

Ex-Ante Evaluation

Central Asia and the Caucasus Division

East and Central Asia and the Caucasus Department, JICA

1. Name of the Project

Country: Georgia

Project: East-West Highway Improvement Project (Phase 2)

Loan Agreement: September 4, 2018

2. Background and Necessity of the Project

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

Georgia's transportation system consists of land transport using railways and roads connecting to neighboring countries, air transport and marine transport, centered on the Port of Poti and the Port of Batumi along the Black Sea. Georgia's land transport heavily relies on its 22,000-km road network, which carries one third of international freight traffic and more than 90% of passenger traffic. Located on the shortest route connecting Europe and Central Asia, the country plays an increasingly important role not only as a transit nation for oil and gas pipelines from the Caspian Sea but also as a logistics base in the Caucasus region. Particularly, the East-West Highway, a 460-km international corridor running from the border with the Republic of Azerbaijan to the coastal Black Sea area, constitutes part of the important international road networks connecting Europe and Asia. The traffic volume on the highway has increased by 8.5% per year on average since 2007, and is projected to continue its steady growth. Thus, the East-West Highway plays an extremely important role not only in Georgia but also in the Caucasus region as a whole.

The upgrading of the East-West Highway is included in the priority list of Georgia's development strategy "Georgia 2020," which places special emphasis on road infrastructure development 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. The Chumateleti-Argveta section, including the section covered by this Project, is one of the unimproved sections of the East-West Highway. Because this section runs through narrow mountain passes, there is a need to construct tunnels and bridges to improve traffic efficiency. In addition, since there is a risk of impassability due to slope failures, appropriate road safety measures, such as rockfall and landslide prevention, are required to enhance traffic safety.

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

This Project conforms to Japan's Country Assistance Policy for Georgia (April 2014), which identifies "improvement of economic infrastructures" as a priority area and promotes the Transportation Program to improve aging road infrastructure in rural areas. JICA has so far provided ODA Loans for the ongoing East-West Highway Improvement Project (Loan Agreement signed in FY2009 for 17,722 million yen) and East-West Highway Improvement Project (II) (Loan Agreement signed in FY2015 for 4,410 million yen) as well as Grant Aid for the Project for Trunk Route Rehabilitation (Grant Agreement signed in FY2000 for 304 million yen).

Moreover, this Project is expected to contribute to Sustainable Development Goals (SDGs) 8 and 9 as it is designed to upgrade an unimproved section and construct tunnels and bridges on the international corridor, one of the basic infrastructure facilities in Georgia, to enhance the transport capacity of Georgia and the Caucasus region and thereby contribute to the development of regional economy, including neighboring countries.

(3) Other Donors' Activities

The World Bank, the Asian Development Bank (ADB), and the European Investment Bank (EIB) have so far funded 18 projects with a total of 941 million dollars, 14 projects with a total of 672 million dollars, and five projects with a total of 750 million euros, respectively, to support the transportation sector in Georgia, mainly the development of the East-West Highway.

3. Project Description

(1) Project Objectives

This Project aims to strengthen the transport system by constructing roads, bridges and tunnels and by upgrading roads on the unimproved Shorapani-Argveta section of the East-West Highway, thereby contributing to economic development in the country and the Caucasus region.

(2) Project Site/Target Area

Imereti Province

(3) Project Components

- 1) Road construction: constructing a new four-lane road (including 12 tunnels at six locations and 14 bridges at seven locations) and upgrading and widening the existing road (into four lanes), amounting to 14.7 km
- 2) Road safety and rockfall prevention measures

- 3) Consulting services (including construction supervision, implementation of construction safety measures, and monitoring of environmental and social safeguards)
- (4) Estimated Project Cost (Loan Amount)
48,497 million yen (Loan Amount: 38,735 million yen)
- (5) Schedule
September 2018 to September 2023 (61 months in total). The project completion is defined as the commencement of the road facility services (scheduled in September 2021).
- (6) Project Implementation Structure
 - 1) Borrower: Georgia
 - 2) Executing Agency: Roads Department, Ministry of Regional Development and Infrastructure (hereinafter referred to as "RDMRDI")
 - 3) Operation and Maintenance Agency: After the project completion, the RDMRDI will be responsible for operation and maintenance. Generally, however, in Georgia, road operation and maintenance are usually outsourced. This Project is also planned to have operation and maintenance conducted by a private company selected through bidding under the supervision of the RDMRDI Road Administration Division.
- (7) Collaboration with and Division of Roles with other Projects and Donors
 - 1) Japan's Assistance Activities:
The Zestafoni-Kutaisi-Samtredia section, adjacent to the section of this Project, is being developed through the East-West Highway Improvement Project (I) and (II). Hence, the upgrading of the road section through this Project is expected to create synergy effects with the other two projects.
 - 2) Other Donors' Assistance Activities
The East-West Highway is being developed, co-financed (parallel-financed) with the World Bank, the ADB, and the EIB. Another section of the East-West Highway (the Batumi Bypass Road) is being developed by the Asian Infrastructure Investment Bank (AIIB) in cooperation with the ADB. With regard to the Khevi-Argveta section, including the Shorapani-Argveta section covered by this Project, the ADB has prepared a draft of the EIA and a Detailed Design (D/D) based on the Feasibility Study (F/S) performed by the World Bank. The World Bank will be financing the construction of the Chumateleti-Khevi section, and the ADB and EIB will be co-financing the construction of the Khevi-Shorapani section.

