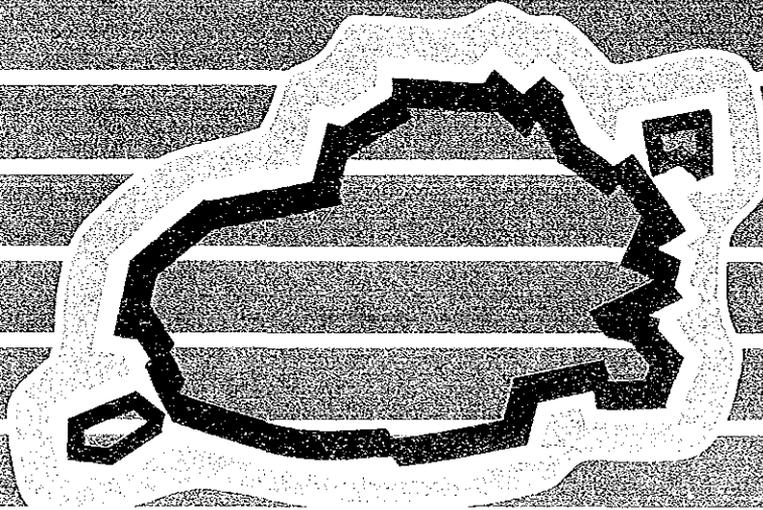


Republic of the Philippines

**Master Plan Study
of
Bohol Integrated Area Development Project**



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

February 1980

JAPAN INTERNATIONAL COOPERATION AGENCY

118
43.1
PLC

PLC

80-11

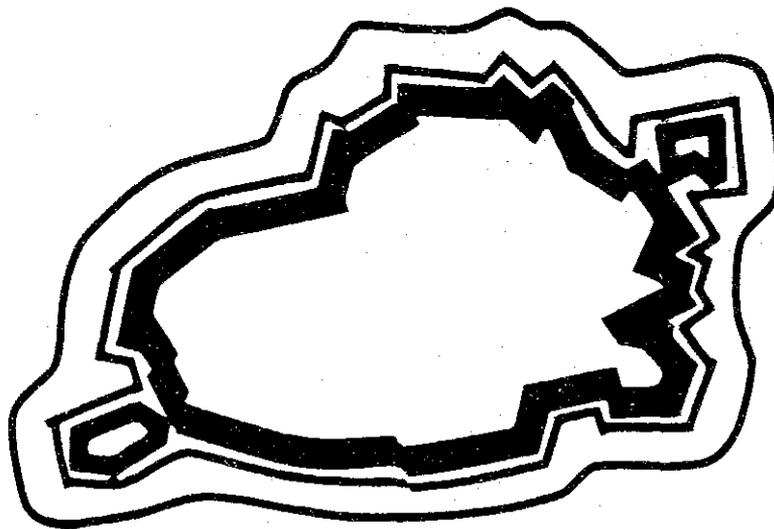
JICA LIBRARY



1045496[5]

Republic of the Philippines

**Master Plan Study
of
Bohol Integrated Area Development Project**



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

February 1980

JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団	
受入 月日 5845920	118
登録No09791	43.1
	PLC

P R E F A C E

In response to the request of the Government of the Republic of the Philippines, the Government of Japan has decided to conduct a survey on the Master Plan of Bohol Integrated Area Development Project and entrusted the Japan International Cooperation Agency (JICA) to carry out the work. The JICA dispatched a survey team headed by Dr. Hidetoshi Matsuo, the special adviser to Pacific Consultants International and Mitsubishi Research Institute Inc., consisting of 14 experts in relevant fields from July 10 to September 29, 1979. The survey team conducted a reconnaissance study, collected the necessary data and information, and exchanged views with the Philippine officials concerned.

After completing further studies and taking into consideration the comments of the Philippine officials concerned, the survey team has compiled this Master Plan for the Bohol Integrated Area Development for submission to the Philippine Government.

I hope that this report will contribute to the integrated area development of the Bohol province of the Republic of the Philippines.

I wish to express my sincere appreciation to the Philippine officials concerned for their whole-hearted cooperation and courtesies extended to the survey team.

