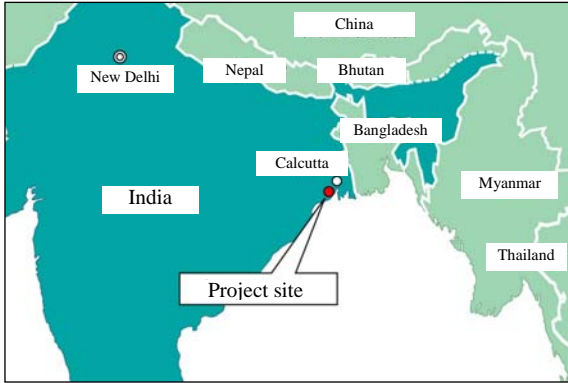


**1. Project Profile and Japan's ODA Loan**



Project site



The No. 2 oil jetty constructed using project funds

**1.1 Background**

There are 11\*<sup>1</sup> major ports, including Bombay, Madras, Calcutta and its outer port Haldia, and about 140 minor ports along India's 6,000-kilometer coastline. Haldia Port is located on the right bank of the Hooghly river – a tributary of the river Ganges. Development of Haldia Port as an outer port for Calcutta started during the 1960s; however, growth in vessel size in recent years and the geographical constraints of the Calcutta Port Complex led to a strengthening of its role as a substitute port, and cargo volume was increasing every year.

However, development of port facilities did not keep pace with growth in demand, weight limitation was necessary because structure of the existing oil jetty was unstable due to river bed erosion, and some facilities were damaged. Furthermore, the port could not meet demand for the transport of crude oil and petrol, oil and lubricants (POL) because of shortage of oil handling facilities, and container handling capacity was also insufficient. As a result of these problems, port operation was inefficient. Thus, it was clear that Haldia Port would not meet the expected increases in cargo handling demand.

**1.2 Objectives**

The project's objectives were to increase the cargo handling capacity and improve operational efficiency at Haldia Port, West Bengal, which is the main port at the mouth of the River Ganges, by developing an oil jetty and other facilities, and thereby contribute to economic growth in the region.

**1.3 Output**

The outputs of this project were as follows.

A. Construction of the No. 2 oil jetty

(1) No. 2 oil jetty (for 150,000 D/W class tankers; water depth: 12.2m)

(2) Incidental facilities

<sup>1</sup> There were 11 major ports at appraisal, but this had increased to 12 when this evaluation was conducted..

- Fire fighting equipment
- Waste oil disposal facilities
- 2 tug boats (traction: 35 tons; also used as fire boats)
- Navigational and Berthing Aids
- 1 trawler (200 HP)

B. Reinforcement of the existing (No. 1) oil jetty

C. Procurement/installation of cargo handling equipment

- Portainer 1
- Transtainer 1
- Traictor 5
- Chassis 10

Of total project costs of 8,525 million yen, the ODA loan covered the entire foreign currency portion (3,463 million yen) and a part of the local currency portion (328 million yen when converted) for a total of 3,791 million yen. The remaining local currency portion was covered by a loan from the central government and funds from the executing agency.

#### **1.4 Borrower / Executing Agency**

The President of India / Calcutta Port Trust

#### **1.5 Outline of Loan Agreement**

Loan Amount	3,791 million yen
Loan Disbursed Amount	1,933 million yen
Exchange of Notes	August 1986
Loan Agreement	December 1986
Terms & Conditions	
Interest Rate	3.25%
Repayment Date	30 years
(Grace Period)	(10 years)
Procurement	Partially untied
Final Disbursement Date	December 1992

## 2. Results and Evaluation

### 2.1 Relevance

As stated above, at the time of appraisal (1986) factors necessitating the implementation of this project had already been confirmed: growth in cargo volume (54.6 thousand tons in FY 1980 → 65.4 thousand tons in FY 1984), insufficient oil handling facilities, and the instability of the existing oil jetty. In addition, the following needs were reconfirmed by the interview with the executing agency during this evaluation.

- (1) There was growing demand for crude oil in the hinterland of Haldia Port. Specifically, there were plans to expand Haldia Oil Refinery, which is run by the Indian Oil Corporation.
- (2) The No. 1 oil jetty had safety problems (at the time), and it was hoped that cargoes could be handled elsewhere until the problems were resolved.

