Indonesia

Semarang Port Development Project (2-1) (2-2)

Report Date: June, 2002
Field Survey: July, 2001

1. Project Profile and Japan's ODA Loan

Project Location Map

Project Site

1.1 Background

In order to meet the increasing demand for container handling and to accelerate foreign trade, the Directorate General of Sea Communications (DGSC) was scheduled to develop container handling facilities in 12 ports during the period of the Indonesian Government's Fifth Five-year National Development Plan (1989-1994). In terms of container cargo handling volume, Semarang Port ranked fourth in the country. Due to the fast economic growth of Central Java Province and Jogyakarta, both the port's hinterland, the cargo handling volume of Semarang Port had been increasing by 20% on average per year, while the container handling volume was increasing by 50% on average per year. Since Semarang Port did not have a container wharf, and its general cargo wharf was already operating at full capacity, there was an imminent need for construction of a container cargo wharf and the related facilities.

1.2 Objectives

To construct a container wharf together with the related buildings, and to procure freight handling equipment, including a computer system, in order to cope with the growing demand for container cargo at Semarang Port.

1.3 Project Scope

(i) Construction of a container wharf, a container yard, and a container freight station, including utility works.
(ii) Procurement of cargo handling equipment and computer hardware.
(iii) Consulting services for supervision of construction works and equipment procurement.

1.4 Borrower/Executing Agency

Government of the Republic of Indonesia / Directorate General of Sea Communications, Ministry of Communications

1.5 Outline of Loan Agreement

	Phase I	**Phase II (this project)**
Loan Amount Loan Disbursed Amount	7,530 million yen 4,918 million yen	3,590 million yen 1,703 million yen
Date of Exchange of Notes Date of Loan Agreement (L/A)	September 1991 September 1991	September 1992 October 1992
Terms and Conditions Interest Rate Repayment Period (Grace Period) Procurement	 2.60% 30 years (10 years) General Untied (Partially Untied for Consulting Services)	 2.60% 30 years (10 years) General Untied (Partially Untied for Consulting Services)
Final Disbursement Date	October 1999	November 1999

2. Results and Evaluation

2.1 Relevance

The development of the port sector in Indonesia has been realized strategically under the Five-Year National Development Plan (REPELITA). REPELITA V (1989-1994) predicted a growth rate in marine transport of 4% to 6% per annum. In order to respond to the rapid growth of container transportation demand, the Government decided to develop container wharfs in 12 ports, including Semarang Port. The Indonesian Government adopted a "National Transport System Plan" in December 1996, which stressed the importance of marine transport as a long distance mass transport mode for international and domestic freight, as well as for passengers. It argued that marine transport would be indispensable for achieving the balanced development of regions, thereby contributing to national cohesion.

The GRDP of Central Java Province grew by 34% from 1991 to 1999, while the population increased by 7.7%. Semarang Port is playing a central role in the rapidly growing provincial economy, linking the Province to other provinces and countries.

In this light, the project has maintained its relevance and consistency with the Government's development policy, and with the circumstances of the regional economy, up to the present.

2.2 Efficiency

The project was completed in September 1999, three years later than originally scheduled, because of 1) the re-evaluation of prequalification owing to inconsistencies in the evaluation; 2) the amendment of the size of the container yard with its stacking capacity, from 135,000 TEUs to 165,000 TEUs; and 3) the additional dredging work of the existing access channel, which had become shallow as a result of silting. There was a significant cost under-run for both Phase I and Phase II, which were

completed at the total cost lower than the original by 37% and 55% respectively. The cost under-run of Phase I was caused mainly by a significant appreciation of Japanese yen vis-à-vis Indonesian rupiah and by the concomitant reduction in the yen equivalent of local currency costs financed in yen. The cost saving for Phase II was achieved as a result of severe price competition.

