

**The Republic of Indonesia
Directorate General of Sea Transportation
Ministry of Transportation**

**The Study on
The New Public Private Partnership
Strategy for
The Port Development and Management in
The Republic of Indonesia**

**FINAL REPORT
SUMMARY**

December 2009

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
The Overseas Coastal Area Development Institute of Japan (OCDI)
Ides Inc.**

Exchange Rate

1 USDoller=11,000Rupiah=100Yen

(As of April 2009)

PREFACE

In response to a request from the Government of the Republic of Indonesia (hereinafter referred to as “GOI”), the Government of Japan decided to conduct a Study on the new Public Private Partnership Strategy for the Port Development and Management in the Republic of Indonesia and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team to Indonesia three times between January 2009 and November 2009, which was headed by Mr. Hidekiho KURODA of the Overseas Coastal Area Development Institute of Japan (OCDI) and was comprised of OCDI and Ides Inc.

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

I hope this report will contribute to the promotion of the Public Private Partnership in port sector and to the enhancement of friendly relations between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of GOI for the close cooperation extended to the team.

December 2009

Toshiyuki Kuroyanagi
Director General
Economic Infrastructure Department
Japan International Cooperation Agency

LETTER OF TRANSMITTAL

December 2009

Mr. Toshiyuki Kuroyanagi
Director General
Economic Infrastructure Department
Japan International Cooperation Agency

Dear Mr. Kuroyanagi:

It is my great pleasure to submit herewith the Final Report of "The Study on the New Public Private Partnership Strategy for the Port Development and Management in the Republic of Indonesia".

The study team comprised of the Overseas Coastal Area Development Institute of Japan (OCDI) and Ides Inc. conducted surveys in the Republic of Indonesia over the period between January 2009 and November 2009 according to the contract with the Japan International Cooperation Agency (JICA).

The study team compiled this report, which formulates a Public Private Partnership (hereinafter referred to as "PPP") strategy to realize effective and efficient port development, management and operation through the case studies on model ports, and drafts guidelines for the articles in the new shipping law No.17/2008 related to PPP, through close consultations with officials of the Directorate General of Sea Transportation (DGST), the Ministry of Transportation of the Indonesian Government and other authorities concerned.

On behalf of the study team, I would like to express my heartfelt appreciation to DGST and other authorities concerned for the cooperation, assistance and heartfelt hospitality extended to the study team.

I am also grateful to the Japan International Cooperation Agency, the Ministry of Foreign Affairs, the Ministry of Land, Infrastructure, Transport and Tourism and the Embassy of Japan in Indonesia for valuable suggestions and assistance during the course of the study.

Yours faithfully,



Hidehiko KURODA
Team Leader

The Study on the new Public Private Partnership Strategy
for the Port Development and management
in the Republic of Indonesia

List of Abbreviations

A	ADPEL	Port Administration Office (Commercial Ports)
	AMDAL	Environmental Impact Assessment
	APMT	APM Terminals
B	BAPPENAS	National Development Planning Agency
	BCA	Board of Conceding Administration
	BKPM	Investment Coordinating Board
	BOT	Build-Operate-Transfer
	BPS	Central Bureau of Statistics
	BTO	Build-Transfer-Operate
	BUMN	State Owned Enterprise
C	CCT	Concession Clarification Team
	CET	Concession Evaluation Team
	CFS	Container Freight Station
	CMEA	Coordinating Ministry of Economic Affairs
	CPRC	Central Planning & Regulatory Committee
	CY	Container Yard
D	DGH	Director General of Highways
	DGST	Directorate General of Sea Transportation
	DKI	Special Capital City District
	DLKp	Port Interest Area
	DLKr	Port Working Area
	DPR	House of Representatives
	DPW	Dubai Port World
	DWT	Dead Weight Ton
E	EBITDA	Earnings before Interest, Tax, Depreciation & Amortization
G	GBHN	Guidelines for State Policy
	GDP	Gross Domestic Product
	GOI	Government of Indonesia
	GR	Government Regulation
	GRDP	Gross Regional Domestic Product
	GRT	Gross registered Ton

H	HM	Harbormaster
	HPH	Hutchison Port Holdings
I	IDR	Indonesian Rupiah
	IFRS	International Financial Reporting Standard
	IMF	International monetary Fund
	IMO	International Maritime Organization
	IPC	Indonesian Port Corporation
	ISO	International Standard Organization
J	JICA	Japan International Cooperation Agency
	JICT	Jakarta International Container Terminal
K	KAI	Indonesian Railway Corporation
	KANPEL	Port Administration Office (Non-commercial Ports)
	KKPPI	National Committee on Infrastructure Provision
	KM	Ministrial Decree
	KPA	Klang Port Authority
L	LDC	Convention on the Prevention of Maritime Pollution by Dumping of Wastes and other materials
	LIBOR	London Inter-Bank Offered Rate
	LOA	Length Over All
	LPRC	Local Planning & Regulatory Committee
	LSD	Limit State Design
M	MARPOL	International Convention for the Prevention of Pollution from Ships
	MEPC	Maritime Environment Protection Committee
	MLIT	Ministry of Land, Infrastructure, Transport and Tourism
	MOC	Ministry of Communications
	MOF	Ministry of Finance
	MOSOE(C)	Ministry of State Owned Enterprises (Companies)
	MOT	Ministry of Transportation
	MPA	Maritime and Port Authority of Singapore
	MPW	Ministry of Public Works
	MTI	PT. Multi Terminal Indonesia

O	OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
P	PA	Port Authority
	PAT	Port Authority of Thailand
	PBD	Performance Based Design
	PELINDO	Indonesian Port Corporation
	PER	Environmental Report
	PFA	Preliminary Financial Analysis
	PMB	Port Management Body
	PMU	Port Management Unit
	PP	Government Regulation
	PPP	Public Private Partnership
	PSA	PSA International Pte. Ltd.
	PSO	Public Service Obligation
	PT	Limited Company
	PTP	Port of Tanjung Pelepas
Q	QGC	Quay Gantry Crane
R	RFP	Request for Proposal
	RFPQA	Request for Prequalification Application
	RKP	National Working Plan
	RMCIP	Risk Management Committee on Infrastructure Provision
	RMU	Risk Management Unit
	Rp	Indonesian Rupiah
	RPA	Regional Port Authority
	RPJM	National Medium-term Development Plan
	RPJP	National Long-term Development Plan
	RTG	Rubber Tired Gantry Crane
S	SEZ	Special Economic Zone
	SME	Small and Medium sized Enterprise
	SOE	State Owned Enterprise
	SPC	Special Purpose Company
T	TBT	Technical Barrier to Trade
	TEU	Twenty-footer Equivalent Unit

	TOC	Terminal Operating Company
	TOU	Terminal Operator Union
	TPK	Container Terminal
U	UU	Law
W	WDI	World Bank Statistics
	WTO	World Trade Organization



Executive Summary

1. Background of the Study

1. Major ports of Indonesia are either service ports which have been invested in, maintained and operated by IPC or tool ports where IPC has leased the facilities to private stevedoring companies or IPC has formed joint venture companies with private operators including foreign companies.
2. Ports have been, however, operated inefficiently due to poorly written concession contracts and risk management, lack of managerial skill of the central government on the operational aspects as well as the insufficient infrastructure regarding access to the ports.
3. In order to improve this situation, GOI promulgated a new shipping law in April 2008 which calls for port management to be conducted either by the Port Authority or Port Management Unit based on the concept of landlord port separating the management from operation.
4. With this law, a framework for effective and efficient port development, management and operation through Public and Private Partnership can be established. There is, however, no concrete tool for the realization of the major objectives of the law.

2. Objective of the Study

5. The objectives of the study are;
 - To formulate Public Private Partnership (hereinafter referred to as “PPP”) strategy to realize effective and efficient port development, management and operation through the case studies on model ports
 - To draft guidelines for the articles in the new Shipping Law No.17/2008 related to PPP
 - To transfer relevant skills and technologies to the counterpart personnel concerned with the Study

3. Results of the Case Studies

3.1. Case Study on Tg. Priok Redevelopment Project

6. The Study designates the northern half of Pier III as a case study area for PPP scheme analysis taking into account the working plan of IPC2 and actual implementation schedule of demolishing works of warehouses and so on. The area is 600m in length from the top of Pier III and 300m in width from east to west.
7. During the implementation of the Project by IPC2, GOI promulgated the new Shipping Law which stipulates that IPC2’s role will be changed from port management to operator. IPC2 is insisting that ongoing projects remain under the ownership of IPC2 while DGST is insisting that new projects will be under the authority of Port Authority to be established.
8. Considering the situation above, two types of PPP schemes are considered;



Case-1:

- Port Authority will purchase the Project from IPC2 at the cost incurred by IPC2 by the fund from government and then terminal operator (TOC) will be selected following the regulations stipulated by the GOI.

Case-2:

- IPC2 will continue to develop the project on a BOT basis while the Port Authority will hold the authority of concession as a conceding authority

9. Evaluation of PPP Scheme is as follows;

The terminal can expect full demand for its capacity from the initial stage of operation, and hence it shows very favorable financial conditions both for the terminal operator and the port authority under any possible scheme of PPP.

Accordingly, it can be said that in the case of a sound market condition and continuation of the existing operation by expanding terminal capacity corresponding to the ever increasing demand, no risk is involved in the project. Therefore, concession scheme should include the possible case of either extension of concession period for the current concessionaire or succession of terminal operation by the port authority itself.

3.2. Case Study on Development of Bojonegara Port

10. Estimated demand of Bojonegara container terminal will be around 0.8 to 0.9 million TEU at around 2015. In order to cope with this situation, container terminal berths with 600m x 600m, and the alongside water depth of -14m with a sufficient breakwater, channel and basins for these terminals as well as access road to the port need to be constructed by around 2015.

11. Possible PPP schemes for the project are set as follows;

Case-1: (partial concession/ joint development)

- Port authority provides the fundamental infrastructure (breakwater, channels and basins, quay wall, conducts reclamation work of the terminal and provides gantry cranes and access road)
- Terminal operator (concessionaire) provides the superstructure of the terminal and other equipment for the operation of the container terminal including RTGs

Case-2: (partial concession /BOT)

- Port authority provides only fundamental infrastructure (breakwater, channel and basin, access road etc.)
- Concessionaire provides all the terminal facilities and equipment for the operation of the container terminal.

Case-3: (master concession)

- Port authority gives the authorization to develop, manage and operate the container port including breakwater, channel and basins and access road to the concessionaire
- Concessionaire invests in whole project under the scheme of master concession

12. Evaluation of each PPP scheme is as follows;

In case-1, estimated financial statements for both the port authority and the



concessionaire are reasonably sound throughout the concession term and thus this represents a reasonable partnership between public and private entities.

In case-2, financial conditions for both the port authority and the concessionaire seem to be sound. Cash flow statement, however, shows a rather severe condition for the concessionaire as there is projected to be a more than \$10 million/year deficit during the initial six years.

In case-3, it is assumed that debt/equity ratio of the concessionaire is 70/30 and hence for the case of master concession, concessionaire will require paid up share capital of more than \$100 million which makes potential concessionaires hesitate to participate.

Considering the results of case studies, it can be said that for the green field port which requires a huge initial investment for fundamental infrastructure such as a breakwater and channel, master concession is not suitable for PPP scheme; either BOT for only the terminal or joint development scheme is desirable.

3.3. Case Study on Coal Terminal in Pelaihari

13. DGST has already started the construction works for a public coal shipping terminal under its own finance and supervision in the Pelaihari area, and plans to complete the terminal by the end of 2012.

14. The new coal terminal being constructed by DGST should be attractive for the coal companies and competitive among the neighboring coal terminals. The original plan of Pelaihari Terminal is reviewed and modified in terms of the capability of coal handling; specifically stock volume and loading capacity is examined by the study team referring to those of neighboring coal terminals.

15. Assuming that a consortium of local industries is formed and becomes the concessionaire for the operation and management of the terminal, investment scheme for the public coal terminal is basically conceived as follow; development and construction of the infrastructure of the coal terminal shall be borne by the public sector side, while the super-structure of the terminal and terminal operation shall be borne by the private sector side. Possible PPP schemes for the project are as follows;

Case-1

- Port authority/DGST provides the infrastructure (land reclamation and causeway) by a general account budget and terminal operator (union of coal mining industries) provides superstructure and equipment. Forty percent of the required funds are provided by a non-interest loan from the government and 60% is provided by the union (debt/equity ratio is assumes as 70/30)
- PPP scheme applied is the concession to lease the infrastructure to the terminal operator with the concession fee.

Case-2

- Scheme is the same as case-1 with the only difference being the percentage of the non-interest loan (20% instead of 40% in case-1).

Case-3

- Scheme is the same as case-1 with the only difference being the non-interest loan (0% instead of 40% in case-1).

Case-4



- All the facilities are provided by the terminal operator. Forty percent of the required funds provided by a non-interest loan from the government and 60% is provided by the terminal operator with debt/equity ratio of 70/30.
- PPP scheme for the concession; concession fees consist of a variable fee of 5% revenue share and land and water rent

16. Evaluation of each PPP scheme is as follows;

Financial statements of both case-1 and case -2 during the concession period shows possible stable financial management both for the port authority and the terminal operator, since the initial investment amount is rather small (less than 10% of the total investment cost).

