

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: Socialist Republic of Vietnam

Project: Nhat Tan Bridge (Vietnam-Japan Friendship Bridge) Construction (III)

Loan Agreement: March 22, 2013

Loan Amount: 15,637 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 Transport and Road Sector in Vietnam

In Vietnam, road transport is the chief transport means: in 2011, 74.3% of cargo transport and 92.1% of passenger transport depend on road transport. In recent years, the traffic has been sharply increasing particularly on arterial roads connecting large cities and regional cities. In Hanoi City, with the high annual average economic growth rate of 9.2% (2008-2010), the number of road users travelling between the central part of the city and Noi Bai International Airport, the gateway in the north of the country, is expected to considerably increase. In 2011, the traffic volume (58,595PCU/day) exceeded the traffic capacity (42,000PCU/day) on the North Thang Long – Noi Bai Road, the existing major access from the central part of Hanoi to the airport. Since the number of people using Noi Bai International Airport and the transport demand to industrial complexes, etc. in the northern region are expected to increase, it is urgently necessary to build a new bridge connecting the central part of Hanoi and the northern region of the Red River and arterial roads in order to alleviate traffic congestion and streamline traffic functions.

(2) Development Policies for the Transport and Road 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 further development of infrastructure systems including transport infrastructure is one of the top priorities for sustainable development with high economic growth. The government cites, in the National Transport Development Strategy up to 2020 with a Vision toward 2030, the importance of the development of arterial roads in Hanoi, Ho Chi Minh and other large cities. The Master Plan of Urban Transport for Hanoi City up to 2020 also gives high priority to this project. The Hanoi Integrated Development and Environmental Program (HAIDEP) (March 2007) also states the need of construction of the Nhat Tan Bridge that can link the existing central part of the city in the south of the Red River, and Noi Bai International Airport, industrial complexes and other newly developed regions in the north, and thus boost the development of the northern region of Hanoi City.

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

Japan's Country Assistance Program for Vietnam (December 2012) identifies "growth and strengthening of competitiveness" as one of Vietnam's priority area, and presents Japan's determination to support the development of arterial and urban transport networks to meet the demand for economic infrastructure that has been increasing as a result of economic growth. The Government of Japan also states in its ODA Policies Rolling Plan that the improvement of arterial transport networks and urban transport is a development issue for the development of economic infrastructure and better access services. This project will contribute to formulation of urban transport networks by constructing a new cable-stayed bridge linking the central part of Hanoi and the northern part including Noi Bai International Airport, thereby contributing to measures for the increased traffic demand. In this light, the project is consistent with Japan's assistance policy. To date, a total of 13.69 billion yen in an ODA loan was supplied to the bridge construction under the first loan agreement, and a total of 24.82 billion yen under the second loan agreement.

(4) Other Donors' Activity

The World Bank has widely performed cooperation activities in the development of national and regional roads, inland and water transport, urban transport and other fields. The Asian Development Bank has supported, among other things, a project for promotion of logistics between Quang Ninh and Hai Phong and the Noi Bai – Lao Cai Highway Project under the Greater Mekong Sub-region Economic Cooperation Program.

(5) Necessity of the Project

This project aims to facilitate smooth transport and development of the city by connecting the existing central part in the south of the Red River and newly developed areas in the north, and thus is consistent with the development policy of the Government of Vietnam, and Japan and JICA's assistance policies, and contributes. Thus given the above, JICA's assistance for this project is highly necessary and relevant.

<h2>3. Project Description</h2>
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(1) Project Objective

The objective of this project is to respond to the increased transport demand, streamline logistics and alleviate traffic congestion by constructing a bridge over the Red River flowing through Hanoi City and approach roads, thereby contributing to promotion of economic development of Hanoi City and the northern regions of Vietnam and the strengthening of international competitiveness.