In addition to the aforementioned needs, the project was also in line with the India's seventh five-year plan, and is judged to have been highly relevant at the time of appraisal.

In India's ninth five-year national development plan, the planned cargo handling capacity of major ports was to be 344.4 million tons at the end of the plan, however, the actual volume is 289.1 million tons. In the tenth five-year plan (FY2002-2006), the government states that as the cargo handling capacity is not a constraining factor any longer, it is now necessary to improve the quality of services and shorten the number of waiting days.

In addition, the cargo handling capacity will be increased to 415 million tons (annual growth of 6%) at the end of the tenth five-year plan (2007). In terms of improving the services provided by existing port infrastructure and shortening the waiting time, there are strong policy-based connections between this project and India's tenth five-year plan, thus the relevance of the project remains sufficiently high even now, while the plan is being implemented.

### 2.2 Efficiency

#### 2.2.1 Output

The output was originally planned to include the following three components; however, items (1) and (3) were excluded (see a conceptual diagram of Haldia Port below).

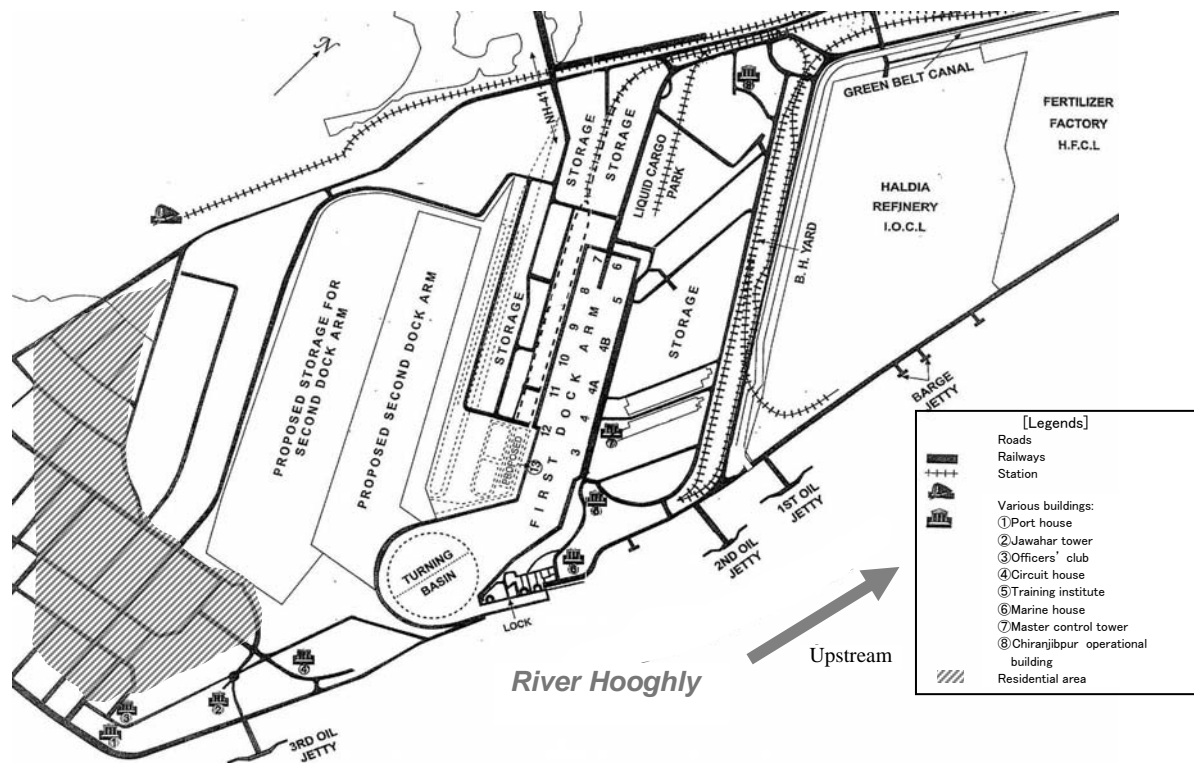
- (1) Reinforcement of No. 1 oil jetty → excluded
- (2) Construction of No. 2 oil jetty and incidental facilities → implemented
- (3) Improvement of cargo handling facilities → excluded

Component (1) was financed by the executing agency and excluded from the ODA loan portion of the project. However, the details of the problems with the jetty were identified via a comprehensive investigation by the executing agency, and each of the piles supporting the jetty was reinforced (1997). Bidding for the execution of work to reinforce the fender system<sup>\*2</sup> is currently under way.

