

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) (Loan Agreement: March 30, 2007; Loan Amount: 20,887 million yen; Borrower: The Government of the Socialist Republic of Vietnam)
2. Necessity and Relevance of JBIC's Assistance
<p>In Vietnam, with urban traffic volume ever increasing in parallel with the robust economic growth, Hanoi 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.</p> <p>In Vietnam's largest metropolis, Ho Chi Minh City, the population grew from 6.88 million in 1997 to reach 7.48 million in 2001 (and is predicted to be 13.5 million in 2020). In tandem with that, the volume of traffic on city streets is increasing conspicuously, and traffic congestion is becoming serious (The average driving speed of 23.8km/h in 2002 is predicted to drop to 13.3km/h in 2020.), which are hindering effective economic and social activities. Because it would be difficult to produce major increases in the passenger capacity of existing public transportation (busses and existing 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 amelioration of traffic congestion and air pollution.</p> <p>In Vietnam's 5-Year Socio-Economic Development Plan (2006-2010), it is noted that development of the urban transportation infrastructure is inadequate and that measures for traffic congestion continue to be an important issue. The plan calls for development of an urban rail system in Hanoi and Ho Chi Minh City.</p> <p>In Ho Chi Minh City, as a result of the master plan study on an urban transportation system undertaken with JICA's support (completed June 2004), a project plan for development of four urban rail lines was proposed, and of those, Line 1, which is the subject of this project, is the line that is given the highest priority.</p> <p>In JBIC's Medium-Term Strategy for Overseas Economic Cooperation Operations, a priority area for assistance is "a foundation for sustained growth," and the strategy is to assist development of economic infrastructure such as transportation, which is the base of socio-economic activities.</p> <p>Thus given the above, JBIC's assistance for this project is highly necessary and relevant.</p>
3. Project Objectives
The project aims to meet growing demand for transport through the construction of an urban rail system in Ho Chi Minh City, Vietnam's largest metropolis, and thereby contribute to economic development and improvement of urban environment in Ho Chi Minh City, by relieving traffic congestion and air pollution.
4. Project Description

(1) Target Area

Ben Thanh - Suoi Tien section in Ho Chi Minh City

(2) Project Outline

(a) Construction of urban railway (underground section and elevated section; approximately 20 km)

(b) Consulting services (detailed design, bidding assistance, construction supervision, assistance for operation and maintenance, etc.)

(3) Total Project Cost/Loan Amount

126,583 million yen (Yen Loan Amount: 20,887 million yen)

(4) Schedule

April 2007 – December 2019 (153 months)

The project will be completed when the maintenance service and consulting services are completed.

(5) Implementation Structure

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

(b) Executing Agency: Ho Chi Minh City People's Committee (HCMCPC)

(c) Operation and Maintenance System: Urban Railway Management Division, Department of Transport and Urban Public Works, HCMCPC

(6) Environmental and Social Consideration

(a) Environmental Impacts/Land Acquisition and Resettlement

(i) Category: A

(ii) Reason for Categorization: This project falls into a railway sector project 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.

(iii) Environmental Permit: The Environmental Impact Assessment (EIA) report concerning this project was approved by Vietnam's Ministry of Natural Resources and Environment (MONRE) in November 2006.

(iv) Anti-Pollution Measures: As countermeasures for noise and vibration during operation, measures for mitigation will be taken, such as soundproof walls and anti-vibration railway ties. As countermeasures for noise, vibration, water pollution, and air pollution during construction, measures will include the setting up of soundproof walls, restriction of usage hours of construction equipment, appropriate management and disposal of wastes, and water sprinkling.

(v) Natural Environment: The project site is in an urban area and 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 the acquisition of approximately 34 ha of land and is expected to require resettlement of 147 households. The process of land acquisition and resettlement is being pursued in accordance with the domestic procedures of Vietnam. As the result

of consultations with residents, it was confirmed that there is no particular opposition to the implementation of this project.

