrarian Reform (Chairman), Local Government and Community Development; Health, Agriculture; Social Services Development, and Public Works; the Regional Directors of the National Irrigation Administration, Bicol River Basin Development Program, and the Land Bank of the Philippines; and a representative of the Governor's Office (Camarines Sur).

The BRBDP Program Director is both a member of the CMG (BIAD II Project specific) and has the task of coordinating all Integrated Area Development (IAD) Projects in the Bicol River Basin. In that latter context, it should be noted that BIAD II is only one among ten IAD projects in the Bicol River Basin. A Regional Bicol River Basin Coordinating Committee, chaired by the BRBDP Program Director, is the venue within which broader inter-agency concerns and issues are addressed. Thus, the CMG constitutes a sub-element of the Bicol River Basin Coordinating Committee which has responsibility for all ten IADs in the Bicol Region. AID is also providing assistance to two of the other BIAD projects: Libmanan-Cabusao IAD and Rinconada-Buhi/Lalo IAD.

c. Future Structural Changes

Although the current structure is appropriate for the implementation of BIAD II, the question of how beneficiary organizations will be supported once the project is completed and the PMO and CMG no longer exist has not yet been addressed.

As discussed above in Section V, subsection 5 of this Report, the original design of BIAD II requires that the irrigation systems constructed by the Project are to be turned over to Irrigators Associations which will "be given full responsibility to manage, operate and maintain the systems [emphasis added]".<sup>49</sup> This complete turnover of the systems to organized farmer beneficiaries is supposed to occur "prior to the third full cropping season after construction is completed and operational in each phase."<sup>50</sup> The current project manager interprets that requirement to mean that the PMO retains control of each system for only six months after completion in each phase. That also means that the PMO is scheduled to fold its tents and fade away no later than the seven month after completion of the last phase irrigation system comes on stream.

The Evaluation Team has presented in subsection 5 above the reasons that it thinks both the timing of the turnover and the extent of that "turnover" should be reconsidered. Thus, those reasons are not repeated here. Rather, we devote the remainder of this subsection to a discussion of some of the implications of such reconsideration for GOP organization.

(i) Timing. The PMO should retain ultimate authority over each irrigation system for at least two full cropping seasons--one wet and one "dry"--prior to the turnover. It should continue to monitor and assist the Irrigators' Association in a support position for at least one additional year following the turnover.

(ii) Backstopping Responsibilities. Although the Irrigators' Associations (IAs) should have the fullest responsibility possible for the management, operation, and maintenance of the system, it is unrealistic to expect them

<sup>49/</sup> Letter from Director Salvador Pejo (MAR) to Director, USAID/Philippines (January 24, 1978) in response to Conditions Precedent 5.1(g) in Project Loan Agreement (January 13, 1978), p. 9 and 10.

<sup>50/</sup> Project Loan Agreement, p. 10.

to assume complete responsibility without at least some continuing technical and financial support assistance from a GOP agency or agencies.

Recognition of the need for support assistance does not mean that the freedom of the beneficiaries would necessarily be constrained by GOP agencies. The IAs should receive financial assistance in response to an approved annual budget through a Regional or Provincial level GOP agency and retain management authority over disbursement of funds received. The IAs should also be responsible for determining the type of technical assistance required from backstopping GOP agencies and to manage that assistance as provided. However, the Evaluation Team repeats its judgment that the IAs cannot be expected to operate completely alone nor on the basis of uncoordinated ad hoc relationships with the wide range of GOP agencies that might theoretically be in a position to provide assistance.

(iii) Options for Post-Project Organizational Structure and Placement. There are at least six general alternatives for the organization and placement of backstopping assistance to the IAs. Examples of each alternative are illustrated by the Matrix in Figure 4 below:

FIGURE 4

<u>Alternative Organizational Types</u>	<u>FUNCTION</u>	
	<u>Financial</u>	<u>Technical</u>
<u>Lead Line Agency</u>	e.g., MAR/NIA/MA/FSDC	e.g., MAR/NIA/MA/FSDC
<u>Regional or Provincial Organization</u>	e.g., BRBDP/Office of the Governor	e.g., BRBDP/Office of the Governor
<u>New Integrated Development Agency</u>	e.g., Permanent PMO	e.g., Permanent PMO

There are both advantages and disadvantages ("tradeoffs") to either combining the financial and technical support functions within one backstopping organization or separating them between two organizations. If those two functions are combined within one agency, integration of financial support and technical requirements is enhanced. Alternatively, if each is assigned to separate agencies, performance within each function might be maximized. This might be especially true if financial responsibility were assigned to an agency with strong links to national level offices like the MOB, COA, or Malacafang, but technical responsibility was assigned to a Regional Organization like BRBDP or a permanent PMO.

There are also "tradeoffs" to be considered when choosing which type of organization should have primary responsibility for providing support as illustrated in Figure 5 on the next page.

Serious consideration should be given to each of these various alternatives and "tradeoffs" prior to making a final decision.

**FIGURE 5.5<sup>1</sup>**  
**ORGANIZATIONAL PLACEMENT ALTERNATIVES AND TRADEOFFS**

No.	ALTERNATIVE	TRADEOFFS		
	Implementor	Major Advantages	Major Disadvantages	Supporting Contingencies
1	Lead Line Agency	<ul style="list-style-type: none"> <li>● Provides a base in a permanent institution;</li> <li>● Provides high-level decision involvement;</li> <li>● Sometimes appropriate for non-area focused projects;</li> <li>● Often simplifies initial preparation process and resource flows.</li> </ul>	<ul style="list-style-type: none"> <li>● Limits sectoral focus of project strategy;</li> <li>● Often there is a preoccupation with national problems rather than local variations;</li> <li>● An unwillingness to delegate significant operational authority is common;</li> <li>● Often accompanied by jealousy of other line agencies.</li> </ul>	<ul style="list-style-type: none"> <li>● High capability in appropriate agency;</li> <li>● High priority on institutionalization;</li> <li>● Agency has high target group orientation;</li> <li>● National leadership commitment critical for success.</li> </ul>
2	Regional Organization	<ul style="list-style-type: none"> <li>● Provides local focus;</li> <li>● Sometimes helps to concentrate authority over project activities;</li> <li>● Can build planning and implementation capability in permanent entity.</li> </ul>	<ul style="list-style-type: none"> <li>● Often has low institutional and human resource capability;</li> <li>● Subnational units often have little leverage over line ministries whose activities affect the project.</li> </ul>	<ul style="list-style-type: none"> <li>● High commitment to decentralization;</li> <li>● Uniqueness of target area;</li> <li>● High capability of target group orientation.</li> </ul>
3	New Integrated Development Agency	<ul style="list-style-type: none"> <li>● Helps comprehensiveness of project overview;</li> <li>● Provides local focus with access to higher level</li> <li>● Can avoid overly oppressive audit and control procedures.</li> </ul>	<ul style="list-style-type: none"> <li>● Line agency competition can cripple performance;</li> <li>● Complex communication needs.</li> </ul>	<ul style="list-style-type: none"> <li>● Good history of inter-agency cooperation;</li> <li>● Technology sensitive to lack of complementary inputs;</li> <li>● High target-group orientation and capability.</li> </ul>

<sup>1/</sup> Adapted from: James A. Carney, Jr., George Honadle, Thomas Armor, Coordination and Implementation at Bula-Minalabac; An Example of the Structure and Process of Integrated Rural Development, a Field Report Prepared Under AID Contract No. DSAN-C-0065, for USAID/Manila (March 1980), p. 12 (Figure 1-3).

## 9. EFFECTIVENESS OF GOP MANAGEMENT (Jerry Silverman)

### a. National Level

The twin concepts of decentralization and coordination provide the fundamental conceptual basis for the management structure and functions of BIAD II. With that in mind, the evaluation team attempted to assess three dimensions of national level commitment to the Project: level of GOP financial support, degree of control over or support to project level management (vertical), level of coordination and cooperation between agencies at the National level (horizontal).

(1) GOP Financial Support. According to the Project Agreement between the GOP and USAID, the former would be responsible for funding all costs in excess of the \$2.25 million provided by the AID loan. The original estimate of those costs was the peso equivalent of \$2.6 million. A subsequent amendment to the Loan Agreement raised the AID allocation to an even \$3 million.

Due to inflation and delays in project implementation, a new budget request totaling ₱75 million (= \$10 million) was submitted by the PMO in 1979. That request was based on the assumption that the Project would be completed no later than December 31, 1983; 12 months beyond the Project Activity Completion Date of December 31, 1982 specified in the Project Agreement. The result of that request was the approval by the GOP of an allocation of ₱69,016,982 ( \$9,202,264) in 1980; an increase over the original estimate of ₱49,162,010 ( \$6,554,934) or 40% overall and 78% in the amount funded solely by the GOP. However, even that substantial allocation is not sufficient and, within that total allocation, cash flow is a problem.

There are three different factors which have contributed to the cash flow problem: delays in disbursement of funds due to poor performance in the budgeting/funds release process; "delay" of reimbursements by AID, and overall limitations on GOP financial resources. The "delay" in reimbursements by AID is discussed in detail in Section V, subsection 6a of this Report. The nature of limitations on overall GOP financial resources can be inferred from various discussion points throughout this Report.

With reference to delays caused by poor performance in the budgeting/funds release process; AID's Audit Report in October 1980 stated:

Questionable ability to perform [with reference to the contracting process] has been aggravated by funding problems, due to the GOP funding processes [sic]. At the time the loan was signed, authorized funds not spent by the end of the year had to be returned to the GOP treasury. This has since been changed, whereby unexpended funds may be carried forward. Original funds were not made available until May 1978 which meant that almost all of the dry season was missed. Delay in receipt of yearly funding also occurred in 1979 and 1980. MOB now believes it will be able to release 1981 construction funds by January 1981. However, this will still result in delaying Phase IV construction for one year. This is because advertising for bids is not allowed by the GOP until funds are released which caused further delays....

