

Ex-Ante Evaluation

1. Name of the Project

Country: Georgia

Project: East-West Highway Improvement Project (II)

Loan Agreement: March 7, 2016

Loan Amount: 4,410 million Yen

Borrower: Georgia

2. Background and Necessity of the Project

(1) Current Development State and Issues of the Transportation and Road Sector in Georgia

In addition to railways and roads of land transport connecting to neighboring countries, Georgia's transportation sector consists of marine transport centered on the Port of Poti and the Port of Batumi along the Black Sea, and air transport. Located on the shortest route between Europe and Central Asia, Georgia is playing an increasingly important role not only as a transit nation for oil and gas pipelines from the Caspian Sea but also as a base for regional logistics. Among the land transport networks, roads play the most significant part in the transportation system, accounting for 60% of the total freight traffic. Although domestic road networks (with a total length of approx. 22,000km) had been left badly damaged due to the lack of funds for road maintenance after Georgia gained independence in the course of the dissolution of the Soviet Union, the Government of Georgia started to raise the budget allocation for road maintenance in 2004, facilitating road maintenance and promoting road development and improvement projects to support economic activities. This Project is intended to upgrade the East-West Highway, a 460km-long international corridor connecting the border with Azerbaijan and the coastal Black Sea area. The traffic volume on the highway has risen by 12% on average since 2005. In the target area of this Project, the increasing flow of vehicles, including heavy trucks, has caused bottlenecks in urban traffic. Moreover, the risk of accidents has risen due to frequent reckless overtaking in narrow sections. Thus, it is urgent to widen and reshape the highway and construct bypass roads to reduce the flow of traffic into urban areas and improve driving safety.

(2) Development Policies for the Transportation and Road Sector in Georgia and the Priority of the Project

The Social-economic Development Strategy of Georgia “GEORGIA 2020” puts special emphasis on road infrastructure development in order to heighten the efficiency of international and domestic logistics, improve the safety of road transport networks, increase Georgia’s competitiveness as a transit hub, and promote regional economies. In this context, the upgrading of the East-West Highway through this Project has been placed as one of the country’s priority challenges.

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

Japan’s Country Assistance Policy for Georgia (set in April 2014) identifies “Improvement of Economic Infrastructures” as a priority area, in which the Transportation Program is to be implemented to improve the aging road infrastructure in rural areas. This Project is in line with this assistance policy. So far, JICA has implemented the East-West Highway Improvement Project (Loan Agreement signed in 2009 for 17,722 million yen) and the Project for Trunk Route Rehabilitation (Grant Agreement signed in 2000 for 304 million yen).

(4) Other Donors’ Activity

The World Bank has carried out 17 projects worth US\$700 million in total to improve the East-West Highway (to the east of the target section of JICA) and develop secondary and local roads. The Asian Development Bank has implemented eight projects worth US\$1,000 million in total to upgrade the East-West Highway (coastal sections along the Black Sea) and construct secondary roads. The European Investment Bank has provided financing of €170 million to improve the East-West Highway (to the west of the target section of JICA).

(5) Necessity of the Project

Although the Project was approved and has been implemented since 2009, an additional loan was requested in April 2015. This was because the project cost inflated due to larger fluctuation in exchange rate than expected at the appraisal stage, the extra work to stabilize excavated slopes, and the installation of road lighting to improve traffic safety at night. Since the financial shortage was not able to be fully covered by the Government of Georgia, an additional funding through Yen Loan is essential in order to ensure the smooth implementation of this Project and produce the project outcome as soon as possible. Moreover, as mentioned above, this Project is in line with the development issues and policies of Georgia as well as the assistance policies of Japan. Therefore, it remains

necessary and relevant for JICA to implement this Project.

3. Project Description

(1) Project Objective

This project is to enhance the transportation capacity of Georgia by constructing and improving the road section between Zestafoni, Kutaisi and Samtredia on the East-West Highway, thereby contributing to the regional economic development of the country.

(2) Project Site/Target Area

Imereti Province

(3) Project Components

- 1) Road construction: Kutaisi Bypass Road (construction of a new two-lane road (17.3km)); Kutaisi-Samtredia section (construction of a new two-lane road (24.0km)); Zestafoni-Kutaisi section (reconstruction and widening of the existing two-lane road into a four-lane road(15.2km))
- 2) Road safety measures (reinforcement of slopes and installation of road lighting)
- 3) Consulting services (including detailed design, bidding assistance, construction supervision, etc.)

(4) Project Cost

31,182 million yen (Loan Amount: 4,410 million yen)

(5) Project Implementation Schedule/Cooperation Period

December 2009 – March 2018 (100 months in total). The project completion is defined as the commencement of the road facility services.

(6) Project Implementation Structure

- 1) Borrower: Georgia
- 2) Roads Department, Ministry of Regional Development and Infrastructure
- 3) Operation/Maintenance and Management System: Private contractor will be responsible for maintenance and management works under the supervision of the Road Administration Division of Roads Department, Ministry of Regional Development and Infrastructure.