<sup>2</sup> Fenders refer to the buffering devices that are set up on quays to prevent hull damage during cargo loading.

The addition of container berthing facilities mentioned in (3) was excluded from the output as the result of delays in gaining approval from the government in connection with the detailed design. Subsequently, demand for container transport has increased at Haldia Port and the executing agency procured two RMQC and four RTG\*<sup>3</sup> with its own funds.

Conceptual Diagram of Haldia Port



Component (2) (construction of No. 2 oil jetty and incidental facilities) was executed almost according to the original plans. However, some minor adjustments were made based on geographical and physiological conditions at the site. These adjustments were made in consideration of the environment (to minimize the impact of the jetty on tidal currents in the river) and in response to recommendations\*<sup>4</sup> made by the Oil Coordination Committee (OCC), a governmental organization. According to the executing agency, these adjustments had no adverse effect on the project effects.

To summarize, there were appropriate reasons for changing the output, the components that were excluded not funded by the Japanese ODA loan, and there are not any specific problems.

<sup>3</sup> Respectively, the abbreviations for Rail Mounted Quay Cranes and Rubber Tiered Gantry Cranes; both refer to crane form.

<sup>4</sup> Specifically, the OCC recommended reinforcements to walkway materials, changes to fire fighting equipment (pump types), etc.

### 2.2.2 Implementation Schedule

According to the executing agency, the following delays occurred in the implementation schedule.

Planned and Actual Schedule

Item	Planned schedule	Result
L/A conclusion	October 1986	December 1986
Prequalification survey	April 1986 – June 1986	September – December 1986
Bidding	July 1986 – April 1987	January 1987 – August 1988 (A)* January 1987 – February 1989 (B)*
Construction	May 1987 – October 1988	September 1988 – April 1990 (A) March 1989 – January 1991 (B)

A: International bidding portion (platform, dolphin, loading arm, etc.)

B: Local bidding portion (approach, walkway, etc.)

The delays were attributed to changes in the bidding system. Initial bidding was undertaken for both international (foreign currency) and domestic (local currency) portions together, however, because the price for the local currency portion was higher than expected, the foreign currency and local currency portions were separated and the bidding was undertaken again. The entire bidding period was prolonged. Moreover, although construction work proceeded at a favorable pace, the domestic (local currency) portion was prolonged due to the effects of tidal currents.

As a consequence, the entire project was delayed by 28 months. However, because the facilities expansions of the Indian Oil Corporation, the major user of the port, were moved back to 1997, these delays had no significantly adverse effects on initially targeted project benefits (to increase port trust revenues by increasing cargo volume).

### 2.2.3 Project Cost

A comparison of planned and actual project costs is given below.

Comparison of Planned and Actual Project Costs

Output	Foreign currency total (million yen)		Local currency total (100 thousand rupees)	
	Planned	Actual	Planned	Actual
(1) Reinforcement of No. 1 oil jetty	543	—	289	—
(2) Construction of No. 2 oil jetty and incidental facilities	1,580	1,933	2,189	4,246
(3) Improvement of cargo handling facilities	1,025	—	342	—
(Reserve fund, price escalation)	315	—	555	—
Total	3,463	1,933	3,375	4,246

Further, details of the costs involved in the construction of the No. 2 oil jetty are given below.

Comparison of Original and Actual Costs for No. 2 Oil Jetty

Item	Foreign currency total (million yen)		Local currency total (100 thousand rupees)		Total* (million yen)	
	Planned	Actual	Planned	Actual	Planned	Actual
1. Berthing/mooring facilities	920	540.19	198	516.85	1217.00	961.42
2. Service platform	-	286.92	155	285.20	232.50	519.36
3. Approach/walkway/ pump room	-	-	316	500.00	474.00	407.50
4. Fender/bollards, etc.	24	41.13	17	99.07	49.50	121.87
5. Capital dredging	-	-	33	-	49.50	0.00
6. Floating landing equipment	188	286.44	65	188.76	285.50	440.28
7. Fire fighting equipment	27	109.11	90	368.87	162.00	409.74
8. Electrical equipment Electrolyte protection equipment	53	54.49	50	146.78	128.00	174.12
9. Waste oil disposal facilities	-	-	100	607.74	150.00	495.31
10. Navigation aids	368	614.50	1,165	1,532.50	2115.50	1863.49
Total	1,580	1,932.78	2,189	4,245.77	4863.50	5393.08

(Note) The exchange rate fluctuated from Rp1 = 15 yen at appraisal to Rp1 = 8.15 yen.