The importance of this aspect is illustrated by a current situation [1980]: MAR and the Mission are in the process of approving plans and specifications of Phase IV-B of the project. The most opportune time to advertise, obtain and review bids and make the award would be between September and December 1980, respectively, so that the winning contractor could start work in January 1981 at the start of the dry season.

However, this cannot be done because of the rigid law which, MOB insists, cannot be waived. Therefore, advertising will take place in January 1981, and, with MAR's slow review procedures, the contract will probably be awarded in May 1981, again losing most of the dry season. As a result, real construction work will not begin until January 1982.<sup>24</sup>

However, although the problem described above contributed substantially to delays in implementation during the first three years of the project (delays which cannot be recovered), the budgetting/fund release process has been amended and during the first two quarters of 1981 funds have been received on a timely basis.<sup>23</sup>

Although the resolution of problems associated with the budgetting/fund release process have been resolved, the amount of annual releases within the total budget allocations still remains a problem.

The Budget ceiling for 1981 was limited to P18.5 million (: \$2.3 million) and the PMO expects that the same ceiling will be imposed for both 1982 and 1983 as well. Although representing only very rough estimates, the revised Input Table in Annex F of this Report suggests that financial requirements for those two years might substantially exceed that ceiling.

Nevertheless, that level of financial support is an indication of deep commitment by the GOP to BIAD II. Future projections<sup>24</sup> suggest, however that an increased level of support will be required for successful project completion in 1986 plus annual subsidies for operations and maintenance indefinitely beyond that date.

(ii) Vertical Control or Support. With the exception of a very strong control orientation by COA towards the authorization of construction contracts,<sup>55</sup> the Central Government has practiced a remarkable degree of support for--rather than control over--the Project Director and his PMO staff. Functionally, the national level BRBCC no longer operates as an organic committee with regularly scheduled meetings. Although this is primarily due to the reorganization of the Bicol River Basin Development Program, it also suggests that

<sup>52</sup> AID/AAG/EA, Memorandum Audit Report No. 2-492-81-1 (October 6, 1980), p.8 & 9.

<sup>53</sup> Although, for reasons not yet understood by either MAR or USAID, only 50% of such funds were released.

<sup>54</sup> Section V, Subsection 6b.

<sup>55</sup> Discussed in Section V, Subsection 4b(1) of this Report.

that Ministerial level interventions are not often required. It is only Minister Juinio, as Cabinet Coordinator for the BRBDP (rather than in his capacity as Minister of Public Works) and Minister Estrella of MAR who regularly exercise a direct role at the ministerial level in the implementation of BIAD II. The other ministers who were members of the BRBCC and are now members of the National Council on Integrated Area Development (NCIAD) act in response to problems that arise on an ad hoc basis in response to initiatives taken within MAR. From the perspective of decentralization, this is appropriate behavior.

In its exercise of the lead agency position, MAR provides on-going management and technical support to the Director and Project Manager of BIAD II through the office of Deputy Minister Labayen. All the available evidence indicates that the behavior of the Deputy Minister and his staff is supportive rather than directive. Although the Project Director and/or Project Manager spend an average of four days a month in Manila with the Deputy Minister and his staff, it is clear that those meetings are almost always initiated by the PMO in order to get help on specific problems. These meetings are seldom initiated by the Deputy Minister in order to instruct project officials. The type of help normally requested by PMO staff involves the Deputy Minister's intervention with other national level officials on such matters as authorization for budget releases, contract problems, civil service appointments for staff recruited directly by the PMO, and assorted budget questions. Although specific solutions to those problems are often delayed, PMO staff report that decisions concerning what specific actions the Deputy Minister's office will take are immediate.

Another indicator of the level and orientation of support rather than control is the secondment of staff from Manila to the PMO for short, recurring, and long term assignments on an as needed basis. That type of support has been limited primarily to the engineering/construction area and has been steadily increasing since the first joint evaluation of the Project in June 1979. Thus, MAR's Manila based chief engineer (and one of the authors of this Report) has been visiting the project site in a support role on an average of three times per month since late 1979. In addition, following AID's Audit Report of October 1980, four MAR engineers<sup>56/</sup> have been seconded from Manila to the PMO on a full time basis since January 1981. Another Mechanical and Electrical Engineer has been seconded on a recurring basis since the middle of 1980 and will continue to provide support to the PMO for pump installation and start-up.

This type of vertical management relationship which relies on project level managers to initiate actions with national level agencies providing responsive support is the heart of an effective decentralized management system. As currently operating, with the exception of the contracting process, the commitment of the GOP to that principle goes far beyond simple rhetoric.

(iii) Horizontal Coordination and Cooperation. Because of the manner in which the system actually operates, as described above, horizontal coordination at the national level is of minor importance; except in the case of

<sup>56/</sup> Three civil engineers and one geodetic engineer.

contracting. In the case of contracting a decentralized process is not allowed to operate. Probably for the same reasons that the national level agency (COA) responsible for retaining control over the contracting process does not appear interested in relinquishing that control, the level of cooperation between MAR and the Cabinet Coordinator of the BRBDP on the one hand and COA on the other hand has been disappointing.

b. Regional Level

Since effective functional authority has been largely decentralized from the national to project level, three dimensions stand out as important indicators of local level commitment: horizontal coordination and cooperation among involved regional agencies, the extent to which Project level management exercises the authority delegated to it, and the level of energy applied to project activities by assigned staff. Thus, the evaluation team attempted to assess performance along those three dimensions.

(i) Horizontal Coordination and Cooperation. As described in Subsection 8 above, the principle mechanism for horizontal policy coordination and cooperation within BIAD II is the Composite Management Group (CMG). Although the CMG meets only intermittently on an ad hoc basis (on average about four times a year), reports from the PMO indicate that it is a supportive group which smooths the interactions of the fifteen regional government agencies participating in the Project. Given the principle of decentralization to the project management level, the degree of participation practiced by the Regional Directors within the CMG is appropriate.

The mechanism for integrating the input of these fifteen agencies at the operational level is the PMO itself. Full and part-time personnel are assigned to the PMO from different agencies. The degree to which personnel assigned from agencies other than MAR are directly managed by and are responsive to the direction of the MAR Project Manager is remarkable. There is no question in the minds of the evaluation team that the PMO is an integrated implementation unit and that the primary employment identification of its full time staff is with the PMO. In the context of comparative experience in several other countries, this is the most effective example of functional inter-agency integration ever witnessed by the Evaluation Team Leader.

(ii) Exercise of Delegated Authority. The exercise of delegated authority by subordinate management levels is not an automatic response to a delegation of authority from higher levels. Rather, responding to a delegation of authority by referring all but the most minor decisions back to higher authorities for approval is a frequent characteristic of initial efforts to decentralize a system. However, there can be no doubt that, in the case of BIAD II, the PMO has seized the authority delegated to it and exercised that authority to its fullest extent. Thus, the Project Director has exercised the right to divert funds available from one annual budget category to another as new requirements are identified and/or priorities shift. The Project Manager has authority to make expenditures for individual items up to a level of \$10,000 (\$1,333) without prior Project Director approval. In addition, the Project Director has authority to make expenditures up to

a level of ₱100,000 ( \$13,333) and to enter contracts up to a maximum of \$1 million ( \$133,333). Further, the Project Manager exercises his own authority in the recruitment of new staff for the PMO. Finally, as discussed above, major decisions concerning revisions in the design of the project itself have been made at the PMO level as project implementation has evolved. The flexibility that the system--as it has been operating--allows is at the heart of effective implementation of a complex project like BIAD II.

Leaving aside judgments concerning the quality of specific decisions made at the CMG/PMO level,<sup>57</sup> the exercise of that authority at the project level is most impressive. If significant errors of judgment at local levels occur, it is not the fault of decentralization but rather a problem in the assignment of specific individuals to positions of responsibility at the project implementation level. In the case of BIAD II, that has not been a significant problem; the Evaluation Team Leader is very much impressed by the high quality of responsible members of the project level implementation team.

(iii) Level of Energy of Assigned Staff. The Evaluation Team would like to think that one result of the decentralization that has occurred is the high level of energy expended by the PMO staff. However, whether or not decentralization is an important contributing factor, it is evident to the external members of the Team that the majority of PMO staff members devote much more time, energy, and creative thought to the implementation of BIAD II than is normally observed among civil servants. Twelve members of the staff, including the Project Manager himself, actually live at the PMO and are--in a very real sense--totally immersed in the project. In addition, the Deputy Manager of the PMO for Physical Infrastructure Development resides in the Project Area close to the PMO. Various external members of the evaluation team observed PMO staff working late into the evening both at the PMO and other project sites on more than one occasion and heard reports that this was not uncommon. The reports of earlier visits by other DAI consultants also indicate a high degree of commitment by PMO staff to the successful implementation of BIAD II.<sup>58/</sup>

#### 10. LAND CONSOLIDATION AND TENURE REFORM (Jerry Silverman)

If the "guts" of BIAD II is the massive physical transformation of the Bula-Minalabac area into a productive irrigated rice producing area, the "heart" of the BIAD II Project is Land Consolidation and Tenure Reform. Under the terms of the Operation Land Transfer Program (OLT) of the Ministry of Agrarian Reform, 2,668 irregularly shaped and scattered farmlots overwhelmingly worked

<sup>57/</sup> That discussion is reserved for Section 4-6 and 10-12 of this Report.