Case-3 shows that even in the case without government financial assistance, the port can be financially sustainable. When there is no government support in the terminal operator's investment, project viability highly depends on whether such small or medium scale industry has the financial capability to prepare the necessary paid up capital.

In case-4, 42% (11.5 million dollars) of the total investment costs (around 27.3 million dollars) has to be financed by a market bank which would be a severe burden to the operator for these small scale businesses.

When government assistance is considered to be necessary for the promotion of such industry for political reasons, provision of infrastructure by the public sector for leasing such infrastructure to the specific industry is a proper scheme, and the superstructure should be provided by the industry itself, since it is designed to fit the specific handling method of the product of the industry.

4. New PPP Strategy for Development, Management and Operation of Ports

17. The objectives in introducing the new public-private partnership scheme to port development, management and operation can be said to be as follows:

- ① Increase operational efficiency
- ② Create a system to recover state investment and to raise state revenue
- ③ Create conditions for more efficient and accountable entities in port management and operation
- ④ Create a more transparent and competitive port concession scheme consistently applied throughout the country for financially sound and efficient port development , management and operation

18. In order to create a better and workable system for introducing the new public-private partnership to the port development, management and operation, it is necessary firstly to redefine the roles and functions of related organizations currently involved in the PPP implementation of the port sector, reform/amend the regulatory framework and to make institutional reforms of related organizations for the promotion of PPP.

19. Principal issues to be incorporated in the PPP strategy on port sector are explained in the Study such as (1) clear definition of roles, function, powers and responsibilities of concerned parties related with the port concession, (2) regulatory framework related with the port concession, (3) institutional framework on supervision and management of the port concession, (4) framework for consultation with the maritime community, (5) basic policy and rules on bidding and contract



management of the port concession, (6) basic rule on port infrastructure pricing (concession pricing) and (7) strategy and scheme on human resource development for port management and operation.

5. Guideline for the Government Regulation on the Shipping Law No.17/2008

20. The Government Regulation regarding ports (hereinafter referred to as “G.R.”) was finalized in October 20, 2009 after year-long deliberation among the concerned authorities.

21. The new Law dictates two major policies in the port sector, one is the introduction of a port management body, and the other is promotion of private sector participation in port development, management and operation.

22. This Study is intended to provide a practical guideline for G.R. In order to achieve the successful implementation of the new scheme under the new G.R. based on the new Shipping Law, the provision of G.R. may not be sufficient for the daily conduct of port operation.

23. Guidelines for G.R. proposed in the study are as follows;

- ① Guideline for G.R. on Article 78 of the Shipping Law regarding Principal Plan, Port Working Area and Port Interest Area
- ② Guideline for G.R. on Article 89 of the Shipping Law regarding Port Management Body
- ③ Guideline for G.R. on Article 94 of the Shipping Law regarding Operational Performance Standard
- ④ Guideline for G.R. on Article 95 of the Shipping Law regarding Port Business Entity
- ⑤ Guideline for G.R. on Article 99 of the Shipping Law regarding Port Construction and Operation.

24. As a comprehensive guideline for the above matters, DGST Policies and Procedure for port concession are compiled and attached in Appendix VI.

Contents

Introduction

I.	Review and Analysis of Current Condition	I-1
1.	Analysis on the Policy and Regulatory Framework of the Port Sector.....	I-1
1.1.	Basic Policy for Maritime Transport in Indonesia	I-1
1.2.	Key Laws and Regulations Related to Maritime Transport	I-1
1.3.	Analysis on Policies and Regulatory Framework of Public-Private Partnership (PPP).....	I-3
2.	Review of Policies and Current Conditions on PPP in Port D.M.O.....	I-5
II.	Case Study on Tg. Priok Redevelopment Project	II-1
1.	Maritime Transport Situation in Greater Jakarta Metropolitan Area	II-1
1.1.	Interest of the Users	II-1
1.2.	International Container Movement around Indonesia and Performance of Mega Container Terminal Operator	II-2
2.	Demand Forecast of Port Cargo Flow in Greater Jakarta Metropolitan Area	II-3
2.1.	Demand Forecast for Tg. Priok Port	II-3
2.2.	Demand Forecast for Bojonegara Port	II-8
3.	Current Condition of Tg.Priok Port.....	II-8
4.	Review of Existing Plan.....	II-8
4.1.	The Study for Development of the Greater Jakarta Metropolitan Ports in the Republic of Indonesia	II-8
4.2.	The Master Plan of Tg. Priok Harbor.....	II-9
4.3.	Present Situation of Pier III.....	II-10
5.	Proposed Redevelopment Plan for Case Study	II-11
5.1.	Necessity of Redevelopment for Container Handling.....	II-11
5.2.	Case Study Pier and Facilities	II-11
5.3.	Capacity Improvement	II-12
6.	Cost Estimate	II-14
7.	Preliminary Implementation Schedule	II-16
7.1.	Investment Plan for Redevelopment of Pier III	II-16
7.2.	Preliminary Implementation Schedule	II-16
8.	Possible PPP Schemes and Financial Analysis	II-17
8.1.	Premises on Project	II-17
8.2.	Possible PPP Schemes for Remodeling of Pier III of Tg. Priok Port.....	II-17
8.3.	Financial Conditions of Port Authority and Terminal Operator	II-18
8.4.	Evaluation of PPP Scheme	II-19

III.	Case Study on Development of Bojonegara Port	III-1
1.	Review of Existing Plan	III-1
1.1.	The Study for Development of the Greater Jakarta Metropolitan Ports in the Republic of Indonesia	III-1
1.2.	Master Plan and Current Condition of Bojonegara Port	III-2
2.	Proposed Development Plan for Case Study	III-3
2.1.	Estimated Throughput	III-3
2.2.	Case Study Facilities for Bojonegara Container Terminal	III-4
2.3.	Case Study Facility of Access Road	III-6
2.4.	Case Study Facility of Breakwater, Channel and Basin	III-6
3.	Cost Estimate of Case Study Facilities	III-8
4.	Implementation Plan	III-11
5.	Possible PPP Schemes and Financial Analysis	III-14
5.1.	Premises on the Project	III-14
5.2.	Possible PPP Schemes for Development and Operation of Bojonegara Container Terminal	III-15
5.3.	Financial Conditions of the Port Authority and the Concessionaire	III-16
5.4.	Evaluation of PPP Scheme	III-17
IV.	Case Study on Coal Terminal in Pelaihari	IV-1
1.	Current Condition of Coal Mining Industry in South Kalimantan	IV-1
2.	Review of Coal Transport Plan in Kalimantan	IV-1
3.	Proposed Development Plan for Case Study	IV-2
3.1.	Facility for Case Study	IV-2
3.2.	Review of the Original Plan and Proposed Development Plan	IV-3
4.	Cost Estimate	IV-6
5.	Implementation Plan	IV-7
6.	Possible PPP Schemes and Financial Analysis	IV-8
6.1.	Premises on the Project	IV-8
6.2.	Possible PPP Schemes for Development and Operation of Pelaihari Coal Terminal	IV-9
6.3.	Financial Conditions of the Port Authority and the Concessionaire	IV-10
6.4.	Evaluation of PPP Scheme	IV-11
V.	New PPP Strategy for D.M.O of Ports	V-1
1.	Proposed Basic Direction of New PPP Strategy on D.M.O of Ports	V-1
1.1.	Background	V-1
1.2.	Objectives	V-1
1.3.	Basic Direction for the Establishment of New PPP Strategy	V-1

2.	Principles on New PPP Strategy	V-3
2.1.	Basic Form of PPP in Port Sector	V-3
2.2.	Principle on Regulatory Framework	V-4
2.3.	Principle on Institutional Settings	V-4
2.4.	Principle on Consultation with Maritime Community and Others.....	V-6
2.5.	Investment Fund and Budgeting System.....	V-7
2.6.	Principle on Infrastructure Pricing	V-8
2.7.	Principle on Rules for Tender and Contract of PPP in Port Sector	V-10
2.8.	Principle on Human Resource Development	V-10
VI.	Guideline for the Government Regulation on the Shipping Law No.17/2008.....	VI-1
1.	Introduction.....	VI-1
2.	Guideline for the Government Regulation on Article 78 of the Shipping Law.....	VI-1
2.1.	Summary of G.R. on Port Principal Plan, Port Working Area and Port Interest Area.....	VI-1
2.2.	Guideline for the Stipulation of Port Principal Plan.....	VI-2
2.3.	Guideline for the Stipulation and Management of Port Working Area and Port Interest Area	VI-5
3.	Guideline for the Government Regulation on Article 89 of the Shipping Law.....	VI-9
3.1.	Summary of G.R. on Port Management Body.....	VI-9
3.2.	Rules, Regulations and Management of Port Concession.....	VI-10
3.3.	Management and Supervision of Concession Contract.....	VI-18
4.	Guideline for the Government Regulation on Article 94 of the Shipping Law.....	VI-23
4.1.	Summary of G.R. on Service Standard.....	VI-23
4.2.	Guideline for Implementation of G.R. on Operational Performance Standard	VI-23
5.	Guideline for the Government Regulation on Article 95 of the Shipping Law.....	VI-26
5.1.	Summary of G.R. on Port Business Entity	VI-26
5.2.	Guideline for Implementation of G.R. on Port Business Entity	VI-27
6.	Guideline for the Government Regulation on Article 99 of the Shipping Law.....	VI-29
6.1.	Summary of G.R. on Port Construction and Operation.....	VI-29
6.2.	Guideline for Technical Regulations in Port Construction.....	VI-30
6.3.	Environmental Preservation	VI-33
6.4.	Guideline for Operational Requirements	VI-34

Conclusions and Recommendations

Table

I. Review and Analysis of Current Condition

II. Case Study on Tg. Priok Redevelopment Project

Table 1.2-1	Historical Change of Container Throughput handled in Asian Countries	II-2
Table 2.1-1	GDP Growth Rates by Case	II-3
Table 2.1-2	Total Container Throughput at Tg. Priok	II-4
Table 2.1-3	Summary of Cargo Tonnage by Package Type.....	II-5
Table 2.1-4	Container Capacity of Tg. Priok.....	II-6
Table 2.1-5	Allocated Container Throughput at Tg. Priok	II-7
Table 2.2-1	Container Demand Forecast for Bojonegara Port.....	II-8
Table 6.1-1	Estimated Project Cost	II-15
Table 7.2-1	Preliminary Implementation Schedule of Pier III, Tg. Priok.....	II-16
Table 8.1-1	Initial Investment Costs	II-17
Table 8.3-1	Financial Conditions of Port Authority and Terminal Operator	II-19
Table 8.4-1	Result of Financial Analysis (Case-1): Tg. Priok Port	II-21
Table 8.4-2	Result of Financial Analysis (Case-2): Tg. Priok Port	II-22

III. Case Study on Development of Bojonegara Port

Table 2.1-1	Revised Estimated Throughput	III-4
Table 3.1-1	Project Cost Estimate of Bonjonegara Port Development(2015; 1/2).....	III-9
Table 3.1-2	Project Cost Estimate of Bonjonegara Port Development(2015; 2/2).....	III-10
Table 4.1-1	Bonjonegara Port Construction Schedule and Disbursement (toward 2015; 1/2).....	III-12
Table 4.1-2	Bonjonegara Port Construction Schedule and Disbursement (toward 2015; 2/2).....	III-13
Table 5.1-1	Initial Investment Costs (Public + Private)	III-14
Table 5.3-1	Financial Conditions of Port Authority and Terminal Operator	III-16
Table 5.4-1	Result of Financial Analysis (Case-1): Bojonegara Port	III-18
Table 5.4-2	Result of Financial Analysis (Case-2): Bojonegara Port	III-19
Table 5.4-3	TOC's Income Statement (Case-2): Bojonegara Port.....	III-20
Table 5.4-4	TOC's Cash Flow Statement and Balance Sheet (Case-2): Bojonegara Port	III-21
Table 5.4-5	Result of Financial Analysis (Case-3): Bojonegara Port	III-22
Table 5.4-6	TOC's Income Statement (Case-3): Bojonegara Port.....	III-23
Table 5.4-7	TOC's Cash Flow Statement and Balance Sheet (Case-3): Bojonegara Port	III-24

IV. Case Study on Coal Terminal in Pelaihari

Table 3.2-1	Proposed Development Plan of Pelaihari Terminal.....	IV-4
-------------	--	------

Table 4.1-1	Cost Estimate of Pelaihari Coal Terminal Development	IV-6
Table 5.1-1	Pelaihari Coal Terminal Construction Schedule and Disbursement	IV-7
Table 6.1-1	Initial Investment Costs (Public + Private)	IV-8
Table 6.3-1	Financial Conditions of Port Authority and Terminal Operator	IV-11
Table 6.4-1	Result of Financial Analysis (Case-1): Pelaihari Coal Terminal	IV-13
Table 6.4-2	Result of Financial Analysis (Case-2): Pelaihari Coal Terminal	IV-14
Table 6.4-3	Result of Financial Analysis (Case-3): Pelaihari Coal Terminal	IV-15
Table 6.4-4	Result of Financial Analysis (Case-4): Pelaihari Coal Terminal	IV-16
Table 6.4-5	TOU's Income Statement (Case-4): Pelaihari Coal Terminal	IV-17
Table 6.4-6	TOU's Cash Flow Statement and Balance Sheet (Case-4): Pelaihari Coal Terminal ..	IV-18

