

Final Report
SUMMARY

**The Study on the
Cebu Integrated
Port Development Plan
in the Republic
of the Philippines**

March 2002

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The Overseas Coastal Area Development Institute of Japan (OCDI)
Pacific Consultants International (PCI)

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Summary

March 2002



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(As of June 2001)

Japan International Cooperation Agency (JICA)
Cebu Port Authority (CPA)

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PREFACE

In response to a request from the Government of the Republic of the Philippines, the Government of Japan decided to conduct a study on the Cebu Integrated Port Development Plan in the Republic of the Philippines and entrusted the study to the Japan International Cooperation Agency (JICA).

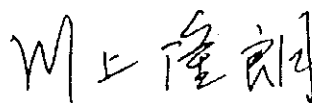
JICA selected and dispatched a study team, headed by Mr. Yukio Nishida of the Overseas Coastal Area Development Institute of Japan (OCDI) and consisting of OCDI and the Pacific Consultants International (PCI) to the Philippines, three times between December 2000 and January 2002.

The team held discussions with the officials concerned of the Government of the Republic of the Philippines and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of the Philippines for their close cooperation extended to the team.

March, 2002



Takao Kawakami
President
Japan International Cooperation Agency

LETTER OF TRANSMITTAL

March 2002

Mr. Takao KAWAKAMI
President
Japan International Cooperation Agency

Dear Mr. Kawakami,

It is my great pleasure to submit herewith the Final Report for the Study on the Cebu Integrated Port Development Plan in the Republic of the Philippines.

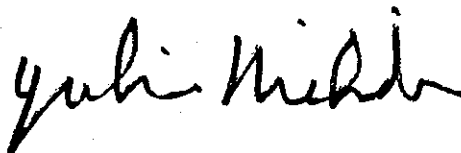
The Study Team which consists of the Overseas Coastal Area Development Institute of Japan (OCDI) and the Pacific Consultants International (PCI), and headed by myself, conducted surveys in the Republic of the Philippines over the period between December 2000 and January 2002 as per the contract with the Japan International Cooperation Agency.

The findings of this study, which are compiled in this report, were fully discussed with the officials of the Cebu Port Authority (CPA) and other authorities concerned to formulate master plans for the development of Cebu Baseport/the New Cebu Port and two selected major outports with a target year of 2020, to formulate a short-term development plan and to implement a feasibility study for Cebu Baseport/the New Cebu Port with a target year of 2010.

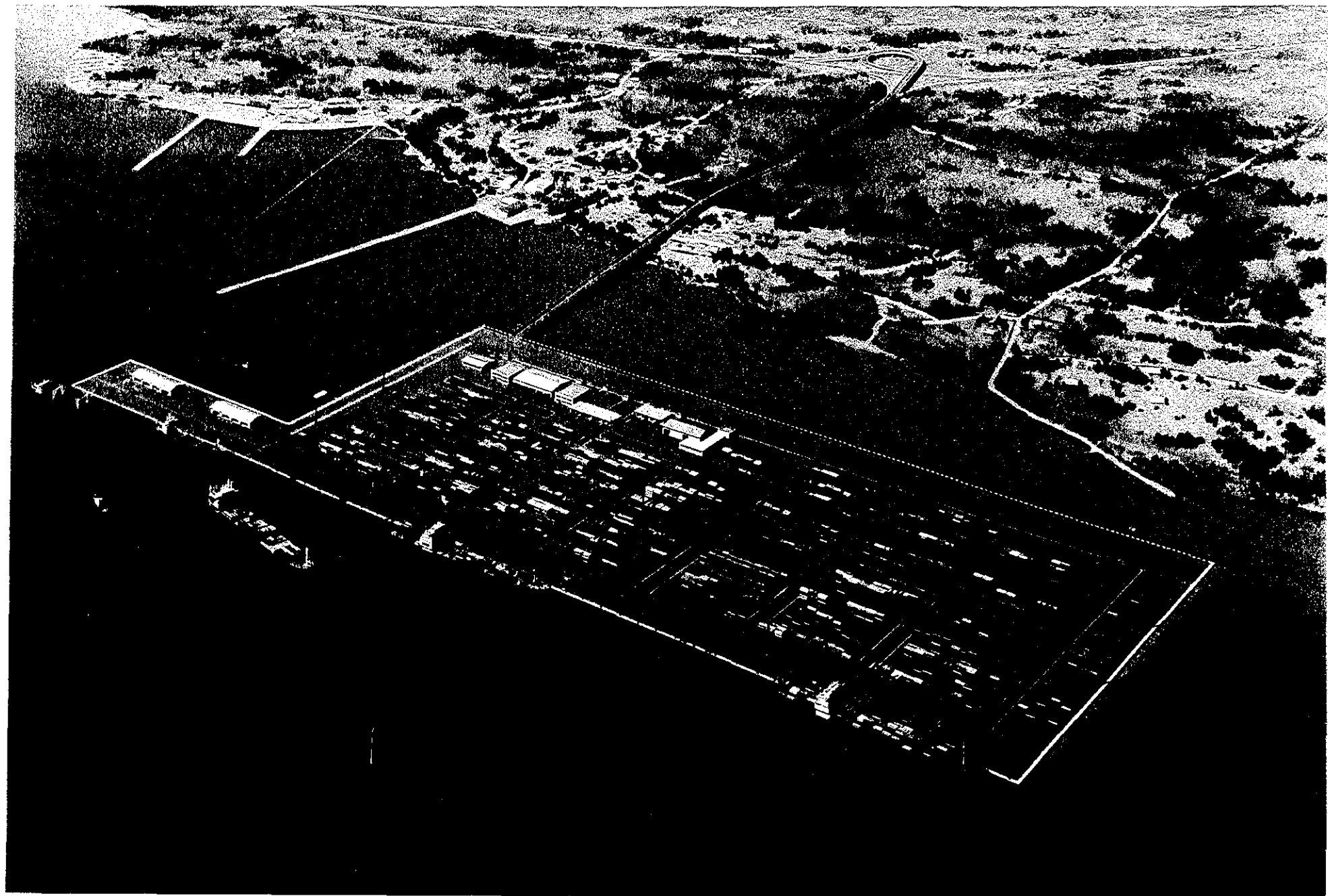
On behalf of the Study Team, I would like to express my deepest appreciation to the Government of the Republic of the Philippines, Cebu Port Authority and other authorities concerned for their brilliant cooperation and assistance in the course of the study.

I am also greatly indebted to the Japan International Cooperation Agency, the Ministry of Foreign Affairs, the Ministry of Land, Infrastructure and Transport, and the Embassy of Japan in Manila for giving us valuable suggestions and assistance during the preparation of this report.