<sup>58/</sup> James Carney, George Honadle, and Thomas Armor, Coordination and Implementation at Bula-Minalabac: An Example of the Structure and Process of Integrated Rural Development; a Field Report prepared under AID Contract No. DSAN-C-0065 for USAID/Manila (March 1980).

by approximately 1,200 tenants and squatters will be consolidated into 1,230 lots.<sup>59/</sup> These 1,230 farmlots--plus about 23 others to be brought under cultivation--will be redistributed to approximately 1,253 farmers by the time the Project has been completed.

Under the terms of OLT, each farmer-tenant with rights to the land will be awarded a new consolidated farmlot equal to the total size of his current holdings within the minimum and maximum size for irrigated rice land of 1-3 hectares; minus 500-600 square meters for a homelot in a new consolidated residential community (refer to Section V, Subsection 11 of this Report) and 12% for Right of Way. For those farmer-tenants currently working an excess of 3 hectares, the additional land will be awarded to qualified members of their family capable of an committed to working that land. An additional 11 owner operators<sup>60/</sup> of farms in the Project Area, with an average landholding of 6.5 hectares, will be allowed to retain the size of their current holdings without maximum limit (minus 12% for Right of Way). Following completion of the Project, any excess agricultural land will be allocated to qualified squatters in the Project Area.

a. Surveys, Computations and Mapping

Progress in surveying, computing, and mapping the entire Project Area has been significantly delayed. This task requires the identification of all farmers within the project area and determination of the total hectares farmed by each one. That is followed by a resubdivision of the entire Project Area into appropriate sized consolidated farmlots and the assignment of a farmer to each one.

Although the Project Paper and original implementation plan projected that all new consolidated farmlots would be mapped and assigned and that all farmers would have occupied those lots and received their CLTs by December 1981, only the survey, computations, mapping and assignment of farmlots to farmers in Barangay San Ramon (300 hectares) has been fully completed. In addition, the identification of farmers and the computation of each farmlot size (but not location) has been completed for all six remaining barangays.

At current staffing levels, the FMO believes that it can complete the entire task of resubdividing the entire Project Area into appropriate sized consolidated farmlots and assigning a farmer to each one by October 1983; according to the following schedule:

<sup>59/</sup> At the time BIAD II was designed and the Project Paper written (1977), the three large estates of the Project had already been expropriated by the GOP (Lirag estate in 1961 and the Hernandez and Silverio Estates in 1972). By early 1977, 756 farmer-tenants had already been issued Agreements to sell or Certificates of Land Transfer (CLTs).

<sup>60/</sup> Five of these 11 owner operators live nearby but outside of the Project Area.

<u>Barangay</u>	<u>Estimated Completion Date</u>
Silverio (Phase II)	Sept. 81
San Agustin (Phase I-B)	Mar. 82
San Jose (Phase IV-A)	Nov. 82
Baliuag Viejo (Phase V)	Jan. 83
Sagrada (Phase IV-B)	May 83
San Isidro (Phase III)	Oct. 83

The substantial delay in this survey, computation, and mapping work has been due to delays in release of funds by the central government; reallocation of funds and staff within the FMO to major infrastructure construction activities; insufficient numbers of staff for surveying and computation; and inadequate availability of transportation.

Some of these problems have recently been ameliorated to some extent (e.g., a full time draftsman was hired in January 1981) and there is reason to believe that some of the others will be resolved in the near future. Thus, the FMO has forwarded a request to MAR for additional supplemental funding from MAR's Line Budget to enable the FMO to hire a third survey team. If a third survey team were added to the staff, it would be assigned exclusively to land consolidation survey work. Currently, the two available survey teams share responsibility for land consolidation surveys with other responsibilities required by the infrastructure construction in the Project. FMO staff expect that with the addition of a third survey team and the hiring of a private contractor for surveys of Phase IV and Phase V, completion of surveys, computations, and mapping could be advanced to April 1983. However, unless additional computers are hired, a bottleneck will most likely still remain.

b. Consolidation and Relocation

To date, no consolidation has occurred in the sense of new CLTs being issued and no relocation has occurred in the sense of actual movement of farmers from plots currently being worked to the new consolidated farmlots. San Ramon (Phase I-A) will be the first area in which that actual movement will occur. The pumps and irrigation system in Phase I-A began operation on a test basis only on May 28, 1981. According to the FMO, farmers in each Phase are permitted to farm their old land no longer than one full cropping season after installation of the new irrigation system. However, at a meeting on June 6, 1981, the IA of San Ramon decided to occupy their new Farmlots immediately prior to the next cropping season; although approximately thirty farmers will not be able to do so because land improvements have not yet been completed.

Once farmers have moved onto their new farmlots, they will be organized into compact farms which serve as integrated production units. These farms will consist of 10 farmers each and range in size from approximately 19-25 hectares each (refer to Section V, Subsection 5).

61 Does not include computations required by Bureau of Lands to process CLTs.

c. Land Titling

The process through which the farmer receives a CLT or Agreement to Sell for his new consolidated farmlot and homelot is complex:

- First, his current "holding" must be surveyed, computed, and mapped;
- Second, the entire barangay within which he lives must be divided into the appropriate number and size of consolidated farmlots and one must be assigned to him;
- Thirdly, survey documents must be prepared for him by the PMO for review and approval by the Bureau of Lands;
- Fourthly, following approval by the Bureau of Lands, CLTs or Agreements to Sell can be issued by the PMO, representing MAR, to those residing in San Ramon, San Agustin, San Isidro, Baliuag Viejo, and Mataroc. For those residing in San Jose and Sagrada, MAR will issue an Emancipation Patent following review of the cost of land amortization by the Land Bank.<sup>62/</sup>

As described above, it is not expected that the second step will be completed for the entire project area until April 1983 at the earliest. However, it is also expected to be common practice for farmers to occupy their new farmlots prior to completion of the third and fourth steps.

11. HOMESITE DEVELOPMENT AND RELOCATION (Jerry Silverman)

a. Improvements

The project design includes the relocation of farmer beneficiaries to a developed community consisting of prepared homelots of between 500-600 square meters. Ten percent of the homelot is normally used for the house while the remainder is available for backyard projects (e.g., gardens, poultry, and/or small animals). The homelot area is considered to be a part of the total land allocation of between 1-3 hectares under the land reform/consolidation scheme.

The New community location provides areas for a school, chapel, park, and Barangay Hall (i.e., Multi-purpose building). In addition, road networks and drainage facilities are provided. According to the original design, a well and small hand-operated water pump and the materials to construct a water-sealed pit privy on each homesite would also be provided. However, in San Ramon, the project has been changed to provide drinking water by a centralized water system. Consideration is now being given to changing the design in that respect throughout the other six Barangays. In any event, the costs of the drinking water systems and the materials for the pit privy are expected to be added to the irrigation construction loan and amortized over a 40-year period.

<sup>62/</sup> The difference in procedures for the issuance of CLTs, Agreements to Sell, and Emancipation Patents in these areas is a function of the different laws under which the three large estates in the Project Area were expropriated.

The location of these new barangay residential communities takes into account topographical features in order to reduce the negative effects of such things as flooding and the desire to maximize the best land for agricultural production. At the same time, the location is selected in such a way that the beneficiaries' farmlots, on average, are only approximately one kilometer away.

Although by this date (June 1981) homesite improvements should have been completed in four barangays (San Ramon, San Agustin, San Isidro, and San Jose), only the 149 homelots in Barangay San Ramon have been fully improved. Mapping of homelots in San Agustin has been completed, but construction of improvements has not yet begun because the site has not yet been harvested of its last crop.

The primary reason for the delay in San Agustin, San Isidro and San Jose is that funds for that purpose were reallocated from current account to construction of roads, irrigation, and drainage systems in Phase IV. Progress in construction of Phase IV was one factor required to demonstrate MAR's ability to "turnaround" the delays caused by inefficient processing of contract approvals within the GOP. Clear progress by June 1981 in that regard was required by USAID as the result of the AID Auditors' Report of October 1980. Thus, the BIAD II Project Manager placed higher priority on progress in the construction of major infrastructure in Phase IV and diverted funds with the expectation that major construction of Phase IV infrastructure could begin no later than January 1981. That belief was in turn based on the understanding that the problems with the contracting approval process had been resolved (refer to Section V, subsection 4b(i) of this Report).

#### b. Relocation

Only San Ramon already has homelots suitably prepared for relocation. In that Barangay, results are remarkable. A full 90% of eligible families have moved from their old locations onto the new homesites.

However, it should be noted that relocation is not regarded by the PMO staff as a voluntary act by the farmer beneficiaries. Rather, the farmers are told that they must move; unless they live in a house built prior to 1974, the original cost of which was more than ₱10,000. However, PMO staff admit that no sanctions are available to them if farmers refuse to move; the farmers are simply not told that they have a choice. Thus, the very high percentage of eligible farmers who have actually moved might be more of an indication of PMO staff efficiency than of farmers' positive desire to avail themselves of the objective benefits of living in new, improved, service communities. In any event, 128 families have already moved onto the 142 available homesites in San Ramon. One of these lots has not yet been allocated. It is believed by PMO staff that the other thirteen have not been occupied because the farmers involved do not yet have sufficient funds to cover the cost of the transfer.

It should also be pointed out that there are ten families assigned homelots within the community who are not allocated farmlots. Either the husband or wife in each of these ten families must meet both of the following criteria in order to be assigned a homelot: (1) is a child of a farmer within the Barangay and (2) has already built a house on land occupied by his parents prior to land consolidation.

12. APPLIED AGRICULTURAL RESEARCH (Cesar Umali)

This activity is comprised of three major components, namely 1) rice variety testing, 2) fertilizer application trials, and 3) insecticide treatment trials. It is aimed at finding optimum (i.e., highest) yields at lowest cost, and the determination of appropriate types and levels of fertilizer application and level of insecticide use.

