Indonesia

The Dumai Port Development Project

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

1. Project Profile and Japan's ODA Loan

Project Location Map

Project Site

1.1 Background

Dumai Port, located in the center of Sumatra Island, is the only seaport in Riau Province, and thus plays a crucial role as the cargo base of the province. The rapid expansion of the provincial economy had created a concomitant expansion in the general cargo handling volume. It was further expected that the export of palm oil would increase rapidly because of the recent development of palm oil plantations throughout the region. The maximum handling capacity of the port was approximately 650,000 ton per year, while it was forecast that the cargo demand of Riau Province would reach approximately 1,500,000 ton per year by 1995. An expansion of the facilities was urgently needed in order to cope with the increasing demand.

1.2 Objectives

To increase the handling capacity of Dumai Port through the expansion of port facilities in order to cope with the rapidly increasing demand of cargo traffic in Riau Province.

1.3 Project Scope

(i) Construction of multipurpose general cargo wharf and related facilities, including two approach trestles, roads, drainage, and buildings with utility supplies.
(ii) Procurement of forklifts, a mobile crane and navigation aids.
(iii) Consulting services for supervising construction works and equipment procurement.

1.4 Borrower/Executing Agency

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

Communications

1.5 Outline of Loan Agreement

Loan Amount Loan Disbursed Amount	4,375 million Yen 4,107 million Yen
Exchange of Notes Loan Agreement (L/A)	December, 1989 December, 1989
Terms and Conditions Interest Rate Repayment Period (Grace Period) Procurement	 2.50% 30 years (10 years) General Untied (Partially Untied for Consulting Services)
Final Disbursement Date	May 1996

2. Results and Evaluation

2.1 Relevance

Indonesia is the largest island country in the world, comprising over 13,000 islands; consequently, marine transport is a priority sector for the country's development policy. In the Fourth Five-year National Development Plan (1984-1988), the government adopted a "Gateway Policy," which categorized the country's major 43 ports into three levels – gateway ports, collector ports, and other trunk ports – in order to strategically develop the ports on each level. The Dumai Port was placed at the second (collector port) level.

Indonesia has been the lowest-cost producer of palm oil in the world. The Government has promoted investment in oil palms vigorously since the 1960s –plantation area expanded from around 100,000 hectares to 2.5 million hectares, and the industry swiftly became a major earner of foreign exchange and a significant employer of the rural population. In this context, the development of the Dumai Port was given high priority, since it is the only seaport of Riau Province and because it has an excellent climate and soil conditions for cultivating oil palms. In order to cope with the increasing demand, the expansion of the facilities was needed imminently. Being the sole outlet of palm oil produced in Riau Province, the Dumai Port has played an important role in the regional economy. In this light, the current project has maintained its relevance and consistency with the Government's development policy as well as with the circumstances of the regional economy, up through the present.

2.2 Efficiency

The project was completed three years later than originally scheduled, owing to the re-tendering of Packages II and III. This delay occurred because the selected contractors, having apparently submitted bidding prices that were too low, were not able to complete the construction works. This situation necessitated an increase in the service quantity of consulting services (215 M/M to 396 M/M).