Both foreign currency and local currency portions exceeded the initial budget. The following three reasons can be pointed out.

- 1) Between 1986 and 1991, domestic prices increased above projections and local currency procurement costs also increased. (This equates to a total of Rp13.30 million according to the executing agency's calculations.)
- 2) The changes to output mentioned above caused the costs to increase, excluding those for the "dolphin"<sup>5</sup> and the "electrolyte protection equipment"<sup>6</sup>.
- 3) Procuring the "dolphin", "fenders", "landing equipment" and "electrolyte protection equipment" generated import duties that were higher than expected.

However, as explained in section 2.3 below, since revenues from port dues are exceeding initial forecasts, this overrun has not had a significant impact on the profitability of the project.

#### 2.2.4 Consultant and Construction Contractor Performance

The executing agency has highly evaluated the consultant, stating that it had expertise, design and coordination skills, and bidding appraisal ability.

The construction contractor met the delivery schedules of both foreign currency and local currency portions (except when delays occurred due to external causes), and its performance is highly evaluated by the executing agency.

<sup>5</sup> This is a free-standing columnar structure that is built in the sea at a distance from the land and is used for berthing.

<sup>6</sup> This system prevents the discharge of corrosion currents by artificially passing an electric current, in order to protect the pipelines from corrosion.

## **2.3 Effectiveness**

### **2.3.1 Increases in Cargo Volume and Improved Operational Efficiency**

Of the indices relating to the port's cargo handling status, the table below shows pre- and post-project figures, the latest figures and the appraisal projections. If the figures are compared with pre-project levels, there have been significant improvements in all indices. Especially, handling capacity of crude oil and POL increased significantly<sup>7</sup>.

Total handling volumes, including those for POL, had increased to 20.71 million tons in FY 1999 (post-project), exceeding the appraisal projection of 17.42 million tons by 19%. The berth occupancy rate for the No. 1 oil jetty was consistently exceeding 70% – the benchmark for increasing waiting days – but this had dropped to about 60% by fiscal 1999 thanks to the construction of the second oil jetty.

The latest figures at the time of this survey (FY2002) further increased for all indices, and it is clear that the project is contributing to improvements in the operational efficiency of Haldia port as time passes.

<sup>7</sup> However, it is considered that the latest figures are also affected by the No. 3 oil jetty, constructed after completion of this project (March 2000)

### Cargo Handling Status at Haldia Port

Index	FY1990 (pre-project)	FY1992 (immediately post-project)	FY1999 (post-project)	Projection & attainment rate (vs. FY1999)	FY2002 * <sup>8</sup>
1. Total Cargoes (container, TEU* <sup>9</sup> )	22,396	7,324	28,321	60,000 (47.2%)	117,138
2. Cargoes (million tons)					
2-1. Combined total	<b>11.11</b>	<b>13.18</b>	<b>20.71</b>	<b>17.42</b> (119%)	<b>28.60</b>
2-2. Crude oil	2.90	3.03	6.74	2.75 (245%)	7.73
2-3. POL	3.32	4.17	4.10	7.9 (51.9%)	4.11
2-4. Fuel coal	2.87	2.96	3.22	No forecasts available	3.37
2-5. Coking coal	1.25	2.09	3.28		4.30
2-6. Iron ore	0.00	0.00	0.00		2.69
2-7. Fertilizer	0.08	0.11	0.12		0.36
2-8. Fertilizer materials	0.20	0.21	0.35		0.45
2-9. Containers	0.32	0.09	0.43	1.5 (28.6%)	1.85
2-10. Other	0.17	0.52	2.47	No forecasts available	3.74
3. Total tonnage of incoming vessels (GRT* <sup>10</sup> , million tons)	13.32	15.51	27.1	No forecasts available	35.72
4. Berth occupancy rate					
4-1. No. 1 oil jetty	73.08	68.01	63.46	No forecasts available	67.48
4-2. No. 2 oil jetty	-	62.35	69.12		55.35
4-3. No. 3 oil jetty	-	-	54.12		45.70
5. Average waiting time (days/vessel)	1.66	2.00	1.61		0.87

(Note) Performance is compared with that for FY99.