Trials are supposed to be conducted during both wet and dry seasons of a 1,500 sq. meter demonstration plot in Baliuag Viejo. There will be four trial seasons after which data and results will be evaluated by the Bicol Rice and Corn Experiment Station. Activities are coordinated with field technicians from Ministry of Agriculture line agencies.

The third trial-season is underway and the fourth and final trial is scheduled for the 1981 wet season. These trials actually began during the 1979 wet season and were targetted for completion during the 1981 dry season. Due to lack of irrigation water, however, trials could not be conducted during the 1980 dry season.

13. FARM LEVEL INCOME AND CREDIT

(Jerry Silverman, Herminiano Echiverre, and Gregorio Beluang)

a. Income

The current level of the net discretionary income earned by farmers within the project area has not been ascertained yet by PMO staff. Some discussion of the factors which have affected income and potential impact of the project on incomes is discussed in Section V, Sub-section 3.b. of this Report.

b. Amortization of Land

Under the terms of land reform, the value of loans to farmers for amortization of redistributed land varies by Estate. Thus, land in Mataoroc was priced at ₱6,000 per hectare, in San Ramon, San Agustin, and San Isidro at an average of ₱1,200 per hectare and in Sagrada and San Jose at ₱8,000 per hectare. Although repayment was supposed to begin during 1975, to date most farmers are in default. Further, although the official policy of the LBP and MAR is that the SN will take over control of the cultivation of land in default for more than three years until such time as the amount of debt in default has been collected, neither agency is enforcing that policy. Therefore, to date, there have been no sanctions applied to farmers in default and there are no plans for such sanctions to be applied within the project area in the future.

c. Production and Commodity Credit

The Project Paper assumed that "sufficient agricultural credit will be made available to finance required product inputs." In line with that assumption, the LBP has been directly involved with the PMO in the design and implementation of a Production and Commodity Credit component.

The first production and commodity credit loans were given during 1980. Farmers can borrow up to a maximum of ₱1,350 for production of rice, secondary crops, poultry and/or livestock and/or for such commodities as hand tractors, draft animals, and/or farm tools. The repayment term is a maximum of 18 months and interest is charged at a rate of 1% per month. Farmers who are in default on amortization of land payments are not excluded from the production and commodity credit program.

The hope of project management is that production and commodity loans will result in such a level of increase in income that farmers will not only repay the production and commodity loans but will also begin repaying the amortization costs on land.

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## VI.

**CONCLUSIONS: SOME THOUGHTS FROM HINDSIGHT**  
(Jerry Silverman)

An often heard lament voiced by Evaluation Teams which look at a project following several years of implementation experience is: Why couldn't they have designed it better; they must have known that aspect could not have worked like that? That particular lament will not be heard from this Evaluation Team because we understand that those persons responsible for the design of projects as complex and ambitious as BIAD II do not have the luxury of the hindsight with which we are gifted. BIAD II represented--and still represents--a fundamentally new and extremely comprehensive approach to the problems of raising agricultural production and improving the incomes and living conditions of the rural poor. There was little enough experience with projects of this kind elsewhere (and no prior experience in the Philippines) at the time BIAD II was designed.

Nevertheless, this Evaluation Team would be remiss in its responsibilities if it did not address at least a few of the broader issues raised or lessons learned from BIAD II implementation experience to date; as well as some of the broader problems that we think might occur during the implementation process in the future.

- The Taiwan Model. The model for land consolidation initially adopted for BIAD II was over-engineered, over-priced, and required much too much social upheaval. Although certain construction design elements were scaled down on successive occasions because of prohibitive costs, adherence to the basic design continued.
- The GOP Contract Approval/Fund Release Process. The design of BIAD II shares with many AID funded projects the identification of bureaucratic constraints within the host government's normal operating procedures (in this case the contract approval and funds release process) and an assumption that the constraint will be immediately removed by the issuance of an "order" changing those procedures. Experience elsewhere suggests that such an order seldom--if ever--is rapidly implemented. It can be argued that the changes that have occurred in the GOP's budget/funds release process in support of BIAD II were arranged within a reasonable time (3 years) relative to worse performance on the part of other governments elsewhere (the metaphor of "the glass half full rather than half empty" might be relevant here).
- Delays. The two design flaws mentioned above account for much of the difficulties and delays experienced during the subsequent implementation of BIAD II.
- Farmer-Beneficiary Participation. Although since 1977 farmer-beneficiaries have been consulted from time to time since initial design efforts began,<sup>1/</sup> they were not actively involved to any significant extent in decisions concerning the fundamental scope and content of the project as a whole. It can be expected that when the full implications of the Project are understood by them, some resistance by farmer-beneficiaries will occur.

<sup>1/</sup> For a discussion of farmer level initiatives prior to 1977, refer to Section IV of this Report.

- **Farmer-Beneficiary Organizational Development.** BIAD II also shares with many other AID financed projects an emphasis on developing local level capacity to manage, maintain, and operate the infrastructure provided by the Project. However, that emphasis is most often expressed in terms of objectives sought rather than in substantive terms of the process through which it can be achieved. An initial assumption that such organizational development will largely take care of itself with the provision of some training courses specified not in terms of substance but rather in terms of results in situations like that discussed in Section V, subsection 5 of this Report.

Given the level of investment that has already been made in the implementation of a project before such flaws in design are apparent, nothing much can normally be done to change the plan in any fundamental manner. That being the case, it should be understood that those persons responsible for implementation at the project management level should not be held entirely responsible for difficulties which subsequently arise.

ANNEX A  
SCOPE OF WORK, METHODOLOGY,  
AND  
RECOMMENDATIONS ON THE EVALUATION PROCESS  
(Jerry Silverman)

INTRODUCTION

The evaluation of the Bicol Integrated Area Development Project II (BIAD II) described in the body of the Main Report was conducted as a joint exercise by USAID/Philippines and the Government of the Philippines (GOP).<sup>1/</sup>

Jerry M. Silverman,<sup>2/</sup> a Senior Development Specialist of Development Alternatives, Inc. (DAI) was engaged by USAID under the terms of the Organization and Administration of Integrated Rural Development Project (#936-5300) of AID/DS/RAD to serve as the Team's Leader and external member. The Team Leader was responsible for overall coordination of the evaluation effort and the integration and editing of the Report. However, seven (7) other persons participated in data collection efforts and drafted specific original contributions; these seven (7) persons were all considered members of the Team and share authorship and final editing of this Report.<sup>3/</sup> In addition, valuable assistance was provided by Don Wadley and David Heesen (USAID); Francisco Ramos (PMO/Ministry of Agriculture/Bula); Huberto Villaraza and Jaime B. Abonita (PMO/Ministry of Agrarian Reform/Bula); and Antonio Peralta (PMO/Land Bank of the Philippines/Bula).<sup>4/</sup> Mr. Jose Fernando of the Office of the Cabinet Coordinator of BRBDP participated in the key introduction and review meetings at MAR/Manila. This Report could not have been written without the strong support and cooperation of Director Salvador Fejo, Project Director and Regional Director, MAR Region V.

SCOPE OF WORK

The objectives of the evaluation were to "critically examine and measure progress or lack of progress based on actual versus planned inputs, outputs, purpose, and goal level indicators" and "comment on the degree outputs have been achieved and are likely to achieve project purposes, and the degree to which progress has or is likely to contribute to higher level sub-goal and goal achievement." In order to arrive at such conclusions, the joint GOP-USAID Team was instructed to "address general project management, status of physical construction and reason for delays, and an assessment of preliminary institution/farmer organization planning/activity."<sup>5/</sup>

1/ This evaluation was the second evaluation of a series; the first of which was conducted in June, 1979: i.e., 1979 Evaluation Bula Integrated Area Development Project (June 22, 1979); Bula-Minalabac Integrated Area Development: Project Evaluation Summary (PES) (August 30, 1978).

2/ Dr. Silverman is Director of Development Alternatives, Inc. (DAI)'s Regional Office for Asia; located in Jakarta, Indonesia. He is a rural development planning and administration specialist with broad experience in project design, implementation, and evaluation in Southeast Asia, East Africa, and the Middle East.

3/ Paul Novick, Nedra Huggins-Williams, and Cesar Umali (USAID/Manila); Oscar Bermillo (USAID/Naga); Herminiano Echiverre (MAR/Manila); and Gregorio Beluang (PMO/MAR/Bula).

4/ Others involved as Resource Persons are identified in Annex C.

5/ USAID/Manila, Memorandum dated 9 April 1981 from Don Wadley (Deputy Chief, ORAD) to James Lowenthal, AID/W (DS/RAD), p. 5.

In addition to the more general terms of the Scope of Work described above, the Evaluation Team was specifically instructed to determine and offer a recommendation concerning the appropriateness of an extension of the Project Assistance Completion Date (PACD) based on the degree of improvement, since October 1980<sup>6/</sup> in: "(1) the project budgeting and financial management system; (2) contract review, award, and management; (3) the quality of work of project contractors; (4) the overall Ministry of Agrarian Reform and project level management capability."<sup>7/</sup>

With those instructions in mind, it was decided that this evaluation exercise should achieve two other important objectives: (1) provide GOP counterparts at the PMO project implementation level with experience in the design and implementation of an appropriate evaluation process and (2) direct the findings of the evaluation toward recommendations which would be of value to those GOP decision-makers and managers responsible for the on-going implementation of the Project. Thus, this type of evaluation did not take an "auditing approach." Rather, a conscious effort was made by the team to develop an improved strategy for the further implementation of the project (i.e., formative evaluation). In order to do so, the team engaged in a process of interactions with GOP officials which demonstrated appropriate evaluation techniques.

