

Ex-Ante Evaluation (for Japanese ODA Loan)

**1. Name of the Project**

Country: Socialist Republic of Vietnam

Project: Noi Bai International Airport to Nhat Tan Bridge Connecting Road Construction Project (II)

Loan Agreement: March 22, 2013

Loan Amount: 11,537 million Yen

Borrower: Government of Socialist Republic of Vietnam

**2. Background and Necessity of the Project**

**(1) Current State and Issues of the Road Sector in Hanoi Metropolitan Area**

Hanoi has been experiencing rapid economic growth in recent years, with significant annual average GDP growth rate at 10.6 percent from 2007 to 2011 and the trend is expected to continue. The Noi Bai International Airport located 30 kilometers north of central Hanoi, serving as a gateway to northern Vietnam is expected to see sharp growth of passengers (21,844,000 passengers (actual) in 2010 to 31,373,000 passengers (projected) in 2015) in line with the rapid economic growth. The Construction Project of Passenger Terminal 2 of Noi Bai International Airport is currently underway with yen loan to cope with the increasing passenger. The traffic (55,459PCU/day) of the North Thang Long-Noi Bai road that is the main existing access road from central Hanoi to the airport exceeded its traffic capacity (42,000PCU/day) in 2008 and it is difficult to handle the expected increase in the passengers of the airport and transportation demand of the industrial zone along the road. Against the backdrop, the enhancement of transportation capacity from central Hanoi to the Noi Bai International Airport has been a challenge.

**(2) Development Policies for the Road Sector in Vietnam**

The Government of Vietnam places further development of infrastructure system that includes traffic infrastructure as a high-priority issue in order to achieve the development goal of sustainable development at high-growth rate in its ninth 5-year social and economic development plan (2011-2015). The Project is regarded as a priority project in the transport master plan for the northern economic zone up to 2020 with vision to 2030. The Hanoi metropolitan area development plan up to 2040 with vision to 2050 also mentions the importance of the Project to connect Hanoi and Noi Bai International Airport based on the recognition that the airport is the gateway to the northern region.

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

The assistance plan for Vietnam formulated in July 2009<sup>1</sup> places the “urban development,

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<sup>1</sup>The assistance plan for Vietnam formulated in February 2012 places “growth and competitiveness enhancement” as one of focal areas and arterial transportation and urban transportation network development is to be assisted.

transportation and communication network development” as a focal issue and says that assistance is to be provided mainly for development of urban beltway and inner-city and surrounding bypass network and development of intercity arterial road network in order to cope with increasing transport demand. It also places importance on assistance for human resources development and quality development for personnel in charge of traffic infrastructure operation and maintenance while assisting the infrastructure development to cope with increasing traffic demand in the city.

#### **(4) Other Donors’ Activity**

- 1) World Bank: It has provided a wide range of assistance, including national and regional road development, inland transportation by water, and urban transportation infrastructure development.
- 2) Asian Development Bank: It is assisting economic cooperation programs for the major Mekong, which include Noi Bai-Lao Kai road development project.

#### **(5) Necessity of the Project**

The Project to enhance transportation capacity between Hanoi and Noi Bai International Airport is consistent with the development policy of Vietnam as described above as the traffic is increasing rapidly and it is also consistent with assistance policies of the Government of Japan and JICA. Therefore, JICA assistance for the Project by JICA is highly needed and reasonable.

### **3. Project Description**

#### **(1) Project Objective**

The Project is to develop a new high-standard road that connects Noi Bai International Airport and Nhat-Tan Bridge (Vietnam-Japan Friendship Bridge), to enhance transportation capacity from central Hanoi to the airport, thereby contributing to promotion of economic growth and enhancement of international competitiveness of the country.

#### **(2) Project Site/Target Area**

Hanoi, Socialist Republic of Vietnam

#### **(3) Project Components**

Construction of new high-standard road from Nam Hong Interchange that is the end point of the Nhat-Tan Bridge (Vietnam-Japan Friendship Bridge) construction project currently underway as a yen loan project to the beginning point of North Thang Long-Noi Bai road via the Noi Bai International Airport as well as width expansion of current road

- 1) Road construction (high-standard road construction)
- 2) Consulting service (construction supervision, etc.)

**(4) Estimated Project Cost (Loan Amount)**

26,957 million Yen (Loan Amount for the Phase: 11,537 million Yen)

**(5) Schedule**

March 2010 to June 2017 (total of 88 months). The Project shall be completed upon the beginning of facility provided for use (June 2015).