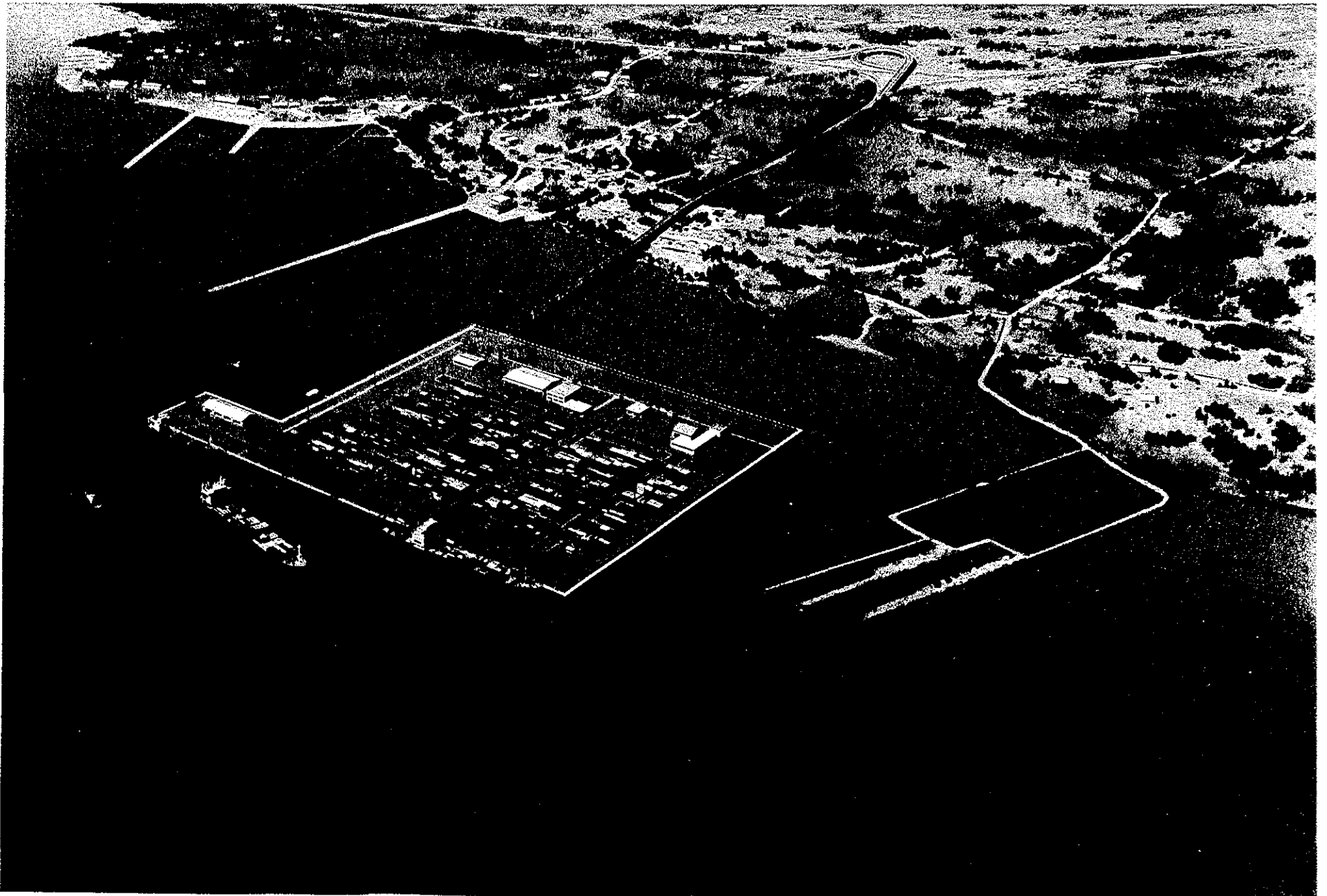
Yours faithfully,



Yukio Nishida
Leader of the Study Team
for the Study on the Cebu Integrated Port
Development Plan in the Republic of the Philippines



New Cebu Port (2020)



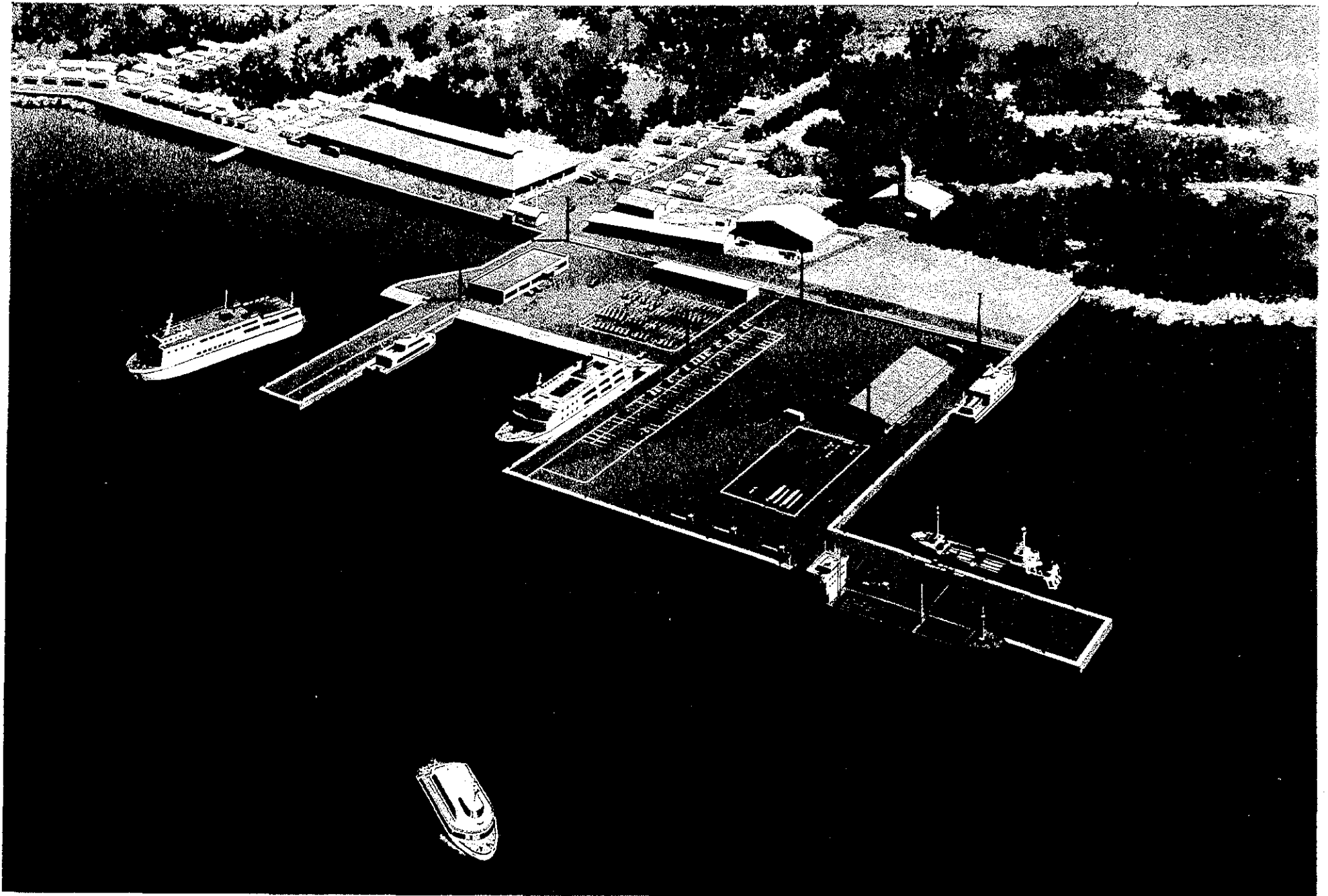
New Cebu Port (2010)



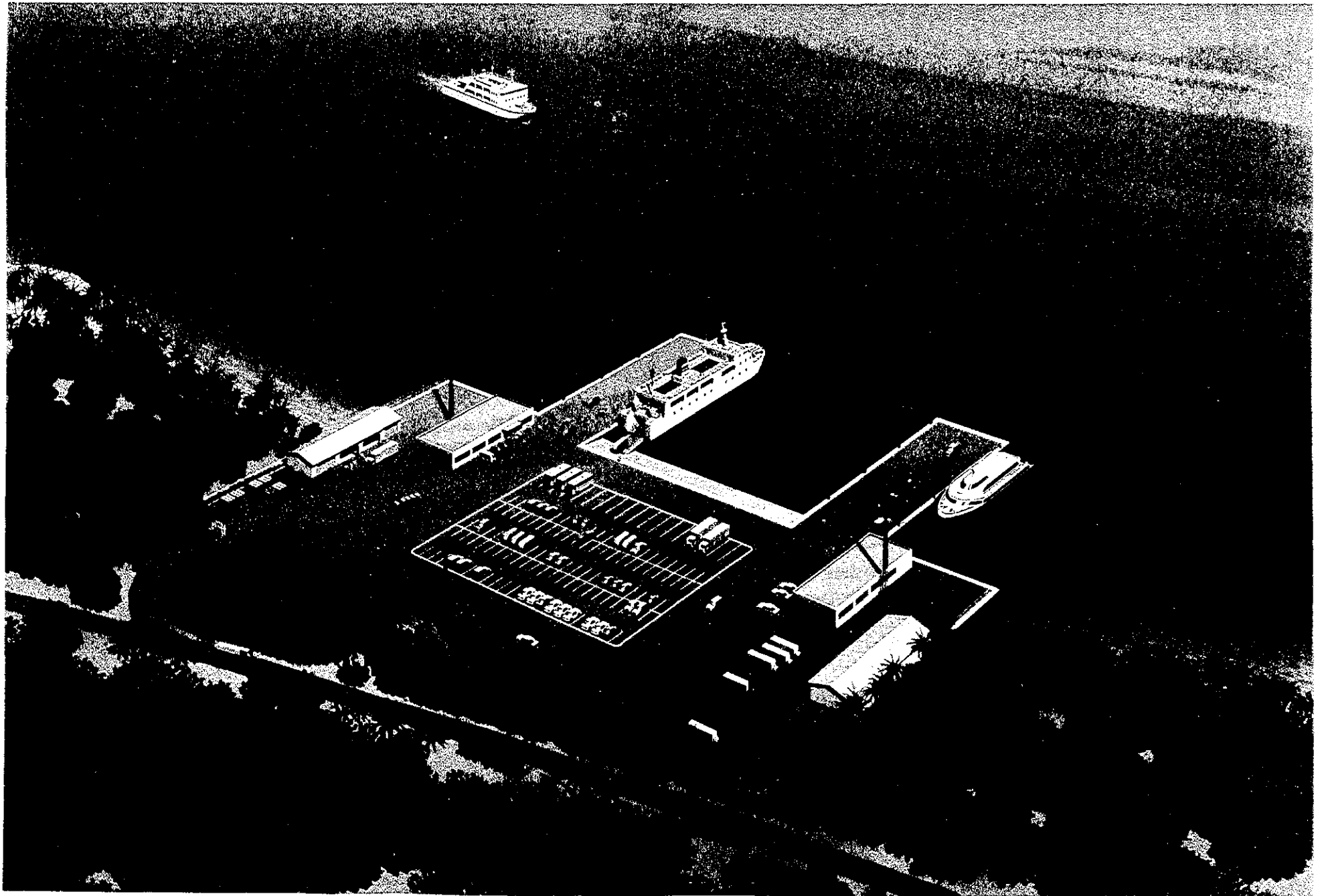
Cebu Baseport (2020)