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

1) Environmental and Social Consideration

- i) Category: A
- ii) Reason for Categorization: This Project falls under the Road sector specified in JICA Guidelines for Environmental and Social Considerations (published in April 2010; hereinafter referred to as the “Environmental Guidelines”).
- iii) Environmental Permit: This Project was required by Georgian law to prepare an Environmental Impact Assessment (EIA) report. The report was approved by the Ministry of Environment Protection and Agriculture in March 2018.
- iv) Anti-Pollution Measures: During the construction, necessary measures will be taken to meet the environmental standards for air and water quality, noise, etc. in Georgia, such as sprinkling water in dry seasons, installing wastewater treatment facilities, and limiting construction hours. After service commences, effective anti-noise measures will be taken, such as installing noise barriers.
- v) Natural Environment: This Project is likely to have a minimum adverse impact on the natural environment since the project site is not located in sensitive areas or their vicinity, such as national parks.
- vi) Social Environment: This Project will acquire 53.0 ha of land and cause the involuntary resettlement of 21 households (112 persons). The land acquisition and resettlement process will be carried out in accordance with the Land Acquisition and Resettlement Plan (LARP) prepared based on Georgia’s relevant procedures and environmental guidelines. No objection has been raised by affected people against this Project at stakeholder meetings.
- vii) Other/Monitoring: In this Project, construction supervision consultants will monitor air and water quality, noise levels, the impact of tunnel construction on aboveground structures, groundwater levels, etc. during the construction and noise levels, etc. for two years after service commences.

2) Cross-Cutting Issues

- i) Poverty reduction and prevention: In the land acquisition and resettlement process, poor households (four households) will be

provided with special compensation (not only the compensation for loss of land and assets but also additional three months' living expenses and priority job opportunities in fields related to this Project).

- ii) Considerations for people with disabilities: In the land acquisition and resettlement process, households headed by people with disabilities (12 households) will be provided with special compensation (not only the compensation for loss of land and assets but also additional three months' living expenses and priority job opportunities in fields related to this Project).

3) Gender Classification: Gender Informed (Significant)

<Activities/Reason for Classification>

In the land acquisition and resettlement process, households headed by females (14 households) will be provided with special compensation (not only the compensation for loss of land and assets but also additional three months' living expenses and priority job opportunities in fields related to this Project).

(9) Other Important Issues:

Japanese technologies are expected to be introduced through this Project, such as the construction of steel bridges and landslide and rockfall prevention.

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (Actual value in 2016)	Target (2023) [Expected value 2 years after project completion]
Annual average daily traffic (vehicles per day)	13,755	18,600
Average travel time (minutes)	20.6	11.0
Average travel speed (km per hour)	50	80
Average number of passengers (persons per day)	46,843	63,343
Average cargo volume (tons per day)	11,404	15,421

(2) Qualitative Effects

Vitalization of Georgian and Caucasian economies by improving the efficiency

of logistics; improvements in traffic safety and comfort

(3) Internal Rate of Return

Based on the conditions indicated below, the Economic Internal Rate of Return (EIRR) of this Project is calculated at 13.03%. The Financial Internal Rate of Return is not calculated because this Project will not generate toll or any other revenues.

[EIRR]

Cost: Project costs and operation and maintenance expenses (excluding taxes)

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

Project life: 40 years

5. Pre-conditions and Important Assumptions

(1) Pre-conditions: None in particular

(2) Important Assumptions: None in particular

6. Lessons Learned from Past Projects

The ex-post evaluation of the Second Mekong International Bridge Construction Project in the People's Democratic Republic of Laos indicated that the key to success in eliminating physical bottlenecks (missing links) in regional road networks is cross-border infrastructure development based on a wide and comprehensive perspective. Therefore, it is essential to examine and analyze not only the development progress and plan of the road networks integrated by constructing the missing links but also those of other road and traffic networks in the project planning stage. Based on the above-mentioned lesson learned, this Project, which is also aimed at developing an international corridor, examined the progress and plans of other road/traffic network development through the preparatory study.

In addition, the East-West Highway Improvement Project and the East-West Highway Improvement Project (II) were delayed because it took long to identify landowners and acquire land necessary for the projects. Therefore, in preparation for this Project, sufficient measures were taken to prevent the recurrence of this problem, such as referring to the land registry in the detailed design stage.

7. Evaluation Results

This Project conforms to the development issues and policies of Georgia as well as the assistance policy and analysis of Japan. Moreover, this Project is expected to contribute to SDGs 8 and 9 by upgrading an unimproved section

and constructing tunnels and bridges on the international corridor to enhance the transport capacity of Georgia and the Caucasus region. It is therefore highly necessary to implement this Project.

8. Plan for Future Evaluation

(1) Indicators to Be Used

Per 4. (1) – (3)

(2) Timing

Ex-post evaluation: 2 years after project completion