V. New PPP Strategy for D.M.O of Ports

Table 2.1-1	Port PPP Forms	V-4
-------------	----------------------	-----

VI. Guideline for the Government Regulation on the Shipping Law No.17/2008

Table 3.3-1	Method of Updating	VI-20
-------------	--------------------------	-------

Figure

I. Review and Analysis of Current Condition

Figure 1.2-1 Key Laws, Regulations and Decree regarding Maritime Transport Policy	I-2
Figure 1.3-1 Implementation Flow of Port PPP Projects under the New Shipping Law	I-4

II. Case Study on Tg. Priok Redevelopment Project

Figure 4.1-1 Long Term Plan of Tanjung Priok port toward 2025	II-9
Figure 4.3-1 Conventional wharves Facility Layout.	II-10
Figure 5.2-1 Location of the Case Study Area	II-11
Figure 5.3-1 Facility Layout Plan of the Case Study Area of Pier 3	II-13

III. Case Study on Development of Bojonegara Port

Figure 1.1-1 Long-term Plan of Bojonegara Port toward 2025	III-1
Figure 1.2-1 First Stage Section I Berth Development	III-2
Figure 2.2-1 Layout of Bojonegara Container Terminal	III-5
Figure 2.4-1 Proposed Development Plan	III-7

IV. Case Study on Coal Terminal in Pelabuhan

Figure 3.1-1 General Layout Plan of Pelabuhan Coal Terminal	IV-2
Figure 3.2-1 Coal Stock Yard Expansion and Terminal Facilities	IV-5

V. New PPP Strategy for D.M.O of Ports

Figure 1.3-1 Basic Direction of New PPP Strategy	V-2
Figure 2.1-1 Services Provided in Port	V-3
Figure 2.3-1 Transformation of IPC	V-6

VI. Guideline for the Government Regulation on the Shipping Law No.17/2008

Figure 2.2-1 Procedure of Port Planning (in the case of main port & national port)	VI-5
Figure 3.2-1 Allocation of Roles and Functions among MOT, DGST and Port Authority	VI-10
Figure 3.2-2 Institutional Settings for PPP implementation in Port Sector	VI-12
Figure 3.2-3 Structure of Port Authority	VI-13
Figure 3.2-4 Procedure of Concession	VI-17
Figure 4.2-1 Basic concept of the CY Capacity	VI-24
Figure 4.2-2 Basic Concept of the Berth (Apron) Capacity	VI-25
Figure 6.2-1 Assessment of Conformity to Technical Standard	VI-32



Introduction

1. Introduction

1. In response to a request from the Government of the Republic of Indonesia (hereinafter referred to as “GOI”), the Government of Japan (hereinafter referred to as “GOJ”) has decided to conduct the Study for the New Public Private Partnership Strategy for the Port Development and Management in the Republic of Indonesia (hereinafter referred to as “the Study”).

2. Accordingly, the Japan International Cooperation Agency (hereinafter referred to as “JICA”) the official agency responsible for the implementation of the technical and financial cooperation programs of GOJ, dispatched a preparatory study team to Indonesia in July 2008, and reached an agreement with GOI on the scope of the Study.

3. JICA dispatched a full-scale team (hereinafter referred to as “the Study Team”) in February 2009 to carry out the Study. The reports submitted to the Indonesian side through the Directorate General of Sea Transportation, the Ministry of Transportation by the Study Team are as follows:

- | | |
|----------------------|----------------------------|
| • Inception Report | Submitted in February 2009 |
| • Interim Report | Submitted in July 2009 |
| • Draft Final Report | Submitted in November 2009 |
| • Final Report | Submitted in December 2009 |

2. Background of the Study

4. Major ports of Indonesia are either service ports which have been invested in, maintained and operated by IPC or tool ports where IPC has leased the facilities to private stevedoring companies or IPC has formed joint venture companies with private operators including foreign companies.

5. Ports have been, however, operated inefficiently due to poorly written concession contracts and risk management, lack of managerial skill of the central government on the operational aspects as well as the insufficient infrastructure regarding access to the ports.

6. In order to improve this situation, GOI promulgated a new shipping law in April 2008 which calls for port management to be conducted either by the Port Authority or Port Management Unit based on the concept of landlord port in which management is separated from operation.

7. With this law, a framework for effective and efficient port development, management and operation through Public and Private Partnership can be established. There is, however, no concrete tool for the realization of the major objectives of the law.

3. Study Area

8. The Study covers the whole country and the case study sites are Bojonogara, Tg. Priok and Kintap area.



4. Objective of the Study

9. The objectives of the study are:

- To formulate a Public Private Partnership (hereinafter referred to as “PPP”) strategy to realize effective and efficient port development, management and operation through the case studies on model ports
- To draft guidelines for the articles in the new Shipping Law No. 17 year 2008 related to PPP
- To Transfer relevant skills and technologies to the counterpart personnel concerned with the Study

5. Framework of the Study

10. In order to achieve the objectives mentioned above, the Study shall cover the following items:

5.1. Review and Analysis of the Existing Conditions of Port Development, Management and Operation in Indonesia

5.2. Formulation of PPP Strategy for Port Development, Management and Operation

5.3. Case Study in Model Ports

- Case study in a container handling port
- Case study in a bulk cargo handling port
- Feed back the results of examination in the model ports to the PPP strategy

5.4. Drafting Detailed Guideline for the Related Articles to PPP in the New Shipping Law No. 17 Year 2008

6. Work Schedule and Flowchart of the Study

11. The work schedule is shown in Table-1.

Table-1 Work Schedule

Study Month	1	2	3	4	5	6	7	8	9	10	11	12	
Calendar Month	2009												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Work in Indonesia													
Work in Japan													
Report		△ IC/R					△ IT/R				△ DF/R	△ F/R	
Seminar		△									△		

IC/R: Inception Report IT/R: Interim Report
DF/R: Draft Final Report F/R: Final Report



7. Implementation Organization

JICA Study TEAM

12. The Study Team is made up of the experts listed below:

Expert	Assignment
Mr. Hidehiko KURODA	Team Leader/Port Administration/Public Partnership-1
Mr. Naota IKEDA	Sub-Team Leader/Port Planning
Mr. Akira KOYAMA	Sub-Team Leader/Port Planning
Mr. Hiroshi KATO	Demand Forecast/Economic Analysis
Mr. Masayuki FUJIKI	Port Management and Operation
Mr. Teruki ETO	Public Private Partnership-2/Concession Agreement
Mr. Nobuhide MIYAWAKI	Concession Financial Analysis
Mr. Michiharu NOSE	Terminal Management/Operation Finance
Mr. Atsushi SATO	Design and Cost Estimation (Civil Works)
Mr. Keiichiro TORII	Design and Cost Estimation (Handling Equipment)
Mr. Kazutoshi KASHIMA	Construction Planning/Investment Planning
Mr. Tadahiko KAWADA	Coordination
Mr. Satoshi HARADA	Coordination

Counterpart and Task Force

13. Directorate General of Sea Transportation, Ministry of Transportation (hereinafter referred to as “DGST” and “MOT”), served as a counterpart agency of the Study Team. DGST established a steering committee composed of officials from the following agencies.

- MOT
- BAPPENAS
- Indonesia Port Corporation II and III (Hereinafter referred to as “IPC2” and “IPC3”)
- MOSOE
- Related Provincial Governments

14. The committee was chaired by the Director of DGST. DGST also established a task force to correspond to a series of workshops headed by the Director of DGST (or the head of Sub Directorate of Port Development).

8. Composition of the Reports

15. Final report of this Study consists of a Main Report (including Appendixes) and Summary Report.

9. Activities in Indonesia

16. The Study Team held a series of workshops and two seminars during the Study in Indonesia with the cooperation of the task force in order to transfer the necessary technology effectively and efficiently. The record of activities in Indonesia is as follows:



Table 2 : Workshops and Seminars held in Indonesia

Date	Activity
14-Feb-09	Seminar on the Port Concession
27-Mar-09	New PPP Strategy
13-Jul-09	Case Studies and New PPP Strategy
14-Jul-09	New PPP Strategy
16-Jul-09	Discussion on Draft Government regulation
28-Jul-09	Financial Analysis and Point of Concession Agreements
30-Jul-09	Port Planning Standard
4-Aug-09	Port Planning Standard and Document necessary for Port Plan Port Facilities Ledger
11-Aug-09	Model Rules on Port Land Premise and Port Water Area Qualification for the Terminal Operator
18-Aug-09	Model Rules on Port Land Premise and Port Water Area Performance Standard
25-Aug-09	Technical Standard for Construction of Port Facilities Guideline for PPP Promotion
1-Sept-09	Guideline for PPP and Risk Analysis on the Port Concession
8-Sept-09	Discussion on Government Regulation
15-Sept-09	Government Regulation Implementation Guideline
4-Nov-09	Seminar on New PPP Strategy



I. Review and Analysis of Current Condition

1. Analysis on the Policy and Regulatory Framework of the Port Sector

1.1. Basic Policy for Maritime Transport in Indonesia

1. Maritime transport plays a vital role in an archipelago country such as Indonesia. Accordingly, it should continue to be improved to support sustainable development of the Indonesian economy. In maritime transport, shipping and port are essential sectors and the basic policy framework of both sectors is stipulated in the Shipping Law (UU Number 17/2008).

2. Each policy for shipping and port is further defined in Government Regulation (PP) and subsequently in Ministerial Decree (KM). Since the Shipping Law has been renewed quite recently (2008), supporting regulations such PP and KMs are still in the drafting process as of this writing (Nov. 2009). But the Government Regulation about ports No.61/October 20/2009 for the new shipping law was already signed by the President and necessary Ministerial Decrees are to be provided in due course.

A. Port

3. The basic policy for port development is to expand port facilities and install the necessary equipment to meet the future demand and hinterland potentials, maintaining available capacity ahead of demand.

4. To attain these targets, private sector participation is also introduced in the policy aiming at the following objectives:

- Increase national port capacity
- Relieve government from high investment burdens
- Import higher standard of operation efficiency through fair competition

B. Shipping

5. The basic policies for shipping development are as follows:

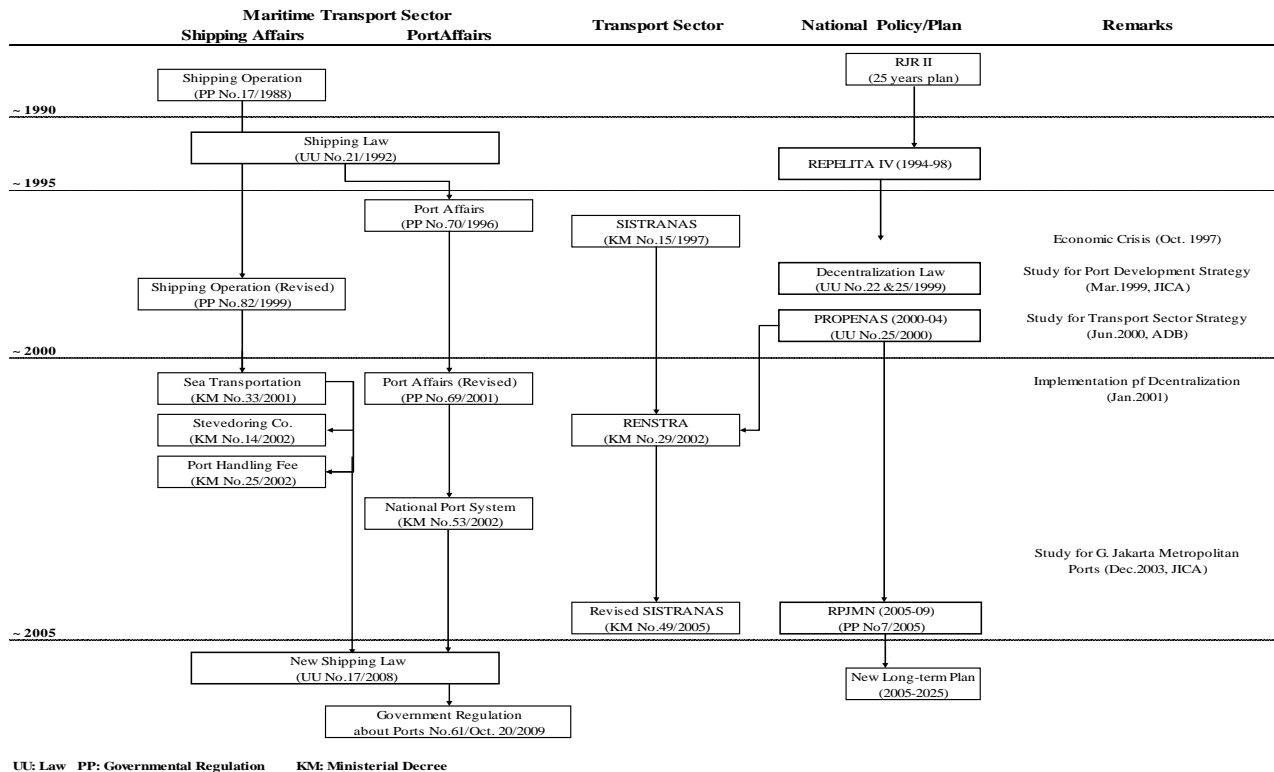
- Promote national shipping for both international and domestic sea transport services and reduce dependence on foreign shipping
- Secure the availability of proper inter-island transport services to cover all regions of the country, especially the eastern part of Indonesia.