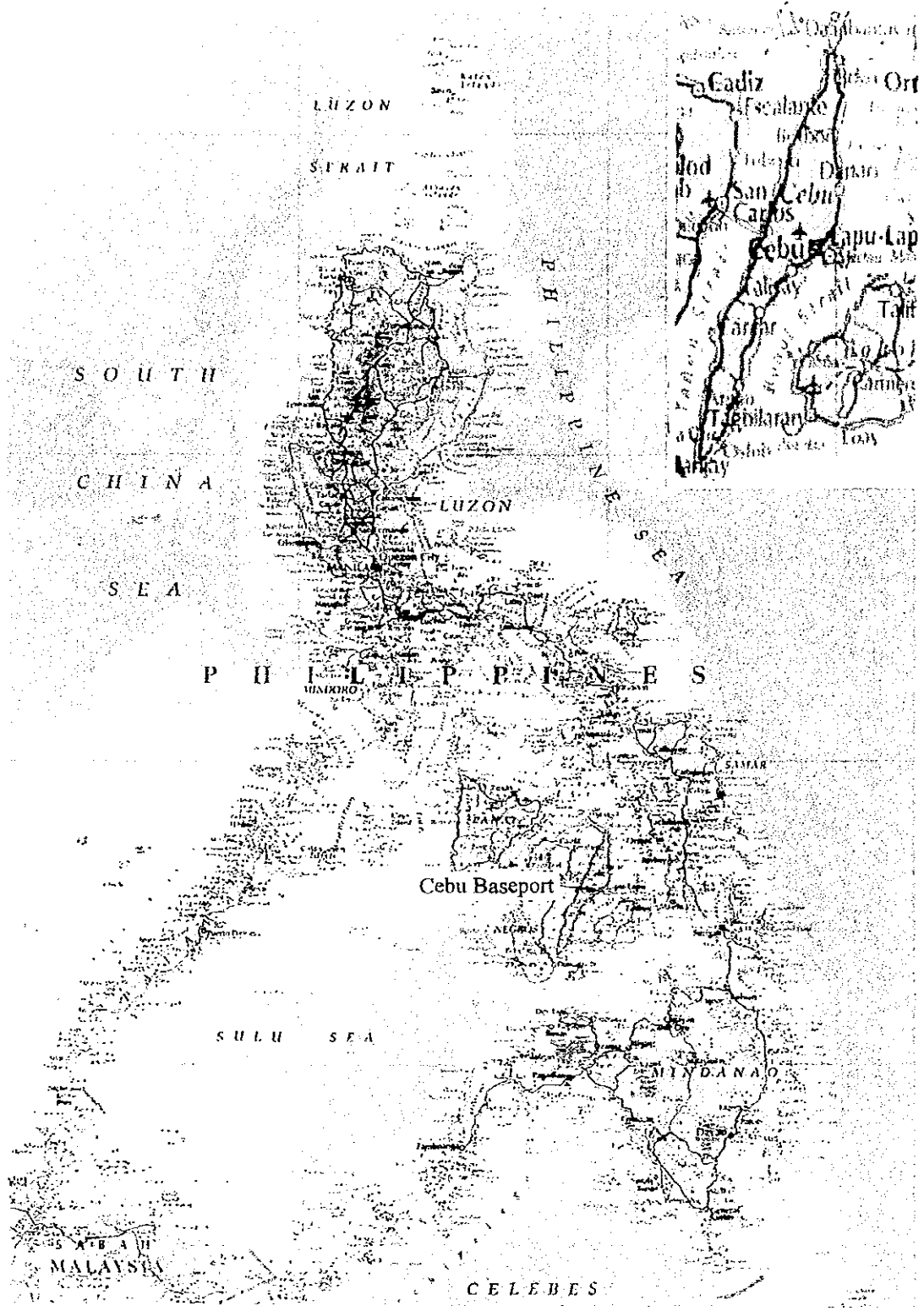
Cebu Baseport (2010)



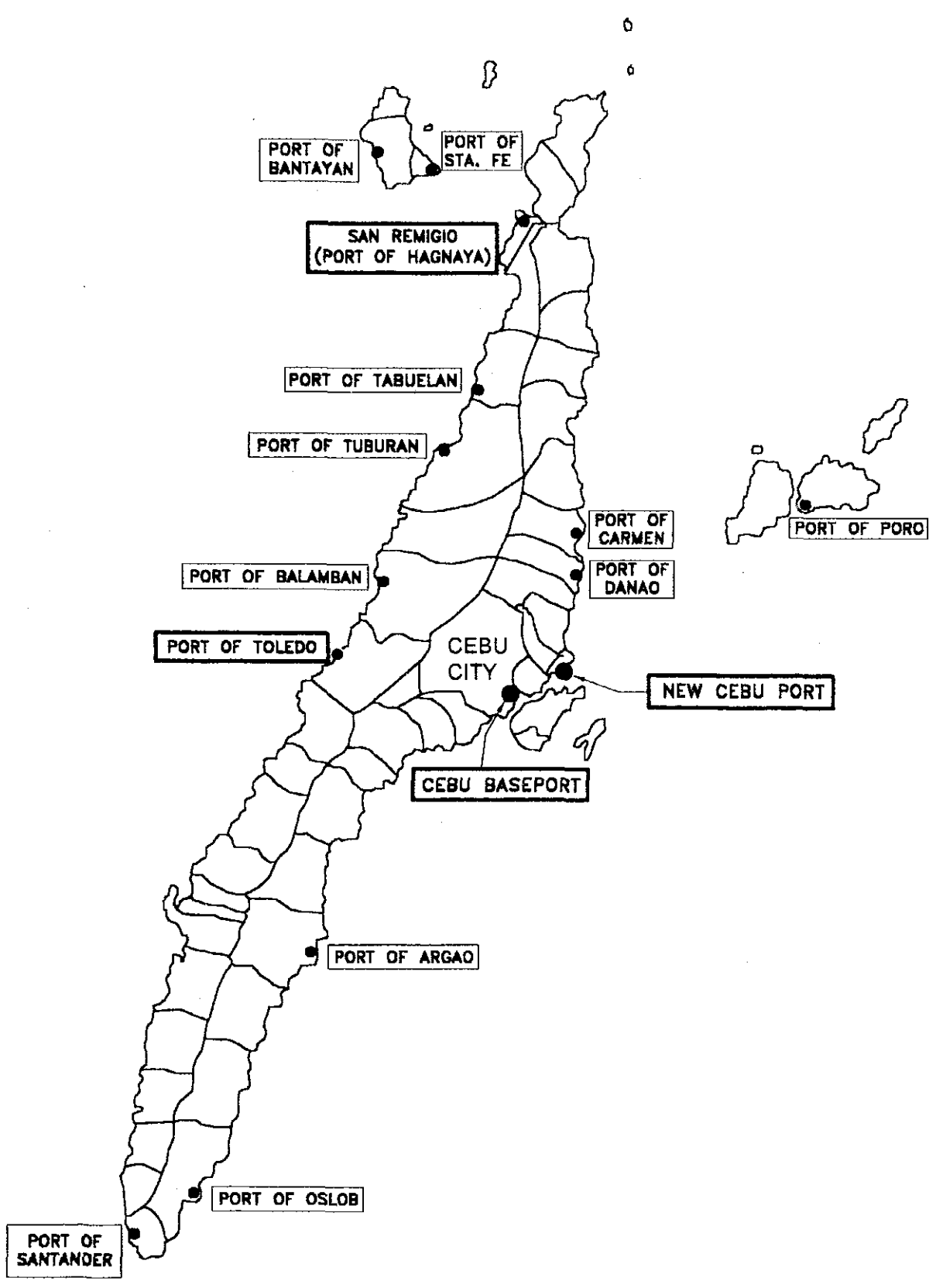
Toledo Port (2020)



New San Remigio Port (2020)