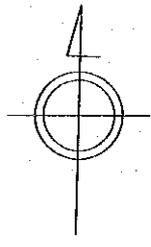
February 1980

Keisuke Arita

Keisuke ARITA
President
Japan International Cooperation Agency

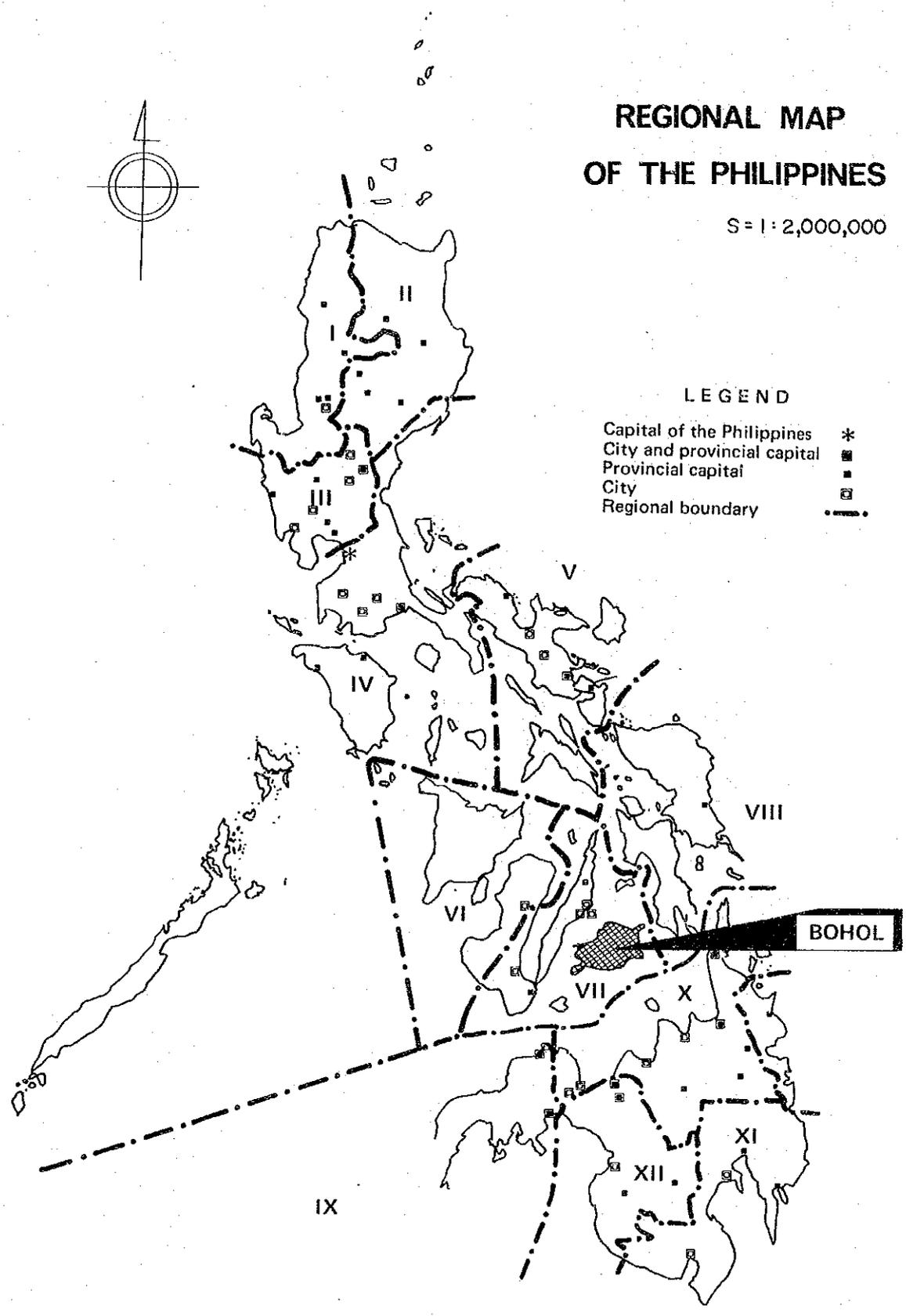
REGIONAL MAP OF THE PHILIPPINES

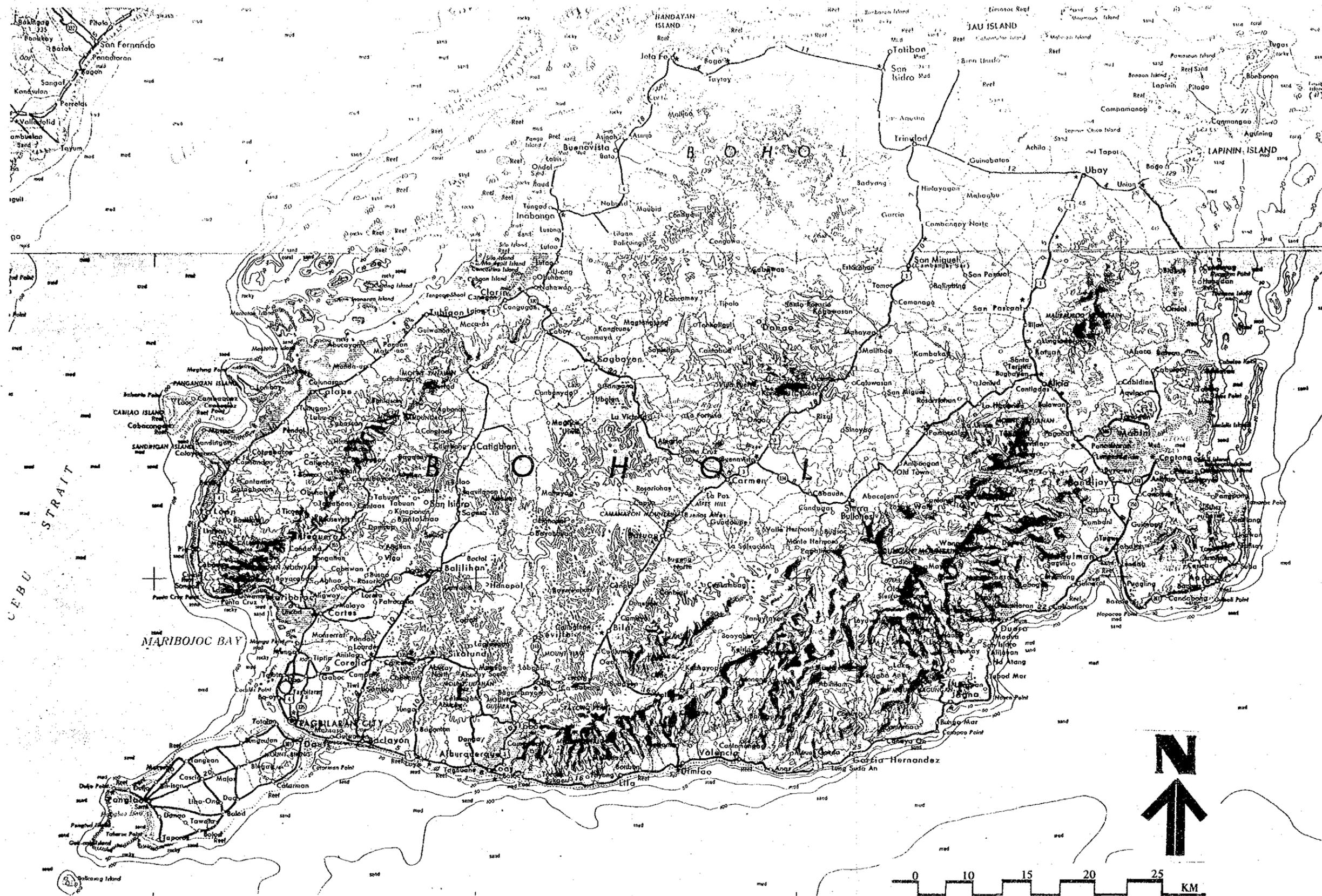
S = 1:2,000,000



LEGEND

- Capital of the Philippines *
- City and provincial capital ■
- Provincial capital □
- City ○
- Regional boundary - · - · -





MAP OF BOHOL PROVINCE
 BY THE PHILIPPINE COAST AND GEODETIC SURVEY
 SEPTEMBER, 1979

INTRODUCTION

This is the summary report of the final report of the Master Plan Study for the Bohol Integrated Area Development Project (BIADP), prepared to provide the general ideas and concepts of BIADP. Conclusions and recommendations are also described in this summary based on the detailed study of BIADP Main Text.

A tentative draft final report was submitted to NACIAD on Sept. 24, 1979 and a draft final report on Dec. 18, 1979. The final report is a revised version of the earlier reports which incorporates the necessary modifications and comments received after discussions with the staff of NACIAD and the officials of Bohol Province and Region VII. Consequently, the final report is a cooperative effort to contribute to the realization of intensified development in Bohol Province.

This summary report is presented in 9 sections as follows:

- S.1 BACKGROUND OF BOHOL'S ECONOMY
- S.2 DEVELOPMENT PROBLEMS
- S.3 NEED FOR THE HIGH IMPACT PROGRAM/PROJECT APPROACH
- S.4 SUMMARY OF HIGH IMPACT PROJECTS
- S.5 PROJECT EVALUATION
- S.6 IMPLEMENTATION
- S.7 THE REGIONAL DEVELOPMENT CONCEPT OF "BIAD"
- S.8 LONG TERM DEVELOPMENT STRATEGY
- S.9 TABLE OF CONTENTS OF THE MAIN TEXT

ACKNOWLEDGEMENT

We, members of the JICA Study Team for the Bohol Integrated Area Development Project, all wish to express our deep sense of gratitude to all the concerned officials of the government of the Republic of the Philippines, the Provincial Government of Bohol and Administrative Officers of Region VII, for their kind advice and warm hearted cooperation and hospitality. Without their assistance and contribution, the study would never have been accomplished. In particular, we wish to thank his, Excellency, the Governor of Bohol Province, MR. ROLANDO G. BUTALID.

Special acknowledgements are also due to those in the National Council on Integrated Area Development (NACIAD) for overall arrangement and closest cooperation given to the Team: MR. ISRAEL CARLOS, Director, Program Planning and Development Department (PPDD); MR. HERMAN ONGKIKO, PPDD; MR. MAURICIO FELICIANO, PPDD; MR. MEYNARDO SANTOS, PPDD; MR. PRISCILO MALALUAN, PPDD; MR. LEONARDO DAYAO, Jr., PPDD; Ms. LILIAN PORTERIA, PPDD; and Ms. LUALHATI EGUIA, PPDD; and those who worked closely with us in Bohol; MR. CALIXTO M. SEROJE, Engineer, National Irrigation Administration (NIA), Tagbilaran; Engr. BALBINO L. SERENCIO, NIA, Tagbilaran; MR. BALTAZAR MACAS, Bureau of Fishery and Aquatic Research (BFAR), Cebu; MR. ESTANISLAO CHAN Jr., Bureau of Plant Industry (BPI), Cebu; Ms. EVA KHO, Ministry of Tourism (MOT), Cebu; and MR. DOMINGO FUDERANAN, Provincial Development Staff, Bohol.

We are also most grateful to MR. REY E. CRYSTAL, Regional Executive Director, Region VII, NEDA and other technical staff members of NEDA for their kind advice and assistance rendered to us. The information and data provided by them proved to be a great value to our study. A good deal of our work could not have been accomplished without the data, information and reports provided by the NEDA Office of Region VII.