Source: Calcutta Port Trust

#### 2.3.2 Improved Safety

One of the project's objectives was to improve safety at Haldia Port. Specifically, there were two components: (1) "reinforcement of the No. 1 oil jetty" and (2) "the construction of the No. 2 oil jetty as a means of shifting POL cargo being handled at the iron ore berth to the oil jetty". The former component is not evaluated here as it was excluded from the project scope; however, as stated earlier, reinforcement measures were taken by the executing agency with its own funds. Details of the status of the latter component are given below.

Even now (post construction of the No. 2 oil jetty), some POL cargo continues to be handled at the iron ore berth. Regarding this situation, the executing agency states that "the safety issues are being

<sup>8</sup> According to the executing agency, the figures in FY2003 came up with 32.56 million tons for the total cargoes and 136,657 TEU for the container handling volumes.

<sup>9</sup> Twenty-foot Equivalent Unit: the unit represents the number of containers when converted into a twenty-foot container equivalent.

<sup>10</sup> Gross Registered Tonnage: a vessel's capacity, i.e. tonnage as an indication of vessel size. It is obtained by multiplying a vessel's total capacity by a fixed coefficient.

<sup>11</sup> The No. 2 oil jetty mainly handles crude oil, and crude oil volume handled in fiscal 1999 is 245% of the forecast made at appraisal.



eased” for the following reasons.

- Fire fighting equipment has been improved since appraisal.
- The volume of POL cargo being handled at this berth is lower than at appraisal.
- No products with low flame resistance (Class A: flash point of 23°C or less) are being handled at this berth.

Accordingly, it is considered that the project has contributed to port safety to some extent.

### 2.3.3 Recalculation of Internal Rates of Return

Compared with 17.2% calculated at appraisal, the recalculated FIRR, on the basis of data submitted by the executing agency, was 27.0%. The reason that the recalculated FIRR significantly exceeds the appraisal value, in spite of the increase in project costs over the initial budget, is that thanks to the rapid increases in cargo volume,<sup>\*11</sup> revenues substantially exceeded initial projections. The premises used in recalculation of the FIRR are given below.

Item	Appraisal	Recalculation
Benefits	Revenues from the No. 2 oil jetty	
Costs	Investment costs and maintenance costs equivalent to 5% of the investment costs	Actual investment and maintenance costs
Project life	25 years	

## 2.4 Impact

### 2.4.1 Initially Projected Impacts

According to the interviews with major companies (representative companies from each industry) located near Haldia Port, the following impacts were confirmed. While the state-owned Indian Oil Corporation is the largest beneficiary, all the other companies have benefited from shorter waiting time.

Table 6: Summary of Results from Interviews with Major Companies

Sector	Company Name	Main Products	Annual Sales Annual Production	Project Impacts
Chemical	MCC PTA India (Mitsubishi Chemical Corporation)	Terephthalic acid (raw material used in manufacture of polyester)	Approx. US\$200 million (sales) 400,000 tons (production)	The company has felt no direct impact, because it only uses the No. 1 oil jetty.
	Indian Oil Corporation (Haldia Refinery)	Refined petroleum products (POL, diesel, gasoline, kerosene)	4.5 million tons (production)	It has become possible to import large volumes of crude oil in response to the increased processing capacity of the refinery.

	Haldia Petrochemicals Ltd.	Polymers, benzene, butadiene, etc.	Rp2,800 million (sales) 95 thousand tons (production)	Several companies have entered the market, promoting the regional economy and increasing jobs.
	Indian Oil Petronas	LPG, butane gas, propane gas, etc.	420,000 tons (production)	Contributing to expansion of regional economy and increase of employment opportunity.
	BPCL Haldia Coastal Installation	Gasoline, diesel, kerosene, etc.	Cumulatively approx. Rp4,440 million (sales)	Handling capacity has increased and waiting time have decreased, as a result of No. 2 oil jetty construction.
	Hind Lever Chemicals	Diammonium phosphate, sodium tripolyphosphate, etc.	900,000 tons (production)	Congestion at the No. 1 oil jetty has been eased as a result of No. 2 oil jetty construction.