#### METHODOLOGY

Twenty-six (26) calendar days were devoted to the evaluation process as a whole. Jerry Silverman (DAI) arrived in Manila on Friday, May 15, 1981 and met with Don Wadley and Dave Haesen of USAID/Manila on Saturday, May 16, 1981. Decisions concerning the composition of the evaluation team and scheduling were finalized on Friday, May 22, 1981 following a meeting with Deputy Minister Labayen (Ministry of Agrarian Reform) on Thursday afternoon, May 21, 1981. All members of the team (with the exception of Nedra Huggins-Williams) visited the Project site for periods varying in length from five (5) to fourteen (14) days. Work was completed on the final evaluation report by Thursday, June 11, 1981, except for final typing and proofreading. Team members and key GOP and USAID officers reviewed the final copy before reproduction.

The evaluation team relied on three types of information sources:

- (1) Documents accumulated by USAID/Manila, USAID/Naga and the GOP in Naga;
- (2) Interviews with a wide variety of USAID and GOP personnel and beneficiaries;<sup>8/</sup>
- and (3) observations of various project activities.<sup>9/</sup>

<sup>6/</sup> AID/AAG/EA, Memorandum Audit Report No. 2-492-81-1 (October 6, 1980) includes the following finding: "At present, the implementation problems of loan 492-T-046 appear to preclude its successful conclusion notwithstanding all the concentrated efforts to date to bring this about. It is still possible that high level GOP action could increase the likelihood of successful although delayed implementation...."

We believe that by June 30, 1981, sufficient visibility will exist to help USAID/Philippines assess the success of ongoing turnaround attempts and decide whether or not continuation of loan 046 beyond that date is warranted."

<sup>7/</sup> USAID/Manila Memorandum (9 April 1981), p. 6.

<sup>8/</sup> Identified in Annexes C and E.

<sup>9/</sup> Identified in Annex B: Schedule of Evaluation Team Activities.

**Recommendations on the Evaluation Process**

- (1) As is usually the case, the Evaluation Team recommends that more time be devoted to the evaluation process and that personnel assigned to the team should be released from all other responsibilities during that time. For a Project as complex as BIAD II, an additional week each at the Project site and in Manila following the project site visit would have resulted in more and better data and enriched the analysis of that data.
- (2) Evaluations should be of the "Formative" and "Process" type. That is, the evaluation should: (a) focus on generating recommendations to Project decision-makers and managers which are useful for the on-going revision of the Project's Implementation Plan; and (b) involve Project Management as active participants in the collection and analyses of data and the preparation of the report itself. Participation of that kind provides substance to the joint nature of an evaluation.
- (3) Because a "formative/process" evaluation serves the purposes of both technical assistance in the monitoring and evaluation process and as a mechanism for refocusing Project Managers' attention on overall strategic and conceptual issues, one should be conducted on an annual basis "no matter what." Such evaluations should not be postponed simply because "no discernible progress" has been made since the last evaluation. The evaluation process should be viewed as an integral part of the implementation process.
- (4) Both the sponsor(s) and members of a joint evaluation team should understand that the process that the team goes through is more important than the formal report which results.
- (5) All AID evaluations--whether or not undertaken jointly with host country Government counterparts--should include an assessment of AID performance from the Host Country Project Management's point of view.



26 May  
(Tuesday)

- (i) Novick/Silverman continued interview of Francisco Ramos and Jimmy Abonita at PMO.
- (ii) Novick/Silverman observed composite Management Group Meeting at PMO attended by:
  - 18 Farmer leaders
  - Director Pejo
  - Gregorio Beluang
  - Antonio Peralta
  - Francisco Ramos
- (iii) Novick continues interviewing Jimmy Abonita at PMO.
- (iv) Silverman continues interviewing Francisco Ramos at PMO.
- (v) Novick interviews Manager of Casureco III at San Ramon.

27 May  
(Wednesday)

- (i) Novick/Silverman interviewed Manager of Casuero II in Naga City.
  - (ii) Novick interviewed Villaraza at PMO.
  - (iii) Novick met with Echiverre at PMO.
  - (iv) Novick/Silverman visited pump site, Phase IV.
  - (v) Silverman interviews Usman del Socorro at PMO.
  - (vi) Silverman interviews Formalejo, Jr. at PMO.
  - (vii) Novick/Silverman interview Manager of National Power Corporation at Naga City Substation.
- (viii) Novick begins calculations for Financial Analyses at Guest House.
- (ix) Silverman begins drafting text of Report at Guest House.

28 May  
(Thursday)

- (i) Novick/Silverman met with Echiverre at PMO.
- (ii) Novick continues calculations for Financial Analysis.
- (iii) Silverman witnesses first test pumping from Bicol River Phase I at San Ramon.
- (iv) Silverman met with Gregorio Beluang and Echiverre at San Ramon.
- (v) Silverman interviews Jimmy Abonita at San Ramon.
- (vi) Silverman continues to draft text of Report at Guest House.

29 May  
(Friday)

- (i) Novick departed for Manila by plane.
- (ii) Silverman met with Gregorio Beluang at PMO.
- (iii) Silverman continues to draft text of Report at Guest House.

30-31 May  
(Saturday/  
Sunday)

- (i) Novick continues calculations/drafting of Sections II and V, sub-sections 6 in Manila.
- (ii) Silverman completes drafting of Sections II/V, sub-sections 10/11, Section III and Appendix A.

1 June  
(Monday)

- (i) Cesar Umali arrives in Naga City
- (ii) Umali/Silverman visit PMO, meet with Gregorio Beluang.
- (iii) Umali continues calculations for Sections II/V, Subsections 6.
- (iv) Silverman completes drafts of Sections II/V, Subsections 9.
- (v) Oscar Bermillo begins drafting Section V, Subsection 4.

2 June  
(Tuesday)

- (i) Silverman continues drafting report.
- (ii) Umali conducts interviews with Farmer-Beneficiaries.
- (iii) Umali begins drafting Sections II/V, Subsection 6.
- (iv) Bermillo continues drafting Section V, Subsection 4.

3 June  
(Wednesday)

- (i) Silverman continues drafting report, begins editing.
- (ii) Umali completes interviews with Farmer-Beneficiaries.
- (iii) Umali completes drafting Sections II/V, Subsection 6; begins drafting Annex E.

4 June  
(Thursday)

- (i) Silverman continues drafting, editing report
- (ii) Umali completes drafting Annex E and Section V, Subsection 12.

5 June  
(Friday)

- (i) Silverman continues drafting, editing report.
- (ii) Bermillo completes Section V, Subsection 4.

6 June  
(Saturday)

- (i) Silverman completes drafting, editing entire 1st draft report.
- (ii) Typing of entire 1st draft report completed and xeroxed.
- (iii) Review of 1st draft report with PMO and CMG at PMO.

7 June  
(Sunday)

Silverman and Umali travel to Manila by plane.

8/9 June  
(Monday/Tuesday)

Meeting Silverman, Beluang, Echiveri, Umali and Novick re: revision of initial draft (Joined by: Bermillo, Tuesday, June 9th).

10 June  
(Wednesday)

Review of 2nd draft report with Deputy Minister Labayen and staff (MAR).

ANNEX C  
PERSON INTERVIEWED AND VISITED  
(other Than Within the Team)

USAID

Ralph Bird  
Abraham Grayson  
David Heesen  
Don. F. Wadley

Project Officer/BIAD II  
Chief Engineer/OCD  
Area Development Advisor/ORAD  
Deputy Chief, ORAD

GOP

Benjamin Labayan  
Salvador Pejo  
Jose Fernando  
Camilo Balisnomo  
Fernando S. Lacaba  
Restituto Daguinsing  
Agustin B. Mago

Deputy Minister  
Regional Director/MAR  
OCC Coordinator/BRBDP  
Program Director/BRBDP  
Regional Director/MLGCD  
Regional Director/MOH  
Regional Director/MA

Jose Bobiles

Regional Director/MPW

Crisanto Gimpaya  
Jose Fuentebella III

Regional Director/NIA  
Provincial Development Coordinator/  
Office of the Governor/Camarines Sur  
Deputy Project Manager: Admin/PMO  
Deputy Project Manager: PIDD/PMO  
(Actg.) Deputy Project Manager: IADD/PMO

Huberto Villaraza  
Jaime Abonita  
Francisco Ramos  
Antonio Peralta  
Osmundo del Socorro  
Jose Bulao  
Francisco Margate  
Rose Tengco  
Adolfo Abragan  
Edmundo Valenciano

LBP/PMO  
MAR/PMO  
MA/PMO  
MAR/PMO  
MA/PMO  
MLGCD/PMO  
MA/PMO

Sixteen (16) Farmer Leaders observed at Meeting; one (1) interviewed

Eight (8) Farmer-Beneficiaries: interviewed

ANNEX D.

DETAILED COMPUTATIONS  
FOR  
AMORTIZATION AND O&M COSTS  
(Paul Novick and Cesar Umali)

The eight Tables, which follow (Tables D-1 through D-8) provide detailed computations for the Tables in Section 6, Subsection C in the main body of the Report.

TABLE D-1

Assumed Potential Service Area

Phase I	610 has.
Phase II	207 has.
Phase III	327 has.
Phase IV	1037 has.
Phase V	<u>248 has.</u>
Total	2429 has.

