

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: Socialist Republic of Vietnam

Project: the Hanoi City Urban Railway Construction Project (Line 1) Phase I -Ngoc Hoi Complex (I)

Loan Agreement: March 22, 2013

Loan Amount: 16,588 million Yen

Borrower: The Government of the Socialist Republic of Vietnam

2. Background and Necessity of the Project

(1) Current State and Issues of the Urban Transport Sector in Hanoi City, Vietnam

Urbanization has been progressing in Hanoi City, whose population increased from 2.74 million in 2000 to 3.22 million in 2006, and, as a result of a merger with surrounding areas in 2008, to 6.56 million in 2010. The population growth causes a considerable increase in road traffic and deteriorates congestion, which hinders efficient socio-economic activities. Due to difficulty in substantial expansions of the capacity of the existing public transport system and road networks, the development of a new mass urban traffic system is needed that can ease congestion and air pollution.

(2) Development Policies for the Urban Transport Sector in Hanoi City, Vietnam, and the Priority of the Project

The Comprehensive Urban Development Programme in Hanoi Capital City (HAIDEP), a development study conducted by JICA (completed March 2007) noted project plans for urban railway development of four railway lines including this project. This project is included in priority projects of the master plan on socio-economic development of Hanoi city through 2020, with orientations toward 2030 approved in 2011 by the prime minister.

(3) Japan and JICA's Policy and Operations in the Urban Transport Sector in Hanoi City

The Country Assistance Program for Vietnam formulated in July 2009¹ states that Japan will cooperate in the field of "urban development, transportation and communication network development" under one of the four priority areas "Promotion of economic growth and strengthening of international competitiveness". The Government of Japan also states in its ODA Policies Rolling Plan (November 2011)

¹ The Country Assistance Program for Vietnam formulated in December 2012 also cites "promotion of economic growth and strengthening of international competitiveness" as a priority area, showing the intention to support the development of arterial transport and urban transport network.

that it will support an improvement in hard and soft aspects of traffic networks of “urban transportation including the development of urban mass transport systems”. This project will be implemented along Japan’s priority area and rolling plan. JICA, on the other hand, granted an engineering service (E/S) loan for detailed designs of the Gia Lam – Giap Bat and the Ngoc Hoi Complex (4,683 million yen) in FY2007, and another loan for the Hanoi City Urban Railway (Line 2).

(4) Other Donors’ Activity

The World Bank has been supporting development of a bus rapid transit system and establishment and strengthening of a new Public Transport Authority in Hanoi City.

The Asian Development Bank has been supporting Hanoi City Urban Railway Construction Project (Line 3) under a joint loan with the French Development Agency (AFD). In addition, China has been supporting Hanoi City Urban Railway Construction Project (Line 2A) of the Urban Railway in Hanoi City.

(5) Necessity of the Project

This project is consistent with Japan and JICA’s priority area and the policy of the Government of Vietnam, and contributes to countermeasures for increased demands for passenger and freight transport and an improvement of safety of railway service. Thus given the above, JICA’s assistance for this project is highly necessary and relevant.

3. Project Description

(1) Project Objective

The objective of the Project is to increase efficiency of train operation and maintenance by constructing Ngoc Hoi complex necessary for Hanoi City urban railway and national railway development, thereby meeting increasing transportation demand and securing safety in railway operation.

(2) Project Site/Target Area

Hanoi City of the of the Socialist Republic of Vietnam

(3) Project Components

- 1) (i) Construction of train depot (including ground improvement work), (ii) track work , (iii) electricity-related work, (iv) procurement of materials and equipment, (v) infrastructure development work for land for residents to be relocated
- 2) Consulting services (detailed design, bidding assistance, construction supervision, etc.)

(4) Estimated Project Cost (Loan Amount)

69,350 million yen (Loan Amount: 16,588 million yen)

(5) Schedule

March 2008 – August 2017 (162 months). The project will be completed when the service commences (in August 2019).

(6) Project Implementation Structure

- 1) Borrower: the Government of the Socialist Republic of Vietnam
- 2) Executing Agency: Vietnam Railways (VNR)
- 3) Operation and Maintenance System: after completion of the project, the national government will own the railway facilities and an operation and maintenance company to be established under the control of VNR will be in charge of the O&M.

