

Ex-ante Evaluation

1. Name of the Project

Country: The Socialist Republic of Vietnam

Project: Ho Chi Minh City Urban Railway Construction Project (Ben Thanh-Suoi Tien Section (Line 1) (I) (II) (III))

L/A signed on: March 30, 2007 (I), March 30, 2012 (II), May 28, 2016 (III)

L/A Amount: 20,887 million Yen (I), 44,302 million Yen (II), 90,175 million Yen (III)

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 10.65 million in 2011. The number of registered motorbikes and automobiles has also increased, and 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 mainly 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 eight 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 December 2012 states that "promotion of economic growth and strengthening international competitiveness" as a priority issue, and maintains that Japan "supports the country to develop arterial traffic and urban transport network, supply energy stably and promote saving energy in order to meet the demands for economic infrastructure which is increasing along with the economic growth." The Government of Japan also states in its ODA Policies Rolling Plan " for achieving sustainable economic growth, Vietnam should deal with

increasing demand for transportation and rapid urbanization. Further, it requires improvement of transportation network that contributes to smooth and safe distribution of goods as well as human mobility.” JICA’s Country Analysis Paper also states that improvement of public transportation system, such as underground metro and public bus, should be advanced as soon as possible to address emerging traffic congestion. Thus, the Project is consistent with the assistance policy of Japan and JICA. JICA, meanwhile, granted the first phase loan of this project in FY2006 (20,887 million yen), second phase loan of this project in FY2011 (44,302 million yen) and another loans for Lines 1 and 2 of the Hanoi City Urban Railway.

(4) Other Donors’ Activity

- 1) The World Bank supports development of a bus rapid transit system in Hanoi City, Ho Chi Minh City, and Danang City. It also supports establishment and strengthening of a new Public Transport Authority in Hanoi City.
- 2) The Asian Development Bank (ADB) 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, ADB has also been supporting for Line 5 under a joint loan with Government of Spain, KfW, and EIB. In Hanoi City, ADB has been supporting Hanoi City Urban Railway Construction Project (Line 3) with the French Development Agency (AFD).
- 3) Others: The People’s Republic of China has been supporting Hanoi City Urban Railway Construction Project (Line 2A).

(5) Necessity of the Project

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

3. Project Description

(1) Project Objectives

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

Ho Chi Minh City

(3) Project Components

- 1) Construction of underground section (Ben Thanh – Ba Son, 2.6km, 3 stations). (ICB) (Tied)
- 2) Construction of elevated section (Ba son – Suoi Tienm 17.1km, 11 stations) and depot. (ICB) (Tied)
- 3) Rolling stocks, electricity, telecommunication, signal, maintenance after commencement (ICB) (Tied)
- 4) IT system for operation and maintenance company (ICB) (Tied)
- 5) Consulting services (basic design, bidding assistance, construction supervision and assistance to operation and maintenance) (Short List)

(4) Estimated Project Cost (Loan Amount)

236,104 million yen (Loan Amount of phase (I) to (III): 155,364 million yen)

*Original plan: estimated project cost was 126,583 million Yen

(5) Schedule

March 2007 – October 2025 (224 months). The Project will be completed when the service commences (November 2020).

*Original plan: schedule was April 2007 – December 2019 (153 months in total), to be completed with the commencement of operation in December 2019.

(6) Project Implementation Structure

- 1) Borrower: The Government of the Socialist Republic of Vietnam
- 2) Executing Agency: Ho Chi Minh City People's Committee is in charge of Line agency of the Project. Management Authority for Urban Railways (MAUR) is in charge of Executing agency.
- 3) Operation and Maintenance System: Ho Chi Minh City approved an establishment of operation and maintenance company under the control of MAUR in December 2015. The operation and maintenance company will be established by the service commences.

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

1) Environmental and Social Consideration

① Category: A

② Reasons 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

As a countermeasure, noise, vibration, and air pollution during construction, installation of soundproof walls, limitation of using construction equipment, appropriate management and process of waste, and water sprinkling have been taken. After starting of service operation, countermeasures will be taken for noise and vibration by installing soundproof walls and anti-vibration railway sleepers.

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 with in accordance with the relevant domestic procedures and plans already completed in Mrch 2015.

⑦ Other / Monitoring

In the Project, 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, Considerations for Persons with Disabilities, 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 including facilities such as elevator, concourse, platform, restroom, ticket-vending machine, and gate will be designed to be disability friendly in accordance with the relevant domestic laws and international standards. It is planning that priority seat for elderly, women, people with disabilities, and injured people will be installed in the car and security cameras will be set up in the trains and stations to use a railway with peace of mind for women.

(8) Collaboration with Other Donors:

Operating and Maintenance Company will cover all of urban railways respectively. Regarding establishment of Operating and Maintenance company, development of

design condition, and standardize such as system requirement, information will be sharing among other donors continuously by using technical cooperation project on “SAPI for Ho Chi Minh City Urban Railway Construction Project (Line 1) (Preparation of Management System)” and other technical supports in the request.

(9) Other Important Issues:

The Project, which is expected to promote modal shift by the railway construction, contributes to the mitigation of climate change.

4. Target Outcomes

(1) Quantitative Effects

Performance Indicators (Operation and Effect Indicator)

Indicator	Baseline (Actual in 2006)	Target (2022) [Expected value 2 years after project completion]
Volume of passenger (persons · km/day)	—	3,416,000
No. of trains in service (trains/day)	—	354
Operating rate (%)	—	91.3
Running distance (km/day)	—	9,466
Travel time in Ben Thanh – Suoi Tien Section (minutes)	60 (Road*1)	29

*1 Shortest time by car

(2) Qualitative Effects

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

(3) Internal Rate of Return

Based on the conditions indicated below, Economic Internal Rate of Return (EIRR) of the Project is 11.6%, and Financial Internal Rate of Return (FIRR) is 6.2%.

【EIRR】

Cost: Project cost (excluding tax) and operating and maintenance costs
 Benefit: Reduction in the running and operation and maintenance 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, Non fare revenue, Subsidy
Project life: 30 years

5. External Factors and Risk Control

None

6. Lessons Learned from Past Projects

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

Ex-post evaluation of “Delhi Mass Rapid Transport System” in India indicates that it is important to ensure financial soundness of operation by setting proper freight rates, ensuring convenient access to other transportation, stimulating potential demands of users by housing development along with railway lines, and increasing usability by properly coordinating public transportation operation agencies.

(2) Lessons for this project:

Based on the aforementioned lessons learned, in implementing the Project, financial soundness of operating body is ensured under “Special Assistance for Project Implementation (SAPI) of set up of operation & maintenance company of Urban Railways in HCMC (improvement of operation and maintenance system) in Vietnam.” To stimulate the demands and increase usability, PR activity to promote the use of Urban Railway No. 1 is conducted under the support of consulting services.

7. Plans 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) FIRR and EIRR (%)

(2) Timing: Two years after project completion