1.2. Key Laws and Regulations Related to Maritime Transport

6. Key laws/regulations regarding maritime transport are chronicled in Figure 1.2-1 which includes national policy/plan and overall transport sector strategy for reference. These laws/regulations shall be revised according to the new Shipping Law during the course of the Study and shall be carefully considered in the course of the Study. Until their revision, existing regulations shall be continuously applicable in so far as there are no contradictions with the new Shipping Law. The most important government regulations are the regulation of Shipping Operation (PP No.82/1999), and the regulation of Port Affairs (PP No.69/2001). General principle of these regulations is summarized below.



The Study on the New Public Private Partnership Strategy for the Port Development and Management in the Republic of Indonesia



(Compiled by the JICA Study Team)

Figure 1.2-1 Key Laws, Regulations and Decree regarding Maritime Transport Policy

A. Government Regulation on Port Affairs (PP No.70/1996 and PP No.69/2001)

7. In line with the Law of Autonomy (UU No.19/25/1999), the government issues the revised Government Regulation for Port Affairs (PP No.69/2001, hereinafter referred to as “Port Regulation”). Main stipulations in the Port Regulation are as follows:

- National Port System consisting of new activity, role, function and classification of ports is decided by Communication Minister.
- Decision system of port location, Port Master Plan, and Port Working Area & Port Interest Area with responsibility of central/local government and port organizer.
- Principals of development and operation of the public/special ports.
- Activities and services to be provided in the public/special ports.
- Principals of tariff system such as kind, structure and classification.

B. New Shipping Law (No.17/2008)

8. In the new Shipping Law, types of Port are stipulated as a. seaport and b. river and lake port (Article 70 (1)) and further seaport is hierarchically classified into a. Main Port, b. National Port and c. Feeder Port.

9. New Shipping Law also stipulates National Port System as follows:

10. National Port System shall be realized in the framework of organizing reliable and high capacity ports, guaranteeing efficiency and having global competing power to support national and regional development with Archipelagic Principle (Article 67 (1)) and,



11. National Port System shall constitute a port system in national scope that describes port planning based on economic zone, geographical area, and regional comparative advantage, and natural condition (Article 67 (2)) and,

12. National Port System shall contain a. the roles, functions, types and hierarchy of port, b. National Port Principal Plan and c. port location (Article 67 (3)).

13. Typical difference of the regulatory framework of new Shipping Law and old one lies in the stipulation of Port Management Body which aims to separate the role of regulator and operator in the development and management of the port.

1.3. Analysis on Policies and Regulatory Framework of Public-Private Partnership (PPP)

A. Current Conditions

14. Basic guideline on public-private partnership (PPP) projects in Indonesia in infrastructure provision is stipulated in Presidential Regulation No. 67, Year 2005. Substance of the regulation is as follows;

- PPP should be established in accordance with fairness, publicity, transparency and competitive circumstance beneficial to both public and private parties.
- Value and/or feasibility of PPP projects should be evaluated by the government in an appropriate manner prior to recruiting the projects.
- Any risks should be borne by a party who can manage the risks more skillfully with less cost than other. Risk sharing scheme should be determined after a mutual agreement has been reached.
- Government support should be limited to projects socially desirable but fiscally non-feasible.
- PPP partners should be selected through competitive bidding.
- PPP projects can be proposed by private entities; however, the project tendering should be conducted under a competitive circumstance when the project is approved by the government.
- Price on PPP projects should be set based on repayment amount of capital cost for the project as well as legitimate profit of the investment.
- PPP projects should be executed by concession contract or by granting business right.

15. Among these regulations and decrees, Ministry of Finance Regulation No.38/PMK.01/2006 is the core regulation, together with Presidential Regulation No.67/2005, for accelerating infrastructure development needs using government support to drive the PPP and increase investment in infrastructure provision in Indonesia. This Ministry of Finance regulation stipulates implementation instructions and procedures for the control and management of infrastructure provision risks on PPP projects in Indonesia by the Ministry for granting government support.

16. Risks in the context of implementing a PPP project for infrastructure provision in Indonesia are categorized as Political Risk, Project Risk and Demand Risk in the regulation.

17. Figure 1.3-1 shows basic flow of implementation of port PPP projects.



B. Status of Revision

18. KKPI and Risk Management Unit (RMU) has handled many proposals on infrastructure provision PPP project in relation to road and energy sectors since the organizations were established in late 2006. Some of the road projects through BOT under the scheme of these Regulations have got final agreement. On the other hand, final agreement has not been reached for some of the projects according to an officer of RMU because the statutes stipulated in these Regulations are too general to apply for the projects proposed by various sectors.

Implementation Flow of Port PPP Projects under the New Shipping Law
and Presidential Regulation No.67/05 & Ministry of Finance Regulation No.38/PMK.01/06

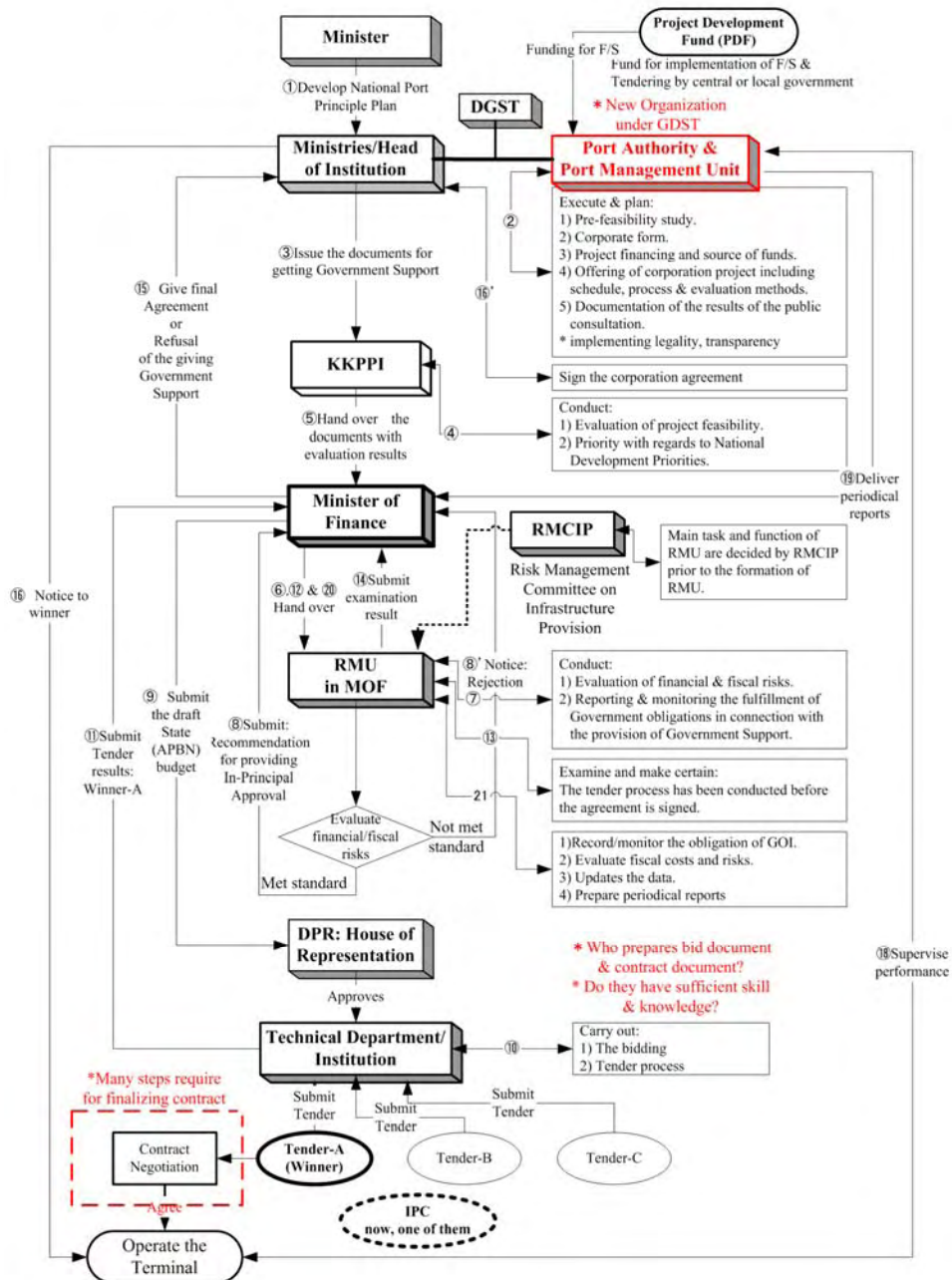


Figure 1.3-1 Implementation Flow of Port PPP Projects under the New Shipping Law



2. Review of Policies and Current Conditions on PPP in Port D.M.O

19. In the port sector, IPC has been responsible for port management and operation as well as the landlord of the port facilities, and a variety of PPP style has been implemented.

20. One way is to lease the facilities to the private stevedoring companies for a short period of time (5 years) for the operation of conventional terminals; a second type is to concede the international container terminal to the joint venture company between IPC and foreign terminal operator (partial concession); a third type is to operate the international container terminal by joint operation contract with foreign terminal operator, while another type which resulted in failure of tender is total (Master) concession.

(i) Partial Concession to Joint Venture companies (JICT & Tg. Perak)

21. The concession agreement of JICT was made between the parties without implementing neither an open tender nor receiving any business plans but a contractual proposal from HPH and hence some unilateral agreement terms and conditions can be found in the agreement.

22. Another issue concerns the concession fee. According to the agreement of JICT, 10% of gross revenue is paid to IPC2 as the royalty and 14.8% of the net profit of the company (JICT) after tax is paid to HPH as the head office management cost as well as technical know-how fee.

23. Another issue concerns the monopolistic behavior of JICT and KOJA both of which are operated by IPC2 and HPH handled 2.7 million TEUs of international containers in 2008, equivalent to 86 % of all international containers handled at the port.

24. Due to the absence of competition in the port, tariff rate for container handling at JICT/KOJA terminals is higher than neighboring ports except Singapore; and ships operational productivities are lower than international standards at these ports.

25. IPC is playing the roles both of conceding authority and a partner of concessionaire JV Company and it is natural that IPC tends to pursue profit maximization rather than protect public interests.

(ii) Joint Operation –KOJA-

26. Koja CT is a joint operation company between IPC2 and HPH today.

27. Royalty/concession fee was paid in advance by the presumed price factors and volumes to be handled at the terminal.

28. Most of the countable values are presumed without any evidence of appropriateness and it is very difficult to evaluate the appropriateness of the operational performance even after the operation because of lack of clear definition of auditing method including accounting method of financial performance of both parties.

(iii) Master Concession –Bojonegara Port-

29. The JVC is to develop and operate the facilities throughout all development stages (1st stage through 3rd stage) and it implies no competition in terms of providing operational services to port/terminal users within the port since the JVC would operate all the facilities by themselves as is HPH's practice at Tg. Priok port.



- 30.** In addition, the JVC is obliged to construct all infrastructures and superstructures as well as purchase container handling equipment required for the operation of the terminals including non profitable facilities which results in an excessive burden and risks to the concessionaire.
- 31.** Once Tg. Priok port is developed according to the plan authorized by the Ministry of Transport, majority of container and bulk facilities in Bojonegara port may suffer from demand risks considering the potential demand in the Greater Jakarta Metropolitan Area.
- 32.** As a result, a total of 8 bidders including AP Moller Terminal, Stevedoring Service of America (SSA), PSA International and ICTSI expressed interest in the project; however, only PSA made a proposal in the end. PSA has requested IPC2 in the negotiation to construct basic infrastructures such as breakwater, ships navigation channel, turning basin and the access road to/from the port with the Government budget.
- 33.** Therefore, IPC2 offered to extend the contract term from 30 years to 50-60 years as an incentive since neither Government nor IPC2 had sufficient funds to construct the infrastructures by themselves; however, the negotiation failed.



II. Case Study on Tg. Priok Redevelopment Project

1. Maritime Transport Situation in Greater Jakarta Metropolitan Area

1.1. Interest of the Users

34. An interview survey was conducted from March 2009 until July 2009. The objective of the survey was to find out what kinds of logistical needs private entities have and what kinds of port services they require. The information obtained through the interview survey will serve as a basic knowledge source for the formation of case studies for Public Private Partnership in port development.

35. This Interview survey targeted industrial estate operators, manufacturing companies, trucking and warehousing companies, shipping companies and business organizations. 46 companies/organizations out of 132 companies satisfactorily responded to the interview survey.

(i) Facilities at Tanjung Priok port

36. More than ninety percent of the total 47 respondents complained about inadequacy in the present state of cargo handling equipment at the Port. Most interviewees expected that the port would increase the amount of modern equipment available, to provide a more sophisticated operation in reducing waiting time for loading/unloading of cargos.

37. Another major issue pointed out by port users is the condition of roads around the port area. They claimed that road traffic congestion occurred every day within/around the Port, and that construction of direct access ways to Tanjung priok port was a must.

(ii) Institutions

38. Although there has been some recent improvement in custom clearance service, many port users still complain about customs clearance practices.

(iii) Port services Cost

39. There are two opposing opinions on the current port service of Tanjung Priok Port;

- Generally, port services costs are deemed reasonable.
- Currently, the service of Tanjung Priok Port has become stagnated, so that alternative development of another Port is needed.

(iv) Bojonegara Port

40. Generally speaking, the development of Bojonegara Port has been anticipated by the majority of those in port-related circles, but people are expecting better coordinated efforts between the governmental institutions and private companies.