TABLE D-2  
DERIVATIONS FOR ANNUAL  
ELECTRICITY COSTS

Phase I

- 610 has. coverage
- 2 (200 HP) main pumps
- 19,694 gal/min total pumping capacity
- 298.28 KW total pumping energy<sup>3/</sup>

(1) Total Average Annual Diversion Requirement

$$= 7,360,320 \text{ gal/ha}^{4/} \times 610 \text{ has}$$
$$= 4.4898 \times 10^9 \text{ gal.}$$

(2) Annual Operation Time of Pumps

$$= (4.4898 \times 10^9 \text{ gal}) \div 19,694 \text{ gal/min}$$
$$= 227,978 \text{ min}$$
$$= 3,800 \text{ hrs.}$$

(3) Annual Electricity Consumption (KWH)

$$= \text{Pump Operation Time (Hrs)} \times \text{Pumping Energy (KW)}$$
$$= 3,800 \text{ hrs} \times 298.28 \text{ KW}$$
$$= 1,133,354 \text{ KWH}$$

(4) Energy Charge (CASURECO III)

$$= 1,133,354 \text{ KWH} \times \text{P}0.63/\text{KWH}$$
$$= \text{P}714,013$$

(5) Demand Charge<sup>5/</sup>

$$= \text{P}5.00/\text{HP/mo} \times 400 \text{ HP} \times 10 \text{ mos}$$
$$= \text{P}20,000$$

(6) Base Rate

$$= \text{P}5,000/\text{mo} \times 2 \text{ mos}$$
$$= \text{P}10,000$$

(7) Annual Electricity Cost (Phase I)

$$= \text{P}744,013$$

(8) Annual Cost per Hectare (Phase I)

$$= \text{P}1,220$$
$$= 22 \text{ cavans @ P}55 \text{ per cavan}$$

<sup>3/</sup> .7457 HP = 1 KW

<sup>4/</sup> Figure derived in Table \_\_\_\_\_.

<sup>5/</sup> Pumps are operational only 10 months of the year due to cropping schedule.

Phase II, IV, V

- 4 (200 HP) main pumps  
596.56 KW total pumping energy<sup>6/</sup>  
46,720 gal/min total pumping capacity  
1,492 has                      207 has (Phase II)  
   1,037 has (Phase IV)  
   248 has (Phase V)
  
- 1 (150 HP) booster pump (A)  
1 (125 HP) booster pump (A)  
205.07 KW pumping energy<sup>6/</sup>  
26,200 gal/min total pumping capacity  
896 has                      207 (Phase II)  
   689 (Phase IV)
  
- 2 (15 HP) booster pumps (B)  
2 (30 HP) booster pumps (B) 6/  
67.11 KW total pumping energy<sup>6/</sup>  
4,855 gal/min total pumping capacity  
223 has (Phase II & IV)

Main Pumps

(1) Total Average Annual Diversion Requirement

= 7,360,320 gal/ha<sup>7/</sup> x 1,492 has.  
= 1.0982 x 10<sup>10</sup> gal.

(2) Annual Operation Time of Pumps

= (1.0982 x 10<sup>10</sup> gal) ÷ 46,720 gal/min  
= 235,051 min.  
= 3,918 hrs.

(3) Annual Electricity Consumption (KWH)

= Pump Operation Time x Pumping Energy  
= 3,918 hrs x 596.56 KW  
= 2,337,037 KWH

Booster Pumps (A)

(1) Total Average Annual Diversion Requirement

= 7,360,320 gal/ha<sup>7/</sup> x 896 has.  
= 6.5948 x 10<sup>9</sup> gal.

---

6/ .7457 HP = 1 KW  
7/ Figure derived in Table \_\_\_\_.

(2) Annual Operation Time of Pumps

- =  $(6.5948 \times 10^9 \text{ gal}) : 26,200 \text{ gal/min}$
- = 251,712 min.
- = 4,195 hrs.

(3) Annual Electricity Consumption (KWH)

- = Pump Operation time x Pumping Energy
- = 4195 hrs x 205.07 KW
- = 860,309 KWH

Booster Pumps (B)

(1) Total Average Annual Diversion Requirement

- =  $7,360,320 \text{ gal/ha}^{8/} \times 223 \text{ has.}$
- =  $1.6414 \times 10^9 \text{ gal.}$

(2) Annual Operation Time of Pumps

- =  $(1,6414 \times 10^9 \text{ gal}) : 4,855 \text{ gal/min}$
- = 338,074 min.
- = 5,635 hrs.

(3) Annual Electricity Consumption (KWH)

- = Pump Operation Time x Pumping Energy
- = 5,635 hrs x 67.11 KW
- = 378,136 KWH

(4) Total Annual Electrical Usage

For all pumps = 3,575,482 KWH

(5) Energy Charge (CASURECO II)

- = 3,575,482 KWH x ₱0.67/KWH
- = ₱2,395,573

(6) Demand Charge<sup>9/</sup>

- = ₱5.00/HP/mo x Total HP x 10 mos.
- = ₱5.00/HP/mo x 1165 HP x 10 mos.
- = ₱58,250

(7) Base Rate

- = ₱5,000/mo x 2 mos.
- = ₱10,000

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<sup>8/</sup> Figure derived in Table \_\_\_\_\_.

<sup>9/</sup> Pumps are operational only 10 months of the year due to the cropping schedule.

(8) Annual Electrical Costs (Phases II, IV, V)

= ₱2,463,823

(9) Annual Cost per hectare (Phases II, IV, V)

= ₱1,651

= 30 cavans @ ₱55 per cavan

TABLE D-3

ELECTRICITY CHARGES

	CASURECO II	CASURECO III
Base Energy Charge	₱0.59 per KWH	₱0.55 per KWH
Fuel Adjustment <sup>1/</sup>	₱0.08 per KWH	₱0.08 per KWH
Total Energy Charge	₱0.67 per KWH	₱0.63 per KWH
Demand Charge	₱5.00/HP/month	₱5.00/HP/month
Base Rate <sup>2/</sup>	₱5,000/month	₱5,000/month

- 
- 1/ This factor varies from month to month depending upon the cost of imported fuel and the amount of electricity the power company purchases from thermal power sources. In the past this factor has ranged from ₱0.04 to ₱0.12 per KWH. An average figure of ₱0.08 per KWH has been selected for this analysis. However, recent reports indicate this cost may no longer be charged in Bicol.
- 2/ A minimum base rate of ₱5,000/month is charged to the user even if actual electricity consumption is less than this amount.

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TABLE D-4

Derivation of Average Annual Diversion Requirement Per Hectare<sup>a/</sup>

	1	2	3	4	5
	Agronomic Water Requirement (mm)	Average Effective Rainfall (mm)	On-Farm Water Requirement (mm)	Turnout Requirement (Col. 3 + 20%) (mm)	Diversion Requirement (Col. 4 + 33%) (mm)
Jan	330	-	330	414	552
Feb	330	8	322	404	539
Mar (1st 10 days)	55	-	55	75	100
Apr (last 20 days)	130	-	130	162	216
May	330	16	254	394	525
June	330	240	90	114	150
July	330	183	152	183	186
Aug (1st 10 days)	55	33	22	28	37
Sep	-	-	-	-	-
Oct	-	-	-	-	-
Nov (last 20 days)	130	50	60	80	132
Dec	330	120	210	266	351
				Total	= 2788

Average Annual Diversion Requirement Per Hectare

$$\begin{aligned}
 &= \frac{2788 \text{ mm/ha}}{1000 \text{ mm/m}} \times 10,000 \text{ m}^3 \\
 &= 27,880 \text{ m}^3/\text{ha} \\
 &= 7,360,320 \text{ gal/ha}^{\text{b/}}
 \end{aligned}$$

a/ Feasibility Study of Bula-Minalabac Project, BRBDP, 1977. Some team members have disputed these findings & recommendation has been made that an updated hydrological study be done.

b/ 264 gallons = 1 m<sup>3</sup>

TABLE D-5

Annual Personnel Expenditures

1. Salaries

1	- Operation Engineer	@ \$24,110	\$ 24,110
1	- Irrigation Engineer	@ 16,240	16,240
4	- Water Management Technologists	@ 12,365	49,459
4	- Pump Operators	@ 7,027	28,106
1	- Asso. Elec. Engineer	@ 14,220	14,220
10	- Water Tenders	@ 6,563	65,631
2	- Clerk Typists	@ 7,027	14,054
3	- Security Guards	@ 7,490	22,470
1	- Sr. Mechanic	@ 10,819	10,819
5	- Drivers	@ 5,590	<u>27,949</u>

\$273,058

2. Fixed Charges

(a) GSIS Life and Retirement Insurance Premium (8.5% of total annual basic salaries) \$ 23,210

(b) Medicare (# of Personnel x \$7.50 premium x 12 mos.) 2,880

Sub-total \$ 26,090

3. Travel & Per Diem

2 Engineers @ \$500/mo \$ 12,000  
5 Staff @ \$250/mo 15,000

Sub-total \$ 27,000

TOTAL \$326,148

TABLE D-6

Estimated Annual Vehicle O&M Expense

Fuel

10 Isuzu vans x 0.083 ltr/km x 40 km/hr x 2 hrs/day  
 x 260 days/yr x ₱5.34/ltr = ₱92,190

₱ 92,190

Lubricants (10% of fuel cost)

9,219

Spare Parts

100,000

TOTAL

₱201,409

TABLE D-7  
Breakdown, By Subsystem, of Pump Acquisition Cost, Replacement Cost, and Sinking Fund Requirement  
(in \$000)

Subsystem	Acquisition Cost		Replacement Cost		Sinking Fund Requirement		
	Large <sup>1/</sup>	Small <sup>2/</sup>	Large <sup>3/</sup>	Small <sup>4/</sup>	Large <sup>5/</sup>	Small <sup>6/</sup>	Total
Phase I	1,422	-	15,407	-	116	-	116
Phase II	2,637	-	28,571	-	214	-	214
Phases II, IV & V	1,621	1,617	17,563	5,075	132	210	342
Phases I & II	4,059	-	43,978	-	330	-	330
All Phases Except III	3,043	1,617	32,970	5,075	247	210	457

1/ 200 HP pumps.