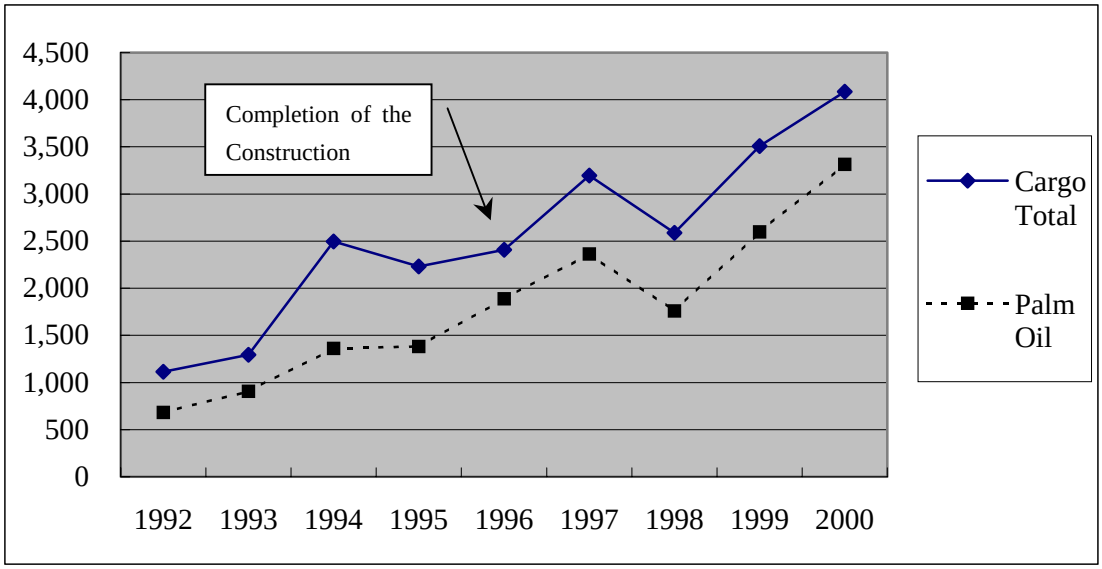
There was a significant cost under-run, 20% lower than originally estimated, owing to the appreciation of the Yen vis-à-vis the Indonesian Rupia.

2.3 Effectiveness

2.3.1 *Increase in the Cargo Volume*

The construction of container facilities has removed the bottleneck of cargo transportation to and from Riau Province. After the completion of the project in 1996, the cargo handling volume increased by approximately 60% by year 2000, reaching 4 million tons per year. The rise is mostly attributable to the increase in palm oil production in Riau Province, which was more rapid than forecast at appraisal. Figure 1 shows the evolution of the cargo handling volume at Dumai Port.

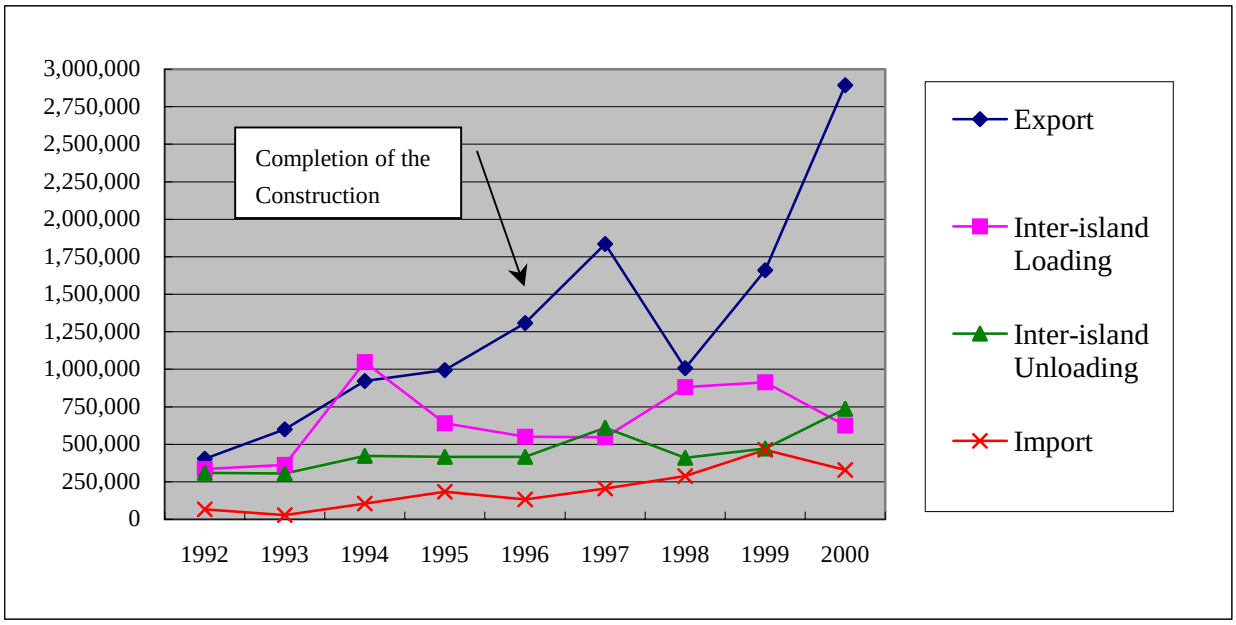
Figure 1 Cargo Handling Volume of Dumai Port (thousand tons)