We also wish to express our acknowledgement to the following Chiefs of line agencies of the Government for their kind hopsitality and cooperation:

NAME	POSITION	AGENCY
1. Atty. Miguela P. Roldan	Regional Credit Director	ACA
2. Mr. Jesus Alix	Director	BAEcon
3. Mr. Wilfredo Parawan	Regional Coordinator	BAEcon
4. Mr. Noli Diligencia	Statistician	BAEcon, Region 7
5. Mr. Loredo Jamandre	Regional Director	BAExt
6. Mr. Francisco Rentutar	Director	BAExt
7. Mr. Zozimo Pamplona	Provincial Agriculturist	BAExt, Bohol
8. Dr. Crispulo Macasib	Regional Director	BAI
9. Mr. Wilmer Guerra	Provincial Veterinarian	BAI, Bohol
10. Mrs. Natividad Macalincag	Planning Officer	BFAR
11. Mr. Sixto Laron	Regional Director	BFAR, Region 7
12. Mr. Jose R. Gapas	Regional Director	BFD
13. Mr. Rosalio A. Montecillo	Regional Supervisor	Bu. of Domestic Trade
14. Mr. Constante B. Bilandres	Regional Director	Bu. of Mines
15. Mr. Francisco Consti	Asst. Director	Bu. of Mines

NAME	POSITION	AGENCY
16. Mr. Josue Bordon		Bu. of Mines, Cebu
17. Mr. Beatroz Ala-an	Regional Director	Bu. of Posts
18. Mr. Robles	Asst. Manager	Bohol Electric Co- operative I, Tubigon
19. Mr. Domingo Panganiban	Director	BPI
20. Mr. Aniano Bondal	Provincial Plant Industry Officer	BPI, Bohol
21. Mr. Emilio Estrada	Asst. Provincial Plant Industry Officer	BPI, Bohol
22. Mr. Constantino Lucero	Regional Director	BPI, Region 7
23. Mr. Rodolfo T. Latquin	National Director	MPW
24. Profirio. Kee	Provincial Engineer	MPW, Bohol
25. Mr. Godofredo Alcasid	Director	BS
26. Mr. Mauro de la Cruz	District Officer	BS, Bohol
27. Mr. Emigdio Fabella	Regional Director	BS, Region 7
28. Engr. Ricardo Oblina	Agricultural Engineer	BS, Region 7
29. Mayor Florentino Solon	City Mayor	Cebu City
30. Mr. Nicanor Ferrer	Station Manager	Marcos Corn Experiment Station
31. Mr. Frank Dinsay	Regional Director	MAR
32. Mrs. Dolores Sale	Executive Officer - Office of Economic Affairs	MFA
33. Ambassador Pablo Suarez	Asst. Secretary on Economic Affairs	MFA
34. Mr. Chito Kalingo	Program Development Group	MHS
35. Mr. Eufemio Ruiz	Regional Director	MLGCD
36. Dr. Jesus Estabes	Director, Bureau of Medical Services	MOH
37. Dr. Jose R. Ybanez	Regional Director	MOH
38. Ms. Olga Panopio	Regional Coordinator	MOT
39. Engr. Pacifico Anonas	Regional Director	MPH
40. Engr. Cruza Bagalsoon	Chief, 2nd Engineering District	MPH, Bohol
41. Mr. Godofredo Roperos	Regional Director	MPI
42. Mr. Jose Valdecañas	Director, Bureau of Public Works	MPW
43. Ms. Lily S. Talagon	Regional Director	MSSD
44. Mr. Nicanor Sarmiento	Regional Manager	NACIDA
45. Mrs. Basilica Borja	Provincial In-charge	NACIDA, Tagbilaran
46. Mr. Tito Mijares	Director	NCSO
47. Mr. Simeon Kintanar	Regional Census Officer	NCSO, Region 7
48. Mr. Eduardo Corpuz	Deputy Director	NEDA
49. Dr. Jose Lawas	Deputy Director	NEDA
50. Mr. Lorenzo Medilo	Asst. Regional Executive Director	NEDA
51. Mr. Jesus Sunga	Director, Infrastructure Staff	NEDA
52. Mr. Rey Crystal	Regional Executive Director	NEDA, Region 7
53. Ms. Aurelia Tapia	Regional Director	NGA
54. Mr. Roberto Antonio	Groundwater Division	NIA

NAME	POSITION	AGENCY
55. Engr. Isidro Digal	Chief Planning Division	NIA
56. Mr. Romeo Potenciano	Surface Water Division	NIA
57. Engr. Tomas Tolentino	Construction Engineer	NPC
58. Mr. Ciriaco Saloma	Provincial-In-Charge	NPC, Bohol
59. Engr. Antonio Mansueto		NPC, Cebu
60. Mr. Angel A. Alejandro	Director	NWRC
61. Atty. Julio Balbon	Water Rights Division	NWRC
62. Mr. Luis M. Sosa	Chief, Water Resources Specialist	NWRC
63. Mr. Prudencio Garcia	Regional Administrator	PCA
64. Mr. Melanio Y. Sanchez	Regional Officer	POPCOM
65. Mr. Vicente Suazo	Port Manager	PPA, Cebu
66. Mr. Rolando Gonzales	Planning Officer	PPA
67. Gov. Eduardo Gullas	Provincial Governor	Province of Cebu

Finally, we would like to express our deep sense of gratitude to our secretaries, Miss EMEGLYN JARUNA, Mrs. TERESITA P. MACARAIG, Miss REMEDIOS PARDO and our draftsman, Mr. JOSE SALAZAR, and our special thanks to Mr. ARMANDO J. MACARAIG, Territory Manager, IBM Philippines, Cebu, and his staff for his unselfish support and cooperation, and to the research assistants for their hardwork, devotion and warmhearted assistance attached to our work. Without their capable contribution, our work would have never been completed.

S.1 BACKGROUND OF BOHOL'S ECONOMY

Bohol's economy has been and is still predominantly agricultural. The industrial structure, measured by the employment by industry, is composed of three-major sectors (source: NSCO, 1975):

- 1) Agriculture, forestry and fishery, 64.8%
- 2) Manufacturing 12.3%
- 3) Services 11.0%

As far as spatial organization of Bohol's economy is concerned, it can be characterized by the following features (see also the map of Agricultural Resources, Appendix 22-8):

The coastal line is ringed with coconut growing areas.

Rice growing areas are more or less evenly distributed all over Bohol with a little concentration in BIADs III, IV and V (see Appendices 22-11 to 22-15 Main Text).

Small scale fishing is being conducted along most of the off-shore areas.

Fish ponds are scattered here and there, showing some concentration in the Tubigon and Mabini areas.

Cottage industry, a major portion of manufacturing industry in Bohol, is scattered around coastal municipalities, particularly in municipalities lying between Tagbilaran and Tubigon.

Economic activities are roughly divided into two halves; the northern part is oriented toward Metro Cebu and the southern part toward Mindanao. (See Appendix 22-10 Main Text).

Human settlement and community development pattern in Bohol tend to show a good deal of uniformity or similarity among different municipalities. Small-scale town-like urban settlement tend to form almost invariably in each municipality with the "poblacion" as a core. Almost without exception the poblacion consists of a city hall, church, public market, schools, retail outlets and small vendor shops, repairing workshops, etc.

Because of Bohol Province's location in the central zone of Region VII, geographically near Cebu City, Bohol's economy, especially the economy of the western portion of the province depends on and is deeply affected by the Cebu economy. The roles played by the Bohol economy in Region VII, are summarized as the following:

- Supplier of major crops to Cebu
- Supplier of major fishing products (both raw and semi-processed)
- Supplier of consumer goods (i.e., agri-processed and cottage industry products)
- Consumer of manufactured goods (i.e., agricultural goods, fertilizer and agricultural machinery and transportation equipment)

- Vacation and resort area for Cebuanos and tourists
- Supplier of surplus labor force for Cebu

S.2 DEVELOPMENTAL PROBLEMS

The socio-economic condition of Bohol Province is relatively depressed as compared with those of the other provinces of Region VII, although human resources are in abundance. The problems that exist are inter-related with each other causing a "vicious circle" retarding development in Bohol as follows (see also Fig. 7.2 Main Text):

