

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: Socialist Republic of Vietnam

Project: Second Transport Sector Loan for National Road Network Improvement

Loan Agreement: March 22, 2013

Loan Amount: 24,771 million Yen

Borrower: The Government of Socialist Republic of Vietnam

2. Background and Necessity of the Project

(1) Current State and Issues of the Transport and Road Sector in Vietnam

Dependence on road transportation in Vietnam is high, with cargo transportation and passenger transportation accounting for 74.3% and 92.1%, respectively, in 2011. The traffic mainly of arterial roads that connect major cities and local cities has sharply increased recently. The pavement rate of road network that includes national roads, provincial roads and regional roads, and village roads (rural roads) remained 57.3% in 2007. Due to increases in traffic and heavy vehicles in addition to insufficient maintenance and rehabilitation work for a long time, many roads and bridges need width expansion, rehabilitation and re-pavement. Ageing and insufficient strength of bridges over national and provincial roads is a bottleneck of smooth distribution and a problem in terms of promotion of industry and investment from Japanese companies and other foreign entities. It also causes inconvenience to people's living as traffic of many parts of road is suspended due to flooding and natural flood damage in the rainy season in rural areas.

(2) Development Policies for the Transport and 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). It also intends to rehabilitate national and provincial roads, expand width of major national roads and develop new roads in areas with traffic demand by 2010 in its transport sector development strategy. It also plans to rehabilitate all old bridges over national roads by 2020 in its road development plan 2020. Thus, the Project is consistent with such plans.

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

Country Assistance Policy for Vietnam (December 2012) places "growth and competitiveness enhancement" as one of focal areas and arterial transportation and urban transportation network development is to be assisted. As for "assistance to solve fragility," rural area and local development is to be assisted for social and

livelihood improvement, poverty reduction and correction of disparities. The Rolling Plan for Social Republic of Vietnam places arterial transportation network and urban transportation network development as part of economic infrastructure development and access service improvement as a development issue in the sector and assistance for promoting its steady implementation and maintenance includes “The Comprehensive Study on the Sustainable Development of Transport System” (VITRANSS2) (2007-2010), individual expert “advisor for the transportation and urban traffic sector“ (2010-2011), and technical assistance, ”Project for Capacity Enhancement in Road Maintenance” (2011-). As the first phase of the Project, a total of 27.45 billion Yen was provided for approximately 150 bridges.

(4) Other Donors’ Activity

The World Bank has provided a wide range of assistance, including national and regional road development, inland transportation by water, and urban transportation. The Asian Development Bank has assisted economic cooperation programs for the Greater Mekong, Subregion which include the Kunming-Hai Phong distribution promotion project and Noi Bai-Lao Kai road development project, However, neither of them has assisted projects solely for bridge rehabilitation over national and provincial roads.

(5) Necessity of the Project

Roads and bridges are major means of transportation in Vietnam and improvement of existing infrastructure is regarded important in terms of contribution to local economy and traffic safety. Bridge rehabilitation over national and provincial roads is highly needed in relation to industrial promotion, promotion of investment from Japanese companies and other foreign entities, and enhancement of connection in the ASEAN/Mekong region. The Project is consistent with challenges and development policies of Vietnam and assistance policies of the Government of Japan and JICA. Therefore, implementation of the Project by JICA is highly needed and reasonable.

3. Project Description

(1) Project Objective

The objective of the Project is to improve the national road network, to strengthen transport capacity, and to improve safety by replacement or reconstruction of deteriorated bridges, thereby contributing to efficient logistic network including ASEAN and Mekong region connectivity and social economic development in urban and rural areas.

(2) Project Site/Target Area: Nationwide

(3) Project Components

- 1) Rehabilitation and replacement of existing bridges over national and provincial roads (approx. 80 locations)
- 2) Consulting service: detailed design, tender assistance, construction supervision, assistance for bridge management database operation, etc.)

(4) Estimated Project Cost (Loan Amount)

29,908 million Yen (Loan Amount: 24,771 million Yen)

(5) Schedule

March 2013 to June 2018 (64 months). The Project shall be completed upon the beginning of facility provided for use (July 2017).