(v) PPP strategy

41. People are generally optimistic about the Public Private Partnership because services in Tg. Priok will become more efficient by the introduction of the PPP scheme.

42. The Public Private Partnership will accelerate the development of infrastructure projects in Indonesia. Funding long term large scale infrastructure projects is not easy. Consequently, the



The Study on the New Public Private Partnership Strategy for the Port Development and Management in the Republic of Indonesia

governance reform is required in order to make the private sector interested in investing in the infrastructure sector.

1.2. International Container Movement around Indonesia and Performance of Mega Container Terminal Operator

43. Table 1.2-1 shows the historical growth and present position of container throughput in Asian Countries during the period 2000-2007. In 2000, Indonesian ports handled 3.86% of the total throughput of the whole Asian region excluding Japan, but in 2007 the share dropped to 1.92%. The reason for the decreasing share seems partially to come from the inaccuracy of the container statistics, but remarkable throughput growth of emerging economies is also contributing this tendency.

44. World-famous hub ports handling transshipment containers and mega ports functioning as the gateway to their respective countries are located around Indonesia.

45. Mega operators have been attracted to this region because 20 of the world's 30 major ports in terms of container handling volume are focused in Asia.

46. As the development and/or operation of container terminals can no longer be maintained without financial resources and operational abilities of the mega operators, Hutchison Port Holding, APM Terminals, PSA and so on have been increasing volume of handling containers and an oligopolistic situation has rapidly been emerging.

Table 1.2-1 Historical Change of Container Throughput handled in Asian Countries

(Unit: TEU)

	2000	2001	2002	2003	2004	2005	2006	2007
Taiwan	10,510,762	10,425,733	11,605,254	12,086,734	13,029,492	12,791,429	13,102,015	13,722,313
H.K.						22,601,630	23,538,580	23,998,449
Singapore	17,096,036	15,572,677	16,986,010	18,441,000	21,329,100	23,192,200	24,792,400	27,932,000
S. Korea	9,030,174	9,287,221	11,719,502	13,049,534	14,363,194	15,113,275	15,513,935	16,640,091
Philippines	3,031,548	3,090,952	3,324,796	3,468,471	3,676,456	3,633,559	3,676,133	3,834,616
China	40,984,361	44,726,085	55,717,490	61,898,336	74,725,444	67,245,263	84,810,503	104,559,291
Thailand	3,178,779	3,387,071	3,799,093	4,232,685	4,847,000	5,115,213	5,574,490	6,200,425
Indonesia	3,797,948	3,901,761	4,539,884	5,176,982	5,369,297	5,503,176	4,316,296	4,481,378
Malaysia	4,642,428	6,224,913	8,751,567	10,210,145	11,510,931	12,197,750	13,419,053	14,872,837
India	2,450,656	2,764,757	3,208,384	3,916,814	4,332,863	4,982,092	6,141,148	7,372,467
Sri Lanka	1,732,855	1,726,605	1,764,717	1,959,354	2,220,525	2,455,297	3,079,132	3,381,693
Vietnam	1,189,796	1,290,555	1,771,992	1,904,949	2,273,056	2,537,487	2,999,646	3,937,066
Pakistan	774,943	878,892	965,610	787,559	1,269,373	1,686,355	1,776,939	1,935,882
Total (I)	98,420,286	103,277,222	124,154,299	137,132,563	158,946,731	179,054,726	202,127,838	232,868,508
Increase %	5.8%	4.9%	20.2%	10.5%	15.9%	12.7%	12.9%	15.2%
Japan	13,129,864	13,127,144	13,501,421	15,055,696	16,436,146	17,055,082	18,469,710	19,008,326
Increase %	11.3%	0.0%	2.9%	11.5%	9.2%	3.8%	7.1%	2.9%
Total (II)	111,550,150	116,404,366	137,655,720	152,188,259	175,382,877	196,109,808	220,402,036	251,876,834
Increase %	6.4%	4.4%	18.3%	10.6%	15.2%	11.8%	12.4%	14.3%

Source: Containerisation International

Remarks: Total (I) is Asian Total excluding Japan. Total (II) is All Asian Total including Japan.



2. Demand Forecast of Port Cargo Flow in Greater Jakarta Metropolitan Area

2.1. Demand Forecast for Tg. Priok Port

A. Socio-Economic Framework

47. In JICA Study 2003, three (3) scenarios were used in the socio-economic framework of Indonesia and its trade partners.

48. After economic crisis happened in the fall of 2008, International Monetary Fund responded quickly by releasing a revised future economic forecast. The World Economic Outlook UPDATE estimates the impact to the economies and reveals the update GDP growth rates of each economy up to 2010. It is true that future economic framework is quite uncertain, but released outlook by IMF is the most reliable ones so far.

49. After 2010, JICA Study Team cannot find any reason to alternate the economic framework for the long term utilized in the JICA study 2003. The assumed GDP growth rates of Indonesia and trade partners by case are shown in the Table 2.1-1. The growth rates of the high case are set at 0.5 percentage point higher, and those of the low case are 0.5 percentage point lower, than those of the basic case, respectively.

Table 2.1-1 GDP Growth Rates by Case

High Case

Year	2008	2009	2010-2012	2013-2025	2026-2030
Indonesia	5.4%	4.5%	6.5%	5.5%	4.5%

Year	2008	2009	2010	2011-2012	2013-2030
United States	1.1%	-1.6%	1.6%	3.2%	2.2%
Euro area	1.0%	-2.0%	0.2%	2.8%	1.8%
JAPAN	-0.3%	-2.6%	0.6%	2.5%	1.5%
ASEAN-5	5.4%	2.7%	4.1%	6.5%	5.5%

Basic Case

Year	2008	2009	2010-2012	2013-2025	2026-2030
Indonesia	5.4%	4.5%	6.0%	5.0%	4.0%

Year	2008	2009	2010	2011-2012	2013-2030
United States	1.1%	-1.6%	1.6%	2.7%	1.7%
Euro area	1.0%	-2.0%	0.2%	2.3%	1.3%
JAPAN	-0.3%	-2.6%	0.6%	2.0%	1.0%
ASEAN-5	5.4%	2.7%	4.1%	6.0%	5.0%

Low Case

Year	2008	2009	2010-2012	2013-2025	2026-2030
Indonesia	5.4%	4.5%	5.5%	4.5%	3.5%

Year	2008	2009	2010	2011-2012	2013-2030
United States	1.1%	-1.6%	1.6%	2.2%	1.2%
Euro area	1.0%	-2.0%	0.2%	1.8%	0.8%
JAPAN	-0.3%	-2.6%	0.6%	1.5%	0.5%
ASEAN-5	5.4%	2.7%	4.1%	5.5%	4.5%



B. Forecast of Container Cargoes

50. A regression model was applied to forecast future port demand taking into consideration trade partner's weighted GDP for export cargo and GRDP of the hinterland of Tg. Priok port for import cargo.

51. Under the three socioeconomic frameworks, container throughputs were forecast. Total tonnage and the number of containers of international trade in the target year for the basic case are calculated at about 43.1 million tons or 4.9 million TEU in 2025, and about 68.8 million tons or 8.3 million TEU in 2030.

52. On the other hand, domestic traffic was forecast in the same manner as international traffic. Applied regressor is national GDP for loading containers and hinterland GRDP for unloading containers.

53. Resulting volume of inter-island containers handled at Tg. Priok port for the base case are estimated at about 16 million tons or 1.6 million TEU in 2015, and about 32 million tons or 3.3 million TEU in 2030.

54. Total container throughputs at Tg. Priok port, which consist of international containers and domestic containers, are summarized in Table 2.1-2.

Table 2.1-2 Total Container Throughput at Tg. Priok

Basic Case

	International Total		Domestic Total		Grand Total	
	Ton ('000)	TEU ('000)	Ton ('000)	TEU ('000)	Ton ('000)	TEU ('000)
2008	30,674	3,147	7,048	838	37,721	3,985
2015	43,148	4,885	15,879	1,660	59,027	6,544
2025	68,754	8,345	31,760	3,329	100,514	11,674
2030	83,716	10,287	40,672	4,266	124,388	14,553

C. Forecast of Cargo demand of other package type

55. Indonesian Port Corporation II prepares several kinds of cargo statistics, and one of them focuses on package types of cargo. Cargo tonnage handled at conventional wharves is disaggregated into package types, which are categorized into the five (5) groups; General cargo, Bag cargo, Liquid Bulk cargo, Dry Bulk cargo, and Container.

56. Resulting future cargo tonnage by package type based on Tg. Priok Port cargo statistics is summarized in Table 2.1-3. Percentage of container cargo tonnage among total cargo tonnage continues to increase and will reach about 70 % in 2025 while it is currently at about 56%. Containerization of inter-island shipping is presently premature, but a shift towards containerization will eventually be realized with the progress of infrastructure development and industrialization of the local economy.



Table 2.1-3 Summary of Cargo Tonnage by Package Type

Basic Case (Unit: '000 Ton)

Year	2008	2015	2025	2030
Container (Tg. Priok)	38,897	62,382	100,514	124,388
General C. + Bag C.	10,862	11,159	13,323	14,538
Liquid Bulk	7,985	10,000	10,000	10,000
Dry Bulk	12,094	14,600	20,614	24,437
Total	69,838	98,141	144,451	173,363



D. Capacity of Tanjung Priok Port

57. Capacity of Tg. Priok is introduced in JICA Study 2003. The quay and yard capacity are calculated on the assumption that the navigation channel is widened and two –way traffic is realized

58. According to IPC’s statistical report, conventional berths including MTI handle not only domestic cargoes but also international cargoes. In reality, these berths handled 446,000 TEU of international containers as well as 838,000 TEU of domestic containers in 2008.

59. It might be permissible to regard the existing throughput of international containers which is handled at conventional berths including MTI (446,000 TEU) as a part of the capacity of international containers at Tg.Priok port. Then, capacity of international containers of Tg. Priok will reach 4.1 million TEU after the channel is improved.

60. Similarly, the conventional berths including MTI handled 838,000 TEU of domestic containers in 2008, which is by far larger than the estimated capacity of domestic containers in the 2003 report, which is 485,000 TEU.

61. JICA Study Team estimates that an additional 700,000 TEU capacity can be added to the existing capacity by rearranging and developing dedicated domestic container terminals and improving operational efficiency at conventional wharves which are Pier I, Pier II, Pier III and Nusantara.

62. Container handling capacity at Tg. Priok port is summarized in Table 2.1-4 under the condition that the channel will be improved. As a result, capacity for international containers will be around 4.1 million TEU and that for domestic is around 1.5 million TEU.

Table 2.1-4 Container Capacity of Tg. Priok

		2003 Report Capacity	Throughput in 2008	Revised Capacity
International	JICT & Koja	3,643	2,715	3,643
	Conventional	485	446	446
Domestic	Conventional (Existing)		838	838
	Conventional (to be converted)	700	700	
Total	Total	4,128	3,999	5,627

Remarks: Capacity is quoted from 2003 Report and revized by JICA Study Team 2009

E. Container Demand Forecast for Tg. Priok

63. Regarding the international containers, it is forecasted that container throughput will reach the maximum capacity in around 2012. After that, overflowed containers will require facilities and spaces. Therefore, development of Bojonegara port is urgent.

64. On the other hand, regarding domestic containers, Tg. Priok port is expected to continuously accommodate inter-island containers at the conventional terminals where capacity is estimated to be about 1.5 million TEU.

65. It is likely that inter-island container traffic demand will reach the maximum capacity of the conventional wharves in around 2015. After the conventional wharves are saturated with the inter-island containers, basic and drastic measures will be needed to handle containers effectively and efficiently.



66. Results of the container demand forecast, which is considered to be the container handling capacity of Tg. Priok port is summarized in Table 2.1-5.

Table 2.1-5 Allocated Container Throughput at Tg. Priok

Basic Case		(Unit: TEU)			
	Total Demand	International after 2012	Sub Total	Tg. Priok	
				International	Domestic
1991	736,370		736,370	717,563	18,807
1992	866,717		866,717	841,640	25,077
1993	1,054,152		1,054,152	1,012,690	41,462
1994	1,270,094		1,270,094	1,193,115	76,979
1995	1,630,320		1,630,320	1,479,721	150,599
1996	1,606,797		1,606,797	1,466,356	140,441
1997	1,908,716		1,908,716	1,721,876	186,840
1998	1,897,961		1,897,961	1,754,636	143,325
1999	2,118,224		2,118,224	1,909,267	208,957
2000	2,313,272		2,313,272	2,076,181	237,091
2001	2,248,802		2,248,802	2,049,884	198,918
2002	2,568,926		2,568,926	2,212,017	356,909
2003	2,758,809		2,758,809	2,310,017	448,792
2004	3,187,055		3,187,055	2,621,087	565,968
2005	3,330,395		3,330,395	2,706,776	623,619
2006	3,370,729		3,370,729	2,735,774	634,955
2007	3,691,918		3,691,918	2,925,990	765,928
2008	3,984,290		3,984,290	3,146,732	837,558
2009	4,303,470		4,303,470	3,373,038	930,432
2010	4,658,437		4,658,437	3,612,490	1,045,948
2011	5,034,702		5,034,702	3,866,308	1,168,394
2012	5,433,543	4,135,356	5,387,187	4,089,000	1,298,187
2013	5,785,852	4,373,014	5,501,838	4,089,000	1,412,838
2014	6,155,777	4,622,556	5,622,221	4,089,000	1,533,221
2015	6,544,198	4,884,574	5,748,624	4,089,000	1,659,624
2016	6,952,040	5,159,694	5,881,346	4,089,000	1,792,346
2017	7,380,274	5,448,569	6,020,705	4,089,000	1,931,705
2018	7,829,920	5,751,888	6,167,032	4,089,000	2,078,032
2019	8,302,048	6,070,373	6,320,675	4,089,000	2,231,675
2020	8,797,783	6,404,783	6,482,000	4,089,000	2,393,000

Remarks

: Figures in bold in the column of int'l throughput refer to the capacity of Tg.Priok.