- The comparative disadvantage of the Bohol province can be considered as the combining effects of five factors producing a widening gap of economic development between Bohol and the rest of the Philippines and a low level-of Gross Domestic Product. These five factors are:
 - 1) Low endowment of natural resources,
 - 2) Insufficient development of physical infrastructure,
 - 3) Lack of financial resources,
 - 4) Lack of technical skill and management know-how,
 - 5) Institutional constraints, viz., centralism.
- The low level of economic activity, particularly lack of development of secondary industries with high labor absorption power, together with a high population growth rate, have brought about a high rate of unemployment and under-employment to Bohol resulting in the outmigration of the Boholanos.
- A low level of per capita income results from the cause-effect nexus of these factors. As a result, the domestic market demand within the province of Bohol is stagnant. Because of this insufficiency of effective market demand in Bohol, the private sector of the Bohol economy has not in the past had enough incentive to expand. This has also been a contributing factor of the low level of GDP in Bohol.
- The low level of public revenue, caused in part by the low level of per capita income, provides little financial resources to the local governments of Bohol province to be invested for the development of infrastructure and social services. The low level of social amenity in Bohol is the end result.
- The primary industries, (agriculture, livestock and fishery), the most important sector, have very low productivity caused by the following factors:
 - inadequate irrigation
 - poor transport system
 - inadequate ports and storage facilities
 - insufficient electric power supply
 - limited number of marketing distribution channels
 - lack of agricultural technological development
 - low fertility of soil

S.3 NEED FOR HIGH IMPACT PROGRAM/PROJECT APPROACH

The aforementioned problems confronting the Bohol Province are widely known, not only to the policy planners, but also to the Boholanos. A variety of development plans have already been drawn up on the Bohol province during the past several years. However, no significant actions have been taken yet to implement these plans so as to drastically change the fundamental nature of the Bohol economy, i.e.; the breaking-up of the "vicious circle" of factors which stagnates Bohol's economy. The cause of inaction may primarily be the lack of financial resources to be invested as capital outlays for achieving the policy objectives.

It is our judgement, however, that what is needed most for the province of Bohol is the identification and formulation of the programs/projects that can be immediately implemented within a short span of time and that can bring about tangible growth effects in Bohol's economy if sufficient funding is made available to Bohol either from domestic sources or from foreign lending sources. These programs/projects are called "high impact programs/projects".

Alternatively a long range and comprehensive development plan would require too long a period of primary data generation, analysis and projection, and inter-sectoral development plans. It is our judgement that writing this type of a long range plan is not only premature but also fruitless unless the developmental progress begins immediately and the vicious circle is broken.

The method adopted for the high impact programs is characterized by the following factors:

- The integrated area development plan is conceived as a "heuristic device" by which the high impact programs/projects are fruitfully identified and formulated so as to expedite immediate policy actions.
- A short term planning time horizon (1980-1985) is used as the primary time frame.
- In consideration of the scarcity of resources (natural, skilled manpower, financial and institutional), a concentrated public investment policy is adopted.
- The project identification and formulation is made specific enough in terms of location, objectives, operational activities and cost estimates to be used immediately as the subject of "feasibility study".

In the light of the urgent action requirements existing in Bohol, major sectors and sub-sectors of strategic importance for the Bohol economy were identified. The selected sectors and sub-sectors are as follows:

SECTOR	SUB-SECTOR	CHAPTER
Economic Sector	- Agricultural and Livestock Industry	8
	- Forestry	9
	- Fishery Industry	10
	- Mining and Manufacturing Industry	11
	- Tourism	12
Infrastructure Sector	- Water Resources Management	13
	- Transportation System	14
	- Energy	15
	- Communication	16
Social Services Sector	- Public Health	17
	- Community Development	18
	- Human Resources and Education	19
	- Housing	20

The high impact programs/projects were studied according to the following method:

- Analysis of the current sub-sector problems and trends; identification of the problem-structure.
- Assessment of sub-sector development potentials.
- Setting of sub-sector objectives and targets.
- Development of strategies for the sub-sector for the short, medium and long terms: 1980-85, 1985-90, 1990-2000 respectively.
- Formulation of sub-sector development programs.
- Identification of sub-sector high impact projects.
- Implementation plan: costs and implementation schedule.

Depending upon the nature of the sub-sector, adherence to this "modus operandi" was more or less observed. Alternatively, a set of policy recommendations was made particularly to the problem areas where high impact programs/projects could not be found; however, these were not taken up as high impact projects.

S.4 SUMMARY OF HIGH IMPACT PROJECTS

A total of 29 high impact projects were selected: 11 economic sector projects, 15 infrastructure projects and 3 social services sector projects. An outline of these projects and their objectives is presented below. The following map should be consulted along with the detailed descriptions given hereafter.

S.4.1 Economic Sector

1. Exploitation of a Profitable Package of Technology on Calcareous Soils and the Establishment of the President Marcos Agricultural Promotion Center

The objectives to increase agricultural production in Bohol will be achieved only through the efforts to develop suitable technologies, especially technology suited to extraordinarily poor soils of Bohol. It is noted that the characteristics of Bohol's calcareous soils have not yet been fully clarified and the interrelation existing between the soils and crops has not been sufficiently examined. The problems on moisture stress which hinder smooth growth of plants need urgent practical solutions. Nevertheless, it is by no means easy to develop a new technological package which can overcome such constraints.

It is recommended that official support should be given during the early stage of development of practical technology. The emphasis should be placed on the optimal combination of the three existing research stations in Bohol to utilize their manpower to apply new profitable technologies at the grass-root level. For this purpose it is strongly suggested that an agricultural promotion center is established as an "integrated research and extension system" in order to fully develop profitable and productive technologies for agricultural production in Bohol. The President Marcos Corn Experiment Station is the best office for such a center since it has the best location and holding hectarage, and 100 hectares have already been set aside for the new center.

In order to exploit new technology of production which is based upon the scientific evaluation of productive interrelationship among soil, crop and water to be used, farmers should be imparted a new technological package that is sufficiently profitable at the farm level to provide an incentive for them to adopt technological innovations.

Wide spread use of technological innovations in Bohol becomes possible only when they are effectively supported by extension services carried out by competent workers with technical knowledge and experience.

2. Wahig-Pamacsalan Rice Irrigation Pilot Farm

Although the new technology of zinc application is familiar to farmers, the whole technological package is not applied yet. This is mostly due to an economical reason that the inputs requested such as fertilizers, etc., are quite expensive for them. This is the exact reason why rice yield is still low. The Pilot Farm will be able to show how to manage rice production based upon the package program and the direction of Masagana 99. Accordingly, the Wahig-Pamacsalan Rice Irrigation Pilot Farm is suggested as an area through which profitable technology can be transferred.

It is also absolutely necessary to transfer the recommended technology of rice to the farmers who will move into the newly irrigated area. It is anticipated that there will be many technical difficulties encountered at the beginning of the pilot project and the following questions must be answered.

- The variety to be used on the land just after the levelling works.
- The recommended level of fertilizers application under different farm conditions.
- The control of pests and diseases.
- The economic and rational methods of irrigation to conserve water.
- The cost and benefit that can be expected when traditional practices are applied.

It is highly recommended that a pilot farm should be established to answer the many technical problems as they occur. It is also suggested that the pilot farm should be operational before the farmers move into the service area.

3. Establishment of the Vegetable Promotion Center

With the increasing industrialization in Cebu, the demand for fresh vegetables and fruits will increase rapidly. Vegetable production, therefore, should be promoted to meet the demand. The northern parts of Bohol are found most suited to produce vegetables. With the proposed communal irrigation project in Tubigon, the vegetable production in this area will be expanded because the irrigation water intended for paddy fields can also be utilized for vegetable production.

4. Promotion of Basic Research on Land Characteristics and Improvement

Soils in Bohol are mostly calcareous derived from limestone and lime-rich shale, siltstone and sandstone. Calcareous soils are usually low in organic matter and, as a result, nitrogen becomes the most limiting nutrient for crops. Also, due to its alkalinity, the soils tend to become deficient in manganese, copper and/or boron. To find ways to increase the productivity of soils, research needs to be carried out and a chemical laboratory needs to be built. Soil chemical analysis will be performed to identify: a) what are the deficient elements, b) where are the deficient areas, and c) how much they are deficient. In conjunction with these analysis, plant analysis will be made to examine what kinds of productive relations exist between the soil characteristics and the type of plants to be grown.