Location of Cebu



Cebu Baseport and Major Outports
in the Province of Cebu

LIST OF ABBREVIATIONS

A	AADT	: Average Annual Daily Traffic
	AAGR	: Average Annual Growth Rate
	A&D	: Alienable and Disposable
	ADB	: Asian Development Bank
	AFC	: Atlas Fertilizer Corporation
	AIP	: Air-mans Information Publication
	ARMM	: Autonomous Region of Muslim Mindanao
	ASEAN	: Association of South East Asian Nations
ATI	: Asian Terminal Incorporated	
B	B	: Berth
	B/C	: Cost Benefit Ratio
	BFAR	: Bureau of Fisheries and Aquatic Resources
	BOD	: Biochemical Oxygen Demand
	BOO	: Build, Operate and Own
	BOR	: Berth Occupancy Ratio
	BOT	: Build, Operate and Transfer
	BOC	: Bureau of Customs
C	CAR	: Cordillera Administrative Region
	CARP	: Comprehensive Agrarian Reform Program
	CASSCOR	: Cebu Arrastre & Stevedoring Service Corporation
	CBD	: Commercial Business District
	CCWP	: Cebu City Waterfront Development Project
	CDC	: Construction Development Corporation of the Philippines
	CDO	: Cagayan de Oro
	CDS	: City Development Strategy
	CENRO	: Community Environmental and Natural Resources Office
	CFS	: Container Freight Station
	CIADMPS	: Cebu Integrated Area Development Master Plan
	CIP	: Cebu International Port
	CIPDI	: Cebu Industrial Park Developers, Inc.
	CLIP	: Cebu Light Industrial Park
	CLUP	: Comprehensive Land Use Plan
	COD	: Chemical Oxygen Demand
	CPA	: Cebu Port Authority
	CRC	: Cargo Release Control
	CVMTPD	: Cebu Visayas Medium-Term Development
CVWSP	: Central Visayas Water and Sanitation Project	

D	D	: Depth
	DA	: Department of Agriculture
	DAO	: DENR Administrative Order
	DENR	: Department of Environment and National Resources
	DO	: Dissolved Oxygen
	DOTC	: Department of Transportation and Communication
	DTI	: Department of Trade and Industry
	DPWH	: Department of Public Works and Highways
	DR	: Delivery Record
	DW	: Department Weight
	DWT	: Deadweight Tonnage
E	EDI	: Electrical Data Interchange
	ECC	: Environmental Compliance Certificate
	ECP	: Environmental Critical Projects
	EGR	: Employment Annual Growth Rate
	EIA	: Environmental Impact Assessment
	EIP	: Environmental Impact Statement System
	EIRR	: Economic Internal Rate of Return
	EIS	: Environmental Impact Study
	EMaP	: Environmental Management Plan
	EMoP	: Environmental Monitoring Plan
	EMB	: Environmental Management Bureau
	EPZ	: Export Processing Zone
	ETA	: Estimated Time of Arrival
	ETD	: Estimated Time of Departure
F	FIRR	: Financial Internal Rate of Return
	FOB	: Free On Board
	FSDC	: Farm System Development Corporation
G	GDP	: Gross Domestic Product
	GLC	: Ground Level Concentration
	GNP	: Gross National Product
	GOP	: Government of the Philippines
	GPS	: Global Positioning System
	GRDP	: Gross Regional Domestic Product
	GRT	: Gross Tonnage
H	hpa	: hectopascal

	HTCI	: Herminio Teves Company
	HWL	: High Water Level
I	IBRD	: International Bank for Reconstruction and Development
	IEE	: Initial Environmental Examination
	IFM	: Inward Foreign Manifest
	ICAO	: International Civil Aviation Organization
	IMO	: International Maritime Organization
	IPHO	: Integrated Provincial Health
J	JBIC	: Japan Bank for International Cooperation
	JICA	: Japan International Cooperation Agency
K	KVA	: Kilo Volt Ampere
L	LCT	: Loading Craft Transport
	LCL	: Less Than Container Load
	LDP	: Local Development Plan
	LGU	: Local Government Unit
	LLC	: Level Lifting Cranes
	LLW	: Lowest Low Water Level
	LOA	: Length of Overall
	LTO	: Land Transportation Office
	LUWA	: Local Unit Water Authority
	LW	: Low Water
	LWL	: Low Water Level
M	MCCU	: Monitoring Cargo Control Unit
	MCDP	: Mactan Cebu Development Project
	MCDPO	: Mactan Cebu Development Project Office
	MCIA	: Mactan Cebu International Airport
	MCIAA	: Mactan Cebu International Airport Authority
	MCWWD	: Metro Cebu Water Works Department
	MECASSI	: Metro Cebu Arrastre & Stevedoring Service
	MEZ	: Mactan Economic Zone
	MICT	: Mindanao International Container Terminal
	MICT	: Manila International Container Terminal
	MLLW	: Mean Lower Low Water
	MRT	: Mass Rail Transit
	MSL	: Mean Sea-Water Level
	MT	: Metric Ton

	MTPDP	: Medium-Term Philippine Development Plan
	MTS	: Mass Transit System
N	NAMRIA	: National Mapping Resource Information Authority
	NCR	: National Capital Region
	NCTO	: New Cebu Township One
	NEDA	: National Economic and Development Authority
	NEPC	: National Environmental Protection Council
	NIA	: National Irrigation Administration
	NOPEMCO	: The Negros Oriental Provincial Employees Multi-Purpose Cooperative
	Nox	: Nitrogen Oxides
	NPC	: National Power Corporation
	NSCB	: National Statistical Coordination Board
	NSO	: National Statistics Office
	NVOCC	: Non Vessel Operate Common Carrier
O	ODA	: Official Development Assistance
	OECD	: Organization for Economic Cooperation and Development
	OECF	: Overseas Economic Cooperation Fund (Currently JBIC)
	O-D	: Origin and Destination
	OFM	: Outward Foreign Manifest
	OPASCOR	: Oriental Port & Allied Service Corporation
P	PACD	: Presidential Arm on Community Development
	PAGASA	: Philippine Atmospheric, Geophysical and Astronomical Services Administration
	PC	: Prestressed Concrete
	P/C	: Passenger Cargo
	PCI	: Pacific Consultants International
	PCO	: Pollution Control Officer
	PCU	: Passenger Car Unit
	PD	: Presidential Decrees
	PENRO	: Provincial Environment and Natural Resources Offices
	PEZA	: Philippine Economic Zone Authority
	PHILVOLCS	: Philippine Institute of Volcanology and Seismology
	Php	: Philippine pesos
	PIC	: Provincial urban/Industrial Center
	PIE	: People's Industrial Estate
	PIE-MO	: PHIVIDEC Industrial Estate-Misamis Oriental
	PMO	: Port Management Office
	POPCEN	: POPulation CENsus
	PPA	: Philippine Ports Authority

Q	QGC	: Quay Gantry Crane
R	R.C.	: Reinforced Concrete
	RDC	: Regional Development Council
	RDP	: Regional Development Plan
	RIC	: Regional Industrial Center
	RORO	: Roll on Roll off
	RPPF	: Regional Physical Framework Plan
	RTGs	: Rubber Tier Mounted Gantry Crane
S	SCF	: Standard Conversion Factor
	SEI(s)	: Significant Environmental Impact(s)
	SEZ	: Special Economic Zone
	SPM	: Suspended Particulate Matter
	SPSP	: Steel Pipe Sheet Pile
	SPT	: Standard Penetration Test
	SS	: Suspended Solid
	SWIP	: Small Water Impounding Project
T	TEU	: Twenty-foot Equipment Unit
	THI	: Tsuneishi Heavy Industry
	TPC	: Toledo Power Company
	TSMC	: Tolong Sugar Mill Company
U	URSUMCO	: Universal Robina Sugar Milling Corporation
	USDI	: United South Dock-Handlers Inc,
V	VAT	: Value Added Tax
	VECO	: Visayas Electric Cooperation
	VTMS	: Vessel Traffic Management System
W	WCIP	: West Cebu Industrial Park

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Executive Summary

Executive Summary

The Study on the Cebu Integrated Port Development Plan in the Republic of the Philippines

(November, 2000 through March, 2002)

Background of the Study

Cebu Province is expected to play an important role as a core of the economic development of Visayas and Mindanao region. To ensure that economic development and social stability will be achieved in Cebu Province and the surrounding areas, it is necessary to formulate a long-term regional development policy and port development plan in Cebu Province from the viewpoints of cargo transport, passenger transport, and industrial development.

The existing Cebu Baseport, which should play an important role for regional development, lacks a future development area and the facilities necessary to cope with the increasing volume of cargoes and passengers. Therefore, improving the existing facilities and developing the New Cebu Port are urgently required.

CPA was established in 1996 and it is the solo development and management authority of ports in Cebu Province. Considering, however, rather short experience of CPA in comprehensive port planning, close cooperation in technology transfer would be necessary.

In this regards, the Government of the Republic of the Philippines requested the Government of Japan to elaborate the Cebu Integrated Port Development Plan to ensure the promotion of port development in Cebu Province. In response, the Japan International Cooperation Agency organized a study team and carried out the study to formulate the Cebu Integrated Port Development Plan.

Objectives of the Study

The objectives of the Study are as follows.

