

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: Socialist Republic of Vietnam

Project: Ho Chi Minh City Urban Railway Construction Project (Ben Thanh – Suoi Tien Section (Line 1))

Loan Agreement: March 30, 2012

Loan Amount : 44,302 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 Development and Urban Transport Sector in Vietnam

The population of Ho Chi Minh City and its urban area increased from 6.59 million in 1995 to 10.54 million in 2010. The number of registered motorbikes and automobiles has also increased, and so road traffic has increased considerably in the city. This causes a number of problems including serious traffic congestion, an increase in traffic accidents, deterioration of air quality and difficulty in access to urban services, which hinder efficient socio-economic activities. Due to difficulty in substantial expansions of the capacity of the existing public transport system (buses, etc.) and road networks, Ho Chi Minh City is planning the development of a new mass urban traffic that is chiefly based on urban railway.

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

The Government of Vietnam states in the Ninth Five-Year Socio-Economic Development Plan for 2011-2015 that the development of traffic infrastructure is insufficient in urban cities and measures against traffic congestions continue to be a priority area, and that it plans to develop urban railway systems in Hanoi and Ho Chi Minh Cities. Currently, projects for seven railway lines are being planned in Ho Chi Minh City, among which Line 1, the target of this Project, is given the highest priority.

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

The Country Assistance Program for Vietnam formulated in July 2009 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 (August 2010) 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, meanwhile, granted the first phase loan of this project in FY2006 (20,887 million yen), and another loans for Lines 1 and 2 of the Hanoi City Urban Railway.

(4) Other Donors' Activity

- 1) The World Bank plans to support development of a bus rapid transit system and establishment and strengthening of a new Public Transport Authority in Hanoi City.
- 2) The Asian Development Bank has been supporting Ho Chi Minh City Urban Railway Construction Project (Line 2) under a joint loan with the German federal government (KfW) and the European Investment Bank (EIB). In addition, it has also been supporting Hanoi City Urban Railway Construction Project (Line 3) under a joint loan with supporting Line 3 under a joint loan with the French Development Agency (AFD).

(5) Necessity of the Project

This project is consistent with Japan and JICA's priority area and the issues and development policy of Vietnam, which regards in the Ho Chi Minh City Urban Transport Master Plan the target area as the top-priority zone to contribute to future traffic demand. Thus given the above, JICA's assistance for this project is highly necessary and relevant.

3. Project Description

(1) Project Objective

The objective of this project is to meet with the increasing transportation demand in Ho Chi Minh City by constructing mass rapid transit system, and thereby contribute to regional economic development and improvement of urban environment, through mitigation of traffic congestion and pollution.

(2) Project Site/Target Area

Ben Thanh – Suoi Tien Section of Ho Chi Minh City

(3) Project Components

- 1) Construction of urban railway (underground and elevated section of approximately 20km)
- 2) Consulting services (basic design, bidding assistance, construction supervision and assistance to operation and maintenance)

(4) Estimated Project Cost (Loan Amount)

236,770 million yen (Loan Amount: 44,302 million yen)

(5) Schedule

March 2007 – February 2024 (204 months). The project will be completed when the service commences (March 2019).

(6) Project Implementation Structure

- 1) Borrower: The Government of the Socialist Republic of Vietnam
- 2) Executing Agency: Management Authority for Urban Railways (MAUR)
- 3) Operation and Maintenance System: an operation and maintenance company will be established under the control of MAUR before the service commences.

(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 impact on the railway sector under the “JBIC Guidelines for Confirmation of Environmental and Social Consideration” (established in 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 November 2006.
 - (4) Anti-Pollution Measures: during construction and service operation, measures will be taken for noise, vibration, etc. by installing soundproof walls that meet the relevant domestic standards.
 - (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 31 ha of land and resettlement of 140 households. The land acquisition and relocation will be proceeded with in accordance with the relevant domestic procedures and plans.
 - (7) Others / Monitoring: the executing agency will monitor the impact of the project (air pollution, noise, vibration, traffic congestion, waste materials, etc.) during construction and service provision, as well as the progress of relocation of the households concerned.
- 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.): the project involves a large-scale civil

engineering work in a country prone to widespread HIV infections, so AIDS control for civil engineering workers will be performed. Stations will be designed to be disability friendly in accordance with the relevant domestic laws and international standards.

(8) Collaboration with Other Donors:

A development survey “Building the National Technical Regulation and Standard Set for Railway” has been implemented. A technical cooperation project, the “Support on Set up of Operation and Maintenance Company of Urban Railways in Ho Chi Minh City” has been in progress. A preparatory survey for Urban Development with Above-and Under-Ground Combined Structures at Ben Thanh Station Area in Ho Chi Minh City (PPP infrastructure project) has been implemented.

(9) Other Important Issues:

None

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Target (2021) [Expected value 2 years after project completion]
Volume of passenger (persons/km/day)	2,376,900
No. of trains in service (trains/day)	394
Operating rate (%)	88.2
Running distance (km/day)	23,285
Travel time in Ben Thanh – Suoi Tien Section (minutes)	29

2) Internal Rate of Return

Based on the conditions indicated below, the economic internal rate of return (EIRR) of the project is 10.8% and the financial internal rate of return (FIRR) is 5.7%.

EIRR

Cost: project cost (excluding taxes) and operating and maintenance costs

Benefit: reduction in the running cost of the conventional transport system, reduction in travel time

Project life: 30 years

FIRR

Cost: project cost (procurement of train cars, electricity, communications, signal system package only) and operating and maintenance costs

Benefit: fare yields

Project life: 30 years

(2) Qualitative Effects

Improvement of safety and amenity of local people, accuracy of travel time, development of regional economy, improvement in air pollution and alleviation of traffic congestion in Ho Chi Minh City

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 past railway projects have given a lesson from the perspective, 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:

This project is the first urban railway project in Vietnam and thus the country has little experience. In light of the above-mentioned lesson, the project aims to build and strengthen the operation and maintenance system in collaboration with technical cooperation.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Volume of passenger (persons/km/day)
- 2) No. of trains in service (trains/day)
- 3) Operating rate (%)
- 4) Running distance (km/day)
- 5) Travel time by train in Ben Thanh – Suoi Tien Section (minutes)
- 6) Travel time by car in Ben Thanh – Suoi Tien Section (minutes)
- 7) FIRR and EIRR (%)

(2) Timing

Two years after project completion