: Figures in bold in the right most column refer to the over capacity situation.



2.2. Demand Forecast for Bojonegara Port

67. It is estimated that the demand for international container cargoes will exceed the capacity of Tg.Priok port in the year 2012. It is reasonable that the excessive containers are regarded as a potential demand of Bojonegara port. Overflowed containers will reach about 800 thousand TEU in 2015. Potential container demand for Bojonegara port is shown in Table 2.2-1.

Table 2.2-1 Container Demand Forecast for Bojonegara Port

Basic Case	(TEU)
	Bojonegara Throughput International
2010	-
2011	-
2012	46,355
2013	284,014
2014	533,556
2015	795,574
2016	1,070,694
2017	1,359,569
2018	1,662,889
2019	1,981,374
2020	2,315,783

3. Current Condition of Tg.Priok Port

68. Tg.Priok port is the biggest port and handles almost half of the total container throughput in Indonesia. It handled a total of 3,280,000 containers in 2006, ranking 25th among world container handling ports. Because of the insufficient number of berths to accommodate large sized container vessels, shipping service is limited to feeder service and/or intra shipping within the Asian region.

69. Handling capacity for containers, however, has reached the limit due to the lack of berth windows. Furthermore, the container terminals JICTII and MTI, which were originally developed to handle general cargoes and were converted into container terminals, lack a sufficient of stock yard for containers and container vessels are compelled to moor in an outgoing direction because of the narrow basins in front. In addition, aged handling equipment seriously hampers the efficiency of container handling operations.

70. IPC is demolishing warehouses in the conventional berths and converting them to handle containers. However, even if such efforts are realized, port capacity will be reached again in the near future.

4. Review of Existing Plan

4.1. The Study for Development of the Greater Jakarta Metropolitan Ports in the Republic of Indonesia

71. JICA carried out the Study for the Greater Jakarta Metropolitan Ports in the Republic of Indonesia from year 2002-2003. A long term plan of Tg.Priok port toward 2025 is shown in Figure 4.1-1. The purposes of the Study, among others, are:

- To prepare a port development strategy comprising development concept including a



The Study on the New Public Private Partnership Strategy for the Port Development and Management in the Republic of Indonesia

role as an international/regional container hub port, administration/ management system, introduction of privatization schemes, and so forth (target year 2025);

- To prepare a master plan for comprehensive development/administration of Tg. Priok Port and Bojonegara Port, taking into account proper functional allotment between the two ports (target year 2025);
- To prepare a short-term development/administration plan for Tg. Priok port and Bojonegara port (target year 2012)

72. Based on the project concepts shown below, facility layout and land use plan toward 2025 was proposed by the Team while some of the projects were recommended to be developed in the short-term toward 2012;

- Project Concepts:
 - Navigational condition improvement (in terms of capacity & safety)
 - Automobile terminal development
 - Re-organizing land-use of the existing port
 - Development of new port area to appropriately accommodate future demand
 - Road improvement in and around the port area
 - Environment improvement

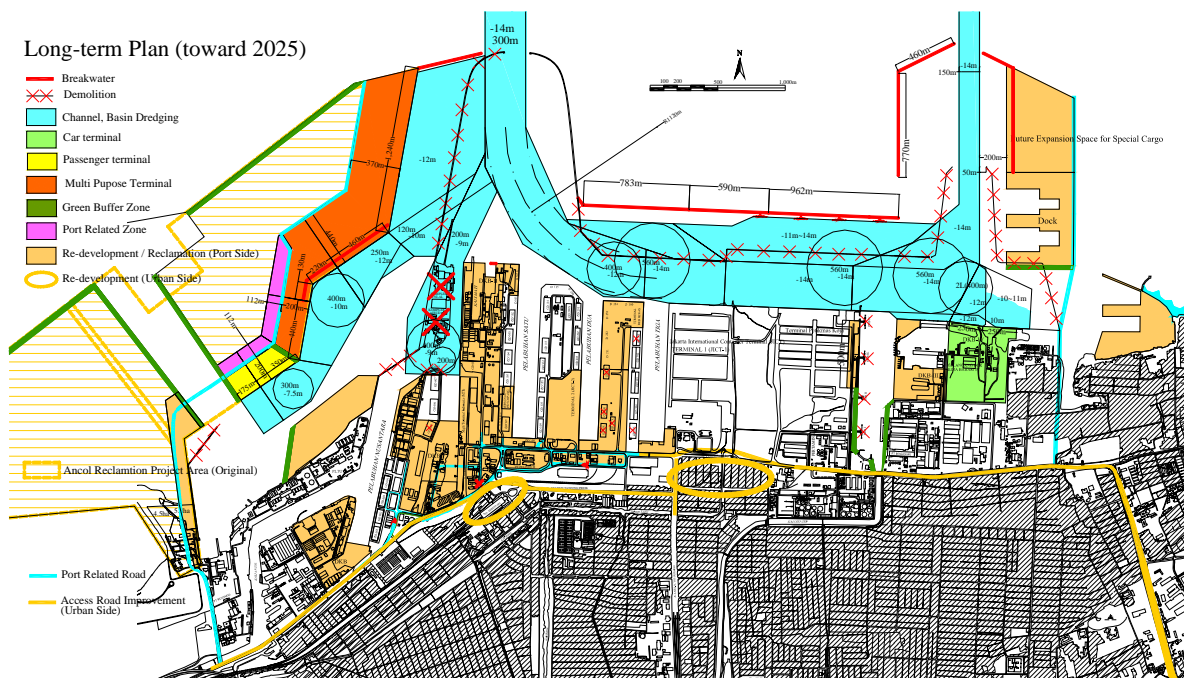


Figure 4.1-1 Long Term Plan of Tanjung Priok port toward 2025

4.2. The Master Plan of Tg. Priok Harbor

73. Minister of Transportation issued a regulation regarding Master Plan of Tg. Priok Harbor on 15 November 2007. The basic direction of the Master Plan of Tg. Priok Harbor is in line with that of Study for Development of the JICA Study 2003 explained in the previous section.

74. In the Master Plan, the role and function of Tg. Priok Harbor is defined as an International Hub Port and a logistic center in ASEAN, both of which were slogans stated in the JICA Study 2003.



4.3. Present Situation of Pier III

A. Existing Wharf Structure

75. Pier III was constructed in 1912 in such way that the east and west quay walls were constructed with concrete caisson structure and the area between both sides of the caisson was filled with sand.

B. Present situation of PIER III

76. Pier III was originally constructed to handle general cargoes of international trade and export of scrap bulk. Recently, to cope with increasing container traffic, some of the berths have been converted to handle containers and warehouses have also been demolished for container storage yards.

77. Based on the recommendation of the JICA Study 2003, IPC2 started to make re-development plans of Pier III to convert it into a container handling terminal by demolishing some warehouses. IPC2 also extended the top part of Pier III to develop the international container berth as berth No.214/300 with the depth alongside the berth of -14m.

78. IPC2 had already developed the berths 301/302 to handle inter-island containers by demolishing the warehouses 301/302 and installing gantry cranes, which foundation was reinforced with steel pipe piles up to the depth of -30m through the existing caisson structure. IPC2 also planned to expand the container handling area to the berth 303.

79. Since the present operational contract of terminal operation at berth 301/302 between IPC 2 and private operator is scheduled to expire in August 2010, the construction works will be started and are scheduled to be completed in 2011. IPC II, which will finance the project itself, plans to operate this part of Pier III as an international container terminal from 2012.

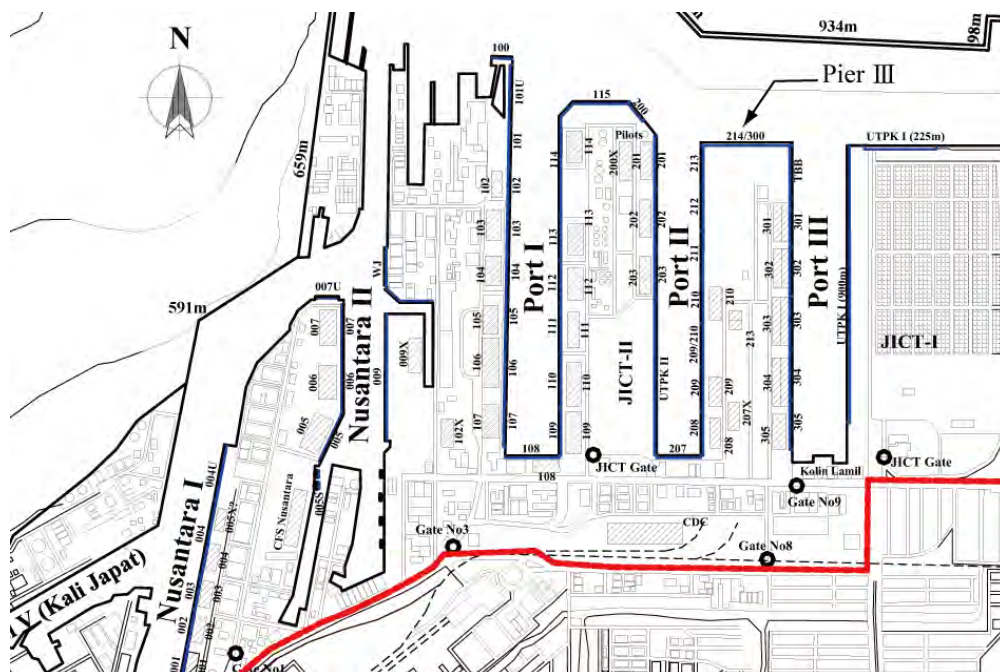


Figure 4.3-1 Conventional wharves Facility Layout.



5. Proposed Redevelopment Plan for Case Study

5.1. Necessity of Redevelopment for Container Handling

80. It is likely that interisland container traffic will continue to grow as the economic activities are progressing in the islands. It is estimated, as explained earlier, that volumes of inter-island containers handled at Tg. Priok Port will reach about 16 million tons or 1.7 million TEU in 2015, and about 32 million tons or 3.3 million TEU in 2025.

81. The rapid growth of the interisland container flow at Tg. Priok port has surely affected both port operation and land use of the port area.

82. Increasing the capacity for handling inter-island containers should be given the first priority. Dedicated inter-island container terminals have to be developed in order to accommodate the increasing inter-island container traffic.

5.2. Case Study Pier and Facilities

83. The JICA Team designates the northern half of Pier III as a case study area for PPP scheme analysis taking into account the working plan of IPC2 and actual implementation schedule of demolishing works of warehouses and so on. The area is 600m in length from the top of Pier III and 300m in width from east to west.

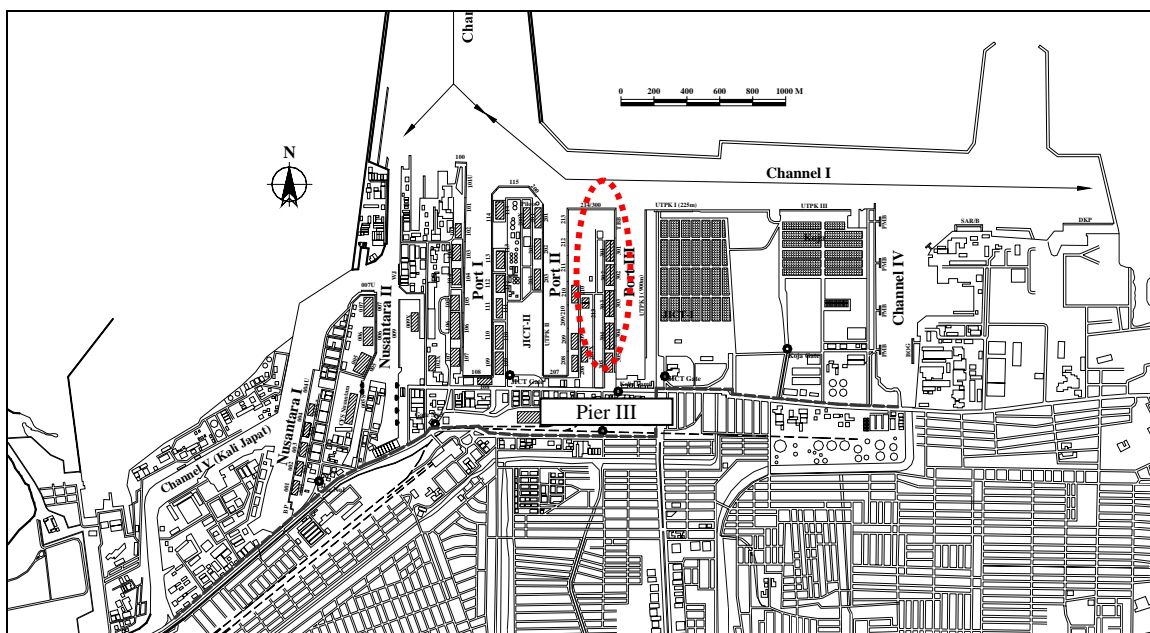


Figure 5.2-1 Location of the Case Study Area

84. Northern end of Pier III shall be utilized as an international container terminal. In the case study, a 300 m long berth with 200 m wide stocking yard shall be used as an import and export terminal.