- (1) To formulate a port development policy in the Cities and Province of Cebu
- (2) To formulate master plans for the development of the existing Cebu Baseport/the New Cebu Port and selected two major ports with a target year of 2020
- (3) To formulate a short-term development plan and to implement a feasibility study for the existing Cebu Baseport/the New Cebu Port with a target year of 2010
- (4) To transfer technology on port development through the Study

Implementation of the Study

The Study was implemented as follows.

- (1) Review and analysis of the present condition
- (2) Formulation of a port development policy in Cebu Province, including recommendation on the site of the New Cebu Port and two selected major ports for the master plan study.
- (3) Formulation of master plans of Cebu Baseport/the New Cebu Port, Toledo Port, and the New San Remigio Port with a target year of 2020
- (4) Formulation of a short-term development plan and implementation of a feasibility study for Cebu Baseport/the New Cebu Port with a target year of 2010

Port Development Policies

(Cebu Baseport/the New Cebu Port)

A new port with deep berths and sufficient cargo handling area should be developed at Consolacion to cater for foreign cargoes. The primary function of the New Cebu Port is the international container terminal. Cebu Baseport should handle passengers and domestic cargoes.

(Outports)

The gate to the neighboring islands with short sea transport distance is the major role of outports. The priority projects are the development of Toledo port to enhance the RORO route with Negros island and the development of the new San Remigio port, in place of Hagnaya port, to establish a new RORO route between Cebu island and Bantayan island.

Demand Forecast

(Cebu Baseport)

The cargo and passenger volumes were forecasted for three scenarios of economic growth rate: high, middle and low cases. On the basis of the middle growth case, which is the most realistic of the three scenarios, the cargo and passenger volume is shown in the following table.

Demand Forecast of Cebu Baseport

	Foreign Container (1,000TEU)	Foreign Conventional (1000ton)	Domestic Container (1,000TEU)	Domestic Conventional (1,000ton)	Passengers (1,000 person)
2000	104	459	300	2,941	10,059
2010	445	477	565	5,597	15,820
2020	1,198	756	1,203	6,905	20,462

(Toledo Port and the New San Remigio Port)

The forecasted cargo and passenger volume is shown in the following table.

Demand Forecast of Toledo Port and the New San Remigio Port

		Cargo(1000 tons)	Passenger(1000 persons)
Toledo Port	1999	141	286
	2010	1,224	1,089
	2020	2,332	1,283
New San Remigio Port	1999*	5	277
	2010	382	670
	2020	789	901

Note: * handled at Hagnaya Port

Master Plan of Cebu Baseport/the New Cebu Port (2020)

(Allocation of Future Demand between Cebu Baseport and the New Cebu Port)

The cargo and passenger volume of the New Cebu Port and Cebu Baseport is shown in the following table.

Future Demand of Cebu Baseport and the New Cebu Port

		Foreign Container (1,000TEU)	Foreign Conventional (1000ton)	Domestic Container (1,000TEU)	Domestic Conventional (1,000ton)	Passengers (1,000 person)
New Cebu Port	2010	445	477	57*	--	--
	2020	1,198	756	120*	--	--
Cebu Baseport	2010	--	--	508	5,597	15,820
	2020	--	--	1,083	6,905	20,462

Note: * 10% of total domestic container cargoes, carried by domestic container vessels

(The New Cebu Port)

The required major facilities in 2020 are as follows.

(1) Foreign container terminal

Quay length 1200m and berth depth 13m (four (4) berths)

Gantry cranes (articulated crane type) 10

(2) Foreign multi-purpose terminal

Quay length 380m and berth depth 10m (two (2) berths)

(3) Access road from the new port to the Cebu North Coastal Road

(Stage Development Plan of the New Cebu Port)

It is recommended that the new Cebu port be constructed in the following plan.

1st Phase : 2006-2008 Tow (2) container berths and one (1) multi-purpose berth

2nd Phase : 2011-2014 Tow (2) container berths and one (1) multi-purpose berth
(One (1) container berth will be operational in 2013)

(Cebu Baseport)

The proposed projects in master plan (2020) are as follows.

(1) Expansion (30m off-shore) of the backyard of conventional cargo berth (B21-22, 24-25, 28-30)

- (2) Renovation of pier1-3, including expansion of width of pier1 and 2 for large vessels
- (3) Construction of passenger terminal buildings with boarding bridge and elevated catwalks for RORO ferries
- (4) Expansion of back-up area for RORO ferries in port zone

(Stage Development Plan of Cebu Baseport)

The renovation work should be conducted part by part in order to maintain required quay length and overall capacity. It is recommended that the renovation works basically be conducted in the following plan.

- 2000-2005 Renovation work at PMO 2
- 2006-2010 Renovation work at PMO 3 & 4
- 2011-2020 Renovation work at PMO 5 and Pier 2

Master Plan of Toledo Port and the New San Remigio Port (2020)

(Toledo Port)

The southward development of the present jetty is recommended. Main facilities are as follows.

- Two (2) unit of RORO berth (4 - 6m deep)
- Fast craft berths
- General cargo berth (320m long and 6m deep)
- Back yard area, Passenger terminal building, warehouse

(New San Remigio Port)

The site of the New San Remigio Port is recommended near the mouth of Hagnaya Bay, where the private causeway exists. Main facilities are as follows.

- Two (2) jetties for RORO berths (4m deep) and fast craft berths
- Back yard area, Passenger terminal building, warehouse

Preliminary Evaluation of the Feasibility of the Master plans

(Cost Estimation for the Master Plans)

The project cost for master plans of each port are as follows.

	New Cebu Port	Cebu Baseport	Toledo Port	New San Remigio Port
Total	17,922	3,576	967	501

(Development Scheme)

(1) The New Cebu Port

Infrastructure and gantry cranes are developed by CPA, while cargo handling equipment and

buildings are the responsibility of the private sector.

(2) Cebu Baseport

Renovation of port facilities is done by CPA, while passenger terminal buildings and the expansion of back-up area for RORO ferries at the private land will be the responsibility of the private sector.

(3) Toledo Port and the New San Remigio Port

All port facilities, except cargo handling equipment, are developed by CPA.

(Preliminary Economic Analysis)

The result of EIR calculation is as follows.

The New Cebu Port	EIRR 27%
Cebu Baseport	EIRR 20%
Toledo Port	EIRR 25%
The New San Remigio Port	EIRR 27%

The social discount rate or opportunity cost of capital of 15%/annum in the Philippines is adopted as an evaluation criterion of the investment efficiency. Since all EIRRs exceed this rate, all projects are assumed to be economically feasible.

(Preliminary Financial Analysis)

The result of FIRR calculation is as follows.

The New Cebu Port (CPA)	FIRR 8.4%
Cebu Baseport (CPA)	FIRR 5.4%

The average interest rate under a soft loan is assumed to be 5.25%. Since the FIRRs exceed this rate, the projects are assumed to be financially feasible. In the case of Toledo Port and the New San Remigio Port, CPA can cover only operating costs by its revenues.

(Initial Environment Examination (IEE))

Regarding fauna and flora in 4 sites, no threatened, extinct and rare species of mangroves, seaweeds, algae, macrobenthic organisms or coral were found in the areas.

Regarding the mangrove community in the new Cebu port proposed area Consolasion, the mangrove areas is not specified as a protected mangrove area now. So the area shall be specified as development area for industry of land use program by the local government of Consolasion, Madaue cty. The mangrove community concerned will be transplanted at the specified Mangrove Mitigation area. As a mitigation measure of mangrove area development, mangrove planting plan should be formulated at the tidal flat in north of proposed area in this study project.

Cebu Baseport respondents who are generally squatters have accepted the reality that they are to be ejected from the area in some cases because CPA owns the land. Although, they expect CPA and the LGU of the Cebu City to recognizes the situation of these squatters and to mitigate this with a Social Development Plan.

On the other hand, residents in Consolacion, particularly the shipyard owners, feel their responsibilities as citizens to respond to the call of local, national and international need for a new international port.

Short-term Development Plan(2010)

(The New Cebu Port)

(1) Foreign container terminal

Quay length 600m and berth depth 13m (two (2) berths)

Land area 30ha

Gantry cranes 5 (articulated crane type)

(2) Foreign multi-purpose terminal (one (1) berth)

Quay length 190m and berth depth 10m

Area 2ha

Cargo shed 1

(3) Access road from the new port to the Cebu North Coastal Road

(4) Service boat mooring facility, Cargo handling equipment, Navigation aids facilities

(Cebu Baseport)

(1) Ongoing/ planned projects

Expansion (30m off-shore) of the backyards and deepening the berths of B8-B17 with construction of RORO ramps (proposed length is 660m) and other ongoing/planned projects are assumed to be conducted by 2010.

