

Ex-ante Evaluation

1. Name of the Project

Country: The Socialist Republic of Vietnam

Project: Hanoi City Urban Railway Construction Project (Line 1) (E/S)

(Loan Agreement: March 31, 2008; Loan Amount: 4,683 million yen; Borrower: The Government of the Socialist Republic of Vietnam)

2. Necessity and Relevance of JBIC's Assistance

(1) The actual state of the urban transport sector in Vietnam and the problems it faces

In Vietnam, with urban traffic volume ever increasing in parallel with the robust economic growth, Hanoi City and Ho Chi Minh City are facing problems such as traffic congestion, deteriorating road safety, air pollution, and difficulty in accessing services in the cities. Consequently, urban railway construction has been expected as a solution.

In Hanoi City, the population grew from 2.74 million in 2000 to 3.22 million in 2006, (and is predicted to increase to 4.5 million by 2020). In tandem with that, the volume of traffic on the city streets is sharply increasing (traffic demands doubled from 3 million trips/day in 1995 to 6.3 million trips/day in 2005). This rapid increase has aggravated traffic congestion and worsened air quality, hindering efficient socio-economic activities. Since it would be difficult to produce major increases in the passenger capacity of existing public transportation (buses and railways) or the road system, this situation calls for a new mass urban transit system, in response to the increasing demand for transportation, which will contribute to the relaxation of traffic congestion and air pollution..

(2) Urban transport sector policy in Vietnam

The National Transport Development Master Plan (–2010), developed in 2000, calls for the establishment of an efficient transport network and development of a public transport system in Hanoi, Ho Chi Minh and other major cities by 2010. In addition, the Five-Year Socio-Economic Development Plan (2006–2010) proposes the development of an urban railway system in Hanoi and Ho Chi Minh on the ground that the implementation of measures to respond to traffic congestion continues to be an important task, considering the inadequate development of transport infrastructure. This project is regarded as a priority project in the Railway Transport Development Plan (–2020), which was approved by the prime minister in 2002. The need for early implementation of this project is also recognized in the Vietnam Railway Development Plan (2007–2010), which was approved by the prime minister in 2007. Additionally, this project is given a high priority among the four lines proposed in the Comprehensive Urban Development Programme in Hanoi Capital City (completed in March 2007), which was prepared by JICA,

(3) Consistency with JBIC's assistance policy

In its Medium-Term Strategy for Overseas Economic Cooperation Operations (FY2005–2007), JBIC sets forth “foundation for sustained growth” as one of its priority areas, and aims to provide assistance to the development of economic infrastructure including transport facilities as a basis for socio-economic activities. Providing support for this project, which aims to respond to the growing traffic demands by constructing a new mass urban transport system, is consistent with JBIC's

assistance policy. Thus it is highly necessary and relevant that JBIC should support the project.

3. Project Objectives

This project aims to meet the growing demand for transport, making the traffic in Hanoi smoother and alleviating the atmospheric pollution through the construction of a railway between Gia Lam and Giap Bat in Hanoi, the capital of Vietnam and the center of its northern economic zone; thereby contributing to the development of the regional economy and improving the urban environment.

4. Project Description

(1) Target Area

Hanoi City

(2) Project Outline

Consulting services for the construction of an elevated railway (detailed design, bidding assistance, etc.). The sections covered by this project are the Gia Lam–Giap Bat section (approximately 11 km) and around Ngoc Hoi Station (approximately 4 km), which are part of the Yen Vien–Ngoc Hoi section (approximately 29 km).

(3) Total Project Cost / Loan Amount

5,488 million yen (Yen Loan Amount: 4,683 million yen)

(4) Schedule

July 2008–December 2014 (78 months, only the E/S portion). Project completion is defined as when the bidding assistance 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: After the project is completed, a two-tiered system will be adopted, the railway facilities will be owned by the government, and the operation and maintenance of the railway will be undertaken by a new organization that is scheduled to be set up under VNR.

(6) Environmental and Social Consideration

(a) Environmental Effects / Land Acquisition and Resident Relocation

(i) Category: B

(ii) Reason for Categorization

This project is classified as Category B because it is a loan for engineering services, and the whole project does not belong to Category C under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (April 2002).