Source: the Dumai Port

In accordance with the expansion of the plantation area, the production and export of palm oil have increased rapidly. Oil palm products account for more than 90% of the outgoing cargo and around 80% of the total handling volume of the Dumai Port, while the incoming cargo is mostly fertilizer, rice, cement and pipes. Exports from the Dumai Port increased from 1.3 million tons in 1996, when the project was completed, to around 3 million tons in 2000.

Figure 2 Evolution of Cargo Handling Volume at the Dumai Port (tons)



Source: Central Bureau of Statistics, Central Java

The annual capacity of the Dumai Port was increased by 800,000 tons through the project, reaching 1.5 million tons per year in total. However, since the actual utilization is already 4 million tons per year, some efficiency must be lost owing to the utilization of the facilities beyond port capacity. The Dumai Port Authority is currently seeking a new financing source so that it can further increase the handling capacity in order to achieve an optimal level of efficiency.

2.3.2 *Re-Estimate of the Financial Internal Rate of Return*

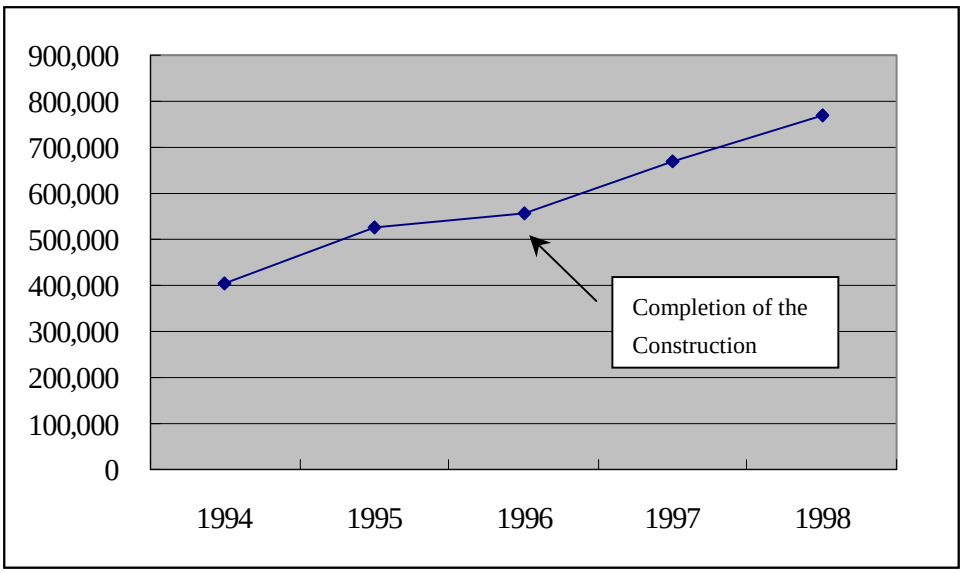
The financial internal rate of return (FIRR) of the current project was re-calculated based on the actual revenues and expenditures accrued from the cargo handling of the Dumai Port. It is assumed that all the incremental net cash flows are attributable to the Project, and that the net operating income in 1999 is maintained during the project life. The FIRR for 30 years' operation was re-estimated at 3.6%, while the projection at appraisal was 2.1%. The difference is mainly attributed to the actual utilization of the port beyond its designed capacity.