5. Beef Cattle Development Through the Use of Fodders Instead of Cogon

Beef cattle production should be increased in Bohol, but the main obstacle of development is how to supply cheaper fodder grasses during the grazing time. The area now covered with cogon needs to be replanted with ipil-ipil and other quick growing plants. Whenever these plants grow well, the weed's growth is suppressed and will eventually be eradicated. However, this method does not work as simply as planned, and a comprehensive study on how to eradicate cogon must be carried out. Cogon lands in Bohol occupy at least a hundred thousand hectares. These fields must be converted either to crop lands or pasture lands.

6. Feasibility Study of Watershed Rehabilitation in all River Catchment Areas in Bohol

Watersheds must be urgently protected by all means in order to conserve the limited water resources in Bohol. In Bohol, watersheds and catchment areas of most rivers need such rehabilitation measures in order just to maintain their water resources. The feasibility study should clarify the following:

- (1) Forest protection measures
- (2) Rehabilitation measures required including engineering works
- (3) Making boundaries and limitations on kaingin activities

7. Cogtong Bay Fishery Processing Complex

Project objectives are:

- to supply ice to the fishermen in the east coast of Bohol enabling them to prolong their operations at sea
- to act as a distribution center for the catch of trawlers
- to freeze shrimps and prawns caught from the neighboring fishponds and off-shore area of Eastern Bohol to be exported outside of Bohol.
- to manufacture the film packery of a fish and meat mixture ("fish sausages").
- to freeze milkfish and other catches to be shipped to Cebu, Cagayan de Oro, Manila
- to develop this Complex into one of the major centers of an export-oriented fish processing industry in Bohol.

8. Cogtong Bay Fishing Port

Project objectives are:

- to act as the major fishing port in the eastern coastal area of Bohol
- to harbor fishing vessels of municipal fisheries and trawlers
- to have facilities to repair vessels including a slipway
- to enable REFEERS (Refrigerated cargo-vessels) to stay alongside the wharf/pier

9. New Technology Development for Small-scale Industries

The success of the small-scale industry development largely depends on how much productivity can be raised. Technical development is required in ceramic industry, manufacture of wearing apparel, and manufacturing of metal products. Project objectives are:

- to make entrepreneurs aware of the modern technology, including mechanization and planned production

- to demonstrate superior technical level and quality of products with improved skills/technology and optimal use of materials

10. Tourism Market Survey/Promotion Project

The success of the tourism development is hinged upon the finding of tourist markets and the promotion of them. Any speculative investments without a proper market analysis could be disastrous. This project is a prerequisite for the tourism development of Bohol in order to avoid a costly trial and error search for the best markets. Project objectives are:

- to determine tourist images and products most suitable to the tourism development of Bohol
- to make tourists aware of the tourism resources and conditions in Bohol
- to attract more international tourists as well as long term domestic tourists
- to generate the necessary and sufficient data on tourists to make a market analysis. Data generation should cover the tourist receipt, volume, length of stay, expenditure, originating country/region, socio-economic status, motivation, type of travel and should also assess the supply of the tourism industry as to types of hotel, available number of rooms, transportation availability/cost, etc.
- to render information services to tourists at the important entry points to Bohol
- to promote the Bohol tourism in originating countries and regions

11. Sea Resort Hotel Development Planning

The hotel industry is the core of the tourism industry. Basic accommodation facilities for international tourists and long-term domestic tourists are mostly lacking in Bohol. Although the targeted effective demand for such a resort hotel will not occur prior to the year 1985, it is necessary to provide the facilities at the earliest possible time to induce group tourism into Bohol. This project should serve as a major stimulus to the tourism industry in the area.

Although hotel development is expected to be exclusively carried out by private developers, extensive governmental assistance for land acquisition, project areas preservation, development incentives, provision of the supportive infrastructures, manpower training is crucial to the success of the project. To provide cohesive planning and implementation of the tourism development, it is necessary to call on the inter-government coalition of the Ministry of Tourism, Provincial Trade and Tourism Committee, Provincial Development Council/Staff and other related agencies.

S.4.2 Infrastructure Sector

1. Wahig-Pamacsalan Irrigation Project

The project area covering an acreage of about 6,000 hectares is located in the eastern central part of the province. The area of influence covers the municipalities of Pilar, Sierra-Bullones, Dagohoy, San Miguel, Alicia and Ubay. The main project works are the Pamacsalan Reservoir Dam and the Malinao Diversion Dam with storage functions. The purposes of the project are for irrigation and hydro-electric power generation. The lands irrigated by the project are expected to produce 30,000 tons of rice annually.

2. Cahayag Communal Irrigation Project

Cahayag CIP is located in the Northwestern part of the island and is capable of serving a potential irrigable area of about 600 hectares within the territorial jurisdiction of the municipalities of Calape and Tubigon. The project has a multi-purpose capability in the sense that impounding dams with heights of about 25 to 30 meters are ideal for micro-hydro-power development, and in the reservoir area, fresh water fish culture can be introduced. Two impounding dams are proposed for construction at the Barangays of Banlasan and Ilihan in the municipality of Tubigon.

3. Improvement of Tagbilaran Water Works

The project consist of the improvement of the existing 8 pumping units and distribution systems and the construction of a Filtering, Purifying and Reservoir tanks. Water shall be treated by chlorination before it is stored in the Reservoir tank for distribution. Capacity of these tanks shall be so designed to meet the water needs of the populace in the CY 1985 as follows:

Household Use (population of about 51,000)	- 4,300 tons/day
Industrial and Public Use	- 1,200 tons/day

4. Rural Water Supply

The project will involve communal springs and open well development giving priority to the five BIAD centers. Implementation of the project shall be undertaken by the BPW in coordination with the local waterworks service units in the Rural Areas. The communal springs and open well development shall also be complemented with intensive studies on the possibility of tapping springs with abundant water supply in the municipalities of Pilar, Valencia and Sevilla to service nearby Barangays and adjoining municipalities with an adequate, safe water supply. The following rural water supply schemes are proposed for each of the 46 municipalities except Tagbilaran.

Level-1 water supply	30 sites
Level-2 water supply	1 site

5. Studies on Water Resource Management

To attain the set target of the integrated development project, rational water resource management plays one of the most important roles, both in planning and implementation stages of various water oriented projects. However, at present basic data are still insufficient on hydrology, hydrogeology, irrigation management and rural water supply. For this purpose, province wide detailed studies on these aspects are urgently recommended and necessary at an early stage of the BIADP. There must be a set of detailed river basin water master plan studies for assessment of available water resources in the province and determining the most efficient and economical techniques of water utilization for the development.

6. Road Improvement Projects

6.1 Tagbilaran-Tubigon

6.2 Tagbilaran-Jagna

6.3 Loay-Carmen

With regards to road improvement, national roads which have heavy traffic or which are connected with the major ports of Tagbilaran, Tubigon and Jagna are scheduled to be improved by 1985. However, investigation revealed the urgency of improvement and upgrading within a shorter period of 2 to 3 years. This program objectives include paving, resurfacing and the replacement and widening of dangerous and narrow bridges as follows:

- To pave all gravel roads of the existing national roads, and to overlay all worn out asphalt surfaces.
- To widen the roads by adding "shoulders", in accordance with the set standard cross section for national roads.
- To improve the drainage system facilities and road protection.
- To provide adequate miscellaneous road facilities such as guardrails, road signs and road markings.
- To upgrade maintenance road capability.

6.4 Replacement of Dangerous Bridges of Other National Roads

There are many dangerous Timber and Bailey bridges with inadequate load capacity since they are about 20 to 30 years old and with narrow widths which obstruct traffic flow. The purpose of this project is to replace the Timber and Bailey bridges, the one-lane reinforced concrete bridges and the steel bridges on all other national roads with two-lane permanent bridges. The replacement of bridges on the above mentioned national roads is included as part of the road improvement projects above.

7. Port Improvement

7.1 Tagbilaran Port Improvement

The Tagbilaran Port is the largest port in Bohol. The port is a major entrance of Bohol Island handling large volumes of cargo and passengers. The facilities of this port are already insufficient, requiring improvements in line with the progress of the development plan as follows:

Repairing of Fenders, Construction of Sheds and Warehouse. Construction of Jetty and Passenger Terminal.