**(6) Project Implementation Structure**

- 1) Borrower: Government of Socialist Republic of Vietnam
- 2) Guarantor: no guarantor
- 3) Executing Agency: Ministry of Transport
- 4) Operation and Maintenance System: Department of transportation, Hanoi People's Committee and Airports Corporation of Vietnam are planned to be in charge.

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

1) Environmental and Social Consideration

- (1) Category: A
- (2) Reason for Categorization: The Project is a major road sector project and has influential characteristics in the Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations (established in April 2002).
- (3) Environmental Permit: Of the report on environmental impact assessment (EIA) related to the Project, that for sub-project 1 (construction of new high-standard road) and sub-project 2 (width expansion of existing road) was approved by the Ministry of Transport in February and October 2009, respectively.
- (4) Anti-Pollution Measures: Measures in accordance with the environmental management plan are taken. Air pollution and noise during construction is to be eased by such measures as water spraying and installation of soundproof wall. As for measures for water quality protection and waste treatment, wall to prevent murky water will be installed and waste will be treated based on the waste management plan, for example.
- (5) Natural Environment: As the target area does not fall in the category of areas prone to be affected including national parks or its surrounding area, unfavorable impact on natural environment will be minimum.
- (6) Social Environment: The Project includes land acquisition of approx. 115ha and non-voluntary relocation of 327 households. Procedures for land acquisition and compensation will be carried out in accordance with the national laws and the relocation assistance program (RAP).
- (7) Other / Monitoring: The consultant and contractor conduct monitoring under the supervision of the executing agency based on the monitoring plan and it will be

- continued until the end of the construction work,
- 2) Promotion of Poverty Reduction: no special note.
  - 3) Promotion of Social Development (e.g. Gender Perspective, Measure for Infectious Diseases Including HIV/AIDS, Participatory Development, Consideration for the Handicapped etc.):

The consultant in charge of construction supervision is planned to take measures against infection of AIDS, etc., under the supervision of the executing agency as part of workers' health management.

**(8) Other Schemes / Collaboration with Other Donors:**

No special scheme or collaboration

**(9) Other Important Issues:**

No special note

**4. Targeted Outcomes**

(1) Quantitative effects

1) Performance Indicators (Operation and Effect Indicator)

Indicator	Baseline (Actual Value in 2011)	Target (2017) 【Expected value 2 years after project completion】
Annual average daily traffic (PCU/day)	Existing road (North Thang Long- Noi Bai road) 58,985	Existing road (North Thang Long- Noi Bai road) 29,046  New road (Nam Hong Interchange-Noi Bai Int'l Airport) 49,528
Required travel time (minute)	Existing road (North Thang Long- Noi Bai road) 60-90 (actual value in 2008)	New road (section of the Project) 30
Shortening of required travel time (billion dong/year)	-	78.9
Saving of driving cost (note) (billion dong/year)	-	370.3
Improvement of driving speed	Existing road (North Thang Long- Noi Bai road)	New road (section of the Project) 80

(km/hour)	50 (actual value in 2008)	
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(Note): conversion into monetary value (calculated by multiplying shortened travel time by time value)

## 2) Internal Rate of Return

The economic internal rate of return (EIRR) of the Project is 17.25% based on the prepositions below

EIRR

Cost: Project cost (tax excluded), operation and maintenance cost

Benefit: Shortening of required travel time and reduction of driving cost

Project life: 30 years

## (2) Qualitative effects

Economic vitalization and enhancement of international competitiveness by securing smooth road transportation between Noi Bai International Airport and Hanoi

## 5. External Factors and Risk Control

No special note.

## 6. Lessons Learned from Past Projects

### (1) Evaluation results of similar projects

The ex-post evaluation of the National Route 5 Rehabilitation Project in Vietnam taught a lesson that careful consideration needs to be given to the impact of changes of traffic in arterial roads after Project completion on the local transportation in the surrounding areas in order to avoid negative impact on local residents and that the measures to ease such impacts should be formulated based on the current and predicted local transportation pattern in the target area.

### (2) Lessons for the Project

Based on the lesson above, the Project will include construction of fly-Over and underpass to secure living road for local residents and develop a side road that runs in parallel to the road so that the construction of the new road between Noi Bai International Airport and Nhat Tan Bridge will not disrupt roads that connect surrounding communes.

## 7. Plan for Future Evaluation

### (1) Indicators to be Used

- 1) Annual average daily traffic (PCU/day)
- 2) Required travel time (minute)
- 3) Shortening of required travel time (billion dong/year)
- 4) Saving of driving cost (billion dong/year)
- 5) Improvement of driving speed (km/hour)

6) Economic internal rate of return (%)

**(2) Timing**

Two years after Project completion