85. Eastern waterfront of Pier III including the berth 303, which is facing JICT, shall be utilized as dedicated inter-island container berths. Warehouse 303 will be demolished and the existing rail shall be extended to the south by 50m. Planned ship size of inter-island container vessels is set as 10,000GT with 8.4m draft considering the scale of the berths and the previous study.



- 86.** Required cargo handling equipment for the redevelopment of Pier III is as follows;
- Quay Gantry Cranes: 6 units (to be covered by existing cranes), etc.

5.3. Capacity Improvement

87. By redevelopment of the dedicated inter-island container terminal at the case study area, it is estimated that considering storage space and handling equipment, 300,000 TEU of inter-island containers will be handled in addition to 200,000 TEU of international containers at Pier-end berth. The area of the southern half of the pier III is almost same as the case study area. Therefore, total capacity of 600,000 TEU for inter-island containers can be achieved.

88. When the above measures are taken, the resulting increase in capacity will meet the realized demand in around 2015, but not afterwards. To cope with the demand after 2015, more dedicated inter-island container terminals are needed. Planned layout of the case study area is shown in Figure 5.3-1.

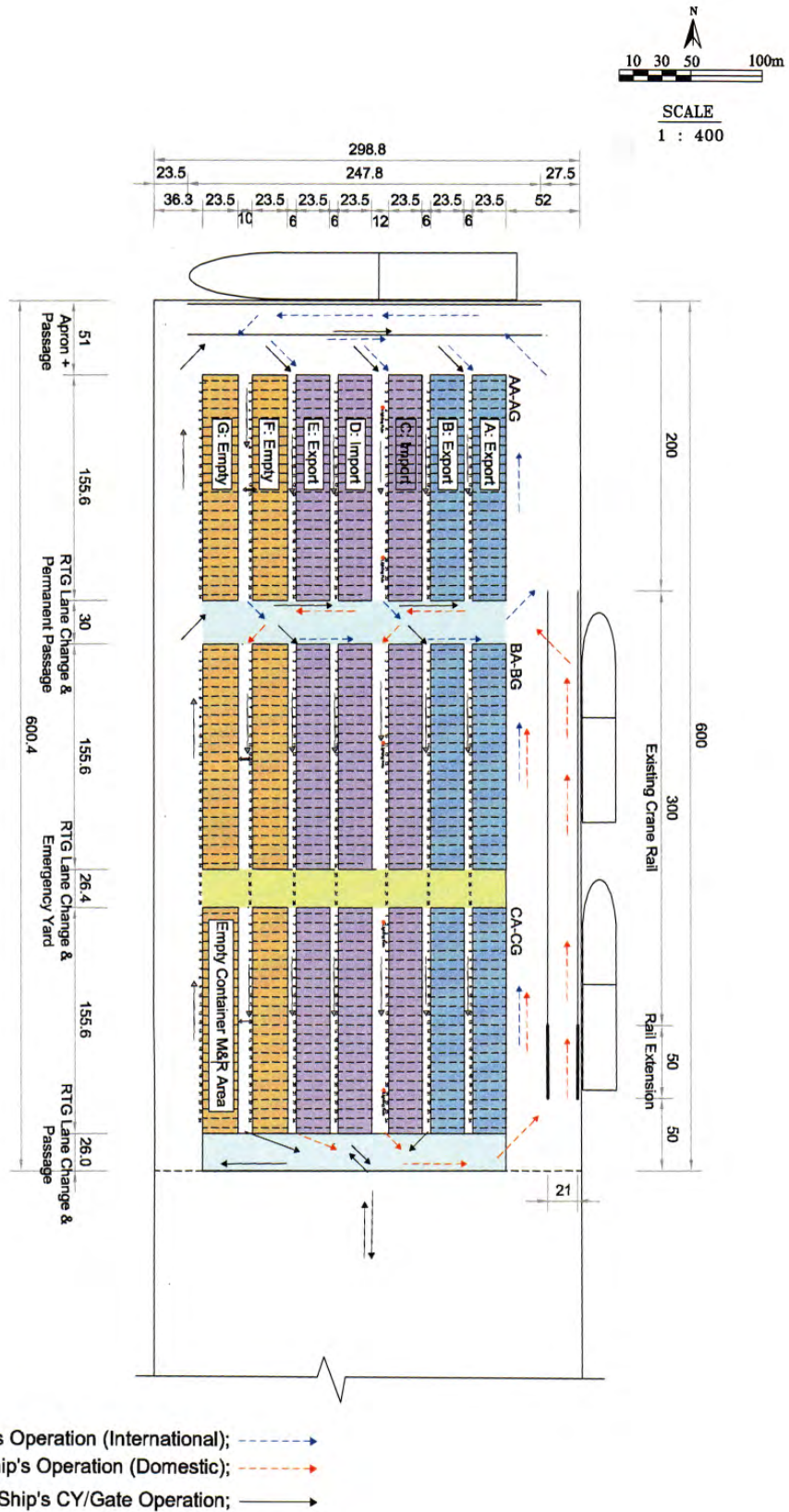


Figure 5.3-1 Facility Layout Plan of the Case Study Area of Pier 3



6. Cost Estimate

A. Cost Hearings and Collection of Information

89. The redevelopment project of Pier III of Tg. Priok port is planned to be carried out, as mentioned above, with the reinforcement and improvement of the existing facilities, and will be achieved by the civil works of comparatively small dimensions.

90. To carry out the cost estimate of those reinforcement works and improvement works, information concerning the improvement programs and actual contract records in recent years was collected from project offices. The project offices visited by the Study Team were as follows.

- i) IPC2, Cabang Tanjung Priok (Technical Division)
Re-development projects of Pier II (Dermaga 114, Dermaga 115) and Pier III
- ii) Jakarta Fishing Port
Rehabilitation and Improvement Project of Jakarta Fishing Port (November 2008)

B. Project Cost

91. Project cost for the re-development of Pier III in Tg. Priok port is estimated in Table 6.1-1.



Table 6.1-1 Estimated Project Cost

Description	Unit	Quantity	Local Portion (1,000 Rupiah)		Foreign Portion (1,000 Rupiah)		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. General Cost (GC)				3,169,002		2,080,601	
(1) Mobilization / Demobilization	I.s.	1		792,250		520,150	Total 4 % of the DC
(2) Temporary Work Yard	I.s.	1		1,188,376		780,225	1.0 % of the DC
(3) Benchmark and Preparation Works	I.s.	1		792,250		520,150	1.5 % of the DC
(4) Testing Laboratory	I.s.	1		316,900		208,060	1.0 % of the DC
(5) Submittals	I.s.	1		79,225		52,015	0.4 % of the DC
2. Quay and Apron				20,050,000		13,140,000	600 m
(1) Demolition Works	I.s.	1		6,336,000		1,584,000	Existing cranes (2), warehouse (150 x 55 m ²)
(2) Crane Rail Extension	m	50	2,500	250,000	1,500	150,000	2 x 50 m x 300 USD/m
(3) Piling for Crane Rail Support	m	660	3,000	1,980,000	2,500	1,650,000	5-meter interval x 30 m depth, 5.5 million Rp/m
(4) Apron Pavement	m ²	31,200	360	11,232,000	240	7,488,000	W:52 m x L:600 m; 50 USD/m ²
(5) Quay Accessories	unit	14	18,000	252,000	162,000	2,268,000	Fender, Bolland, etc.(15 m interval for 200 m)
3. Container Yard				57,795,039		38,530,026	
(1) Pavement for Container Stacking Area	m ²	76,789	540	41,465,844	360	27,643,896	
(2) Pavement for Passages	m ²	9,251	360	3,330,187	240	2,220,125	50 USD/m ²
(3) Access Road Reinforcement	m ²	4,000	360	1,440,000	240	960,000	Gate House / Container Yard; L: 400 m x W: 10 m
(4) Utility Facilities	I.s.	1		11,559,008		7,706,005	Power supply, lighting, drainage, etc.
4. Buildings				1,380,000		345,000	
Gate House	m ²	375	3,680	1,380,000	920	345,000	25 m x 15 m; 400 USD/m ²
Direct Construction Cost (DC)				79,225,039		52,015,026	Total of 2.+ 3.+4.
5. Total Construction Cost (TC)				82,394,041		54,095,627	TC = GC + DC
6. Project Related Expenses							
(1) Administration Cost	I.s.	1		823,940		540,956	1 % of TC
(2) Engineering Fee (EF)	I.s.	1		4,943,642		3,245,738	6% of TC
Total Project Related Expenses (PE)				5,767,583		3,786,694	9,554,277
7. Total Project Cost				88,161,623		57,882,321	Sum of 5.+ 6.
VAT (10 %)				8,816,162		5,788,232	14,604,394



7. Preliminary Implementation Schedule

7.1. Investment Plan for Redevelopment of Pier III

92. The financial source of the re-development of Pier III shall be borne by IPC2, and the budgetary procedures for the project shall start from the year 2009.

93. After promulgation of new shipping law and its G.R., IPC2 will lose its current status as the conceding authority. Hence, PPP scheme should be the case where the new port authority will become the conceding authority.

7.2. Preliminary Implementation Schedule

94. Assuming that construction works will get started after August 2010 when the present contract between IPC2 and OJA will be terminated and the redevelopment container terminal will become operational from the beginning of 2012, the preliminary implementation schedule of Pier III is shown in Table 7.2-1.

Table 7.2-1 Preliminary Implementation Schedule of Pier III, Tg. Priok

Description	Unit	Quantity	2009	2010	2011	2012	2013
Process of Finance			█	█			
Survey / Detailed Design			█	█			
Tender Process / Contractor Selection				█			
Construction (Quay 200 m)				█	█		
Construction (Apron 400 m and Yard; PT OJA)					█	█	
Operation of PIER 3						█	█
1. Quay Improvement (200 m)							
(1) Apron Pavement	m ²	10,400		█			
(2) Fender and Bollard	unit	14		█			
2. Quay Improvement (400 m)							
(1) Demolition Works	l.s.	1			█		
(2) Crane Rail Extension	m	50			█		
(3) Piling for Crane Rail Support	m	660			█		
(4) Apron Pavement	m ²	20,800			█		
3. Container Yard							
(1) Pavement for Container Stacking Area	m ²	76,789			█		
(2) Pavement for Passages	m ²	9,251			█		
(3) Access Road Reinforcement	m ²	4,000			█		
(4) Utility Facilities	l.s.	1			█		
4. Buildings							
Gate House	m ²	375		█			
Fences	m	300		█			



8. Possible PPP Schemes and Financial Analysis

8.1. Premises on Project

A. Initial Investment Costs

95. Initial investment costs are estimated in Table 8.1-1.

Table 8.1-1 Initial Investment Costs

	Item	Total Cost '000 US\$
	Construction Cost for Tanjung Priok	31,621
	1. General Cost	477
	2. Quay and Apron	3,031
	3. Container Yard	9,027
	4. Buildings	157
	5. PA Equipment (used)	18,930
	7. Price Escalation	632
	TJP Total Construction Cost	32,254
	8. Engineering Fee	1,897
	Total Construction Cost & Consulting Services	34,151
	9. Interest During Construction (IDC)	-
	TJP Total Direct Project Cost-1	34,151
	6. Physical Contingency	3,415
	TJP Total Direct Project Cost	37,566
	10. Equipment (other than PA equipment) inc. VAT	23,656
	11. Local Cost (Administration Cost + VAT)	3,788
	TJP Total Project Cost	65,010

Notes. 1US\$=100Yen, 1US\$=11,000Rp

B. Management and Operation Costs

96. Manning of the Port Authority and terminal operator are scheduled and management and operation costs are estimated.

C. Tariff and Dues

97. Tariff and dues are taking the current level into consideration.

D. Estimated scale of business

98. Maximum capacity of the terminal is presumed as 500,000TEU/year, considering the scale of the terminal and estimated vessel type and productivity of the terminal is also presumed.

8.2. Possible PPP Schemes for Remodeling of Pier III of Tg. Priok Port

A. Estimated Productivity of the Port

99. During the implementation of the Project by IPC2, GOI has promulgated new Shipping Law which stipulates that IPC2's role will be changed from port management to operator. The legal status



of IPC2 as the project owner of existing terminals including their rehabilitation project is not clear in the current government regulations.

100. IPC2 is insisting that ongoing projects are continuously under the ownership of IPC2 while DGST is insisting that new projects will be under the authority of Port Authority to be established.

101. Considering the situation above, two types of PPP scheme are considered to be possible;

(i) Case-1:

- Port Authority will purchase the Project from IPC2 at the costs spent by IPC2 by the fund from government and then terminal operator (TOC) will be selected following the regulations stipulated by the GOI.
- PPP scheme applied will be the concession of the terminal facilities for 20 years term to the TOC and TOC will purchase additional equipment for its operation.

(Duration of the concession period should be decided based on the financial assessment under relevant concession conditions such as initial investment, reinvestment for renewal of equipment and facilities, maintenance obligation and concession fee etc. A 25~30 year period or more is common, however, regarding the Pier III redevelopment project, duration of the concession period of case-1 and case-2 is set at 20 years considering the regulated life time of used assets because that this project is a form of improvement for the existing berth and yard.)

