

Ex-ante Evaluation

1. Name of the Project
Country: India Project: Visakhapatnam Port Expansion Project (Loan Agreement: 03/30/2007; Loan Amount: 4,129 million yen; Borrower: The President of India)
2. Necessity and Relevance of JBIC's Assistance
<p>The cargo volume handled by Indian ports has displayed rapid growth in recent years due to the country's open-door policy. However, the ports' overall operational efficiency remains low due to lack of expansion projects because each Port Trust has insufficient funds, low cargo handling capacity due to aging facilities, low worker productivity, and the low level of service, etc. Another issue is the fact that the number of berths, berth extensions, water depth, etc., is small scale compared to major ports of other countries, even though the size and number of ships including container ships and freighters in port are increasing.</p> <p>In India's 10th 5-Year Plan (April 2002 – March 2007), it is planned to boost the cargo handling capacity of India's 13 major ports from 344.4 million tons as of the end of FY2002 to 455.6 million tons. The Plan also proclaims the need for strengthening of the ports' cargo handling capacity and improvement in the level of service. Moreover, in July 2005 the National Maritime Development Programme was drawn up for the purpose of promoting investment in port projects and improving the level of service as well as boosting competitiveness of the ports, and this project is designated as a candidate for development.</p> <p>In JBIC's current Medium-Term Strategy for Overseas Economic Cooperation Operations, a priority sector in assistance to India is "Economic Infrastructure Development". The assistance to this project conforms to the strategy.</p> <p>Visakhapatnam Port is one of 13 major ports in India and handled 55.8 million tons of cargo in FY2005. Of that, iron ore accounts for 16.0 million tons (outer harbor, 13.7 million tons; inner harbor, 2.3 million tons). The port is an important shipping port for including exports of high quality iron ore from the Bailadila Mine (30% of which is shipped to Japan). The amount of iron ore handled by the outer harbor in FY2005 was 13.7 million tons; this is planned to reach 15.7 million tons in FY2012, and for that, larger ships will have to enter the port to facilitate effective transport. Consequently, it is necessary to implement a port expansion project immediately for the long-term stability and efficiency of iron ore exports henceforth, and so JBIC's assistance in this project is highly necessary and highly relevant. In addition, in FY2005, JBIC provided an engineering service (E/S) loan related to this project (loan amount: 161 million yen).</p>
3. Project Objectives
The objective of this project is to increase transport capacity and enhance transport efficiency by upgrading the existing iron ore handling facilities at the port of Visakhapatnam in the State of Andhra Pradesh in southern India, and thereby contribute to the economic development of the country by expanding export amount of iron ore, etc.
4. Project Description

(1) Target Area

Visakhapatnam Port, State of Andhra Pradesh

(2) Project Outline

Civil works and procurement of goods and materials, etc., will be carried out as follows for the improvement of capacity and efficiency for iron ore transport.

- (a) Civil engineering works (improvement of stockpile foundation)
- (b) Marine works (berth expansion, dredging of ship channels and moorings)
- (c) Equipment procurement and electrical work (ship loader, belt conveyor system, etc.)
- (d) Social development
- (e) Consulting services (bidding assistance, construction supervision, etc.)

(3) Total Project Cost/Loan Amount

4,901 million yen (Yen Loan Amount: 4,129 million yen)

(4) Schedule

February 2007 – January 2012 (60 months)

(5) Implementation Structure

- (a) Borrower: The President of India
- (b) Executing Agency: Visakhapatnam Port Trust (VPT)
- (c) Operation and Maintenance System: Same as (b)

(6) Environmental and Social Consideration

(a) Environmental Effects/Land Acquisition and Resident Relocation

(i) Category: A

(ii) Reason for Categorization

This project is classified as Category A because it is in the port sector under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established April 2002), and has characteristics that may exert impact.

(iii) Environmental Permit

The EIA Report has been approved by Ministry of Environment and Forests in November 2006.

(iv) Anti-Pollution Measures

Scattering of dust and amount of noise will be kept to a minimum through appropriate operation and management of the belt conveyor system and upgrading of the sprinkler system. Wastewater and waste material produced in the port will be treated in a manner that meets the country’s domestic standards and is pursuant to VPT’s own standards, the International Convention for the Prevention of Pollution from Ships, and others.

(v) Natural Environment

The project site is not located in and around any sensitive areas such as national parks, and it is likely to have a minimal adverse impact on the natural environment.

(vi) Social Environment

This project will be implemented within existing premises, and it will not involve any land acquisition nor involuntary resettlement.

(vii) Other/Monitoring

Environmental impacts regarding such items as air quality, noise, and so on will be monitored by the executing agency.

(b) Promotion of Poverty Reduction

None

(c) Promotion of Social Development (e.g. Gender Perspective)

Most of the migrant workers who will be engaged in this project live alone and are expected to be at high risk of contracting HIV. Consequently, HIV prevention activities will be carried out targeting workers who will be engaged in this project by hiring an NGO with funds from the ODA loan allocated for this project. In addition, health care services will be provided for local residents around the project area.

(7) Other Important Issues

None

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Baseline (2006)	Target (2013, 2 years after completion)
Total iron ore cargoes (million tons/year)	13.7	15.7
Number of vessels (ships/year)	225	172
Berth occupancy ratio (%)	81	54
Max. dead weight tonnage (DWT)	151,982	200,000

(2) Internal Rate of Return

Financial Internal Rate of Return: 6.4%

(a) Cost: Project cost, operation and maintenance expense

(b) Benefit: Income from port usage charges

(c) Project Life: 25 years

Economic Internal Rate of Return: 13.3%

(a) Cost: Project costs (excluding tax), operation and maintenance expense

(b) Benefit: Reduction in cargo handling expense due to increased efficiency of facilities; reduction in the transport expense of iron ore due to introduction of larger vessels

(c) Project life: 25 years

6. External Risk Factors

(1) Economic stagnation/deterioration in India and the surrounding area of the project as well as natural disasters

(2) Occurrence of shortage in mining capacity and railroad transport capacity

(3) Reduction in export volume due to increased domestic demand for iron ore

7. Lessons Learned from Findings of Similar Projects Undertaken in the Past

A lesson learned from the ex-post evaluation of similar projects in the past is that it is important to check demand forecasts, future plans etc., for peripheral projects that may affect the scale of port expansion project. At the stage of appraisal of this project, in addition to making an iron ore demand forecast, the mining capacity of the iron ore and the transport capacity of railroad to the port was reconfirmed.

8. Plans for Future Evaluation

(1) Indicators for Future Evaluation

- (a) Total iron ore cargoes (million tons/year)
- (b) Number of vessels (ships/year)
- (c) Berth occupancy ratio (%)
- (d) Max. dead weight tonnage (DWT)
- (e) Internal rate of return: FIRR (%), EIRR (%)

(2) Timing of Next Evaluation

After project completion