(2) Proposed Projects

Expansion (30m off-shore) of backyard of conventional cargo berth (B21, 22, 24, 25)

Renovation of pier1 and 3, including expansion of width of pier1 for large vessels

Construction of passenger terminal buildings and boarding bridge for RORO ferries

Expansion of back-up area for RORO ferries

(Development Scheme)

(1) The New Cebu Port:

Infrastructure and gantry cranes are developed by CPA, while cargo handling equipment and buildings are the responsibility of the private sector. Container terminal should be operated by private sector. Double terminal operator system is recommended for sound competition in general.

(2) Cebu Baseport:

Renovation of port facilities will be done by CPA, while passenger terminal buildings and the expansion of back-up area for RORO ferries at the private land will be the responsibility of the private sector.

(Project Cost)

Estimated Cost for the Short-term Plan	(million pesos)	
	New Cebu Port	Cebu Baseport
CPA's Original Plan	-	732.5
Proposed Plan for CPA	5,974.1	626.7
Construction	4,389.0	
Equipment	1,500.0	
Other (land, compensation, etc)	85.1	
Proposed Plan for Private Companies	1,220.5	693.3
Total	7,194.6	2,052.5
Engineering Cost, Contingency (10%), VAT (10%)	2113.0	607.9
Grand Total	9,307.6	2,657.3

(Economic Evaluation (EIRR))

Regarding Cebu Baseport Development, objective project for the feasibility study is the proposed plan for CPA.. The results of the calculation of EIRR are as follows.

New Cebu Port	23%
Cebu Baseport	28%

Both EIRRs exceed the social discount rate or opportunity cost of capital (12-15% per annum) in the Philippines and both projects are economically feasible. Moreover, even though the project cost was increased by 10 % and the benefits were decreased 10 %, both projects are still economically feasible (EIRR of New Cebu Port : 18 %, EIRR of Cebu Baseport : 22 %)

(Financial Evaluation (FIRR))

The result of the calculations of FIRR of CPA and private container terminal operator is as follows.

CPA

New Cebu Port	7.4%
Cebu Baseport	7.1%
New Cebu Port and Cebu Baseport	7.4%

Container Terminal Operator

New Cebu Port	20.1%
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FIRRs of CPA exceed the average rate of 5.25% under a soft loan and the projects are thus financially feasible. Moreover, even though the project cost was increased by 10 % and the revenues were decreased 10 %, both projects are still financially feasible (FIRR of New Cebu Port : 5.4 %, FIRR of Cebu Baseport : 5.5 %)

Development of Cebu Baseport, which will increase the capacity of the port, contributes to decrease the required facilities of the New Cebu Port. To improve the FIRR of Cebu Baseport project, development Cebu Baseport is recommended to be conducted together with the New Cebu Port development as one package project.

(Natural Environmental Impact Assessment (EIA))

Generally the water is polluted in the order of 1) Cebu Baseport - 2) New Cebu Port

(Consolacion) - 3) Toledo Port - 4) New San Remigio Port site, especially in the parameter of coliform. That is due to population pressure from the populated area such as Cebu city and Lapu-Lapu city. As mitigation measures to such pollutions, the environmental treatment facilities should be provided at Cebu Baseport and the New Cebu Port to prevent discharging pollutants from the port areas.

Regarding the mangrove community in the New Cebu Port development area at Consolacion, the mangrove community concerned will be transplanted at the specified Mangroves Mitigation area. As mitigations of such mangrove trees and ecosystem of tidal area, the following measures are proposed:

- (1) The reclamation area and access road foundations should be planned to minimize the interference of existing mangrove trees.
- (2) The mitigation area should be specified for relocations of affected mangrove trees and equivalent amount of affected mangrove trees should be replanted by seedlings 10 times of existing number as part of the project.

Regarding the air quality and noise impacts to the planned Access Road Area, the access road is planned along the agricultural land and nearest residents are located around 300 - 500 m away from the planned access road area. Therefore there will not be the serious environmental impacts by air pollution and noise level.

(Social Environmental Impact Assessment (EIA))

Regarding the awareness and perception of the project by the residents of Barangay Tayud, 83% of the respondents of the survey were already aware of the project. 90% of them are favor of the project.

It is further recommended that an amicable settlement could be rendered and concrete social development projects could be extended to the affected residents to encourage harmonious relationship between the proponent and stakeholders during the project implementation.

Port Administration, Management, and Operation

(Restructuring of CPA Organization and Management)

CPA was established as the regional port authority, whose base organization was a regional port management office of PPA. Therefore, CPA is required to enhance its organization of "Plan" and "See" as an independent port authority. The following actions are recommended.

- (1) Enhancement of planning section,
- (2) Fostering of generalists through the personnel exchange,
- (3) Establishment of the regular meeting with each central and local government and port users to exchange of views and opinions for port development

(Financial Management and Tariff System)

Public financial support by central and local government is necessary for the outports

development. To enhance the financial foundation of CPA, tariff system and levels should be timely revised based on the situation of shipping market.

(Staff Training)

To upgrade the capability of each employee, CPA should improve its training system in cooperation with DOTC and PPA, because they have advanced training systems and facilities.

(Upgrading of Port Statistics System)

The following measures are recommended to upgrade CPA's port statistic system.

- (1) Enhancement of the statistic section, (2) Improvement of the collecting data items and quality, (3) Proceeding computerization, (4) Publication of a statistic book

(Container Terminal Management and Operation)

A private company is recommended as the container terminal operator for efficient management and operation. In order to promote sound competition, double terminal operator system is recommended in general. The following matters are recommended for the contract condition.

- (1) guaranty of fair treatment for all shipping companies, (2) Incentive system for cargo handling volumes, (3) The fixed and variable (depends on the cargo volume) mixed lease fee system

(Coordination with Private Sector)

For the development of Cebu Baseport, CPA should encourage the private sector projects under close coordination with concerned organizations, such as landowners in port zone and shipping companies.

(Navigation Safety)

Introduction of Vessel Traffic Management System (VTMS) and one way traffic system at the channel for large vessels is recommended. CPA should coordinate with the Coast Guard to ensure that these measures are introduced.

Follow up Actions for Successful Implementation of the Proposed Port Development

(Authorization of the Project)

CPA needs to obtain authorization of the project as a national project for implementation of the project through the required procedures with relevant organizations, such as DOTC, NEDA, RDC, and affected residents by the project. In particular, CPA should prepare the integrated Environmental Impact Statement (EIS) System based on the Environmental Impact Assessment (EIA) study conducted by the JICA Study in order to obtain the Environmental Compliance Certificate (ECC) from DENR.

(Preparation of Financial Resources)

A soft loan is an essential factor for the implementation of the proposed projects. CPA should progress both required processors in the Philippines and the coordination with related organizations for providing soft loan.

(Port Sales Activities)

Under the recent severe competition among the world major container ports, port sales activities have become one of the vital measures in attracting calls of container vessels in particular. CPA also should carry out port sales activities, such as port sales missions for domestic and foreign market, port seminars, port tours for users, which other major ports conduct.

(Diversification of the Business Field of CPA)