(ii) Case-2

- IPC2 will continue to develop the project on BOT base while the Port Authority will hold the authority of concession as a conceding authority
- The Port Authority as a representative of the Government holds the proprietorship of the port water and port land

8.3. Financial Conditions of Port Authority and Terminal Operator

102. For the purpose of financial analysis, financial conditions of Port Authority and Terminal Operator are set as shown in Table 8.3-1.

Discount rates of all cases are set as follows;

Port Authority: 0.0% (the interest rate of government funds)

Terminal Operator: 10.5% (calculated from market interest rates (15.0%) of Indonesia and debt-equity ratio (70:30))

(One of the criteria for evaluating the financial viability of a project is that the FIRR which is one of the financial indicators should exceed the discount rate.)



Table 8.3-1 Financial Conditions of Port Authority and Terminal Operator

Case-1	Port Authority	Terminal Operator (Concessionaire)
1. Cost Allocation	rehabilitation costs of pier III including equipment under use	cost for additional equipment
2. Financial Resource	Government fund (repayment from the year of terminal operation for its principal for 20 years term)	70% from bank (15% interest loan term 10 years) and 30%=\$71.mill from its equity
3. Tax and Duties	non tax	20 % income tax
4. Maintenance	Maintenance Dredging	Facilities and equipment maintenance
5. Depreciation	facilities and equipment of P.A.	additional equipment
6. Concession Fee	Fixed fee for facilities equivalent to repayment to Government + variable fee of 5% revenue share + land rent and water rent	
7. Renewal cost for equipment	bank loan	bank loan
Case-2	Port Authority	Terminal Operator (Concessionaire)
1. Cost Allocation	no initial investment	all the project cost
2. Financial Resource	not applicable	70% from bank (15% interest loan term 10 years) and 30%=\$20mill from its
3. Tax and Duties	not applicable	same as case-1
4. Maintenance	same as case-1	same as case-1
5. Depreciation	not applicable	all the facilities and equipment
6. Concession Fee	15% revenue share + land and water rent	
7. Renewal cost for equipment	not applicable	bank loan

8.4. Evaluation of PPP Scheme

A. Table of Financial Indicators and Financial Statements for the concession evaluation

103. Regarding the financial viability of the concession, the financial soundness of the whole project is first analyzed by evaluating the financial indicators such as Financial Internal Rate of Return (FIRR), Return on Net Fixed Asset, Operating Ratio and Debt Service Coverage Ratio (DSCR) etc. to determine whether these indicators satisfy the criteria.

104. Next, the financial situation of the operator will be analyzed through the concession period by using Financial Statements such as Income Statement, Cash Flow and Balance Sheet.

105. The financial statements are not attached in the case that the financial situation of the operator is satisfactory (e.g. the financial situation of the operator becomes normal 5 years from the commencement of operation). In the case that each of the financial indicators shows an unusual/extreme numerical value, however, the financial statements will be attached.

106. By analyzing the effects to the concession conditions such as the concession fee, taxes and other public charges, obligatory investment and so on during the concession period by using the financial statements, reasonable conditions for the concession can be set.

107. In the case of the Pier III redevelopment project, the results of the financial analysis show that the financial condition of both cases are relatively sound and hence tables of the financial indicators are attached in the report.



B. Result of Evaluation

108. Tg. Priok Port has been the dominant commercial port in Indonesia favored with concentrated shippers and consignees facing the metropolitan area and hence demand for the port has been ever increasing. In this context, there is no commercial risk. The project needs less investment costs than other project because of its nature of rehabilitation of existing facility and hence it involves no project risk.

109. The terminal can expect full demand for its capacity from the initial stage of the operation, and hence it shows very favorable financial conditions both for the terminal operator and the port authority under any possible scheme of PPP.

110. Major reason of resulting favorable financial condition for case-1 lies in the financial resource for the port authority which depends on government fund with non-interest loan and rather small amount of initial investment cost (see Table 8.4-1).

111. As to the case-2, it is assumed that IPC2 will invest 30% of the project costs from its own equity favored with the current status of SOE which has endowed credibility from the bank. In addition to the small amount of initial investment costs, it leads to the favorable financial condition of IPC2 (see Table 8.4-2).

112. From these analysis, it can be said that in case of rather favored market condition and continuation of the existing operation by expanding similar terminal capacity corresponding to the ever increasing demand, no risk is involved in the project.

113. Taking into such a situation as this case study, concession scheme should includes the possible case of either extension of concession period for the current concessionaire or succession of terminal operation by the port authority itself.



The Study on the New Public Private Partnership Strategy
for the Port Development and Management in the Republic of Indonesia

Table 8.4-1 Result of Financial Analysis (Case-1): Tg. Priok Port

		2012			OUTPUTS																
Year of No.4-6 Q. Crane added		1st Prd	2nd Prd	3rd Prd																	
Concession Fee																					
Fixed		1,121	1,121	1,121																	
Variable		5,358	5,253	5,186																	
					1000\$												1000\$				
Used RTG, Tractor&Chassis Rental					0	RTG Rental (from 2022)										0					
Used GT Crane lease					1,787	GT Crane lease (from 2022)										2,382					

TOC	Financial Indicators		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
	PROFITABILITY (Net Operating Income/ Net Fixed Assets)																			
	Rate of Return on Net Fixed Assets (Criterion: over %)	8.00%	0.00%	38.13%	40.74%	43.84%	33.80%	36.38%	39.95%	44.43%	33.29%	36.54%	37.33%	31.69%	29.03%	34.82%	38.16%	20.10%	16.91%	
OPERATIONAL EFFICIENCY																				
	Operating Ratio (Criterion: under 0.7- 0.75)		0.00	0.68	0.68	0.69	0.70	0.71	0.71	0.71	0.71	0.71	0.71	0.80	0.80	0.80	0.80	0.80	0.80	
	Working Ratio (Criterion: under 0.5- 0.6)		0.00	0.62	0.62	0.62	0.62	0.63	0.63	0.63	0.63	0.63	0.63	0.67	0.68	0.68	0.68	0.68	0.68	
LOAN REPAYMENT CAPACITY																				
	Debt Service Coverage Ratio (Criterion: over 1.0)		0.00	1.70	1.87	1.97	2.08	1.64	1.75	1.87	2.02	1.53	1.68	1.52	2.98	2.24	2.44	2.32	1.27	
	concessionn fee rate (fixed)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	concession fee rate (variable)		20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
	total concession fee/revenue		0%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	39%	39%	39%	39%	39%	40%	
	MAXIMUM CONCESSION FEE RATE NPV(Profit/Revenue)	75.38%																		
	Financial Indicators		2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
PROFITABILITY (Net Operating Income/ Net Fixed Assets)																				
	Rate of Return on Net Fixed Assets (Criterion: over %)	8.00%	18.73%	21.03%	24.03%	20.88%														
OPERATIONAL EFFICIENCY																				
	Operating Ratio (Criterion: under 0.7- 0.75)		0.80	0.80	0.80	0.81														
	Working Ratio (Criterion: under 0.5- 0.6)		0.68	0.68	0.68	0.68														
LOAN REPAYMENT CAPACITY																				
	Debt Service Coverage Ratio (Criterion: over 1.0)		1.05	1.14	1.22	1.48														
FINANCIAL INTERNAL RATE OF RETURN		36.9%																		
	concessionn fee rate (fixed)		100%	100%	100%	100%														
	concession fee rate (variable)		20%	20%	20%	20%														
	total concession fee/revenue		40%	40%	40%	40%														
	MAXIMUM CONCESSION FEE RATE NPV(Profit/Revenue)	75.38%																		
	Retained Earnings Total	60,816	(\$1,000)																	

PA	Financial Indicators		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
	PROFITABILITY (Net Operating Income/ Net Fixed Assets)																			
	Rate of Return on Net Fixed Assets (Criterion: over %)	1.59%	0.00%	19.78%	21.12%	22.68%	24.50%	26.66%	29.25%	32.43%	36.50%	41.72%	9.19%	10.03%	10.46%	10.93%	11.45%	12.01%	12.64%	
OPERATIONAL EFFICIENCY																				
	Operating Ratio (Criterion: under 0.7- 0.75)		0.00	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.31	0.31	0.31	0.31	0.31	0.31	
	Working Ratio (Criterion: under 0.5- 0.6)		0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
LOAN REPAYMENT CAPACITY																				
	Debt Service Coverage Ratio (Criterion: over 1.0)		0.00	2.61	4.95	4.94	4.93	4.91	4.90	4.89	4.89	4.88	4.87	1.28	1.28	1.28	1.28	1.28	1.28	
	Financial Indicators		2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
PROFITABILITY (Net Operating Income/ Net Fixed Assets)																				
	Rate of Return on Net Fixed Assets (Criterion: over %)	1.59%	13.34%	14.13%	15.02%	16.03%														
OPERATIONAL EFFICIENCY																				
	Operating Ratio (Criterion: under 0.7- 0.75)		0.31	0.31	0.31	0.31														
	Working Ratio (Criterion: under 0.5- 0.6)		0.02	0.02	0.02	0.02														
LOAN REPAYMENT CAPACITY																				
	Debt Service Coverage Ratio (Criterion: over 1.0)		1.28	1.28	1.28	1.27														
	Retained Earnings Total	153,390	(\$1,000)																	
FINANCIAL INTERNAL RATE OF RETRUN		17.9%																		



The Study on the New Public Private Partnership Strategy
for the Port Development and Management in the Republic of Indonesia

Table 8.4-2 Result of Financial Analysis (Case-2): Tg. Priok Port

		2012			OUTPUTS																	
Year of No.4-6 Q. Crane added		1st Prd	2nd Prd	3rd Prd	1000\$																	1000\$
Concession Fee					Used RTG, Tractor&Chassis Rental		RTG Rental (from 2022)															0
Fixed		0	0	0	Used GT Crane lease		GT Crane lease (from 2022)															0
Variable		4,086	4,007	3,957																		

TOC	Financial Indicators		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
	PROFITABILITY (Net Operating Income/ Net Fixed Assets)																			
Rate of Return on Net Fixed Assets (Criterion: over %)		8.00%	0.00%	15.19%	16.51%	18.13%	16.85%	18.82%	21.50%	25.19%	23.89%	28.84%	7.78%	7.09%	7.25%	7.80%	8.26%	7.36%	7.28%	
OPERATIONAL EFFICIENCY																				
Operating Ratio (Criterion: under 0.7- 0.75)			0.00	0.66	0.66	0.66	0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.74	0.74	0.74	0.74	0.74	0.75	
Working Ratio (Criterion: under 0.5- 0.6)			0.00	0.45	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	
LOAN REPAYMENT CAPACITY																				
Debt Service Coverage Ratio (Criterion: over 1.0)			0.00	3.22	3.38	3.36	3.33	2.88	2.89	2.87	2.86	2.47	2.49	1.02	1.31	1.26	1.26	1.23	1.12	
concessionn fee rate (fixed)			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
concession fee rate (variable)			15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	
total concession fee/revenue			0%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	
MAXIMUM CONCESSION FEE RATE NPV(Profit/Revenue)		74.50%																		
Financial Indicators			2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
PROFITABILITY (Net Operating Income/ Net Fixed Assets)																				
Rate of Return on Net Fixed Assets (Criterion: over %)		8.00%	7.86%	8.55%	9.39%	9.49%														
OPERATIONAL EFFICIENCY																				
Operating Ratio (Criterion: under 0.7- 0.75)			0.75	0.75	0.75	0.75														
Working Ratio (Criterion: under 0.5- 0.6)			0.47	0.47	0.47	0.47														
LOAN REPAYMENT CAPACITY																				
Debt Service Coverage Ratio (Criterion: over 1.0)			1.07	1.07	1.07	1.13														
FINANCIAL INTERNAL RATE OF RETURN			14.9%																	
concessionn fee rate (fixed)			0%	0%	0%	0%														
concession fee rate (variable)			15%	15%	15%	15%														
total concession fee/revenue			17%	17%	17%	17%														
MAXIMUM CONCESSION FEE RATE NPV(Profit/Revenue)		74.50%																		
Retained Earnings Total			121,798	(\$1,000)																

PA	Financial Indicators		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
	PROFITABILITY (Net Operating Income/ Net Fixed Assets)																			
Rate of Return on Net Fixed Assets (Criterion: over %)		1.59%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
OPERATIONAL EFFICIENCY																				
Operating Ratio (Criterion: under 0.7- 0.75)			0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
Working Ratio (Criterion: under 0.5- 0.6)			0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
LOAN REPAYMENT CAPACITY																				
Debt Service Coverage Ratio (Criterion: over 1.0)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Financial Indicators			2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
PROFITABILITY (Net Operating Income/ Net Fixed Assets)																				
Rate of Return on Net Fixed Assets (Criterion: over %)		1.59%	0.00%	0.00%	0.00%	0.00%														
OPERATIONAL EFFICIENCY																				
Operating Ratio (Criterion: under 0.7- 0.75)			0.03	0.03	0.03	0.03														
Working Ratio (Criterion: under 0.5- 0.6)			0.03	0.03	0.03	0.03														
LOAN REPAYMENT CAPACITY																				
Debt Service Coverage Ratio (Criterion: over 1.0)			0.00	0.00	0.00	0.00														
Retained Earnings Total			102,499	(\$1,000)																
FINANCIAL INTERNAL RATE OF RETRUN																				