

Ex-ante Evaluation

1. Name of the Project

Country: The Socialist Republic of Vietnam

Project: Hanoi-HCMC Railway Line Bridges Safety Improvement Project (II)

(Loan Agreement: March 30, 2007; Loan Amount: 11,737 million yen; Borrower: The Government of the Socialist Republic of Vietnam)

2. Necessity and Relevance of JBIC's Assistance

Railways in Vietnam began with the construction during the French colonial period in the 19th century. In 1935, the Hanoi-Saigon Line was completed (Saigon is currently known as Ho Chi Minh City). The railway network consists of seven principal routes, and they are all single-track, non-electric lines. The two major lines are the North-South Line and the East-West Line. The North-South line is a major passenger line that connects the northern, central, and southern areas, and stretches two-thirds of the total length of the national railway of Vietnam. The East-West line is a major freight line that connects Hanoi and the northern ports. On these existing railway lines, there are many areas with sharp curves and steep grades, antiquated bridges, and culverts¹. Also, due to inconsistent operation and maintenance, the tracks, trackbeds, signals, and communications equipment is old and in poor condition. In particular, bridges on the railway have markedly deteriorated, requiring a speed limit of 40km per hour or less in many places. Repairing the bridges is fundamental in terms of improving safety and transport capacity. In the Master Plan on the Development of the Vietnamese Railway Transport Sector (approved by the prime minister in 2002), the stated goals for improvement of existing lines up to 2010 are modernization of the North-South line and the East-West line, boosting of train line capacity, improvements such as electrification of the line between Hanoi and Hai Phong as well as signals and communications equipment, and the goals up to 2020 are advancement of double tracks and electrification and actualization of high-speed rail service on the north-south line. In this plan, the Hanoi-Ho Chi Minh railway line is regarded as an important part of the transportation system, and rehabilitation of bridges on this segment is one of the highest priority projects.

In JBIC's Medium-Term Strategy for Overseas Economic Cooperation Operations (FY2005-2007), a priority area for assistance is "a foundation for sustained growth," and assistance is to be provided for economic infrastructure development such as transportation which is a basis for economic and social activities. By assisting urgently required improve and replacement of bridges, this project contributes to the improvement of safety of rail service, and it is consistent with JBIC's assistance policy. Thus given the above, JBIC's assistance for this project is highly necessary and relevant.

3. Project Objectives

The objective of this project is to ensure the safety of rail service, shorten passenger and freight transport time, and boost transport volume by replacing 44 severely age-worn bridges on the rail line between Hanoi and Ho Chi Minh City (on the North-South rail line, total length: 1,700 km), thereby contributing to sustainable economic growth of the region along the above-mentioned train line.

¹ A structure built by piling up earth or using the existing ground to create a space for roads or waterways to pass underneath a road.

4. Project Description

(1) Target Area

Between Hanoi and Ho Chi Minh City

(2) Project Outline

(a) Civil engineering works

-Replacement of 44 bridges and improvement of the bridge approaches

-Construction of appurtenant facilities (removal of road crossings and building of overpasses, etc.)

(b) Procurement of equipment for operation and maintenance

(c) Consulting services (bidding assistance construction supervision, etc.)

(3) Total Project Cost/Loan Amount

23,868 million yen (Yen Loan Amount: 11,737 million yen)

Note: Previous yen loan: Phase I, 8,222 million yen (L/A signed March 2004)

(4) Schedule

October 2005 – December 2012 (87 months)

The project will be completed when the guaranteed period is completed.

(5) Implementation Structure

(a) Borrower: The Government of the Socialist Republic of Vietnam

(b) Executing Agency: Vietnam Railway (VNR)

(c) Operation and Maintenance System: VNR

(6) Environmental and Social Consideration

(a) Environmental Impacts/Land Acquisition and Resettlement

(i) Category: A

(ii) Reason for Categorization: This project falls into a large-scale involuntary resettlement sector which is likely to have significant adverse impact on the environment under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Consideration” (established in April 2002). Thus this project is classified as Category A.T (This project was requested while the above-mentioned guidelines were under development, and this project is classified as Category B under the JBIC Guidelines for Confirmation of Environmental and Social Considerations (established October 1999) which apply to this project.)

(iii) Environmental Permit: A preliminary Environmental Impact Assessment (EIA) report was approved by Vietnam’s Ministry of Science, Technology, and Environment (currently the Ministry of Natural Resources and Environment (MONRE)) in February 2002 and October 2003. The detailed Environmental Impact Assessment (EIA) report is scheduled to be approved by MONRE in May 2007.

(iv) Anti-Pollution Measures: Because this is a project mainly to replace existing bridges and to improve their approaches, no significant adverse impact is expected. Moreover during construction, measures will be taken for noise and vibrations by planting trees and installing soundproof walls, and measures will be taken for river pollution by conducting appropriate treatment

of waste material.

(v) Natural Environment: The project site is not located in or around sensitive areas such as a national park, and so adverse impact on the natural environment is assumed to be minimal.

(vi) Social Environment: This project requires acquisition of approximately 34 ha of land, including that to be used temporarily during construction, and resettlement of 186 households. The executing agency is proceeding with land acquisition and resettlement in accordance with the domestic procedures of Vietnam.

(vii) Other/ Monitoring: The executing agency will monitor noise, vibration, and resident relocation, etc.

(b) Promotion of Poverty Reduction

None

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

None

(7) Other Important Issues

None

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

Annual Transportation Volume on Hanoi-Ho Chi Minh Rail Line (passenger and freight)

Indicator	Baseline (2005)	Target (2013, 1 year after completion)
Passenger Volume (1,000 persons)	6,671	9,260
Passenger Volume per km (million persons/km)	3,889	7,648
Freight Volume (tons)	2,915	5,692
Freight Volume per km (million tons/km)	1,650	2,922

Time Required on Hanoi-Ho Chi Minh Rail Line (passenger and freight)

Indicator	Baseline (2006)	Target (2013, 1 year after completion)
Passenger trains (hours)	29 hr 30 min	24 hr
Freight trains (hours)	60 hr	54 hr

(2) Internal Rate of Return

Economic Internal Rate of Return: 11.5%

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

(b) Benefit: Shortening of transport time of passengers and freight, reduction of operation and

<p style="text-align: center;">maintenance costs (c) Project Life: 40 years</p>
<p>6. External Risk Factors</p>
<p>Non-accomplishment of improvement of other railway facilities such as rail tracks, rail cars, and signals, etc.</p>
<p>7. Lessons Learned from Findings of Similar Projects Undertaken in the Past</p>
<p>It has been pointed out in ex-post evaluations of previous railway loans that, when equipment and materials are provided, it is necessary to include human resource training for technicians and technology transfer, etc., in the scope of the project so that there is no hindrance in operation and maintenance after project completion. In the consulting service of Phase I of this project, the necessary human resource training was conducted for strengthening the operation and maintenance system after project completion, and in Phase II, training for operation and maintenance is to be conducted in conjunction with the procurement of equipment and materials.</p>
<p>8. Plans for Future Evaluation</p>
<p>(1) Indicators for Future Evaluation</p> <ul style="list-style-type: none"> (a) Passenger volume (persons) (b) Passenger volume per km (persons/km) (c) Freight volume (tons) (d) Freight volume per km(tons/km) (e) Time required - passenger train (hours) (f) Time required - freight train (hours) <p>(2) Timing of Next Evaluation After project completion</p>