(iii) Environmental Permit

The Environmental Impact Assessment (EIA) report concerning this project was approved by the Ministry of Natural Resources and Environment (MONRE) in February 2008.

(iv) Anti-Pollution Measures

To deal with noise and vibration when the planned railway is in use, the mitigation measures will be implemented, including the installation of sound insulation walls and vibration-proof sleepers. To deal with noise, vibration, water pollution and air pollution during construction, the mitigation measures will be implemented, including the installation of temporary sound insulation walls, the limit on the length of time construction equipment may be used, appropriate management and treatment of waste materials, and water sprinkling.

(v) Natural Environment

The area targeted by this project is not located in or around sensitive areas, such as national parks, and so adverse impact on the natural environment is assumed to be minimal.

(vi) Social Environment

The project is expected to require the acquisition of approximately 131 ha of land and resident relocation of 499 households. Compensation and relocation of residents will be carried out in accordance with a resettlement action plan and a detailed resettlement action plan prepared in the future, both of which are based on the domestic laws of Vietnam. A consultation with local residents about the project outline, environmental impact and the like has been held since October 2007.

(vii) Other/Monitoring

In this project, the executing agency will monitor the noise, vibration, water quality, soil, progress in resident relocation, living conditions of residents after relocation and etc.

(b) Promotion of Poverty Reduction

None

(c) Promotion of Social Development (e.g. Gender Perspective, Measure for Infectious Diseases Including AIDS, Participatory Development, Consideration for the Handicapped, etc.)

(i) Measures against HIV/AIDS

Because this project involves large-scale construction in a country where there is a risk of spreading HIV/AIDS infection and the construction workers converge in certain area for long period of time, a bidding document will be prepared such that contractors are obliged to implement measures against HIV/AIDS for construction workers.

(ii) Consideration for Disabled Persons

In accordance with the domestic laws of Vietnam regarding consideration for disabled persons, the building such as station houses are expected to have a universal design that takes into consideration the needs of the elderly, the disabled, and so on. Furthermore, in order to make the railway facilities easily accessible to elderly and disabled persons, consultations will be held with local organizations and the like at the design stage so that the needs of disabled persons will be taken into account in the final design of the project.

(7) Other Important Issues:

None

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Target (2022, 2 years after completion)
Volume of passengers (passengers-km/day)	1,500,000
Number of running trains (trains/day)	156
Operating rate (%)	80
Running distance (km/day)	21,000
Full trip time between Gia Lam and Giap Bat ¹ (minutes)	32

(2) Internal Rate of Return (Financial and Economic Internal Rate of Return)

Based on the conditions indicated below, the economic internal rate of return (EIRR) is 10.69% and the financial internal rate of return (FIRR) is 1.44%.

[EIRR]

- (a) Cost: Project cost (excluding tax), operation and maintenance expenses
- (b) Benefit: Reduction in operation and maintenance expenses of conventional transport system and shortening of trip time
- (c) Project Life: 30 years

[FIRR]

- (a) Cost: Project cost, operation and maintenance expenses
- (b) Benefit: Fare income
- (c) Project Life: 30 years

6. External Risk Factors

Economic stagnation/deterioration in Vietnam and the area targeted by this project

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

From the evaluation results of similar projects in the past, it has been learned that it is important to ensure the financial soundness of the operator by setting fares appropriately, stimulate latent demand by making it convenient to transfer to other modes of transport and by developing housing along the railway lines, and increase usage through proper coordination among public transport facilities. In the execution of this project, JBIC will propose an appropriate level of fares through consulting services and coordination and cooperation with JICA while supporting the executing agency's measures for demand creation and utilization improvement.

8. Plans for Future Evaluation

(1) Indicators for Future Evaluation

- (a) Volume of passengers (passengers-km/day)
- (b) Number of running trains (trains/day)
- (c) Operating rate (%)
- (d) Running distance (km/day)
- (e) Full trip time between Gia Lam and Giap Bat (minutes)
- (f) Internal rate of return: EIRR (%), FIRR (%)

¹ The full trip time for existing diesel trains in the same section is 45 minutes.

(2) Timing of Next Evaluation

Two years after project completion