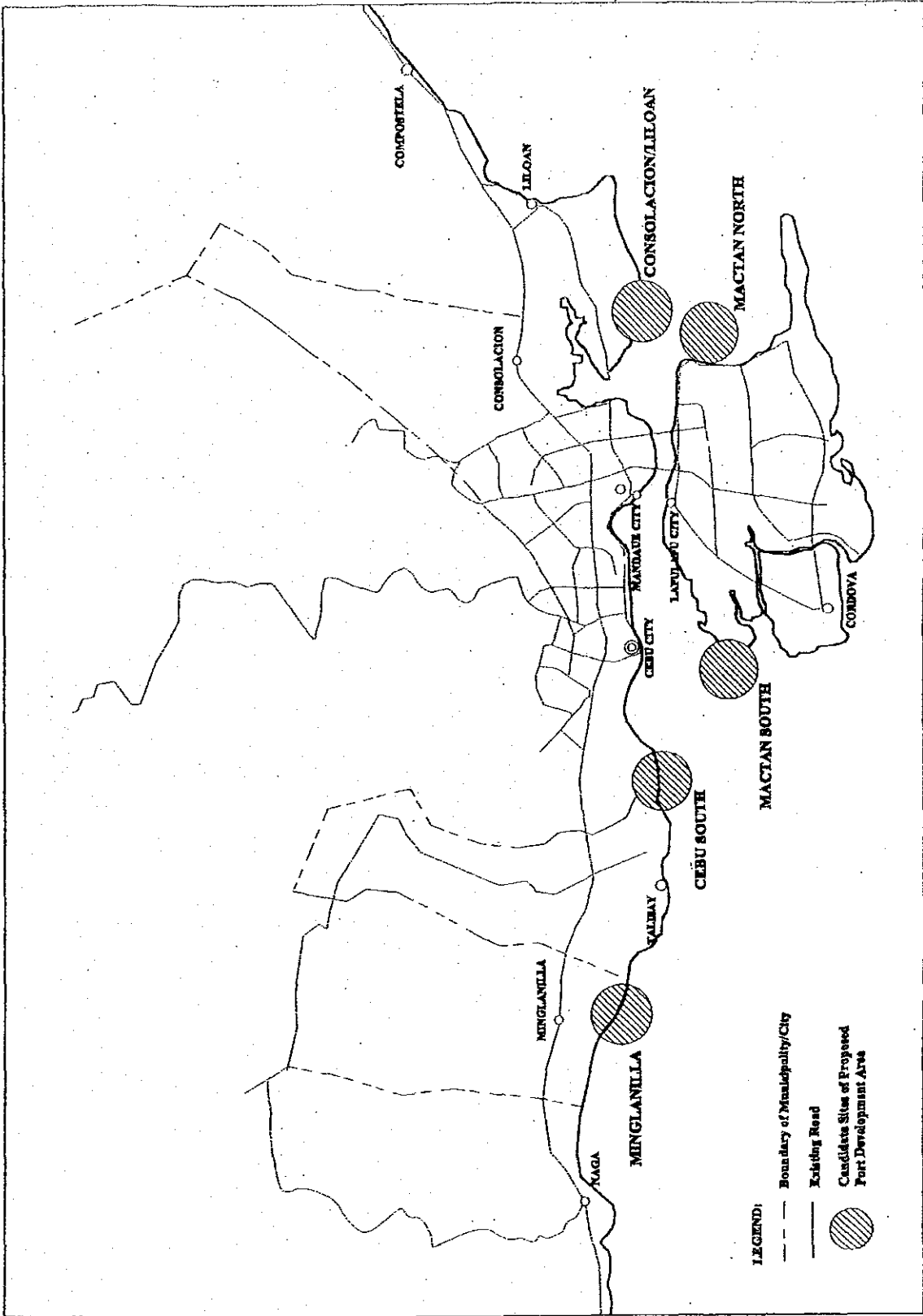
The port authority's business is not limited within port management and operation. In order to contribute to the regional economic promotion, it may be worthwhile in long time range for CPA to consider other types of business such as port-oriented industrial park, port business office building, a kind of maritime and so on.

(Establishment of Cooperation System with Neighboring Communities)

It is often observed that a port authority organizes a sort of association composed of port related business groups as a supporting system for the port promotion. This strategy may be necessary for CPA as well in promoting the development of the New Cebu Port.

(Surveys and Researches for future Development)

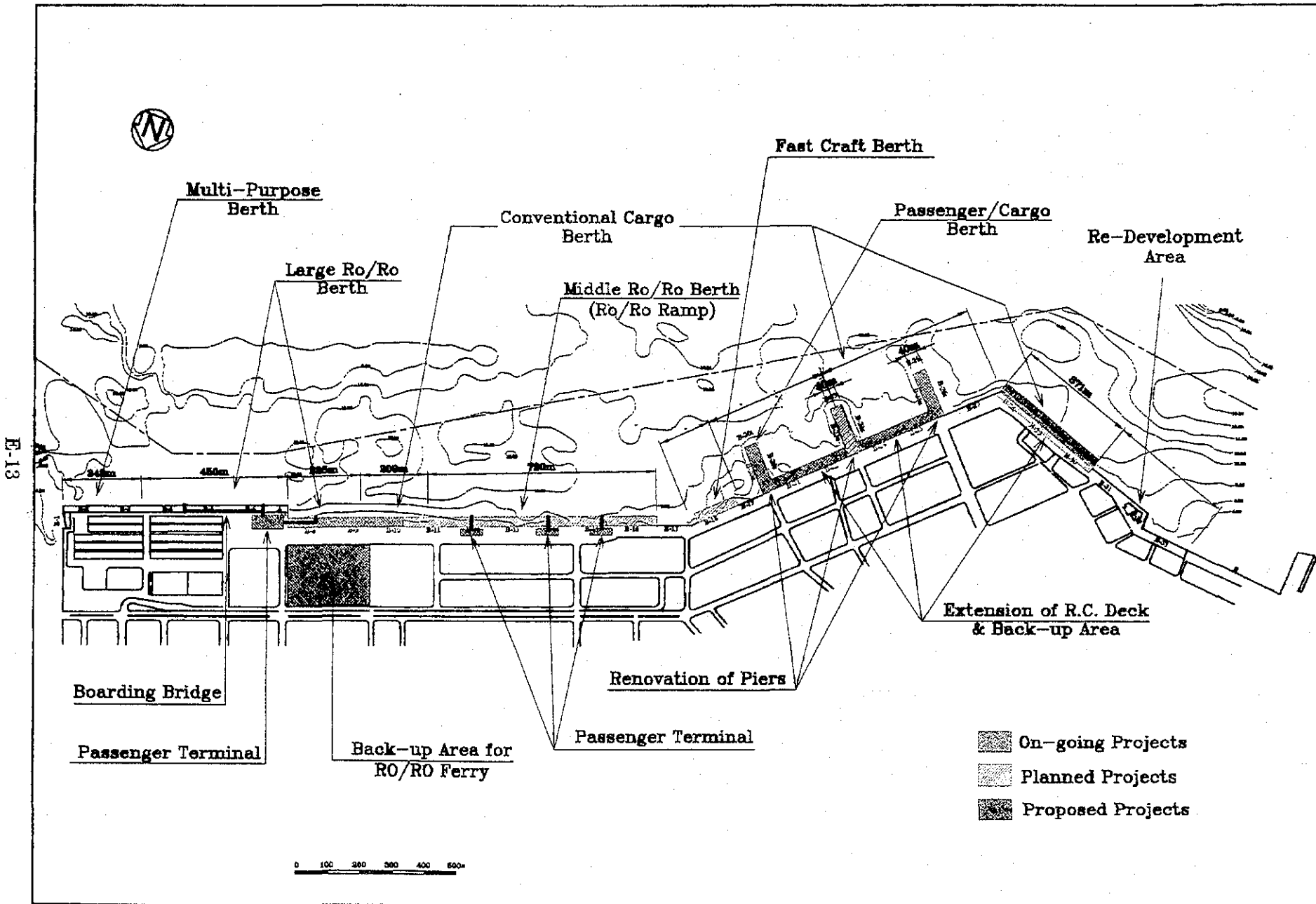
The planned area and alignment of berthing facilities is found reasonable workable ratio of more than 97.5 % of annual working days. However in the future plan, when the berthing alignment is extended to north direction, the probability of workable conditions is considered to be lower than this. The wave calmness will become an issue in future development of the New Cebu Port. The wave assessment in this study was made based on the observed wind data. It is proposed to make the future wave assessment more accurate by using actual recorded wave data to be collected by wave record equipment installing offshore near the Bagapay point (mouth of Magellan Bay).