Moreover, according to the Haldia Development Authority\*<sup>12</sup>, the project has benefited the entire Haldia municipal area. For example, in the last five years, the number of companies in the industrial area near the port (there are fifty companies, including chemicals manufacturers, port-related companies, etc.) has increased, which led to the increase of employment.

According to the executing agency (Calcutta Port Trust: CPT), the total added value from the manufacturing sector in this area has increased from approximately Rp2,050 million (FY1997) to Rp3,850 million (FY2000). Moreover, while the port sector accounts for 19.9% of total employment, the chemical industry accounts for 17%, and the oil sector for 15% (FY2002).

Household incomes are also increasing in the Haldia municipal area. According to the latest survey from the executing agency (May 2002), per capita GNP (FY2000) in this area was about Rp46,000, which equates to approximately three times the West Bengal average. In addition, despite the fact that the Haldia municipal area occupies only 0.1% of the state, its GDP accounts for 0.6% of the state total.

As evidenced above, the project is believed to be contributing, to a certain degree, as a stimulus to economic activity in the Haldia municipal area and to the creation of employment.

#### **2.4.2 Environmental Impacts**

To summarize the results of the survey targeting interested parties, there have been no specific reports of environmental impacts attributable to the project\*<sup>13</sup>.

<sup>12</sup> This organization is responsible for promoting development in the Haldia municipal area and is under the direct jurisdiction of West Bengal's municipal development department.

<sup>13</sup> According to the executing agency, no oil is being leaked during cargo handling on the No. 2 oil jetty, and rinse water is being appropriately processed in line with West Bengal Pollution Control Board regulations.

<sup>14</sup> Calcutta Port Trust employs the consolidated accounting system for the two ports.

### 2.4.3 Impact on Local Residents

Since this project was to modernize an existing port complex, there were no problems concerning the acquisition of land, relocation of residents, etc.

### 2.4.4 Impact on Calcutta Port

Having examined the impacts of the project on Calcutta Port, it is clear that while the project has had no specific effects on physical distribution, since both Calcutta Port and Haldia port are under the jurisdiction of the executing agency (TPT), Calcutta Port has benefited from the good financial performance of Haldia port\*<sup>14</sup>.

## 2.5 Sustainability

### 2.5.1 Current State of Facilities and Maintenance Issues

An outline of the maintenance activities is given below.

Outline of Maintenance Activities at Haldia Port

Target	Tasks performed	Frequency	Dept. in charge
Civil engineering works	Coating of corroded sections of (steel) piles, inspection of joints, and parts replacement as needed	Once every 4 years	Infrastructure & Civic Facilities
Electrical system	Periodic inspections	In conformity with ISO standards	Plant & Equipment
Navigation aids	Periodic inspections	Routine inspections are conducted annually, precision inspections once every 4 years	Infrastructure & Civic Facilities

Since there are no specific problems with facility function, the executing agency will continue to employ its current maintenance methods and systems. Moreover, as geographical conditions near the No. 2 oil jetty prevent sand sedimentation, maintenance dredging is only being undertaken once a year.

### 2.5.2 Verification of Project Sustainability

(1) Operation and Maintenance (System and Technical Capacity)

At appraisal, the executing agency: Calcutta Port Trust/Haldia Port Complex had a total of approximately 3,500 employees, which had increased to around 5,000 by FY 2000. However, due to the non-replacement of retiring workers and restrictions on new hiring, the number of employees had decreased to around 4,400 in FY 2003.

Although organization-wide structural reforms, including privatization, have been investigated, the executing agency is promoting the introduction of private capital, instead of privatization, in line with government policy. For example, the operation and maintenance of berth 12 have already been commissioned to a private contractor and there are plans to commission operations at berth 4A to a private contractor on a BOT (Build, Operate, Transfer) basis.

As stated above, of the facilities developed via this project, the maintenance of civil engineering

works is conducted by the Infrastructure & Civic Facilities department of Calcutta Port Trust, that of machinery and electrical systems is conducted by the Plant & Equipment department, and that of navigation aids is conducted by the Marine Operations department. For reference, the Infrastructure & Civic Facilities department comprises the following technical staff members.

