

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country : The Democratic Socialist Republic of Sri Lanka

Project: Project for the Construction of Major Bridges on National Road Network

Loan Agreement: March 14, 2013

Loan Amount: 12,381 million yen

Borrower: The Government of Democratic Socialist Republic of Sri Lanka

2. Background and Necessity of the Project**(1) Current State and Issues of the Road Sector in Sri Lanka**

Road transportation represents 90% of the domestic passenger and cargo transport in Sri Lanka, playing a very important role in the nation's economic and social activities. As the steady and rapid economic growth boosts demand for transportation, Sri Lankan Government with the support of international organizations and foreign countries have been improving the deteriorated road network in the country. Though more than a third of the 2,000 major bridges on national roads across the country are over 100 years old, repair work has not proceeded because the country does not have necessary construction skills and because support from donor organizations has been limited to the repair of small bridges. Bridges of over 30 meters in length remain as deteriorated and become bottlenecks of transportation due to their poor conditions and insufficient width. The improvement of major bridges is an urgent task in order to achieve smooth road transportation.

(2) Development Policies for the Road Sector in Sri Lanka and the Priority of the Project

Under Sri Lanka's national development plan called "Mahinda Chintana (2010-2016)" focuses on the improvement of road infrastructure to vitalize the national economy and to double the national income per capita. The National Road Master Plan (2007-2017) includes the improvement plan of the national road network that connects the development centers across the country. Since this Project contributes to the enhanced national road network by constructing major bridges on the national roads, it is an important project with high priority.

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

Japan's "Country Assistance Program for Sri Lanka (June, 2012)" focuses on the improvement of infrastructure as a part of the focal area of "promotion of economic growth." As a means for it, on the improvement of necessary transportation infrastructure. JICA also regards the enhancement of the transportation infrastructure network as one of the focal areas of support for Sri Lanka in its "JICA Country Analytical Work". JICA has supported through the ODA yen loan to improve highways in the "Project for the Construction of the Southern Highways" (2000 and 2008) and the "Greater Colombo Urban Transport Development Project" (2006, 2008 and 2010), and through the grant aid, "The Project for Reconstruction of 5 Bridges in Eastern Province" and the "The Project for Construction of Manmunai Bridge." JICA also dispatched an expert (road administration advisor) to the Road Development Authority (RDA) from May 2008 to April 2011 to support capacity building in the area.

(4) Other Donors' Activities

ADB, other organizations and China have been providing support for the improvement of national roads. France, Britain and other nations have been separately implementing tied-loan projects to construct and replace small scale bridges.

(5) Necessity of the Project

Bridges are bottlenecks on the national road network of Sri Lanka, which relies heavily on road

transportation. The purpose of this Project is to replace these bridges by Japanese technology to contribute to smooth road transportation. This purpose is in accordance with the development policies of the Sri Lanka Government as well as the aid policies of Japan and JICA. It is highly necessary and relevant for JICA, therefore, to support the implementation of this Project.

3. Project Description

(1) Project Objective

The objective of this Project is to replace old bridges and construct new ones on major national roads across Sri Lanka to ensure smooth road transportation, thereby contributing to promote the nation's economic growth and social development.

(2) Project Site/Target Area

Across Sri Lanka

(3) Project Components

- 1) Bridge construction (International Competitive Bidding)
- 2) Consulting service (detailed design, tender assistance, construction supervision, etc.)
(Consultants will be short listed)

(4) Estimated Project Cost (Loan Amount)

16,132 million yen (including an the agreed loan amount: 12,381 million yen)

(5) Schedule

Planned for March, 2013 to December, 2019 (a total of 81 months); the project will be completed when the use of all the bridges begins (January, 2019).

(6) Project Implementation Structure

- 1) Borrower: The Government of the Democratic Socialist Republic of Sri Lanka
- 2) Executing Agency: Ministry of Ports and Highways (MOPH)
- 3) Operation/Maintenance/Management: RDA

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

- 1) Environmental and Social Considerations
 - a) Category: B
 - b) Reason for the Categorization: Since this project does not involve any sectors or characteristics that are liable to cause adverse environmental impact nor sensitive areas specified in the "JICA Guidelines for Environmental and Social Considerations" (published in April, 2010), it is unlikely that the project will have any severe negative impact on the environment..
 - c) Environmental Permit: The domestic laws of Sri Lanka do not mandate the preparation of the Environmental Impact Assessment (EIA) report for this project.
 - d) Anti-Pollution Measures : Dust and water pollution caused during the construction are expected to meet the domestic standards if measures including watering, sandbagging and surrounding the project sites with steel plates are taken.
 - e) Natural Environment: Since the target areas of the Project are not in or around a sensitive area such as national parks, this Project will have minimum negative impact on the natural environment.
 - f) Social Environment: This Project requires the acquisition of land of about 13ha in area and the relocation of up to 25 local people per project site (a total of about 170 people across all 37

bridges). The relocation and compensation procedures will be taken according to the laws of Sri Lanka and the JICA Guidelines for Environmental and Social Considerations.

g) Other Aspects/Monitoring: The implementing agency shall monitor air and water quality and noise during the construction and after starting operation.

- 2) Promotion of Poverty Reduction: None in particular
- 3) Promotion of Social Development: None in particular

(8) Collaboration with Other Schemes and Donors

None in particular

(9) Other Important Issues

Japanese technology will be employed including weather-resistant steel plate; steel-pipe-sheet-piling foundation pile method; extra-dosed bridge; waterproofing of floor panels; and reinforcing steel covered by epoxy resin.

4. Targeted Outcomes

(1) Quantitative Effect

1) Performance Indicators

Indicators	Baseline (actual value in 2010)	Target (2021) (Expected value 2 years after project completion)
Annual average of daily transportation (number of vehicles/day) (average of the 37 bridges)	9,094	16,438
Reduced transportation time compared to detours taken when the bridges are broken (average hours reduced)	—	2.4

2) Internal Rate of Return

Based on the conditions below, the economic internal rate of return (EIRR) of this Project will be 26.13%.

Cost: project cost (excluding taxes); and operational, maintenance and management cost

Benefit : shorter transportation time; reduced cost; and reduced construction cost of detours

Project life: 30 years

(2) Qualitative Effect : promotion of logistics by smooth road transportation

5. External Factors and Risk Control

Climatic conditions (floods and others)

6. Lessons Learned from Past Projects

(1) Results of Evaluation of Similar Past Projects

The ex-post evaluation of a ODA yen loan aid called the “Road Network Improvement Project” indicates from the viewpoint of sustainability the importance of establishing an operation/maintenance/management scheme after project completion. Also, the necessity to enhance a bridge maintenance/management cycle including accurate maintenance/management instructions and the review of maintenance/management/inspection reports was noted during the formation phase of this Project.

(2) Lessons for the Project

A technical cooperation project will be simultaneously implemented to support capacity building in the operation/maintenance/management of these bridges.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Annual average of daily transportation (number of vehicles/day) (average of the 37 bridges)
- 2) Reduced transportation time compared to detours taken when the bridges are broken (average hours reduced)
- 3) Economic internal rate of return (EIRR) (%)

(2) Timing of Next Evaluation

Two years after project completion