(vii) Other/ Monitoring: The executing agency will monitor the noise, vibration, water quality, ground subsidence, and resettlement.

(b) Promotion of Poverty Reduction

None

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

Because this project involves large-scale construction in a country where there is a risk of spreading HIV/AIDS infection, it is planned to include an obligation for the contractor to implement HIV/AIDS prevention measures for the construction workers. Prior to the implementation, the executing agency is scheduled to conduct training for the consultants and contractors (i.e., employers of construction workers) on methods for implementing HIV/AIDS prevention activities, with the cooperation of AIDS Committee of Ho Chi Minh City.

Moreover, in accordance with the domestic laws of Vietnam concerning consideration for the disabled, it is planned to give consideration to the disabled in the design.

(7) Other Important Issues

None

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)¹

Indicator	Target (2019, year of completion)
Volume of passenger (passenger/km/day)	2,200,000
Number of running trains (trains/day)	248
Operating rate (%)	91.7
Running distance (km/day)	29,000
Full trip time between Ben Thanh - Suoi Tien by railway (minutes)	29

(2) Internal Rate of Return

Based on the following premises, the Economic Internal Rate of Return (EIRR) is 12.2% and the Financial Internal Rate of Return (FIRR) is 5.4%.

EIRR

¹ At the time of the ex-post evaluation, to measure the effects on amelioration of traffic congestion and air pollution, which are project objectives, the following effect indicators, which are to be set in the future, will be also evaluated.

Indicator	Baseline (2006)	Target (2019, year of completion)
Full trip time between Ben Thanh - Suoi Tien by car (minutes)	60	Undetermined *
Nitrous dioxide concentration along the rail line (mg/m ³)	0.022	Undetermined *
Suspended particulate matter (SPM) concentration along the rail line (mg/m ³)	0.29	Undetermined *

* Target is to be set prior to the commencement of work.

<ul style="list-style-type: none"> (a) Cost: Project cost (excluding tax), operation and maintenance cost (b) Benefit: Reduction in operation and maintenance cost of the existing transportation system and shortening of travel time. (c) Project Life: 30 years <p>FIRR</p> <ul style="list-style-type: none"> (a) Cost: Project cost, operation and maintenance cost (b) Benefit: Fare income (c) Project Life: 30 years
<p>6. External Risk Factors</p> <ul style="list-style-type: none"> (1) Stagnation/deterioration of the economy of Vietnam or the economy of the project site area (2) Natural disasters
<p>7. Lessons Learned from Findings of Similar Projects Undertaken in the Past</p> <p>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 transportation and by developing housing along the line, and increase usage through proper coordination among public transportation facilities. Based on this lesson learned, the following measures are taken in the implementation of this project.</p> <ul style="list-style-type: none"> (1) Through the consulting services, it is planned to provide support for financial management of the operation and maintenance organization, etc. (2) A JBIC consignment study was conducted on current status and recommendations for integrated development of the area surrounding the project site. HCMCPC is requested to prepare and implement an action plan based on those recommendations. (3) To avoid competition with Urban Railway Line 1 and to operate so as to complement usage of that line, HCMCPC plans to rearrange the bus routes. It is also planned to study unified fares for the urban railway and buses.
<p>8. Plans for Future Evaluation</p> <ul style="list-style-type: none"> (1) Indicators for Future Evaluation <ul style="list-style-type: none"> (a) Volume of passenger (passenger/km/day) (b) Number of running trains (trains/day) (c) Operating rate (%) (d) Running distance (km/day) (e) Full trip time between Ben Thanh - Suoi Tien by railway (minutes) (f) Full trip time between Ben Thanh - Suoi Tien by car (minutes) (g) Nitrous dioxide concentration along the rail line (mg/m^3) (h) Suspended particulate matter (SPM) concentration along the rail line (mg/m^3) (i) Financial internal rate of return (FIRR) (%) and economic internal rate of return (EIRR) (%) (2) Timing of Next Evaluation At project completion