Maintenance Department Personnel (Infrastructure & Civic Facilities)

Level	Necessary qualifications	Necessary experience
Manager (Civil)	Bachelor of Engineering (from an officially accredited university. Same applies below)	15 years
Deputy Manager	Bachelor of Engineering	10 years
Executive Engineer	Bachelor of Engineering	5 years
Assistant Engineer	Bachelor of Engineering	2 years
Supervisor	Diploma (Engineering)	0

The Plant & Equipment department, which is responsible for machinery and electrical systems maintenance, has almost the same structure. The executing agency considers the current structure and technical capacity of engineers to be appropriate.

#### (2) Financial Status

In FY 2002, maintenance costs were approximately Rp282 million which are sufficient to cover the necessary maintenance, and the costs will be maintained at this level in the future. Port dues are set on a cumulative cost basis with the application price being subject to government approval. The geographical conditions at each port are reflected in the prices (port dues are revised once every 3-5 years).

Recent port dues have been stable since around 1996. Because of this fact and due to the growth in cargo handling volume, revenues and profits at Haldia Port Complex have been increasing at a steady pace, as evidenced in the profit and loss statement below.

Haldia Port Complex Profit and Loss Statement (unit: million rupees)

Fiscal year		1999	2000	2001
Operating income	Cargo handling/storage	1,564.7	1,835.6	2,263.0
	Port/docking fees	3,616.9	4,697.4	6,257.5
	Rail tariffs	253.2	274.6	308.5
	Property rental	239.0	302.8	323.0
	Total	5,673.8	7,110.3	9,152.0
Operating expenditure	Cargo handling/storage	343.4	415.2	427.7
	Port/dock facilities costs*	2,997.9	3,198.3	3,525.6
	Rail facility costs	153.4	144.5	160.8
	Land/buildings for rent	143.8	169.8	154.7
	Administrative costs	446.8	499.1	474.6
	Total	4,085.3	4,426.9	4,743.3
Gross profit		1,588.5	2,683.4	4,408.6
Finance/miscellaneous income		320.6	420.9	446.5
Finance/miscellaneous expenditure**		1,089.7	2,138.7	3,170.3
Net profit***		<b>819.4</b>	<b>965.7</b>	<b>1,684.8</b>

\* Including the maintenance costs for this project.

\*\* Mainly comprised of "expenditure based on transactions in the preceding fiscal year: details unknown" (Rp2,080 million) and "pension reserve funds" (Rp803 million).

\*\*\* Based on consolidated accounting with Calcutta Port Complex, the net profits for Calcutta Port Trust as a whole for each fiscal year are 436.4, -75.3, 1203.7 (million rupees), respectively (because Calcutta Port is operating at a loss).

Haldia Port Complex Balance Sheet (unit: million rupees)

Fiscal year		1999	2000	2001
Assets	Fixed assets	6,566.8	7,027.1	8,545.2
	Liquid assets	9,060.9	10,069.2	10,421.0
	Investment	930.0	1,080.0	1,480.0
	Total	16,557.8	18,176.3	20,446.3
Capital/liabilities	Reserves/surplus	11,143.9	12,100.6	14,270.2
	Pension fund, etc.	300.0	464.2	694.1
	Deferred income	0.0	0.0	9.4
	Capital liabilities	2,270.8	2,090.2	2,378.7
	Current liabilities	2,843.2	3,521.3	3,093.7
	Total	16,557.8	18,176.3	20,446.3

To summarize the above, the project is functioning as expected in terms of its objectives, which were to improve cargo handling facilities and increase operational efficiency. Furthermore, there are no specific maintenance-related problems and sufficient funds are being allocated to facilities maintenance. Accordingly, the overall sustainability of the project is deemed to be comparatively high.