7.2 Tubigon Port Improvement and Terminal

The sea transportation between Cebu and Bohol is expanding rapidly at present, and will continue to expand in the future in proportion to the progress of the development plan of the Bohol Island. A Roll-on Roll-off (Ro/Ro) ferry system is proposed to transport passengers from Cebu to Bohol and vice-versa. It is proposed that a Ro/Ro ferry system should

be put up at the Tubigon port to facilitate the transportation of passengers commuting from Bohol and Cebu. The construction of the Ro/Ro ferry terminal at the Tubigon port is an immediate requirement. The ferry system will need 2 ferry boats to service the growing number of commuters. Passengers bound for Cebu from Talibon, Tagbilaran and elsewhere in Bohol will travel via Tubigon (for example, by bus from Tagbilaran to Tubigon, and Talibon to Tubigon) and from Tubigon, the ferry service system will bring them to Cebu. This new route utilizing the bus and ferry system is considered most economical and least time consuming. One boat (four trips/day) can estimateably carry approximately 800,000 passengers from Talibon, Tagbilaran and Tubigon annually.

7.3 Jagna Port Improvement

The port serves as the major link with ports in export of dry fish shipped from this port to Mindanao has been greater in volume than from Tagbilaran port due to its geographical proximity. The cargo to be handled by this port will increase as the development of the Bohol Province and improved trade relations with Mindanao is effectuated in the future. The following port improvements are required:

Repairing of Jetty and Warehouse, Construction of Passenger Terminal

8. Airport Improvement

The volume of air passenger traffic will increase together with the increase in the economic activities of Bohol. Present growth of the gross domestic product is one of the indicators of such economic activities. To be able to meet the future increase of demand for air transportation improvements and extensions of the existing airport facilities of Tagbilaran should be undertaken. Improvements are essential for the attainment of air safety and landing/take off operation and are necessary to meet the minimum standards required by future air traffic.

9. Feasibility Study on Alcolgas Refinery Plant

The objectives of the plant are to contribute substantially to the achievement of self-sufficiency in energy, and to contribute to the creation of "the value added" of agriculture through processing agro-products. The F/S will determine the following:

- a) the scale and function of the pilot plant (R & D or commercial oriented)
- b) identification of production problem areas, especially anticipated for local varieties of cassava, etc.
- c) to check the economic feasibility of the plant, economic scale production, in accordance with the national alcolgas development program.

10. Telecommunication Expansion

It is necessary for the government to facilitate better and more efficient transmission of messages in municipalities lacking a telegraph system and to eliminate the communication gap existing among municipalities in Bohol. Telegraph system should be installed as soon as possible in the main 10 municipalities which do not have telegraph service at present.

S.4.3 Social Services Sector

1. Strengthening of Schistosomiasis Center Research Service

To establish effective measures against schistosomiasis, efforts should be made to undertake the following steps in Bohol: to identify numbers of inhabitants infected with schistosoma, to conduct an environmental survey in areas where Miyairi snails and infected inhabitants are living, and to take all the steps for the establishment of countermeasures as determined are necessary according to the survey.

2. Mobile Medical Service

In order to extend medical services into rural areas and to augment the existing medical facilities at rural health centers and barangay health centers, it is proposed that a mobile medical service be established. Such a service would utilize four full-equipped medical vehicles and would consist of a team of doctors and medical personnel who would travel along a fixed route between existing health centers. The exact services provided and routes travelled qualifications of personnel required and specifications of vehicles will be determined in a later stage of planning. The mobile medical service should be planned in coordination with and controlled by the Ministry of Public Health.

3. Bohol Integrated Manpower Development Center at Tagbilaran

The BIMDC at Tagbilaran City will be the major Center equipped with facilities, staff and other supporting infrastructure and materials to train about 1,800 persons per year (other centers are planned for the other BIAD centers).

The purposes of the Center are as follows:

- To provide information, vocational and skill training and job placement services to school graduates, school dropouts, and mid-career adults in Bohol.
- To assure that they will be sufficiently prepared for entering into new occupational life.
- To contribute to the economic development of Bohol by means of labor productivity increase.

- To prepare periodical labor market information bulletins to be distributed to various educational institutes and public offices so that constant supply of information regarding current job market will become readily available to job seekers.
- To keep in close contact with business circles within and outside Bohol to ensure that effective job placement services will be provided.

S.5 PROJECT EVALUATION

The cost estimates of programs/projects were made using the standard unit costs which were provided to us by local authorities. Although further examination might be required for some of the cost estimates, as a rule of thumb, contingency allowances included in most of the cost estimates should be adequate.

A summary of the project costs by sector is listed below with details by Project summarized in the table attached.

Economic Sector	₱ 64.4 million
Infrastructure Sector	₱479.9 "
Social Services Sector	₱ 5.0 "
Total Bohol Integrated Area Development Plan	<u>₱549.3 million</u>

The cost estimates were based upon the standard unit costs of capital outlays. In principle, operational expenses are not included, but depending upon the type of project, the costs for necessary training of the personnel are included. However, it must be noted that the reliability of cost estimate must become higher as the study progresses from the stage of planning to feasibility study and detail design stage. It is commonly believed by UNIDO and other international organizations that the reliability variation of the cost estimate at the planning stage is about 30%.

As indicated in the report (see Table 24-3 Main Text), the income generation effects of the Bohol economy from the implementation of the selected high impact project ranged from the lowest ₱219 million to the highest ₱380 million. The calculation made was based on rather conservative assumptions, but it can easily be seen that the economic effects generated even by selective implementation of the high impact projects are estimated to be considerable. In light of this, it is strongly urged that the Philippine government will take immediate actions necessary for implementation of selected high impact projects.

The priority recommended for high impact projects is given in a subsequent table. Prioritization of high impact programs/projects was made on the basis of immediate economic impact.

Cost Summary for High Impact Projects

(Unit: 000's pesos)

SECTOR Sub-Sector	Project	Amount	SUB-SECTOR Total
ECONOMIC SECTOR			
Agriculture	1. Exploitation of Soil Technology and Establishment of Agro Promotion Center	5,000	
	2. Wahig-Pamacsalan Irr. Pilot Farm	3,000	
	3. Vegetable Promotion Center	3,300	
	4. Promotion of Basic Research on Land Characteristics	500	
	5. Promotion of Beef Cattle Production	2,000	13,800
Forestry	6. F/S on Watershed Rehabilitation	900	900
Fisheries	7. Cogtong Bay Fishery Processing Complex	25,500	
	8. Cogtong Bay Fishing Port	17,900	43,400
Mining and Manufacturing	9. New Technology Development for Small Scale Industries	500	500
Tourism	10. Market Survey/Promotion Project	800	
	11. Sea Resort Hotel Dev. Planning	5,000	5,800
INFRASTRUCTURE SECTOR			
Water Management	1. Wahig-Pamacsalan Irrigation	328,500	
	2. Cahayag Communal Irrigation	11,000	
	3. Tagbilaran Waterworks	12,000	
	4. Rural Water Supply	3,700	
	5. Study on Water Resource Management	6,700	361,900
Transportation	6. Tagbilaran-Tubigon Road Improvement	9,800	
	7. Tagbilaran-Jagna Road Improvement	8,900	
	8. Loay-Carmen Road Improvement	7,500	
	9. Replacement of Bridges on other National Roads	6,200	
	10. Tagbilaran Port Improvement	27,300	
	11. Tubigon Port Improvement and Terminal	50,500	
	12. Jagna Port Improvement	1,800	
	13. Airport Improvement	4,400	116,500
Energy	14. F/S on Alcolgas Refinery Plant	800	800
Communication	15. Telecommunication Expansion	700	700
SOCIAL SERVICES SECTOR			
Public Health	1. Strengthening Schistosomiasis Program	300	
	2. Mobile Medical Service	700	1,000
Human Resources Dev.	3. Bohol Integrated Manpower Development Center of Tagbilaran	4,000	4,000
TOTAL	(29) Bohol Integrated Area Development Plan		549,300