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

1) Environmental and Social Considerations

(i) Category: A

(ii) Reason for Categorization: This project corresponds to the road sector specified in the JICA Guidelines for Confirmation of Environmental and

Social Considerations (established in April 2002).

- (iii) Environmental Permit: Georgian laws require that an Environmental Impact Assessment (EIA) report be prepared. EIA reports were made separately for individual construction sections. The reports for the Kutaisi Bypass Road, the Kutaisi-Samtredia section, and the Zestafoni-Kutaisi section were approved by the Ministry of Environment and Natural Resources Protection in May 2011, May 2012, and December 2012, respectively. If additional construction requires an EIA report to be submitted to and approved by the Ministry of Environment and Natural Resources Protection, the Roads Department of the Ministry of Regional Development and Infrastructure will take necessary steps to obtain the approval.
- (iv) Anti-Pollution Measures: The construction contractors are required to take appropriate measures to mitigate the environmental impact of construction operations in accordance with the environmental monitoring plan, such as constructing a stilling basin to prevent erosion and maintaining construction equipment. After the commencement of the services, the Roads Department of the Ministry of Regional Development and Infrastructure will consider taking measures to mitigate air pollution, noise, and vibration, such as planting trees and installing noise barriers where necessary.
- (v) Natural Environment: The regions covered by the project are not in regions with national parks, etc., or neighboring regions that would be vulnerable to any impact, and any negative impact on the natural environment is expected to be minimal.
- (vi) Social Environment: This Project will require land acquisition of 1,643,372m² (excluding 16,806,727m² of publicly owned land) and involuntary resettlement of 16 households. Resettlement Action Plans (hereinafter referred to as "RAPs") have been formulated separately for individual construction sections. The RAPs specify that the Government of Georgia will provide affected persons with compensation for lost assets at full replacement cost and support for loss of earnings, regardless of whether or not they have legal title. The land acquisition and resident resettlement process has been completed for an area of 1,609,139m², and it is confirmed that the compensation procedures are being followed in accordance with the RAPs. If this Project requires

additional land acquisition and involuntary resettlement, an Addendum RAP will be developed.

(vii) Other/Monitoring: In this Project, the quality of air and the levels of noise and vibration will be monitored, in accordance with the monitoring plan, by contractors under the supervision of the Roads Department of the Ministry of Regional Development and Infrastructure during construction and by the Roads Department of the Ministry of Regional Development and Infrastructure and other relevant ministries after the commencement of the services. The land acquisition and resettlement process is being monitored by the Roads Department of the Ministry of Regional Development and Infrastructure.

2) Promotion of Poverty Reduction: None

3) Promotion of Social Development: It is confirmed that special compensation is to be provided to households with female householders and poor households in the land acquisition and resettlement process.

(8) Collaboration with Other Donors

The East-West Highway Improvement Project is co-financed (parallel-financed) with the World Bank, the Asian Development Bank, and the European Investment Bank. All of these development partners have started construction in their respective sections.

4. Targeted Outcomes

(1) Quantitative Effects

1) Outcomes (Operation and effect indicators)

Indicators (draft)	Baseline (Actual value in 2008)	Target (2019) [two years after project completion]
Annual average daily traffic volume (vehicles/day)	8,588	18,843
Time required (minutes/vehicle)	63	35
Driving speed (km/hour)	80	100
Impassable days in sections with reinforced slopes (days/year)	-	1

(JICA's project target area only)

(2) Qualitative Effects

Vitalization of regional economies by improving the efficiency of logistics; improvements in road traffic safety and comfort

(3) Internal Rate of Return (IRR)

Based on the conditions below, the economic internal rate of return (EIRR) of this project was calculated as 19.6%. The financial internal rate of return (FIRR) is not calculated as the project does not generate financial revenue such as revenue from fees.

[EIRR]

Cost: Project cost (excluding tax) and operation and maintenance expenses

Benefit: Reduction in total travel time for car users and reduction in fuel consumption

Project Life: 25 years after the commencement of operation

5. External Risk Factors and Control

There will be no major natural disasters that can delay the construction.

6. Lessons Learned from Past Projects

(1) Findings of Similar Projects

The results of the ex-post evaluation of the Pak Kret Bridge and Connecting Road Construction Project in Thailand pointed out that more attention should have been given to the disruption to communities due to the construction of the trunk road (the road became more difficult to cross, and the distances between crossing points became longer) and suggested that the project plan should have included the installation of crossing structures (e.g., overpasses and underpasses) at suitable intervals.

(2) Lessons Learned to the Project

In this Project, new roads will be constructed in farm and pasture land. Therefore, the project plan includes the installation of the necessary number of suitable underpasses based on needs surveys in the local communities. The Project is also designed to be able to install additional underpasses according to the needs arising from local communities at the construction stage.

7. Plans for Future Evaluation

(1) Indicators for Future Evaluation

- 1) Annual average daily traffic volume (vehicles/day)
 - 2) Time required (minutes/vehicle)
 - 3) Driving speed (km/hour)
 - 4) Impassable days in sections with reinforced slopes (days/year)
- (2) Timing of Next Evaluation
- 2 years after project completion