2/ Less than 200 HP pumps.

3/ 25 years @ 10% annual inflation rate compounded.

4/ 12 years @ 10% annual inflation rate, compounded.

5/ 25 years @ 12% interest on balance, compounded annually.

6/ 12 years at 12% interest on balance, compounded annually.

D-11

TABLE D-8

Breakdown, by Subsystem, of Vehicle Acquisition Cost, Replacement Cost,

<u>Subsystem</u> <sup>1/</sup>	(1) <u>Acquisition Cost</u>	(2) <u>Replacement Cost</u> <sup>2/</sup>	(3) <u>Sinking Fund Requirement</u> <sup>3/</sup>
Phase I	170	441	25
Phases II, IV & V	415	1076	61
All Phases, Except III	592	1535	87

<sup>1/</sup> Total acquisition cost was allocated on the basis of each subsystem's hectarage relative to total area.

<sup>2/</sup> 10 years @ 10% annual inflation rate, compounded.

<sup>3/</sup> 10 years @ 12% interest on balance, compounded annually.

## ANNEX E

### FIELD NOTES: INTERVIEW WITH FARMER BENEFICIARIES (Cesar Umali)

1. Sample - Respondents were selected at random. The sample consists of: one farmer from Phase I (San Ramon); one rainfed farmer in Phase II (Sagrada); two farmers - pump operators in Phase III (San Isidro); one private pump user from Phase III; one rainfed farmer in Phase IV (Mataoroc); one farmer-pump operator in Phase V (Baliuag Viejo); and one private pump user in Phase V.
2. Methodology - Visits were made at or near farmer-respondents' homes. Informal interviews were conducted with the assistance of two PMO personnel who initially contacted interviewees; one of whom subsequently acted as both facilitator and Bicolano interpreter. An interview guide (attached) was prepared but response were not confined to the original set of questions.
3. Results - Field notes had been organized into the following broad topics:
  - a) project benefits; b) project costs, including problems, & c) irrigation fee.
  - a. Project Benefits - With the possible exception of the farmer at San Ramon, the respondents have only a vague idea as to when water from the project's irrigation system will reach them. Notions of the proposed irrigation system are mainly qualitative at this point, thereby making it difficult for farmers to say how much irrigation fee they can pay.

Both owners and users of private pumps (irrigating from 5-7.5 has) are looking forward to the day when the proposed system can serve them, primarily because their current problem is insufficient quantities and unreliable sources of water supply. Most private pump owners rely on shallow wells which cannot provide the required water supply during the dry season. This situation is most apparent in the case of Phase III, which can reportedly be entirely covered by private pump service.

Training programs for the farmer, his wife, and children and feeder roads are the benefits which are mostly readily appreciated and closely associated with the Project.

- b. Project Costs/Problems - Relocation and delays in project implementation are the most common concerns mentioned by the interviewees. With respect to relocation, the focus was on anticipated expenditures due to likely damage to houses, as well as relocating families owning permanent (concrete) houses.

The farmer at San Ramon noted certain problems namely: (i) inability to pump water to an elevated part of his farm and (ii) canal bank erosion.

Interviewees who brought up the topic of right-of-way compensation do not seem to understand to accept the existing arrangements concerning lands affected by right-of-way. Another problem cited was disruption of planting due to construction.

- c. Irrigation Fee - As earlier noted, farmers do not appear to be in the position yet to determine their capacity to pay. Nevertheless, certain useful indicators are available.

The San Ramon farmer has paid 15 cavans/hectare/season for a temporary pump owned by NIA. Though he says he needs to review his financial situation, he expects the proposed fee to be lower.

Other respondents also anticipate lower irrigation fees, ranging from 4-12 cavans/ha/season. The farmer at Sagrada believes that the PMO-proposed fee is 14 cavans/ha/season and he thinks that is too high; another farmer at Mataoroc feels the same way (although he believes that the PMO is proposing only 10 cav/ha/season).

The usual fee paid for private pumps (7 cav/ha/season plus fuel) may be a useful indicator. Current users can reasonably be expected to pay more than this fee if the new system can provide timely and sufficient water and because the user won't have to pay for fuel; which amounts to about 10-15 gallons per ha/season (about 2.2-3.3 cavans).

On two separate occasions, farmer respondents subsequently raised their originally low estimate: ceiling for what they said would be willing to pay as an irrigation fee after being reminded that the viability of their respective Irrigator's Association would depend on the amount of funds which could be generated. Respondents unanimously support the role envisioned for IAs as well as their participation in the IAs' activities.

Interview Guide

- I. What do you expect the actual benefits for you will be from this Project?
- II. What do you expect your obligations/responsibilities will be under the terms of this Project?
  - A. Monetary (irrigation fee, max. amount?)
  - B. Involvement/participation
    1. in irrigators association?
    2. in the maintenance of facilities (pumps, etc.?)
  - C. Others?
- III. Training Aspects: relevance and purpose clear? useful?
- IV. Past, Present, Expected problems with project?
- V. Other comments, recommendations, observations?

**FOR PRIVATE IRRIGATION SYSTEM OWNERS/USERS**

- I. Nature of user/powner relationship?
- II. Benefits/costs of private system?
- III. Expected/actual effects (positive and negative) of project on users/owners?
- IV. Other comments.

## ANNEX F:

### REVISED LOGICAL FRAMEWORK

#### INTRODUCTION

The Revised (Recommended) Project Design Summary Logical Framework provides a comparison between original design expectations and current estimates. Revised sections are provided for blocks A-2, B-2, C-2, D-2, B-4 and C-4. Total project costs and costs by year are rough estimates.

**Measures of Goal Achievement: (A-2)**

**(Amend original log frame statements as indicated)**

1. By 1990
2. By 1990
3. by 1990

**Sub-Goal**

1. By 1990
2. By 1990
3. By 1986
  
7. By 1986
8. By 1986
9. By 1985
10. By 1988

**Conditions that will Indicate Pumps has  
been achieved: End-of-Project Status. (B-2)**

**(Amend original log frame statements as indicated)**

1. 70% ... CY 1984
3. Utilized by all farmers by CY 1985 be maintained by IA by 1986
5. By 1985
6. By 1986
7. By 1984
9. By 1985 (delete from; to by 1982)
10. By 1985
11. By 1984
12. By 1985
13. Delete five by end of CY 1985.

Magnitude of Outputs: (C-2)

Physical Facilities

Year: 1978 1979 1980 1981 1982 1983 1984 1985 1986 TOTAL

- Pump Houses Built			1	1	3	6			11
- Pumps Installed			2	4	6	6			18
- Irrigation Canals (Km)	4	16	37	53	47	16			173
- Drainage Canals (Km)	1	11	22	18	9	2			63
- Service Roads and Access Paths (Km)	1	8	16	20	20	7			72
- (Hectarage Irrigated)		25	198	479	732	585	169		2188
- Multi-Purpose Buildings	3		3		1				7
- Elementary Schools				1					1
- Training Center and Dormitory			2						2

Homesite Development

- Homesite completed				1	1	2	3		7
- Homelots developed and distributed				149	172	436	473		1230
- Households Relocated				123	140	358	389		1010
- Hand Pumps Installed									
- Water-Sealed Pit Privies Constructed or Approved				150	171	436	478		1230

(Delete: Central Water Systems to be installed)

Land Consolidation & Tenure Reform

- Farmlots consolidated		30	240	585	891	712	205		2663
- Consolidated Farms demarcated		15	113	275	419	335	96		1253
- New CLT's, Leases and Titles Issued					321	537	372		1230

Organizational Development and Training

a. Organizations Formed

- Compact Farms									
- Dist. Irrigators' Assn.									
- Irrigators' Association			1						
- Homemakers' Club	4		5	11	9	3			32
- Youth Clubs	2	6	10	23	18	6			65

b. People Trained

- Project Implementors	34								34
- Promotion Committee Members	18								18
- Barangay Leaders	18	19	33						
- Compact Farm Members	60	90	121	436	328	145			
- Compact Farm Leaders	18	27	51	130	98	45			
- Dist. IA Officers	4	6	12	30	22	10			
- IA Bd. Members	2	3	6	15	11	5			
- IA Water Masters				2	2	1			5
- Farmers (In Health)	60	90	171	436	328	145			1230
- Homemakers	60	90	171	436	328	145			1230
- Youth	75	227	380	870	681	227			2460

Applied Agricultural Research

- Applied Agricultural Crops		2	2	2	2	2			10
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Implementation Target (Type and Quantity) (D-4)

Project Component	FX	AID Loan		GOP		Year 1976-7	1978	1979	1980	1981	1982	1983	1984	1985	1986
		LC	Total	LC	Total										
I. Physical Facilities	404	1805	2209	5740	7949		787	768	802	1678	2707	1724	33	33	16
a. Imported Equipment	(404)		(404)	(569)	(973)		(112)	(93)	(127)	(72)	(500)	(117)			
b. Construction Costs		(1805)	(1805)	(5171)	(6976)		(675)	(675)	(675)	(1607)	(1607)	(1607)	(33) <sup>8/</sup>	(33) <sup>8/</sup>	(16) <sup>8/</sup>
II. Homesite Development				584	584					83	83	168	250		
III. Land Consolidation & Tenure Reform				155	155		20	21	21	30	30	30	1	1	1
IV. Organizational Development & Training				23	23		3	3	3	3	3	3	2	2	1
V. Applied Agricultural Research				9	9			2	5	2					
VI. Project Ops. & Mgt.	45		45	1399	1444	49	156	140	169	169	169	169	169	169	85
a. Imported Equipment	(45)		(45)		(45)		(45)								
b. Local Costs				(1399)		(49)	(111)	(140)	(169)	(169)	(169)	(169)	(169)	(169)	(85)
Sub-Totals	449	1805	2254	7910	10164	49	966	934	1000	1966	2392	2094	455	205	103
15% Contingency	67	271	338	1186	1524	7	145	140	150	295	359	314	68	31	15
Sub-Totals	516	2076	2592	9096	11688	56	1111	1074	1150	2261	2751	2408	523	236	118
Cost Escalation Factor	77	331	408	1003	1411	0	110	157	0 <sup>7/</sup>	339	412	361	0 <sup>9/</sup>	21	11
GRAND TOTALS	593	2407	3000	10099	13099	56	1221	1231	1150	2600	3163	2769	523	257	129

<sup>7/</sup> For 1980-83, 8% compounded annually with 1980 as base year.