2.4 Impact

2.4.1 *Plantation of Oil Palm*

The increase in the handling capacity of the Dumai Port has made the transport of palm oil from Riau Province efficient, thus leading to a considerable expansion of oil palm plantation areas. The following graph shows the evolution of oil palm plantation areas from 1994 to 1998.

Figure 3 Plantation Areas in Riau Province (ha)



Source: Central Bureau of Statistics, Riau Province

2.4.2 *Impact on Environment*

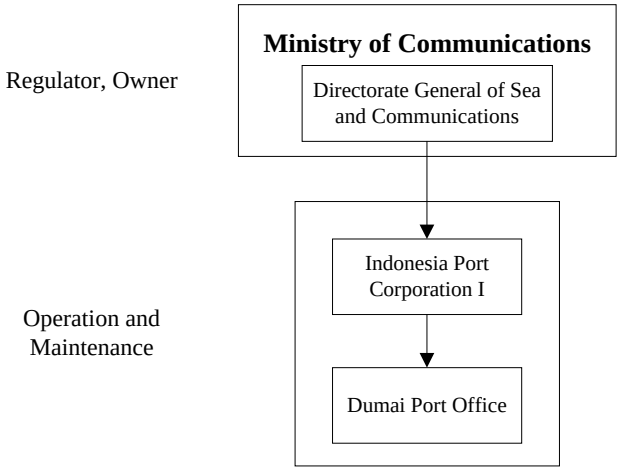
There was no significant environmental impact caused by the construction of the Dumai Port itself.

2.5 Sustainability

2.5.1 *Institutional Framework*

The Dumai Port Office of Indonesia Port Corporation I (IPC I), a 100% state-owned corporation based in Medan, is responsible for the operation and maintenance of the Dumai Port, as shown in the following chart.

Figure 4 Relationship of the MOC and IPC I



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 I: Manage commercial ports as an independent corporation
- Dumai Port Office: Operate and maintain the Dumai Port

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

2.5.2 *Financial Viability*

(1) IPC I

IPC I issues a consolidated financial statement for all its port operations. Table 1 shows the financial data of IPC I for 1997 and 1998.

Table 1 Financial Performance of IPC I (million Rupia)

Financial Statement	1997	1998
Total Assets	1,170,930	1,375,645
Current Assets	169,307	361,623
Current Liabilities	20,089	69,491
Operating Revenue	117,383	258,145
Net Operating Income	26,707	140,309
Net Income after Tax	51,869	179,260
Financial Indicators	1997	1998
Return on Assets	4%	13%
Net Operating Income / Operating Revenue	23%	54%
Total Assets Turnover	0.10	0.19
Current Ratio	843%	520%

Source: IPC I

From the financial perspective, IPC I's operation is quite profitable and efficient, with net operating income accounting for half of the sales revenue. IPC I's liquidity is high, since most of its assets are financed by capital provided by the Government.

(2) The Dumai Port

Table 2 shows the financial performance of the Dumai Port.

Table 2 Financial Performance of the Dumai Port (million Rupia)

Financial Statement	1999	2000
Total Assets	129,184	129,869
Current Assets	9,748	10,433
Current Liabilities	7,035	5,994
Equity and Retained Earnings	114,309	112,961
Operating Revenue	46,489	52,260
Net Operating Income before tax	25,400	28,237
Financial Indicators	1999	2000
Return on Assets	20%	22%
Net Operating Income / Operating Revenue	55%	54%
Total Assets Turnover	0.36	0.40
Current Ratio	139%	174%
Stockholder's Equity Ratio	98%	87%

Source: The Dumai Port

The Dumai Port's operation is also profitable and efficient, with net operating income accounting for more than half of operating revenue. As with the case of IPC I, total assets turnover is fairly high, probably because many such assets are undervalued.