2.3 Effectiveness

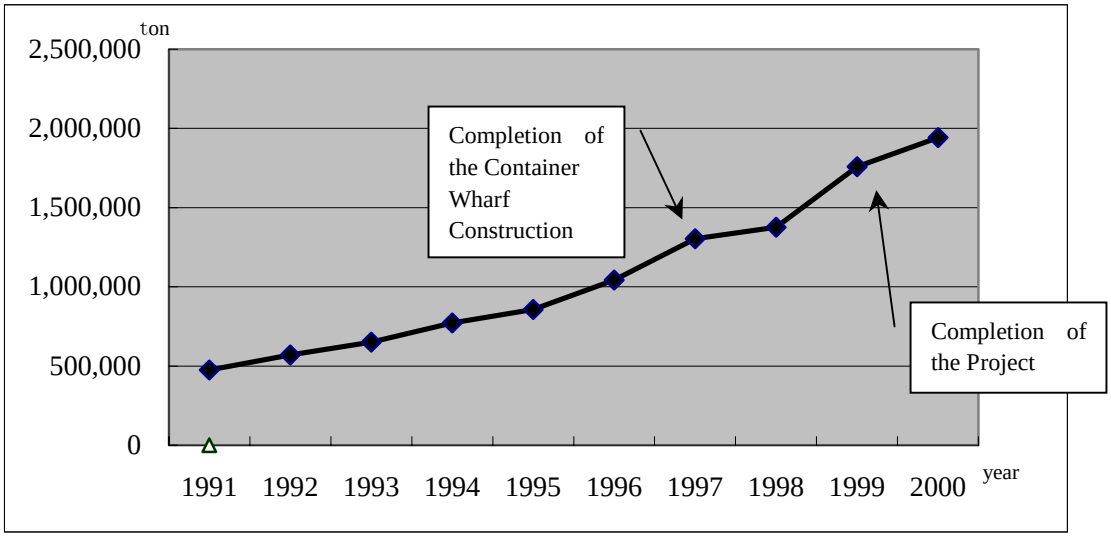
2.3.1 *Improvement of the Services*

The new container wharf was constructed in 1997, and gradually started operations thereafter. The construction of container handling facilities has remarkably shortened the processing time for loading and unloading, thus reducing waiting time for ships. Before the construction of the container facilities, ships had to wait offshore for at least two to three days before unloading. After construction, ships have only had to wait for five to seven hours on ordinary occasions, with a maximum of one day. The efficient container handling has also made processing time more predictable, which has in turn contributed to efficient port management. Previously, it was quite difficult, without container handling facilities, to predict loading and unloading time. Currently, the container cargo terminal office can inform its clients exactly when their containers will be loaded or unloaded, thereby improving customer satisfaction.

2.3.2 *Increase in the Container Cargo Volume*

The construction of container facilities has removed the bottleneck of container transportation to and fro Central Java. While the general cargo volume has been stagnating at around 3 million tons per year at Semarang Port, the container handling volume increased almost as rapidly as was forecast at appraisal, from 569,000 tons in 1991 to 1,942,000 tons in 2000, a 17% increase per year on average. Figure 1 shows the actual container cargo handling volume at Semarang Port.

Figure 1 Container Cargo Handling Volume at Semarang Port



Source: Semarang Port Office

2.3.3 *Estimate of the Financial Internal Rate of Return*

The financial internal rate of return (FIRR) of the current project was estimated based on the actual revenues and expenditures accrued from the container cargo handling activities of Semarang Port. It is assumed that all the incremental net cash flow related to container handling, since 1997, is attributed to the Project, and that the net operating income, as it was in 1999, is maintained during the project life. The FIRR for 30 years' operation was re-evaluated at 23%. There are two main reasons for the high FIRR: (1) the Port is actually used beyond its capacity – although it is designed to cope with 1.4 million tons per year, actual utilization is 2 million tons per year; and (2) the demand of container freight has drastically increased, while the volume of general cargo has been stagnating at 3 million tons since 1995.

It should be noted, however, that although high financial returns are achieved by utilizing the Port beyond its capacity, it is possible that economic efficiency is being lost owing to inadequate handling capacity of the container wharf. Semarang Port has reportedly started further expansion of its facilities, in an effort to keep pace with increasing container demand.

2.4 Impact

2.4.1 *Impacts on the Regional Economy*

Semarang has no heavy industry, but it has quite a few small- and medium-sized manufacturers. Semarang Port handles nearly all imports and exports coming into and going out of Central Java. The largest group of export goods consists of wood products - including furniture, garments and textiles - while the largest group of import goods does of cotton, polyester products, machines and spare parts. Owing to the increase in the container handling capacity of Semarang Port, new regular container routes have been opened between Semarang and Malaysia, Taiwan, Japan, China and the Philippines. The introduction of new routes has had a considerable impact on the regional economy, opening opportunities for trading goods with these countries and territories.

2.4.2 *Impacts on Environment*

There was no significant impact by the Project on the natural environment, since the container wharf was constructed within the port area that had already been operated and thus the reclamation was quite limited.

