

## Ex-ante Evaluation

### 1. Name of the Project

Country: The Socialist Republic of Viet Nam

Project: Lach Huyen Port Infrastructure Construction Project (I)

L/A signed on: November 2, 2011

L/A Amount: ¥20,995,000,000 yen (Port: 11,924,000,000 yen, Road and Bridge: 9,071,000,000 yen)

Borrower: The Government of the Socialist Republic of Viet Nam

### 2. Background and Necessity of the Project

#### (1) Current state and Issues of the Port Sector in Viet Nam

A significant number of foreign firms are settled in an area stretching from Hai Phong and Ha Long, which lies along the northern coast of Viet Nam, contributing to economic growth in the northern part of the country. The two major ports are Hai Phong and Cai Lan, which were rehabilitated and extended through ODA Loan projects to support these foreign-affiliated companies. Taking future expansion into account, however, these ports can only handle a total of 40 million tons. Meanwhile, container cargo demand in northern Viet Nam is expected to increase to 42 million tons by 2015 and 59 million tons by 2020, reflecting the soaring economy of the area. The volume of cargo will soon overflow capacity in these two ports. Reflecting recent trends in the international maritime transportation market, shipping companies are ordering more and more large containerships to satisfy customer needs and cut costs. To enhance the functionality of the ports as international logistics bases in northern Viet Nam, it is necessary to construct ports with sufficient water depth to accept these large containerships. However, the expansion of Hai Phong and Cai Lan Ports to meet the rising demand for cargo and large containerships is considered to be difficult from technical and social point of view. Since expanding these ports to secure sufficient water depth is thought to be nearly impossible, Viet Nam is awaiting the construction of new ports with sufficient water depth to meet international standards.

#### (2) Development Policy for the Port Sector in Viet Nam and the Priority of the Project

A port improvement plan formulated by the Viet Nam government for 2020 indicates the necessity of constructing efficient and competitive ports to respond to industrialization of the country and cargo demand as a result of modernization.

(3) Japan's and JICA's Country Assistance Program and Achievements in the Port Sector Under Japan's Country assistance program for Viet Nam (July 2009), port improvement is defined as one of the core issues in transport system. JICA also places importance on promoting growth and boosting competitiveness, and prioritize the port sector development as an arterial transport networks improvement.

JICA's past assistance in the port sector includes a number of projects, such as: (1) D/S Hai Phong Port Emergency Improvement Plan" (1993), L/A Hai Phong Port Rehabilitation Project (I), (II) (approved in 1993 and 1999 respectively), L/A Cai Mep - Thi Vai International Port

Construction Project (approved in 2004), and T/C Improvement of Port Management System (2005-2008).

(4) Assistance by Other Aid Organizations

In recent years, no direct assistance related to port improvement has been provided from other donors.

(5) Necessity of the Project

This project contributes to economic growth and strengthening of international competitiveness in Viet Nam, as well as to enhanced cargo-handling capacity through newly constructing an international port with sufficient water depth and the surrounding basic infrastructure. This project is highly relevant to Japan and JICA's priority areas, so JICA is highly likely to provide support for the project.

<b>3. Project Description</b>
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(1) Project Objectives

The objective of the project is to respond to the growth of demand in cargo volume as well as the increase of larger vessels in the maritime transportation market by building a new international deep-sea port and related basic infrastructure in Lach Huyen area, Cat Hai district, located in the eastern part of Hai Phong city, thereby contributing to economic development and greater competitiveness in the international market.

(2) Project Site/Target Region: Hai Phong city, the Socialist Republic of Viet Nam

(3) Project Outline

1) Construction Work (Port)

- i. soil improvement and reclamation for the terminal area (water depth: 14.0 m, berth length: 750 m, two berths)
- ii. Dredging of channel and turning basin
- iii. Construction of revetment, training dyke, etc.

(Construction of container yards, pier-type berths, and installation of cargo-handling equipment is planned to be arranged by a joint venture company between Japanese companies and a Vietnamese company ("Investment Projects by the Private Sector"))

2) Construction Work (Road and Bridge)

Construction of Tan Vu-Lach Huyen Highway (total length: about 15.63 km)

3) Consulting Service

Tender assistance and construction supervision

(4) Total Project Cost: 139,816 million yen (Japanese ODA loan amount for this fiscal year: ¥20,995 million yen)

1) Port: 92,759 million yen (Japanese ODA loan amount for this fiscal year: ¥11,924 million yen)

2) Road and Bridge: 47,057 million yen (Japanese ODA loan amount for this fiscal year: ¥9,071 million yen)

(5) Schedule

November 2011–May 2018 (79 months in total)

Completion of project: February 2016—when two berths are put into operation

(6) Implementation Structure

- 1) Borrower: The Government of the Socialist Republic of Viet Nam
- 2) Executing agency
  - i. Port: Ministry of Transport (MOT), Vietnam Maritime Administration (VINAMARINE)
  - ii. Road and Bridge: MOT, Directorate for Roads of Viet Nam (DRVN)
- 3) Operation and maintenance system
  - 1) Port: Safety Navigation Section and Berth Maintenance Section of Maritime Administration of Hai Phong (a subordinate department of VINAMARINE) will take charge of maintenance of facilities (e.g. channel, turning basin, and training dyke) to be constructed under the project invested by the Government. Terminal to be constructed through Investment Projects by the Private Sector will be operated and maintained by the joint venture company between Japanese companies and a Vietnamese company to execute the project.
  - 2) Road and Bridge: Project Management Unit No. 2, a subordinate organization of DRVN

(7) Environmental and Social Consideration, Poverty Reduction, and Social Development

1) Environmental and social consideration:

① Category: A

② Reasons for categorization:

This project is classified as category A, because it comes under the road and bridge sector and also has features that are likely to have significant impact (large-scale involuntary resettlement) as defined by the Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations (stipulated in April 2002). Environmental permit: The Environmental Impact Assessment (EIA) report for this project was approved by Viet Nam's Ministry of Natural Resources and Environment (MONRE) in October 2008. The other EIA report for the access bridge was approval by MOT in May 2010.