### **3. Feedback**

#### **3.1 Lessons Learned**

None

#### **3.2 Recommendations**

None

Comparison of Original and Actual Scope

Item	Planned	Actual
1. Output		
① Construction of a second oil jetty		
· No.2 oil jetty	150,000 D/W class tankers; water depth: 12.2m	As planned
· Incidental facilities		
· Fire fighting equipment	3 electric pumps	2 diesel pumps, 1 electric pump
· Waste oil disposal facilities	—	Unknown
· 2 tug boats	Traction:35 tons; also used as fire boats	As planned
· Navigation and Berthing Aids	1 mooring boat, 2 tractor tugs	As planned
· 1 trawler	200 HP	As planned
② Reinforcement of existing (No.1) oil jetty	Add Berthing Dolphins in front Put Anchors Decks at the back	excluded
③ Procurement/installation of cargo handling equipment	Portainer 1 Transtainer 1 Tractor 5 Chassis 10	excluded
2. Execution period		
L/A conclusion	October 1986	December 1986
Prequalification survey	April 1986 – June 1986	September 1986 – December 1986
Bidding	July 1986 – April 1987	January 1987 – February 1989
Construction	May 1987 – October 1988	September 1988 – January 1991
3. Project costs		
Foreign currency	3,463 million yen	1,933 million yen
Local currency	5,062 million yen	3,460 million yen
(local currency conversion)	(337.5 million rupees)	(425 million rupees)
Total	8,525 million yen *	5,393 million yen
ODA loan portion	3,791 million yen	1,933 million yen
Exchange rate	Rs1 = 15 yen	Rs1 = 8.15 yen
	(as of September 1986)	(as of December 1990)

\* Project costs (planned values) include the two excluded components: i.e. “Reinforcement of No. 1 oil jetty” and “Improvements to cargo handling facilities”.

## **Third Party Evaluator's Opinion on Haldia Port Modernization Project**

Dr. Pushpa Trivedi  
Professor  
Indian Institute of Technology-Bombay

### **Relevance**

Improvement in infrastructure (both in terms of increased availability and better services) has been deemed as a priority in the planning and policy making in India in the recent years. The then Finance Minister of India listed development of infrastructure as one of the 5 priorities (Budget 2003-04). The Prime Minister of India has set up a Committee (with the Planning Commission as its executive arm) headed by him to monitor the progress in infrastructure projects. The panel includes, *inter alia*, the Shipping Minister as one of its members.

The project was required primarily to tackle the inadequate facilities for handling POL (petroleum, oil and lubricants) and products thereof. Between 1994-95 and 1999-2000, the project has handled about almost one-tenth of the total traffic of POL and products at the major ports of India. The refinery at Haldia has also led to development of petrochemical and fertilizer industry in its vicinity and the port has been catering to the needs of these industries as well besides the coal traffic. During 1994 -95 to 1999-2000, the port accounted for about 7 to 8 percent of the total traffic handled at the major ports of India. Thus, in terms of relevance of the project in terms of relieving the infrastructural constraints in general and traffic handling by the ports in India, the project is certainly relevant in the national context.

### **Efficiency**

#### **2.1 Output:**

Out of the three components initially envisaged, only one component of the plan, viz., the construction of No. 2 oil jetty and development of incidental facilities materialized. Only this component was included for financing by ODA. The other two components of the initial project proposal, viz., the reinforcement of No. 1 oil jetty and improvement of cargo handling facilities became the responsibility of the Calcutta Port Trust. Though the reasons, both technical and administrative, have been cited regarding exclusion of the same, it is not possible to comment on the growth of these components of the project and the impact it would have had if these were also within the purview of ODA.

#### **2.2 Implementation Schedule:**

The implementation schedule was delayed by more than two years. The capacity of Haldia refinery was expanded merely by 0.25 MMTPA in 1989-90 by another 1.00 MMTPA in 1997. As the Haldia refinery was the major user of the port and the major expansion of the refinery took place only in 1997, the delays in implementation of the port project did not adversely affect the project revenues. In all likelihood, the timely completion of the project would have resulted in underutilization of the port capacity.

#### **2.3 Project Cost:**

Project cost escalation did take place as a result of delay in the implementation schedule. It would be appropriate to compare only the planned and actual for construction of No. 2 oil jetty and the incidental facilities. The cost escalations amount to about 22 percent and 94 percent for the foreign currency component and the domestic currency component. The reasons for cost overruns were increase in domestic prices, depreciation of the rupee vis-à-vis the Japanese yen and increase in import duties on some of the equipment. Though the port unlike many other infrastructure services



in India is profitable, a better temporal coordination with the development of the Haldia refinery with completion of port project would have generated higher profits. Though tidal current can be considered as an external factor in delay of the project, procedural lacunae, such as, those in bidding process were avoidable.

**2.4 Consultant and Construction Contractor Performance:**

The executing agency, viz., Calcutta Port Trust was appreciative of the consultant and construction contractor as regards the quality of services provided by them in terms of the delivery schedules and services provided.