2.4.3 *Social Impacts*

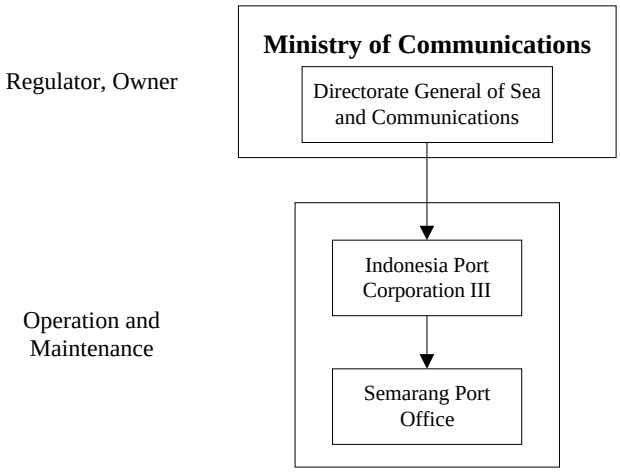
There was no negative social impact such as involuntary resettlement of inhabitants.

2.5 Sustainability

2.5.1 *Institutional Framework*

The Semarang Port Office of Indonesia Port Corporation III (IPC III), a 100% state-owned corporation based in Surabaya, is responsible for the operation and maintenance of 37 ports including Semarang Port. The following chart shows the organisational structure of the Ministry of Communications, IPC III and Semarang Port:

Figure 2. Organizational structure



The demarcation of functions of each organization is as follows:

- MOC: Determine overall port development and operation policies
- DGSC: Implement policies determined by MOC
- IPC III: Manage commercial ports as an independent corporation
- Semarang Port Office: Operate and maintain Semarang Port

The managers of the Port are appointed by IPC III while the board members of IPC III include representatives from the Government.

2.5.2 *Financial Viability*

(1) IPC III

IPC III is issuing a consolidated financial statement for all its port operations. Table 2 shows the financial data of IPC III from 1997 to 1999.

Table 2 Financial Performance of IPC III (million rupiah)

Financial Statement	1997	1998	1999
Total Assets	1,034,081	1,285,636	1,802,271
Operating Revenue	242,057	556,171	791,695
Net Operating Income	113,145	367,009	349,018
Net Income after Tax	92,051	304,045	1,031,702*
Financial Indicators	1997	1998	1999
Return on Assets	9%	24%	57%
Net Operating Income / Operating Revenue	47%	66%	44%
Total Assets Turnover	0.23	0.43	0.44
Current Ratio	213%	185%	688%

Source: IPC III

* Extraordinary revenue was recorded in 1999 in the form of proceeds from the privatization of the international cargo terminal of the Surabaya Port.

From a financial perspective, IPC III's operation is quite profitable and efficient, with net

operating income accounting for half of the operating revenue. Considering that the port operation is highly capital intensive, total assets turnover, at around 0.4, is fairly high; it is likely that the asset value has not been sufficiently re-evaluated taking the effects of inflation into consideration. The liquidity of assets is also adequate.

(2) Semarang Port

Table 3 shows the financial performance of Semarang Port.

Table 3 Financial Performance of Semarang Port (million rupiah)

Financial Statement	1998	1999	2000
Total Assets	281,058	362,138	328,285
Current Assets	21,414	24,809	38,626
Current Liabilities	11,005	6,714	9,434
Equity and Retained Earnings	260,556	346,456	306,957
Operating Revenue	113,273	124,968	161,619
Net Operating Income before tax	80,234	79,647	105,837
Financial Indicators	1998	1999	2000
Return on Assets	29%	22%	32%
Net Operating Income / Operating Revenue	71%	64%	66%
Total Assets Turnover	0.40	0.35	0.49
Current Ratio	194%	370%	409%
Stockholder's Equity Ratio	93%	96%	94%

Source: Semarang Port

Semarang Port's operation is also profitable and efficient, with net operating income accounting for 60% to 70% of the operating revenue. As in the case of IPC III, total assets turnover is fairly high for infrastructure services, probably because of undervalued assets.

2.5.3 *Operation and Maintenance*

The facilities and equipment provided through the Project have been well managed. Semarang Port was accredited ISO 9002 in 2001. The Port had 424 staff members as of the end 2000. Staff training at the manager level is carried out at IPC III in Surabaya, while training programs are provided by Semarang Port for lower level staff, such as machine or computer operators. Not only physical container handling equipment, but also a computerized container handling system has been introduced into Semarang Port by the Project. The software is a modification of the application software in service at the International Container Terminal of Tanjung Perak, Surabaya. The system includes a container receiving/delivery information system, yard planning, and a billing system. The staff training was undertaken by Semarang Port staff who had sufficient past experience with the computer system at the Surabaya Port. After several tests and modifications during the Project, the system was implemented and is currently functioning properly.