The Candidate Sites for the New Cebu Port

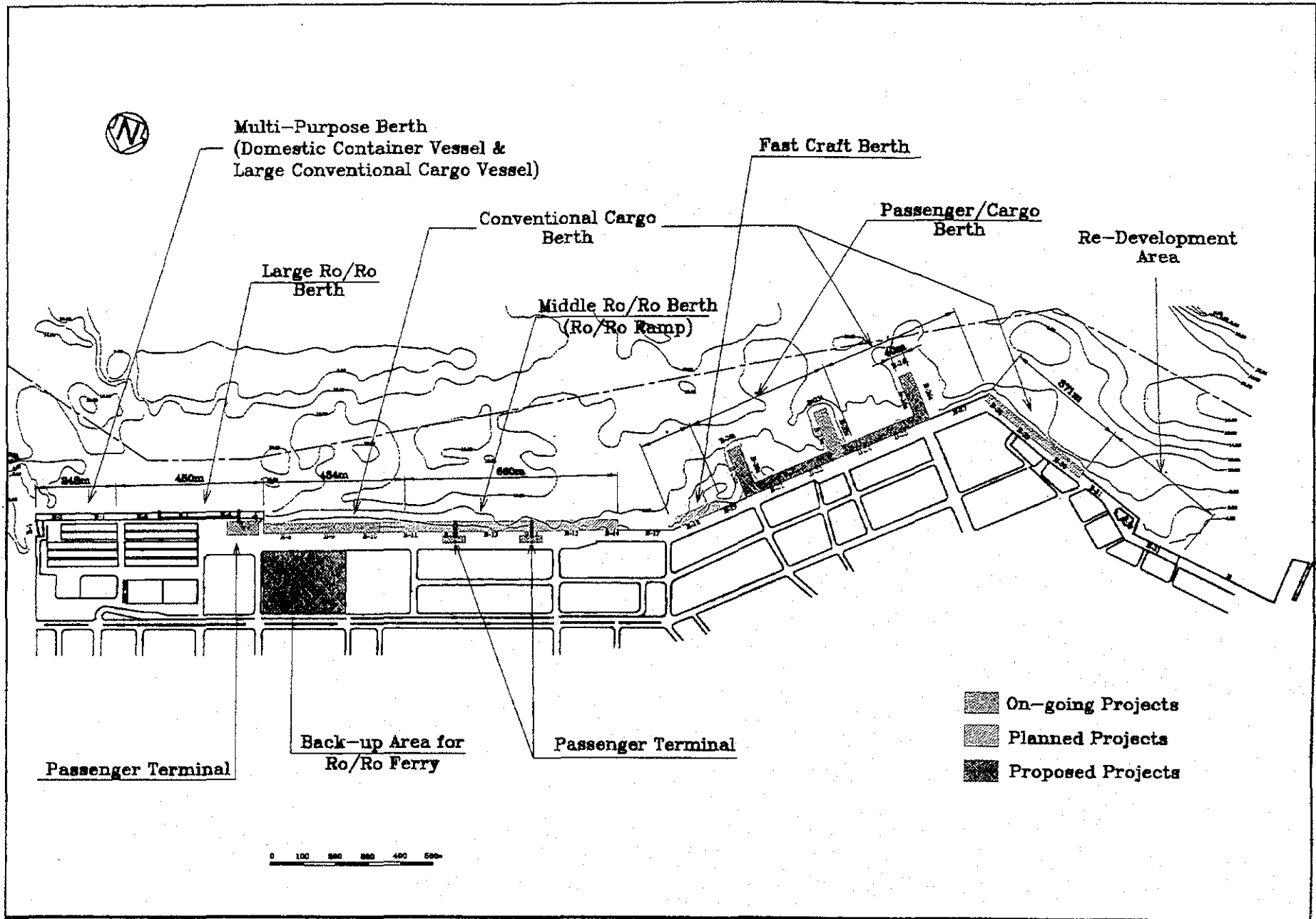


Short-term Development Plan of New Cebu Port

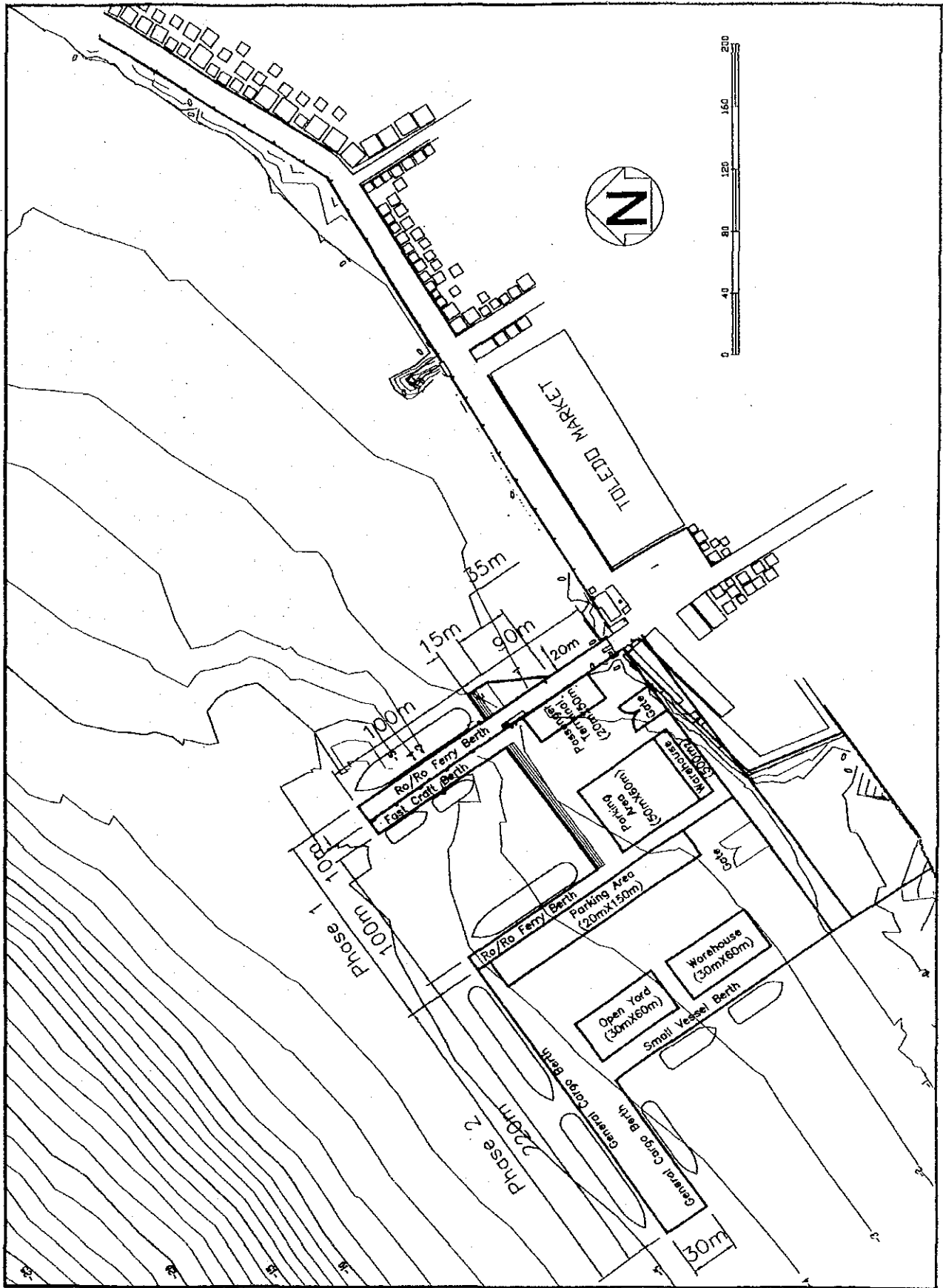


Cebu Baseport Development Plan (2020)

E-14



Cebu Baseport Development Plan (2010)



Toledo Port Master Plan

List of the members of the Inter-Agency Steering Committee, the CPA Counterpart Study Team and the JICA Study Team

1. Inter-Agency Steering Committee

Mr. George D. Esguerra	Assistant Secretary for Planning, Department of Transportation and Communications
Mr. Jose J.N. Marques	General Manager, Cebu Port Authority
Mr. Samuel Custodio	Director, Department of Transportation and Communications
Mr. Manuel T. Gorme	Port District Manager-Visayas, Philippine Ports Authority
Mr. Glenn G. Cabanez	Regional Director, Maritime Industry Authority Region 7
Mr. Juanito Abergas	Regional Director, Department of Public Works and Highways Region 7
Mr. Romeo C. Escandor	Regional Director, National Economic and Development Authority Region 7
Mr. Augustus L. Momongan	Regional Executive Director, Department of Environment and Natural Resources Region 7
Ms. Asteria C. Caberte	Regional Director, Department of Trade and Industry Region 7
Mr. Bruce B. Chiongbian	Private Sector (Shipping) Representative
Mr. Antonio Y. Oppus, Jr.	Regional Development Officer, Office of the Presidential Adviser for Regional Development

2. CPA Counterpart Study Team

Mr. Dennis Villamor	Manager, Port Management Department
Mr. Mario G. Tan	Manager, Engineering Services Department
Ms. Rosario G. Pegarom	Manager, Finance and Administrative Department
Mr. Romeo S. Alviso	Manager, Business Marketing and Development Department
Mr. Yusop J. Uckung	Manager, Legal Affairs Department
Mr. Oscar J. Lopez	Manager, Port Safety, Security and Environment Department
Mr. Leonides F. Quirante	Corporate Board Secretary
Ms. Elizabeth C. Suarez	Manager, Finance Division
Mr. Jose Ride C. Sullano	Manager, Planning and Monitoring Division
Ms. Lorna T. Jordan	Chief, Management Information/Systems Development
Ms. Japier Czarina Garcia	Statistician

3. JICA Study Team

Mr. Yukio Nishida	Leader/Port Policy
Mr. Takahiko Kishimoto	Port Planning(1)/Investment Plans
Mr. Toshihiko Kamemura	Port Planning(2)
Mr. Shinichi Tezuka	Port Management(1)/Port Promotion
Mr. Arata Ichihashi	Port Management(2)/Financial Analysis
Mr. Masahiro Iwade	Port Management(2)/Financial Analysis
Mr. Seiichi Kawashima	Regional Development
Mr. Masamitsu Toriyama	Demand Forecast
Mr. Yoshiteru Sunago	Economic Analysis
Mr. Atsushi Sato	Engineering Design
Mr. Hiroyuki Tateyama	Implementation Planning/Cost Estimation
Mr. Seiji Ikeda	Natural Condition
Mr. Tsukasa Kishimoto	Natural Environmental Impact Assessment
Dr. Felixberto Hansen Roquia Jr.	Social Environmental Impact Assessment
Mr. Hiroto Suzuki	Coordination
Mr. Kenji Nakanishi	Coordination