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

- 1) Environmental and Social Consideration
 - (1) Category: A
 - (2) Reason for Categorization: this project has the characteristics that are liable to cause adverse environmental impact under the “JBIC Guidelines for Confirmation of Environmental and Social Consideration” (established April 2002).
 - (3) Environmental Permit: the detailed Environmental Impact Assessment (EIA) report was approved by Vietnam’s Ministry of Natural Resources and Environment (MONRE) in July 2012.
 - (4) Anti-Pollution Measures: air-pollution substances to be emitted from the painting ward in the depot after the commencement of services will be appropriately treated on the premises so that emissions meet the domestic emission standards. Wastewater will be treated to meet the domestic drainage standards at an industrial wastewater treatment facility and a general wastewater treatment facility to be constructed on the premises of the depot.
 - (5) 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.
 - (6) Social Environment: this project requires acquisition of approximately 114 ha of land and resettlement of 75 households. The executing agency will proceed with the land acquisition and resettlement in accordance with the domestic laws and procedures of Vietnam.
 - (7) Other / Monitoring: VNR will, in collaboration with the Hanoi People’s Committee, monitor the progress of resident relocation and the state of their

living after relocation. The contractor will monitor air quality, noise, vibration, soil, etc. during construction, and the operation and maintenance company will monitor them after the provision of service starts.

2) Promotion of Poverty Reduction:

None

3) Promotion of Social Development (e.g. gender perspective, measure for infectious diseases including HIV/AIDS, participatory development, consideration for the person with disability etc.):

AIDS and other infectious disease control: the project will require contractors to agree in relevant contracts to perform AIDS control for civil engineering workers.

(8) Collaboration with Other Donors:

A development survey “Building the National Technical Regulation and Standard Set for Railway” (February 2008 – June 2009); a project related to ODA loan, “Project on Integrated UMRT and Urban Development for Hanoi in Vietnam” (2011); and a Special Assistance for Project Implementation (SAPI) for Establishment of an Agency Managing the Operation and Maintenance of Metropolitan Railway Lines in Hanoi (August 2011 – December 2012) have been implemented. A technical cooperation project, the “Operational Support for the Implementation of the Hanoi City Urban Railway Project in Vietnam” has been in progress since FY2012.

(9) Other Important Issues:

None

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (2012)	Target (2021) [2 years after project completion]
No. of days necessary for inspection and repair of locomotives (days/car)	60	29
No. of locomotives inspected and repaired (cars/year)	2	39
No. of days necessary for inspection and repair of passenger train cars (days/car)	45	25.5

No. of passenger train cars inspected and repaired (cars/year)	86	230
No. of days necessary for inspection and repair of freight train cars (days/car)	20	18
No. of freight trains cars inspected and repaired (cars/year)	-	239

* Overhauls are expected for inspection and repair.

2) Internal Rate of Return is not calculated because of difficulty in expressing the benefits in monetary and quantitative terms.

(2) Qualitative Effects

Improvement of safety of railway service and the streamlining of operation and maintenance of train cars

5. External Factors and Risk Control

- (1) Stagnation or aggravation of the economy of Vietnam and the project area
- (2) Natural disasters, etc.

6. Lessons Learned from Past Projects

(1) Evaluations of similar projects undertaken in the past:

The ex-post evaluations of Delhi Mass Rapid Transport System Project Phases I – VI in India have given a lesson from the perspective sustainability, which is the need to carefully consider formulation of an operation and maintenance system including the costs thereof at an early stage of the project planning.

(2) Lessons for this project:

In light of the above-mentioned lesson, Terms of Reference (TOR) of the consulting service in relation to provision of a loan for the Hanoi City Urban Railway Construction Project will include assistance to establishment of an operation and maintenance company for the purpose of building and strengthening the operation and maintenance system.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) No. of days necessary for inspection and repair of locomotives (days/car)
- 2) No. of locomotives inspected and repaired (cars/year)
- 3) No. of days necessary for inspection and repair of passenger train cars (days/car)
- 4) No. of passenger train cars inspected and repaired (cars/year)

- 5) No. of days necessary for inspection and repair of freight train cars (days/car)
- 6) No. of freight trains cars inspected and repaired (cars/year)

(2) Timing

Two years after project completion