2.5.3 *Operation and Maintenance*

The constructed facilities have been well-managed. The Dumai Port received ISO 9002 accreditation in September 1999. The Dumai Port currently has 230 staff members. Various staff training programs are provided by IPC I. It has also introduced a uniform evaluation system for human resource management in which the performance of the staff at each level at each port is evaluated by supervisors, and the reports are consolidated and submitted to IPC I for further evaluation. Although the salary scale is set in accordance with position levels, there are virtually no other monetary incentives for port staff, since bonuses are determined solely by overall performance at the IPC I level.

Comparison of Original and Actual Scope

Item of major works	Original	Actual
Project Scope		
Civil Work		
Soil improvement of transit shed and road	274,500m	270,095m
Pavement	49,000m2	55,900m2
Drainage	5,644m	5,756m
Security Fence, Gate and others	1,382m	1,139m
Mobile Crane Truck	25ton x 1 unit	35ton x 1 unit
Consulting Services	215 M/M	396 M/M
Construction Schedule		
Selection of Consultant	Dec. 1989 to Mar. 1990	Dec. 1989 to Jan. 1990
PQ, Bidding, and Contract	Jan. 1990 to Sep. 1990 Aug. 1993 to Sep. 1996	Package I Jan. 1990 to Sep. 1990 Package 2: Mar. 1991 to Oct. 1991 Package 3: Oct. 1991 to Oct. 1992 Package 2 & 3: Nov. 1991 to Aug. 1995
Construction work	Nov. 1991 to Dec. 1992	Jan. 1991 to Apr. 1996
Project Cost		
Foreign Currency	3,227 million Yen	2,089 million Yen
Domestic Currency	26,325 million Rp.	51,481 million Rp.
Total	5,148 million Yen	4,251 million Yen
ODA Loan Portion	4,375 million Yen	4,107 million Yen
Exchange Rate	Rp.1 = 0.068 Yen	Rp.1 = 0.042 Yen

Independent Evaluator's Opinion on The Dumai Port Development Project

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

The Relevance

The draft report is concise and covering all the relevant subjects stipulated in the Criteria. To increase the handling capacity of Dumai Port through the expansion of port facilities in order to cope with the rapidly increasing demand of cargo traffic in Riau Province are still relevant and will become more important as the government trying to increases of Riau Province access to the international market. Riau port will gain even greater importance in the future, particularly in the wake of the Regional Autonomy law of 2001 and the recent development of palm oil plantation throughout the region.

Indonesia has been the lowest-cost producer of palm oil the world, and being the sole outlet of palm oil produced in Riau Province, with this project Riau can tap the benefit derived from existing competitive advantage.

Even though that the project was completed three years behind schedule it might be mentioned that construction of multipurpose cargo wharf and related facilities (container facilities) has removed the bottleneck of cargo transportation to and from Riau Province, and after the completion of the project, the cargo handling volume increase significantly in accordance with the expansion of production and export of palm oil.

The report states that the EIRR of the project was re calculated based on the actual revenue and expenditures accrued from the cargo handling of the Dumai Port. By assuming that all the incremental net cash flow are attributable to the project, and that the net operating income in 1999 is maintained during the project life, The FIRR for 30 years operation was re-estimated at 3.6% which was higher that when appraisal of that project (2.1%). The actual utilization which was beyond port capacity attributed to the inefficiency of using the Dumai Port. Therefore capacity utilization need to be taken into account in order to make this projects used efficiently.

Impact

It might be admitted that the project resulted in positive economics and social impacts. The increase in the handling capacity of the Dumai Port has made the transport of palm oil from Riau Province efficient, and as a result the project leading to a considerable expansion of oil palm plantation areas. This argument was not very convincing, however, as there are other factors that might have contributed to higher growth of palm oil plantation areas. The report pointed out that the actual cost was much lower than the estimate at the time of appraisal (about 17%). The significant cost under-run, about 17% lower than originally estimated, resulted from the excessive competition among bidders and the appreciation of the Yen vis-à-vis the Indonesian Rupiah. However, in order to show whether this project was cost-efficient accurately, we need to compare the unit cost of the project with unit cost of a similar project.