③ Anti-pollution measures:

Drainage water, waste, and the like from vessels will be disposed of according to Viet Nam's domestic laws for ports. Dredged soil will also be disposed of in an appropriate manner, while avoiding impact to the surrounding waters. For air pollution, noise, and other environmental factors in the vicinity of the access road, measures to mitigate impact will be taken, such as planted zones, speed limit, and installing soundproof walls according to the country's baseline.

④ Natural environment:

Although the target area of this project is not thought to be sensitive areas (e.g. national parks and their peripheral areas), making adverse impacts on the natural environment minimal, more detailed investigation at the stage of detailed design and measures according to investigation results will be implemented to mitigate impact to natural

environment.

⑤ Social environment:

The port construction requires the acquisition of about 11.2 ha of land, while construction of the bridge requires about 87.8 ha of land and resettlement for 79 households. Related processes will be implemented according to the country's domestic rules.

⑥ Other/monitoring:

Under this project, the executing agent will take charge of monitoring air/water quality during construction. Once service has started, the executing agent and private operators will be in charge of the monitoring air/water quality for the port portion, while Project Management Unit No. 2, a subordinate organization of the executing agent, will do the same for the road and bridge.

2) Poverty reduction: None in particular

3) Promotion of social development: This is a massive project for improving the country's infrastructure, involving recruitment of a large number of labors. The construction workers are expected to work at a limited place for a longer period, Hai Phong People's Committee plans to take steps to prevent the spread of HIV among workers as a part of health control. Hai Phong city authority will work together with consultants in charge, to prepare specific program. The work supervision consultants will carry out monitoring during the project execution.

(8) Partnership with other donors: None in particular

(9) Other important issues

1) This project is designed to be executed through joint initiatives between the public and private sectors. As described above, the joint venture company between Japanese companies and a Vietnamese company will construct pier-type berths, container yards, and install cargo-handling equipment in line with the progress of the project. After completion of construction, the company will operate the terminal.

2) As a measure to shorten the construction period and hasten the port opening, JICA is now implementing detailed design. JICA is also implementing Special Assistance for Procurement Management (SAPMAN) for procurement of consultants and the pre-qualification process for procurement of contractors.

3) In Viet Nam, impacts from rising sea levels (due to climate change) and severer tropical storm damage are expected. Under such circumstances, the Viet Nam government is determined to take the impact of climate change into consideration when designing ports and related structures. This project can therefore be considered a way to help Viet Nam cope with climate change.

<b>4. Project's Effects</b>
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(1) Operation and Effect Indicators

1) Port

Indicator	Baseline (2011 Actual)	Target (2018) 【Two years after the completion of the project】
Berth Occupy Rate (%)	—	30
Container Dwell Time (day)	—	6
Throughput (TEU*)	—	500,000 (2016)
Maximum load of vessels docked at Berth one and two (DWT**)	—	50,000

\*Twenty-foot equivalent units

\*\*Dead weight tonnage

(Reference)

• As of October 2010, the maximum load of vessels entered (DWT) is around 20,000 for vessels entering the nearby Hai Phong port.

## 2) Road and Bridge

Indicator	Baseline (2011 Actual)	Target (2018) 【Two years after the completion of the project】
Annual average daily traffic (PCU*/day)	409 (2009)	9,026
Travel time between Tan Vu and Lach Huyen (min.)	155	12

\* Passenger Car Units

However, completion of Investment Projects by the Private Sector to be implemented at the same time as this project is considered a premise for securing the above benefits.

## (2) Internal Rate of Return

Based on the following premises, the economic internal rate of return (EIRR) for this project is 13.1%. (Calculated port and road and bridge as a unit)

Cost: Project cost (excluding tax) and operation and maintenance expenses (both include costs incurred by Investment Project by Private Sector)

Benefit: Saving costs for alternative transportation and cargo transport cost

Project life: 35 years

(3) Qualitative Effect: Promotion of economic growth in throughout the country (particularly northern part) and strengthening of international competitiveness

## 5. External Risk Factors and Control

None in particular

## **6. Lessons Learned from Findings of Similar Projects Undertaken in the Past**

In a mid-term review for a similar project, the necessity of further expansion was pointed out reflecting the increase of cargo volume much more than original estimation. Under this project, the design shall include consideration of future expansion by 2020, based on analyses that will consider medium- to long-term demands.

## **7. Plans for Future Evaluation**

- (1) Indicators for Future Evaluation
  - 1) Berth Occupy Rate (%)
  - 2) Container Dwell Time (day)
  - 3) Throughput (TEU)
  - 4) Maximum load of vessels docked at Berth one and two (DWT)
  - 5) Travel time between Tan Vu and Lach Huyen (min.)
  - 6) Economic internal rate of return (EIRR) (%)
- (2) Timing of the Next Evaluation: Two years after the completion of the project