(2) Project Site/Target Area

Dong Anh District and Tay Ho District, Hanoi City, the Socialist Republic of Vietnam

(3) Project Components

Construction of a new bridge over the Red River flowing through Hanoi City and bypass roads

- 1) Construction of bridge (approx. 3.1km) and approach roads (approx. 6.1km) (international competitive bidding)
- 2) Consulting services (detailed designing, bidding assistance, construction supervision, training on operation and maintenance) (short-list method)

(4) Estimated Project Cost (Loan Amount)

75,449 million yen (Loan Amount: 15,637 million yen)

(5) Schedule

March 2006 – December 2016 (130 months). The project will be completed when the facilities start operation (December 2014).

(6) Project Implementation Structure

- 1) Borrower: the Government of the Socialist Republic of Vietnam
- 2) Executing Agency: Ministry of Transport(MOT)
- 3) Operation and Maintenance System: expected to be the Department of Transport, Hanoi People's Committee. The department will appoint a commissioned company before the services commence.

(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) Other / Monitoring: Project Management Unit No. 85 (PMU85) of the Ministry of Transport will monitor air quality, noise, resettlement of residents and other aspects during construction, and an operating and maintenance company during the service in operation. As of October 2012, monitoring was performed during construction, and it was confirmed that no particular problem occurred.
- 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 concerns a large-scale infrastructure development in a region vulnerable to HIV/AIDS infection. HIV/AIDS control has been included in the consulting service agreement and has been performed.

(8) Collaboration with Other Donors:

None

(9) Other Important Issues:

This project is designed to minimize the impact of climate change such as the flood risk in Hanoi City by reducing the number of bridge piers to be used, and so contributes to the adoption to climate change. The project concerns construction of a large-scale cable-stayed bridge, appropriate safe measures must be taken during construction.

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Target (2016) 【Expected value 2 years after project completion】
Annual average daily traffic (PCU/day)	65,821
Shortening of travel time (time) <i>Note</i> (1 billion dong/year)	582.163
Reduction of running cost (expense) (1 billion dong/year)	1,209.270

Note: converted to monetary terms (calculated by the shortened travel time multiplied by time value)

2) Internal Rate of Return

Based on the conditions indicated below, the economic internal rate of return (EIRR) of the project is 21.36%. Since the project does not generate any revenue from toll fees, the financial internal rate of return (FIRR) is not calculated.

- (1) Cost: project cost (excluding taxes) and operating and maintenance costs
- (2) Benefits: shortening of travel time and reduction of running cost
- (3) Project life: 30 years

(2) Qualitative Effects

Improvement of efficiency of passenger and freight transport by reducing traffic congestion, and promotion of economic development and international competitiveness in Hanoi and its surroundings.

5. External Factors and Risk Control

None

6. Lessons Learned from Past Projects

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

The ex-post evaluation of the National Highway No.1 Bridge Rehabilitation Project in Vietnam” gives a lesson that the implementation system of the regional government must be strengthened for land acquisition and resident relocation. The ex-post evaluation of the National Highway No.5 Improvement Project in Vietnam” points out that, to prevent any adverse effect on local citizens, care must be taken for possible impacts of changes in traffic conditions of the completed arterial road on transport in the surrounding areas; and that measures to ease such impacts must be formulated in accordance with the current transport pattern and forecast future patterns in the region in question.

(2) Lessons for this project:

In light of the above-mentioned lesson, JICA, MOT and HPC have enhanced the liaison under the project and are monitoring the progress of reallocation of the citizens affected. PMU85 is also enhancing the executing system by dispatching officers to the department of HPC in charge of resident resettlement. In addition, residential roads are secured for local citizen by using box culverts so that the residential roads connecting neighboring communes are not disconnected by the access road to be constructed under the project.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Annual average daily traffic (PCU/day)
- 2) Shortening of travel time (time)Note (1 billion dong/year)
- 3) Reduction of running cost (expense) (1 billion dong/year)
- 4) EIRR (%)

(2) Timing

Two years after project completion