<sup>8/</sup> For repair and maintenance.

<sup>9/</sup> For 1984-86, 10% compounded annually with 1984 as base year (1986 half year).

**Assumptions for achieving purpose: (B-4)**

**(Amend original log frame statements as indicated)**

1. First loans extended 1980
3. By 1985
4. Cooperatives II and III (CASURECO II, CASURECO III) are installed.
5. By end of CY 1982
6. ...Approved and in Process
7. ...GOP will provide subsidy to IAS to reduce costs to farmers to acceptable limits

**Assumptions for achieving outputs: (C-4)**

**(Amend original log frame statements as indicated)**

1. ...Construction can be completed according to revised schedule taking into account limited dry season.
2. Recent contractors are capable and available to do the construction work as currently scheduled.
5. Testing of pumps indicates sufficient groundwater to irrigate Phase III at acceptable costs (Phase II now designed to be irrigated from Bicol River).
6. Delay of GOP budgetary release as experienced through 1980 will not occur again; timely releases during 1981 will continue through 1986.
7. By the end of 1982.

ANNEX G :  
PROJECT MANAGEMENT OFFICE (PMO)

STAFF LIST  
(Prepared by Huberto Villaraza)

Project Manager	Gregorio P. Beluang		Permanent (MAR)
- Monitoring Section:			
1. Francisco Margate	FT Proj. Analyst		Permanent (MAR)
2. Godofredo Pan	FT CE Aide		Casual
3. Aurelio Barandon	FT CE Aide		Contractual
I <u>Administrative Division:</u>			
1. Huberto Villaraza	FT DPM-Adm. Affairs		Permanent (MAR)
- Cash Section:			
1. Rebecca Ruiz	FT Disbursing Officer		Permanent (MAR)
2. Mansueta Pan	FT Cash Clerk		Casual
3. Cita Sandrimo	FT Clerk		Contractual
- Accounting Section:			
1. Carlos Reyes	FT Project Accountant		Permanent (MAR)
2. Sylvia Ruiz	FT Bookkeeper		Casual
3. Luis Delima	FT Acctg. Clerk		- do -
4. Jessebel Bucasas	FT Acctg. Clerk		- do -
- Supply and Property Section:			
1. Limneo Mateo	FT Actg. Supply Officer		Permanent (MAR)
2. Rodolfo Imperial	FT Liaison Off/canvasser		Permanent (MAR)
3. Carmen Nebreja	FT Property Clerk		Casual
- General Services Section:			
1. Lilian Elgario	FT Record Officer		Contractual
2. Emilita Tuason	FT Personnel Aide		Contractual
3. Marisol Audian	FT Radiophone Operator		Contractual
4. Salvador Imperial	FT Clerk		Permanent (MAR)
5. Raquel Levity	FT Clerk		Casual
6. Tina Rieza	FT Clerk		Contractual
7. Salvador Antioquia	FT Light Equipment Operator		Contractual
- Maintenance Section:			
1. Edgar Sacid	FT Mechanical Engr.		Permanent (MAR)
2. Pablo Ibasco	FT Supervising Mechanic		- do -
3. Jesus Parco	FT Driver		Permanent (MAR)
4. Augusto Pasa	FT - do -		- do -
5. David Faura	FT - do -		- do -
6. Zosimo Regalado	FT - do -		- do -
7. Romeo Bisuña	FT Mechanic		- do -

8.	Efren Raquiel	FT	H.E. Operator	- do -
9.	Romualdo Bragais	FT	Driver	- do -
10.	Eduardo Majistrado	FT	Driver	Contractual
11.	William Rodriguez	FT	Driver	Casual
12.	Francisco Barrameda	FT	Mechanic	Casual
13.	Norberto Vale	FT	H.E. Operator	- do -
14.	Rodolfo Melchor	FT	Mechanic	- do -
15.	Juan Cea	FT	H.E. Operator	- do -

- Janitorial and Security Services:

1.	Romeo Taal	FT	Janitor	Casual
2.	Emerito Abad	FT	- do -	- do -
3.	Joel Deciban	FT	- do -	- do -
4.	Trespeces Security Agency			Contractual

II Physical and Infrastructure Division:

1.	Jaime Abonita	FT	DFM-PIDD	Contractual
2.	Fe Casuarte	FT	Clerk	- do -
3.	Margarita Gaviola	FT	CE Aide	- do -

- Design, Planning and Monitoring Section:

1.	Teresita Blasco	FT	Sr. Design Engr.	Contractual
2.	Roberto Marandarte	FT	CE Aide	- do -
3.	Aaron Fabieu	FT	- do -	Casual
4.	Adela Bacud	FT	- do -	Contractual
5.	Inocencio Tolentino Jr	FT	- do -	Casual
6.	Romulo Carmpina	FT	Draftsman	Contractual
7.	Réynaldo Chavez	FT	- do -	Casual
8.	Wilfredo Valencia	FT	- do -	Contractual
9.	Ricardo Veracruz	FT	- do -	Permanent (MAR)

- Survey Section:

1.	Eliseo Formalejo	FT	Sr. Geodetic Engr.	Permanent (MAR)
2.	Elena Cu	FT	Computer	Contractual
3.	Margarita Formalejo	FT	- do -	- do -
4.	Edmundo Palaypayon	FT		Permanent (MAR)
5.	John Rosero	FT	- do -	Contractual
6.	Nestor Raviza	FT	- do -	- do -
7.	Cesar Claveria	FT	Survey Aide	Casual
8.	Adolfo Pacao	FT	- do -	- do -
9.	Bernardo Samar	FT	- do -	Contractual
10.	Henry Bermejo	FT	- do -	- do -
11.	Leonardo Concepcion	FT	- do -	- do -
12.	Oscar Carmela	FT	- do -	- do -
13.	Réne Malate	FT	- do -	- do -
14.	Nilo Fornillos	FT	- do -	- do -
15.	Gregory Ojeda	FT	- do -	- do -

- Material Quality Control Section:

1. Noe Balang	FT	Actg. Materials Engr.	Contractual
2. Amauco Olayta	FT	Laboratory Aide	- do -
3. Danilo Garcia	FT	- do -	- do -
4. Wilfredo Felizmenio	FT	- do -	- do -

- Homesite Development and Force Account Section:

1. Publico Peyra	FT	Construction Engr.	Contractual
2. Alex Ramero	FT	CE Aide	- do -
3. Gener Barcelo	FT	CE Aide	- do -

- Field Supervising Staff:

1. Orlanuo Mentino	FT	Sr. Construction Engr.	Permanent (MAR)
2. Alan Rañeses	PT	C. Engr.	- do -
3. Escolastico Manilla	FT	C. Engr.	- do -
4. Paternucio Calleja	PT	Coordinator	Permanent (BRBDP)
5. Pablo Cordova	PT	Coordinator	- do -

III Institutional and Agricultural Development Division

1. Francisco S. Ramos	FT	TL-OIC	MA
2. Diego T. Rud	PT	Asst. SC	- do -
3. Antonio C. Peralta	FT	SC-IEDP	LBP
4. Jaime Hernandez	PT	LBP Farm Rep.	LBP
5. Adolfo C. Abrajan	PT	Inst. & Agri. Dev. Worker	MLGCD
6. Leopoldo C. Doblón	PT	BDW	MLGCD
7. Rosa D. Tengco	FT	FMT	MA
8. Maristela V. Tablizo	FT	FMT	MA
9. Oscar P. Orozco	FT	FMT	MA
10. Ruben R. Delfino	FT	FMT	MA
11. Edmundo Valenciano	FT	FMT	MA
12. Celedonio Basmayor	PT	FMT	MA

Women and Youth Section:

13. Zenaida S. Palencia	FT	FMT	MA
14. Flor F. Florenda	PT	PHN	MH
15. Leticia R. Chavez	PT	PHN	MH
16. Theo Jayme Santy, Jr.	FT	PHN	MAR
17. Melinda F. Abonita	FT	RHM	MH
18. Bernardita F. Estrada	PT	RHM	MH
19. Marilou Alparan	PT	RHM	MH
20. Luisa Manongsong	PT	RHM	MH
21. Myrna B. Sanchez	FT	RHM	MAR
22. Rodolfo Abrantes	PT	RSI	MH
23. Gertrudis Sanchez	PT	RSI	MH
24. Edith C. Manzano	PT	RYDO	MA
25. Mai Bismonte	PT	YDW	MSSD
26. Susan B. Perez	PT	RYDO	MA

- Land Consolidation and Tenure Reform Section

27.	Osmundo V. Del Socorro	FT	Actg. LAAO	MAR
28.	Rudy B. Tianes	FT	ART	MAR
29.	Cesar B. Bismonte	FT	Land Inspector	MAR

- Agricultural Research Section:

30.	Jose B. Bulao	FT	PPCT	MA
31.	Victor B. Gabad	PT	S.T.	MA
32.	Irene Ondes	PT	L.I.	MA
33.	Salvador Briones	PT	L.I.	MA
34.	Jerry Calag	FT	Coordinator	MAR