Priority of High Impact Projects

Priority	Sub-Sector	Project
AA - Highest Priority	Water Management	•Wahig Pamacsalan Irrigation
A - Top Priority	Agriculture	•Exploitation of Soil Technology and Establishment of Agro Promotion Center •Wahig Pamacsalan Pilot Form •Research on Land Characteristics •Promotion of Beef Cattle Production
	Fishery	•Cogtong Bay Fishery Processing Complex
	Mining and Manufacturing	•Technology Dev. for Small-scale Industries
	Water Management	•Cohayag Communal Irrigation •Tagbilaran Waterworks •Rural Water Supply •Study on Water Sources Management
	Transportation	•Tagbilaran Port Improvement •Tubigon Port Imprv. and Terminal •Jagna Port Improvement
	Energy	•F/S on Alcogas Refinery Plant
	Public Health	•Strengthen Shistosomiasis Program •Mobile Medical Service
B - Second Priority	Agriculture	•Vegetable Promotion Center
	Forestry	•F/S on Watershed Rehabilitation
	Fishery	•Cogtong Bay Fishing Port
	Transportation	•Tagbilaran-Tubigon Road Improvement •Tagbilaran-Jagna Road Improvement •Loay-Carmen Road Improvement •Replacement of Bridges on other National Roads
	Communication	•Telecommunication Expansion
	Human Resources Development	•Bohol Integrated Manpower Dev. Center at Tagbilaran
C - Third Priority	Tourism	•Tourism Market Survey/Promotion
	Transportation	•Airport Improvement
D - Fourth Priority	Tourism	•Sea Resort Hotel Dev. Planning

S.6 IMPLEMENTATION

As a strategy of implementation, it is recommended to treat the High Impact projects as a whole under the heuristic title of Bohol Integrated Area Development Plan (BIADP). The following are specific recommendations with regard to implementation.

1) Early Establishment of the Project Organization

It is often the case that the lack or insufficient development of project organization is one of the major causes of delay of the project implementation. It is strongly urged that the necessary organization designed specifically to deal with Bohol's situation and objectives be quickly established for the BIADP.

2) Strategic Choice of a Project of High Implementability

Since the set of high priority projects cannot be implemented simultaneously due to: e. g., 1) lack of sufficient available financial and manpower resources, 2) event and activity sequence, and network of the work and task that must be followed in order to implement each project, 3) priority order of the projects necessarily varies among projects judged from the criteria of economic benefit, urgency in need or demand, time span required, etc; it is strongly recommended that a strategic choice be made on the type of project which can be easily carried out in the initial implementation of the BIADP.

3) Project Package

With exception of Wahig-Pamacsalan Irrigation Project, the investment costs estimated for the projects identified for the BIADP are relatively small. Consequently, it is highly advisable from the point of view of economic efficiency that a set of programs/projects should be taken up as a package one for the necessary feasibility study or implementation planning and scheduling.

It is strongly advised that a project package method be used not only for the cost effectiveness of feasibility study but also for the requirement of work and task network of the implementation of the set of projects.

4) Project Implementation Network

Although it is necessary to indicate how the set of high impact projects should be carried out in accordance with the master implementation schedule and network of projects, it is our judgement that this must be most fruitfully made only after a definite strategic decision is reached as to which projects should be selected as the candidates for feasibility study or other step of the implementation.

5) Need for Follow-Up Studies

Since all development plans cannot be regarded completely finished when they are drawn up, it is therefore necessary that every project plan should be reviewed periodically and that whenever changes are found necessary, the plan must be reformulated by taking into account the effects of new factors. For the BIADP, it is recommended that follow-up studies must be undertaken to supplement the present work. They are:

- Generation of primary data
- Demand and supply projections of various items
- Detailed sectoral plans, i.e., economic sector, infrastructure and social services
- Specific area development plans
- Others

S.7 REGIONAL DEVELOPMENT CONCEPT OF "BIAD"

As the Philippine Government has started shifting its regional development to a decentralized system of development planning, one of the notable approaches or tools developed from this trend is the concept of "Integrated Area Development (IAD)". Bohol province is divided into five BIADs, from BIAD I to BIAD V, and each BIAD is composed of varying numbers of municipalities (see the following figure)

Since it is deemed very difficult to build up cost effective social infrastructure and social services network in an agricultural society where population is widely dispersed, strategic consideration must be given to a hierarchical role allocation of infrastructure and social services facilities. Consequently, each municipality of the BIAD is characterized as part of "three developmental tiers" (growth pole, growth centers and service centers) each of which is hierarchically arranged in terms of its functional role. (Table 22.2 fully outlines the functional roles of each tier.) For Bohol, the 3-tiers are as follows:

Provincial Growth Pole (PGP)	:	Tabilaran (BIAD I)
BIAD Growth Centers (BIAD-GC)	:	Tubigon (BIAD II)
		Ubay (BIAD III)
		Jagna (BIAD IV)
		Carmen (BIAD V)
Municipal Service Centers (MSC)	:	Other municipalities

Since Bohol's economy is more or less a homogenous agricultural society in which no significant difference exists in its socio-economic fabric, it can be said that the BIAD concept is nothing more than an areal planning unit artificially created for administrative purposes.

Actually the concept of IAD (Integrated Areas for Development) was originally developed by NEDA as a conceptual tool for its regional development plan, and there is no inherent reason that this concept must be used for Bohol integrated area development planning. Nevertheless it is our judgement that this concept should be retained for the time being for the following reasons:

- Development needs existing in locality of Bohol can be most effectively aggregated at the level of BIAD and it can be used as a practical development planning tool of the "bottom-up approach". (see Section 7.2.4)
- A variety of planning exercises have already been performed in Bohol based upon the BIAD concept, and introduction of another concept would likely invite unnecessary confusion among the development planning officers.
- Alternative concepts or tools should be introduced later only when the merits and demerits of the BIAD concept are carefully weighed in the light of its actual contribution to the on-going process of planning in Bohol.
- Necessary and practical data can be most fruitfully generated and compiled at the level of BIAD.

For long term development planning, Bohol would be much better regarded as the basic areal unit of integrated development plan due to the following considerations:

- Larger financial resources are commandable at the provincial level.
- A unified approach becomes possible for development planning without administrative tape to go through at every stop of coordination.
- Allocation of resources can be made more effectively by taking into account the total development needs and potentiality existing in Bohol.

S.8 LONG TERM DEVELOPMENT STRATEGY

S.8.1 Development Strategy for Bohol's Economy

Although the primary focus of this study was on high impact projects for immediate action, the long range framework for development was nonetheless considered. If general economic development patterns are applicable to Bohol, development planners of the Bohol province should give policy consideration to the following:

- 1) The long term development plan should be formulated for Bohol in order to stimulate the development of secondary and tertiary industries. In 1975, the industrial composition of employment was primary sector 64.8%, secondary sector 12.4%, and the rest 22.8%. This pattern of share should be gradually changed in favor of the non-primary sector, reflecting the projected changes in Bohol Net Provincial Product (NPP). This change is desirable primarily because the secondary industry based industrial structure will accelerate the growth rate of NPP. It must be noted that the potential NPP growth rate of the Bohol economy is determined by two factors: one is the rate of growth in labor productivity and the other is the growth rate of labor force in Bohol.

So long as the Bohol economy remains to be agriculture-based, neither a high rate of economic growth nor a rapid expansion of labor market can be expected in the future.

- 2) One of the crucial factors stagnating the Bohol economy in the past is that neither agriculture nor any other industry in Bohol succeeded in playing a leading role to give stimuli to the development of the Bohol economy. A strategic consideration must be made by the development planners as to how such a leading industry can be effectively cultivated by fully utilizing the comparative advantage of resources available in Bohol.

- 3) It must be well recognized that regional disparities existing in the Philippines, particularly between Metro Manila Area (MMA) and the rest of provinces, are the epiphenomena of dualistic economic structure which characterizes the Philippine economy. It is observed that Bohol in the past acted as a traditional economic sector in the Philippines and its main role was to supply its surplus labor to the industrial sector. This fact served the Bohol economy in both beneficial and non-beneficial ways. On one hand, because of free labor mobility, Bohol could reduce the economic burdens of "disguised employment" or underemployment contributing in part to optimum allocation of labor in the Philippine economy. On the other hand, Bohol lost a substantial amount of productive labor force which partly caused the stagnation of the Bohol economy. In the short run, this dualistic structure of the Philippine economy cannot be drastically changed, necessitating that the Bohol economy remains to be ancillary or complementary to advanced industrial areas of the Philippines. However, in the long run, Bohol must ameliorate her conditions through implementation of industrial development policy measures such as the development of agro-business and processing industries fully taking advantage of the resources available in Bohol.