Aiming at the de-regulation and decentralization of port management, the Indonesian Government adopted policies to enable the participation of the private sector in the construction and operation of ports. Moreover, the Government intends to privatize those commercial ports currently operated under IPCs whenever possible. In this context, Semarang Port is currently under the process of separating container terminal management from general cargo management, so that the former can be ceded to a private operator. The detailed privatization methodology remains to be decided.

Comparison of Original Plan and Actual

Item of major works	Original	Actual
Project Scope		
Phase I		
1. Civil Works		
1) Dredging	470,000 m^3	456,000 m^3
2) Reclamation	343,000 m^3	404,000 m^3
3) Container Wharf	Length: 345 m, 8,625 m^2	No Change
4) Pavement for Container Yard and Road	Yard and Road: 80,500 m^2 Side Walk: 2,100 m^2	Total Area: 102,000 m^2
5) Drainage	Length: 4,300 m	Length: 5,380 m
2. Building and Utility Works		
1) Maintenance Shop	1,600 m^2	1,640 m^2
2) Fire Station and Workshop	1,350 m^2	1,775 m^2
3) Container Freight Station	3,600 m^2	No Change
4) Administration Building	1,200 m^2	No Change
Phase II (this project)		
1) Container Crane	35.5 t -2 units	40 t - 2 units
2) Transfer Crane	4 tier stacking - 3units	No Change
3) Forklift	10 ton - 2 units, 2 ton-6 units	No Change
4) Head Truck	10 units	No Change
5) Chassis	(for 40 containers) 20 units	No Change
6) Fire Fighting Truck	1 unit	No Change
7) Transformation and Emergency Generator	1 set	No Change
8) Computer Hardware	1 set	No Change
Construction Schedule		
Phase I		
Selection of Consultant	Sep. 1991 to Mar. 1992	Sep. 1991 to Apr. 1992
Prequalification, Bidding, and Contract	Apr. 1992 to Jul. 1993	Jul. 1992 to Mar. 1995
Construction work	Aug. 1993 to Sep. 1996	May 1995 to Aug. 1999
Phase II (this project)		
Selection of Consultant	Sep. 1992 to Mar. 1993	Sep. 1992 to March 1994
Prequalification, Bidding, and Contract	Apr. 1993 to Jun. 1995	Apr. 1994 to Oct. 1996
Construction work	Sep. 1994 to Feb. 1996	Dec. 1995 to Sep. 1999
Project Cost		
Phase I		
Foreign Currency	3,061 million yen	3,576 million yen
Domestic Currency	85,267 million rupiah	67,968 million rupiah.
Total	8,859 million yen	5,615 million yen
JBIC Loan Portion	7,530 million yen	4,918 million yen
Exchange Rate	1 rupiah = 0.068 yen	1 rupiah = 0.030 yen
Phase II (this project)		
Foreign Currency	3,590 million yen	1,542 million yen
Domestic Currency	6,819 million	8,374 million rupiah
Total	4,026 million yen	1,793 million yen
JBIC Loan Portion	3,590 million yen	1,703 million yen
Exchange Rate	1 rupiah = 0.064 yen	1 rupiah = 0.030 yen

Independent Evaluator's Opinion on Urgent Development Plan of Semarang Port

Pande Radja Silalahi
Head of the Department of Economic Affairs, CSIS, Jakarta

1. This draft report is concise, covering all subjects stipulated in the criteria.

2. Port construction for faster, more efficient shipping remains an important priority in Indonesia. Semarang Port will gain even greater importance in the future, particularly in the wake of the Regional Autonomy Law of 2001.

3. As a result of this project, time savings have been achieved in cargo loading and off-loading at Semarang Port. In addition, the volume of cargo handling has increased, even though at a relatively modest rate compared to growth in previous years.
   The report states that port use in excess of capacity has possibly caused economic loss. However, no analysis of this economic loss has been made in this study.

4. This report does not make any claims or analysis as to project cost efficiency. To establish whether the project is cost efficient, comparisons must be made against benchmarks.

5. With the launching of decentralization or regional autonomy, activity in Semarang Port is predicted to increase. Maintenance and expansion of Semarang Port will in turn support the economy of Central Java. This report clearly shows that Semarang Port enjoys relatively good financial performance. With economic growth in Central Java on a sustainable track, the availability of adequate port facilities will be crucial.