(6) Project Implementation Structure

- 1) Borrower: Government of Socialist Republic of Vietnam
- 2) Executing Agency: Directorate for Roads of Vietnam (DRVN)
- 3) Operation and Maintenance System: Regional Road Management Unit under the umbrella of Directorate for Roads of Vietnam (DRVN) and provincial department of transport

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

- 1) Environmental and Social Consideration
 - (1) Category: FI
 - (2) Reason for Categorization: The project is designed to provide financing to financial intermediaries. Sub-projects cannot be specified prior to JICA's approval for financing, and they may have environmental impacts under the guidelines for Environmental and Social Consideration (April, 2010).
 - (3) Other / Monitoring: With assistance from consultants to be hired with yen loan, the executing agency is supposed to categorize sub-projects based on the national laws and JICA guidelines for environmental and social considerations and countermeasures necessary for the category are to be taken. No sub-project falls in Category A.
- 2) Promotion of Poverty Reduction: The road and bridge rehabilitation in local areas is expected to contribute to improvement of people's livelihood through vitalization of local economy.
- 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.):
No special note.

(8) Collaboration with Other Donors:

No special note.

(9) Other Important Issues:

No special note.

4. Targeted Outcomes

(1) Quantitative Effects

- 1) Performance Indicators (Operation and Effect Indicator): As for the operation and effect indicator of the Project, approx. 10 bridges are selected to set the daily traffic volume and required travel time.

Indicator	Bridge ¹	Baseline (Actual Value in 2012)	Target (2019) [2 years after project completion]
(a) Operation indicator Daily traffic volume (vehicle/day, each bridge)	Ghep	17,074	32,217
	Truoi	9,085	15,942
	O Song	12,092	22,363
	Song Van	12,359	22,845
	Nam Dong Ba Thin	9,536	18,502
	Tri Chinh	6,271	16,467
	Soong	3,652	6,785
	Sen	2,201	3,981
	Cay Diep	4,452	5,647
	Tan Hue	6,814	9,951
(b) Effect indicator Required travel time (minute, each bridge)	Ghep	161.93	78.00
	Truoi	56.00	23.14
	O Song	682.33	111.43
	Song Van	615.00	180.00
	Nam Dong Ba Thin	615.00	180.00
	Tri Chinh	85.20	44.57
	Soong	146.40	66.86
	Sen	156.20	31.71
	Cay Diep	245.20	94.29
	Tan Hue	198.00	39.43

2) Internal Rate of Return

Based on the conditions indicated below, the economic internal rate of return (EIRR) of the Project is 31.5%. The financial internal rate of return (FIRR) is not calculated because of no collection of toll fees in the Project,

EIRR

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

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

Project life: 25 years

¹Bridges and target values to be used as samples currently. (Sample bridges may change.)

(2) Qualitative Effects:

Better efficiency of distribution network including enhancement of connection in the ASEAN and Mekong region, social economic development in the target area, safety improvement

5. External Factors and Risk Control

- (1) Stagnation or aggravation of the economy of Vietnam and the project area
- (2) Natural disaster (The Mekong Delta area has flood damage every year and civil engineering progress is easily affected by rainfall, etc.)

6. Lessons Learned from Past Projects

(1) Evaluation results of similar projects:

The ex-post evaluation of the National Highway No.1 Bridge Rehabilitation Project in Vietnam taught a lesson that the operation and maintenance agency needs to continue to exert efforts to perform proper road maintenance in order to secure road sustainability. The ex-post evaluation of Twelve Provinces Bridge Replacement & Rehabilitation Project in Indonesia also taught a lesson that effective monitoring based on the latest data and nationwide bridge management system are necessary for the Project as the data was not updated to the latest and the bridge management data system called bridge management system (BMS) was hardly used although it was created.

(2) Lessons for the Project:

Based on the lessons above, consulting service is provided for BMS operation assistance (collection and arrangement of bridge data, creation of database operation manual, etc.) necessary for formulation of long-term maintenance plan to enhance the operation and maintenance system in the Transport Sector Loan for National Road Network Improvement (II). For continuation of proper operation and maintenance system and effective bridge monitoring across the country, consulting service is planned to be used for system support after BMS introduction, support for creation of practical operation manual, and assistance for settlement of BMS operation.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Daily traffic volume (vehicle/day, each bridge)
- 2) Required travel time (minute, each bridge)
- 3) Economic internal rate of return (EIRR) (%)

(2) Timing

Two years after Project completion