- 4) As described in chapter 25, the financial resources have been poor in Bohol and the provincial government has had to rely upon internal revenue allotment from national government even just to cover its operating expenses. As a result, little capital funds were available for investment which could stimulate the Bohol economy. In effect, the capital accumulation has remained low resulting in the high marginal coefficient of capital. The low economic growth was in part caused by its high marginal coefficient of capital combined with its low rate of savings. One of the important policy measures is to stimulate the Bohol economy by government expenditure, particularly by public investments on industrial infrastructure which can lift up the productivity of economic sector in Bohol.

- 5) Although development planners of the Bohol province might consider using the income multiplier to effectuate the economic development of the Bohol economy since economic growth can be accelerated by the effects of income multiplier, in the case of Bohol, the investment multiplier cannot be operative primarily because of the lack of

financial resources and also because of the low level of economic activity or lack of opportunities upon which investment can be made. As a result, the policy planners may have to use other exogenous policy variable which will produce income multiplier effects. The strategic tool that should be used by the policy planners is the export multiplier, in that export is to be used as the source of "basic income" for the Bohol economy. It is maintained in the present study that export-oriented industry should be developed in Bohol, particularly catering to the market demand of consumer and industrial goods in Metro Cebu, the major industrial growth pole in Region VII.

S.8.2 Development Strategy for Bohol's Industries

Since the Bohol industrial input/output table is not available, the technical indications cannot be made in quantitative terms as to what kind of strategy should be drawn up for a long term inter-sectoral linkage of the development programs/projects. However, based upon the 1969 Inter-industry (Input-Output) accounts of the Philippines published by NCSO of NEDA, the following observations and guidelines can be made regarding the development of the Bohol economy.

- 1) Establishment and development of industries of high forward linkage effects in the early stage of development.
 - (a) In general, added-value ratio is high in agriculture particularly in vegetables and root crops and the labor distribution ratio is also high indicating that these commodities require little input from other industrial sectors, i. e., low in the backward linkage effects, and that they are naturally of labor intensive type.
 - (b) Root crops, vegetables, fruits and nuts, corn, palay, and fisheries are highly recommendable to Bohol in terms of the value added ratio.
 - (c) Although, Bohol is relatively rich in limestone, silica and the like, non-metallic mining and quarrying industry is purely exploitative with little input from other industries.
 - (d) Gradual development of agro- and fishery-based industries using surplus products of the primary sector, e. g., coco-oil, cottage type industries, etc. is recommended.

In the manufacturing sector, meat products, rice milling, and coconut oil are low in their value-added ratios but high in the backward linkage. In consequence, Bohol can supply raw materials to these industries, through the establishment of an agro-based industry which requires relatively large amount of capital investment.

- (e) In general, intra-industry linkage effects are high for the manufacturing industry indicating that its establishment requires interlocking system of the forward and backward linkage within its own sector.

- 2) Development of industries of high backward linkage effects in the later stage of development.
 - (a) Establishment of light manufacturing industries, machine shops, machineries, electric appliances, etc.
 - (b) Development of industries of weaving apparel and made-up, and furniture manufacturing because of their relatively high added value and labor intensity.
- 3) Obviously, the sectors of electricity, gas, water services, and construction require relatively large inputs from manufacturing sector. Added values are also naturally high in the tertiary sectors of commerce, transportation and communication, and services. The importance of the tertiary sector development is the following:

- (a) High added value to raise the NPP of the Bohol economy
- (b) High labor absorption power

The tourism industry can also contribute a lot to the Bohol economy, if it is effectively developed and marketed.

- 4) Effective demand creation policy
 - (a) High priority to be given to export-generation for full utilization of export multiplier effects of income determination of the Bohol economy.
 - (b) Final demand of the consumer sector should be shifted from the demand of food items to that of non-food items.
 - (c) Investment and government expenditure cannot be expected to play a leading role in the Bohol economy primarily because of its insufficiency of financial resources.

S.8.3 Spatial Development Strategy

From the standpoint of a long range development plan, it is also required that a spatial development strategy should be formulated so as to optimally allocate different economic roles among various areas. It must be understood that a spatial unit of integrated area development does not have to correspond to the administrative unit of local government. The spatial development strategy for Bohol should be formulated by taking into consideration the following criteria:

- Spatial development strategy for Bohol should carefully be formulated by taking into consideration various factor endowments and the future development potentiality of the areas. BIAD framework can be continuously used as the basic planning unit. However, the area zoning system in Bohol does not have to correspond with the BIAD.

- Agglomeration and spatial linkage effects
 - Allocation of economic roles and division of labor
 - Advisability of "growth pole" approach under the prevailing conditions of scarce resources. Since the Bohol economy cannot become by itself a viable economic entity with self-sustaining growth power, it should be regarded as an inseparable constituent of Metro Cebu regional growth pole, participating in it as "a part of MC growth corridor". The major functions ascribed to the Bohol economy will be to act as "a supply depot" of MC, particularly of agricultural and fishery products, manufactured goods of agro-based industries, cottage industry products, etc.
 - A long term development framework of putting Bohol economy as "a supply depot" of Metro Cebu-Regional growth pole in Region VII.
- Bohol economy should be developed in parallel with MC's economy by playing a complementary or accillary role to the economy of MC.
- Uplifting the economic level particularly in depressed areas
 - Community development plan needs to be formulated for both urban and rural areas so as to ensure that infrastructure and social services' facilities are optimally distributed and grow with the demand of the population.

S.9 TABLE OF CONTENTS OF THE MAIN TEXT

ACKNOWLEDGEMENT

PREFACE

ABBREVIATIONS

	<u>Page</u>
PART I : PROVINCIAL DEVELOPMENT FRAMEWORK	1-1
Chapter 1: General Background of Bohol Development	1-1
Chapter 2: Socio-Economic Profile of Bohol Province	2-1
Chapter 3: Development Problems in Bohol	3-1
Chapter 4: Development Potentials of Bohol	4-1
Chapter 5: Socio-Economic Development of the Philippines and Region VII	5-1
Chapter 6: Development Objectives and Strategies of Bohol Province	6-1
 PART II : SECTORAL DEVELOPMENT PROGRAMS AND PROJECTS	 7-1
Chapter 7: Strategy and Methods of Program & Project Planning	 7-1
 ECONOMIC SECTOR	
Chapter 8: Agriculture and Livestock Industry Development Programs and Projects	 8-1
Chapter 9: Forestry Development Programs and Projects	9-1
Chapter 10: Fishery Industry Development Programs and Projects	10-1
Chapter 11: Mining and Manufacturing Industry Development Programs and Projects	11-1
Chapter 12: Tourism Development Programs and Projects	12-1
 INFRASTRUCTURE SECTOR	
Chapter 13: Water Resources Management Development Programs and Projects	 13-1
Chapter 14: Transportation System Development Programs and Projects	14-1
Chapter 15: Energy Development Programs and Projects	15-1
Chapter 16: Communication Development Programs and Projects	16-1

	<u>Page</u>
SOCIAL SERVICES SECTOR	
Chapter 17: Public Health Development Programs and Projects	17-1
Chapter 18: Community Development Programs and Projects	18-1
Chapter 19: Human Resources and Education Development Programs and Projects	19-1
Chapter 20: Housing Development Programs and Projects	20-1
PART III : INTEGRATED AREA DEVELOPMENT PLAN OF PROGRAMS AND PROJECTS	
Chapter 21: Planning	21-1
Chapter 22: Development Scenario and Integrated Area Development Strategies	22-1
Chapter 23: Land Use Planning	23-1
Chapter 24: Inter-Sectoral Linkages of Development Programs and Projects	24-1
Chapter 25: Financial Resources of Bohol Province and Investment	25-1
Chapter 26: Implementation Planning and Schedule	26-1

JICA